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# COURSE DESCRIPTIONS

# DESCRIPTION OF COURSES

## COURSE NUMBERING SYSTEM

Course numbers appearing in this catalog follow a few basic guidelines. Those numbered 1-1990 are primarily for freshmen, and those numbered 2000-2990 are primarily for sophomores. The number 2980 is reserved for Directed Study - individual student research under the sponsorship of an instructor. The number 2990 is reserved for Special Topics - courses for which there is a temporary demand or courses offered on an experimental basis.

## DIRECTED STUDIES AND SPECIAL TOPICS

The 2980 and 2990 course numbers are available for each discipline with the following common course descriptions:

### **2980 DIRECTED STUDY 0.5-3 CREDIT HOURS**

#### **8-45 STUDY HOURS + 0 LAB HOURS = 8-45 CLASSROOM HOURS**

Directed Study is independent study within a subject area or at a subject level not available in regular catalog courses. Faculty assistance in planning and evaluation is required. No more than a total of twelve semester hours Directed Study and Special Topics may apply to an associate degree program. Directed Study may not be taken Pass/No-Pass. Prerequisite: Approval by the instructor, the division chairperson, and the Vice-President for Educational Services and Student Development. Offered on demand.

### **2990 SPECIAL TOPICS**

#### **0.5-3 CREDIT HOURS**

#### **8-45 STUDY HOURS + 0 LAB HOURS = 8-45 CLASSROOM HOURS**

A course, seminar, or workshop within a subject area or at a subject level not available in regular catalog courses. Consult current Schedule of Classes for course title. No more than a total of twelve semester hours of Special Topics and Directed Study may apply to an associate degree program. Offered on demand.

## SPECIALY ARRANGED COURSES

These courses are intended to give the student, through independent study, the same experiences and knowledge that he/she would receive in the regularly scheduled class.

### **Limitations and Conditions:**

1. Students may not enroll in more than two Independent Study courses per semester.
2. Students will pay regular tuition and fees.
3. Instructors have the right to refuse to offer an Independent Study.
4. Students must obtain approval by the instructor before registering.
5. Students may not receive credit for more than four Independent Study courses.

## SEMESTER HOURS OF CREDIT

Each semester credit hour of a regular academic course represents at least 15 classroom hours and from two to three times as much outside study. Each semester hour of a laboratory, internship, clinical experience or practicum represents a minimum of 30 to 60 contact hours, with additional outside study.

## PREREQUISITE COURSES

When related courses are offered in a series, with each subsequent course building on knowledge and skills specifically covered in the previous course, students may be required to complete the series in order. In such cases, each course is a "prerequisite" for the following course; the students are not allowed to skip ahead without demonstrating that they have the ability to undertake advanced study.

Many courses list prerequisites or permission of instructor. It should be noted that a student is responsible for insuring his/her success in a course when a prerequisite is waived. It is not the responsibility of the instructor. Students should also check with transfer institutions concerning transferability of courses when a prerequisite was waived.

## COURSE SCHEDULING

Many courses are offered every semester on the three campuses. However, the college cannot guarantee that every course listed in the catalog will appear on all of the semester and summer session schedules.

## COURSE DESCRIPTIONS

On the following pages are the descriptions in alphabetical order by prefix for credit courses offered by MPCC. Each course is described by an alpha prefix and a number identification, followed by the course title, semester credit hours, classroom hours, lecture hours, and CLIP hours (clinical, laboratory, internship, practicum), if appropriate. The total credit hours allocated to each course include hours generated through any combination of lecture and/or CLIP hours in compliance with Nebraska statutes.

# COURSE DESCRIPTIONS

## ACCOUNTING

### ACCT 1010 Payroll Accounting

2 credit hours 🔄

30 Classroom Hours = 30 Lecture Hours

This course is designed to help small business managers and current or prospective payroll employees develop an understanding of the personnel and payroll records required by law and for the operation of an effective payroll accounting system. Topics covered include payroll operations, recording payroll accounting entries, preparation of payroll tax returns, and the use of computer accounting programs for payroll accounting. This course is designed for accounting personnel and may not be accepted for transfer.

### ACCT 1020 Accounting Fundamentals

2 credit hours 🔄

30 Classroom Hours = 30 Lecture Hours

This course is designed for individuals with no accounting or bookkeeping experience. Topics covered include the accounting equation, debit and credit rules, trial balance and financial statements, double-entry accounting, general journal entries, worksheet preparation, adjusting and closing entries, cash management, payroll, and accounting for personal services. This course is not designed to be a transfer course for business majors.

### ACCT 1025 Bookkeeping for Business

3 credit hours 🔄 📖

45 Classroom Hours = 45 Lecture Hours

An introductory course to provide students with a sound basic knowledge of accounting terms, concepts, and procedures. Includes the accounting cycle for a service business, accounting for cash and payroll, and the accounting cycle for a merchandising business. This course is not designed to be a transfer course for business majors.

### ACCT 1200 Introductory Accounting I

3 credit hours 🔄 📖

45 Classroom Hours = 45 Lecture Hours

This course is designed to provide introductory knowledge of accounting principles, concepts, and practices. Included topics are the balance sheet, the income statement, the statement of owner's equity, the statement of cash flows, worksheets, journals, ledgers, accruals, adjusting and closing entries, internal controls, inventories, fixed and intangible assets, liabilities, equity, and financial statement analysis. This course provides a foundation for more advanced work in the fields of accounting and business. (Replaces ACCT 1030.)

### ACCT 1210 Introductory Accounting II

3 credit hours 🔄 📖

45 Classroom Hours = 45 Lecture Hours

This course is a continuation of ACCT 1200. Introductory Accounting II includes accounting for businesses organized as corporations, cash flow statements, accounting for manufacturing, preparing and using accounting data for management decision making, and analyzing and interpreting financial statements. Prerequisite: ACCT 1200. (Replaces ACCT 1040.)

### ACCT 2020 Income Tax Accounting for Individuals

3 credit hours

45 Classroom Hours = 45 Lecture Hours

A beginning course in the preparation of federal tax returns for individuals and an introduction to federal taxation laws. Topics include basic tax concepts and familiarization with frequently used tax forms. The course contains the information needed to prepare most individual income tax returns according to current laws.

### ACCT 2130 Intermediate Accounting I

3 credit hours 🔄

45 Classroom Hours = 45 Lecture Hours

Includes theoretical foundation of accounting; a review of the accounting model, income statement, retained earnings, the balance sheet, and statement of cash flows; in-depth study of the concepts of future and present values, cash control, short-term investments, receivables,

inventories, liabilities, income taxes timing problems, property, plant, equipment depreciation and depletion. Prerequisite: ACCT 1210.

### ACCT 2160 Intermediate Accounting II

3 credit hours

45 Classroom Hours = 45 Lecture Hours

Problems relating to current and non-current liabilities, stockholders' equity, leases, and pension, and analytical problems under study by the accounting profession. Prerequisite: ACCT 2130.

### ACCT 2170 Introductory Cost Accounting

3 credit hours 🔄 📖

45 Classroom Hours = 45 Lecture Hours

Includes the nature of cost accounting concepts, classifications and statements; cost and control of materials, labor, and overhead; cost accumulation systems-job order and process; joint product and by-product costing; and standard costs. Prerequisite: ACCT 1210.

## AGRICULTURE

### AGRI 1005 Introduction to Ag & Natural Resources

3 credit hours 📖

45 Classroom Hours = 45 Lecture Hours

A survey course that provides an overview of historical development of agriculture, its present status and future challenges. The course will also evaluate the relationship and importance of educational programs to agriculture. Educational and career opportunities and objectives will be studied.

### AGRI 1015 Animal Agriculture

3 credit hours 📖

45 Classroom Hours = 45 Lecture Hours

The uses of animals and animal products, the structure of the industry as well as trends and current issues related to production and consumption of animal products. (Replaces AGRI 1010.)

### AGRI 1030 Introduction to Plant Science

3 credit hours 📖

45 Classroom Hours = 45 Lecture Hours

This course will cover plant physiology and morphology and its relationship to growth, development and reproduction of crop and forage plants. Seed identification, is also included.

### AGRI 1031 Introduction to Plant Science Lab

1 credit hour

30 Classroom Hours = 30 Lab Hours

This course is a lab that is required to be taken concurrently with AGRI 1030 Introduction to Plant Science.

### AGRI 1410 Introduction to Ag-Economics

3 credit hours 🔄 📖

48 Classroom Hours = 48 Lecture Hours

The purpose of this introductory course is for students to develop a basic understanding and appreciation for the role of economics in agriculture at the (1) firm, (2) national, and (3) international levels. The main focus of this course will be directed at the firm level or the study of microeconomics. Students will learn to apply various economic principles and concepts relating to production agriculture, business management, consumer behavior, market price analysis and equilibrium, and public policy formation. An overview of the structure and cope of the U.S. food and fiber sector and its current trends/implications for the national economy will also be presented. Additional course topics will include rural development, natural resources, world food economics, international trade and policy, market structure and competition, and monetary/fiscal policies as time permits during the semester.

### AGRI 1540 Introduction to Soil Science

3 credit hours 📖

45 Classroom Hours = 45 Lecture Hours

Introduction to the study of soil science, including the development, physics, chemistry, biology, and classification of soils. Emphasis is placed on the role of soils in the growth of plants. Prerequisite: high school

chemistry or one semester of college chemistry, sophomore standing, or permission of instructor. (Replaces AGRI 1530 for 4 credits.)

**AGRI 1541 Introduction to Soil Science Lab**

**1 credit hour** 

**30 Classroom Hours = 30 Lab Hours**

This is a lab course that is to be taken concurrently with AGRI 1540 Introduction to Soil Science.

**AGRI 1745 Agribusiness & Food Marketing**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

This course is an introductory course in agribusiness and food products marketing offered for students interested in the marketing of ag commodities and food products in the agribusiness industry as it relates to the Food and Fiber Sector of the U.S. economy. This course will acquaint students with the workings of the U.S. food marketing system and enable them to examine how this system affects farm producers, middlemen (processors, wholesalers, retailers, and food services) and consumers. Students will gain an understanding how food products move through a food marketing channel to the final point of consumption (i.e. at home or away from home). The course will also illustrate how consumer demand, marketing, and information technology as well as political forces have shaped the agricultural food marketing industry over time. (Replaces AGRI 1740.)

**AGRI 1850 Gold Medal Management**

**4 credit hours**

**60 Classroom Hours = 60 Lecture Hours**

This course is designed to fulfill Farmers Home Administration requirements for production and financial management training. The overall objective of the course is to improve the students' understanding of production and financial management techniques and enable the students to better analyze and manage their farming operations.

**AGRI 2040 Farm & Ranch Management**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

The purpose of this course is to develop an understanding of the various business management decisions involved in the organization and operation of a farm or ranch firm for continuous profit and efficiency. Students will acquire knowledge and proficiency in applying the various economic principles and business management analysis concepts which aid a farm/ranch operator in the decision making process for a farm/ranch business operation. (Replaces AGRI 2030 for 4 credits.)

**AGRI 2041 Farm & Ranch Management Lab**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

This is a lab course that is to be taken concurrently with AGRI 2040 Farm and Ranch Management.

**AGRI 2100 Animal Products**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

This course will provide knowledge of edible animal products with particular emphasis to meat products from livestock and poultry. Course material will include all aspects of the meat industry from slaughter to consumption. Methods of slaughter and fabrication, conversion of muscle to meat, processing techniques, preservation and storage and consumer related topics will be discussed and demonstrated.


**AGRI 2500 Animal Management**

**3 credit hours** 

**75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

Principles of managing animals in typical production systems. Emphasis is to provide the basics of managing beef, dairy, horses, poultry, sheep and swine through the life cycle for economic and efficient production.

**AGRI 2620 Introduction to Pest Management**

**4 credit hours** 

**90 Classroom Hours = 45 Lecture Hours + 45 Lab Hours**

This course will teach proper methods for pesticide application and safety, and preparation for commercial pesticide applicator certification and relevant pesticides, their different forms, types, and modes of action. Identification of plant pests, including morphology and life cycles of selected insects, weeds and diseases of horticultural plants will be included. Pest control methods will include chemical, physical, mechanical, cultural, and biological techniques. Application of integrated pest management will be stressed.

**ARCHITECTURAL DRAFTING AND CAD TECHNOLOGY**

**ARCH 1750 Computer Assisted Drafting Operation**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

(AutoCad Release 14 Windows) Computer developed graphics.

**ARCH 1760 Computer Assisted Drafting Application**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

(AutoCad Release 14 Windows) Advanced computer developed graphics. Prerequisite: ARCH 1750 or equal experience.

**ART**

**ARTS 1000 Art Structure**

**3 credit hours** 

**60 Classroom Hours = 30 Lecture Hours + 30 Lab Hours**

An introduction to the language and manipulation of two and three-dimensional forms of art. Lecture and studio lab. For elementary education and non-art majors. Text and supplies required. Fee \$20.

**ARTS 1010 Introduction to the Visual Arts**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

An appreciation of the visual arts from a historical perspective. Includes an overview of the creative process, the evolution of art, and art as it relates to society. [Offered as ARTS 1210: Art Appreciation prior to Fall 2016]

**ARTS 1050 Introduction to Art History & Criticism I**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

A survey of major works of art in all media from Prehistory through the end of the Late Gothic. Artistic styles will be discussed in relation to contemporary history, society, and culture. Individual works of art will be explored as well as the role of art and architecture in a cultural context. [Offered as ARTS 2310: Art History Survey I prior to Fall 2016]

**ARTS 1060 Introduction to Art History & Criticism II**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

A survey of major works of art in all media from the Renaissance through Post-Modernism. Artistic styles will be discussed in relation to contemporary history, society, and culture. Individual works of art will be explored as well as the role of art and architecture in a cultural context. Prerequisite: ARTS 1050 or permission of instructor. [Offered as ARTS 2320: Art History Survey II prior to Fall 2016]

**ARTS 1070 Design**

**3 credit hours**

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

Study of the application and manipulation of two-dimensional elements and principles of design. Emphasis on theory and practical applications of each element of design. Studio lab required. Fee \$10.

**ARTS 1210 Drawing I**

**3 credit hours** 

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

A fundamental study of drawing utilizing a variety of media and subject matter. Emphasis on composition and manipulation of design elements.

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Studio lab required. Fee \$15. [Offered as ARTS 1010: Drawing I prior to Fall 2016]

## **ARTS 1220 Drawing II**

**3 credit hours**

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

A continuation of ARTS 1210 with emphasis on expressive applications. Studio required. Prerequisite: ARTS 1210 or permission of instructor. [Offered as ARTS 1020: Drawing II prior to Fall 2016]

## **ARTS 1300 Ceramics I**

**3 credit hours**

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

An introduction to the manipulation of clay, the evolution of form, application of glazes, and application of three-dimensional composition. Prerequisite: ARTS 1070 or permission of instructor. Fee \$35.

## **ARTS 1310 Ceramics II**

**3 credit hours**

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

A continuation of ARTS 1300 with emphasis on improvement of technique and wider expression of individual creativity with clay. Studio lab required. Prerequisite: ARTS 1300 or permission of instructor. Fee \$35.

## **ARTS 1400 Fundamentals of Photography**

**3 credit hours**

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

An introduction to the principles of photography. A lecture/demonstration course in learning to use the camera. Deals with the basic camera functions and darkroom techniques for black and white and color.

## **ARTS 1500 Sculpture I**

**3 credit hours** ☹

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

An introduction of sculpture including the physical qualities of materials: plaster, clay, wood, stone, metal, and combination by mixed media construction. Fee \$15.

## **ARTS 1600 Three Dimensional Design**

**3 credit hours**

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

Further study of the application and manipulation of the elements and principles of design with emphasis in three-dimensional studies. Studio lab required. Prerequisite: ARTS 1070. Fee \$15.

## **ARTS 2020 Life Drawing**

**3 credit hours**

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

The course deals partially with the human anatomy. Drawing from the human form (full figure and portrait) in various drawing media. Prerequisite: ARTS 1210 or permission of instructor.

## **ARTS 2100 Painting I**

**3 credit hours**

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

An introduction to the application and manipulation of paint media in a variety of techniques and subject matter utilizing the elements and principles of design. Studio lab required. Prerequisite: ARTS 1210 and 1070 or permission of instructor. Fee \$10.

## **ARTS 2110 Painting II**

**3 credit hours**

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

A continuation of ARTS 2100 with emphasis on expressive applications. Studio lab required. Prerequisite: ARTS 2100 or permission of instructor. Fee \$10.

## **ARTS 2200 Problems in Painting I**

**3 credit hours**

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

Individual problems in various painting media will be investigated. Technique, color, composition, and originality will be emphasized.

The course may be taken for 3 semesters for a total credit of 9 hours. Prerequisite: ARTS 1700, 2100, 2190, or permission of instructor.

## **ARTS 2220 Problems in Painting II**

**3 credit hours**

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

Continuation of ARTS 2200. Prerequisite: ARTS 2200.

## **ARTS 2230 Problems in Painting III**

**3 credit hours**

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

Continuation of ARTS 2220. Prerequisite: ARTS 2220.

## **ARTS 2450 Portfolio**

**3 credit hours** ☹

**75 Classroom Hours = 35 Lecture Hours + 40 Lab Hours**

Students will be directed in the refining process of their portfolio to help them prepare for employment after graduation. Included in the course will be the exhibition of student work for public display. This course should be taken the final semester of the student's study. Fee \$45.

## **ASSOCIATE DEGREE NURSING**

### **ADNR 2290 Nursing Concepts IV**

**5 credit hours** ☹

**75 Classroom Hours = 75 Lecture Hours**

Emphasis is placed on meeting the basic needs of the family throughout the childbearing and rearing cycle. This course focuses on meeting physical and emotional needs of clients throughout the life cycle who have common, recurring health problems and are in a secondary setting. Emphasis is focused on obstetrics, pediatrics, and mental health care. The nursing process will be utilized to facilitate adaptation during illness. Knowledge gained from biological, social, and behavioral sciences will be integrated into the course content. Corequisite: ADNR 2330. Fee \$160.

### **ADNR 2330 Clinical IV**

**4 credit hours** ☹

**180 Classroom Hours Clinical**

Clinical experience to provide nursing care to maternal, child, and mental health clients, in both acute and community settings. Nursing experiences are provided in labor and delivery, normal newborn nursery, post-partum, pediatrics and various psychiatric settings. Fee \$60.

### **ADNR 2400 Nursing Concepts V**

**3 credit hours** ☹

**45 Classroom Hours = 45 Lecture Hours**

This course is designed to apply the nursing process to clients with more complex health care problems. Topics include: problems of a complex nature in oxygenation, brain and spinal cord injuries, cardiac, urinary elimination, regulation problems (liver, pancreas, endocrine, and cancer), complex protective problems (burns, immune, HIV and AIDS), and emergent and critical care. Emphasis is on physical and emotional needs common to clients throughout the life cycle. Knowledge from biological, social and behavioral sciences will be integrated into the course content. Corequisite: ADNR 2420. Fee \$175. Fee \$175.

### **ADNR 2420 Clinical V**

**5 credit hours** ☹

**225 Classroom Hours Clinical**

Clinical experience to provide complex nursing care in acute care facilities and in the community. Clinical experience provides the opportunity to assess needs, formulate a nursing diagnosis, and to plan, provide and evaluate client care. Therapeutic communication skills will be enhanced. Experience will be provided on the role of the registered nurse in leadership and management. Fee \$65.

### **ADNR 2430 Issues and Trends in Nursing II**

**1 credit hour** ☹

**15 Classroom Hours = 15 Lecture Hours**

This course is designed to provide information and stimulate analytical thinking regarding current topics relevant to the nursing profession. This course addresses topics pertinent to the professional nurse entering

practice. This course assists students in identifying the role of the registered nurse as a member of the healthcare team. Concepts related to legal issues, professional development and ethical dilemmas are explored. Employment skills, stress management and therapeutic communication are emphasized.

## **AUTO BODY TECHNOLOGY**

### **AUTB 1005 Safety**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Specific safety practices that apply to the auto body shop.

### **AUTB 1110 Basic Metal Working**

**5 credit hours**

**165 Classroom Hours = 30 Lecture Hours + 135 Lab Hours**

Shop safety and practical experience in metal repair, straightening, filing, finishing and panel alignment, including fiberglass repair. Fee \$30.

### **AUTB 1120 Auto Body Painting**

**5 credit hours**

**135 Classroom Hours = 45 Lecture Hours + 90 Lab Hours**

Practical experience in preparation, using painting equipment, applying and mixing paint, sanding and masking. Instruction in using both high pressure and high volume/low pressure paint guns in down draft paint booths, including maintenance of paint equipment. Prerequisite: AUTB 1005. Fee \$30.

### **AUTB 1130 Auto Body Hydraulics**

**3 credit hours**

**105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

Pushing and pulling operations on body and supporting sections with power tools and equipment. Safety procedures and use of hydraulic jack to align body panels.

### **AUTB 1150 Auto Body Welding**

**3 credit hours**

**105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

Oxyacetylene, Arc, TIG and MIG welding for auto body frame and chassis repair. Safety, warpage control and cutting procedures. Fee \$20.

### **AUTB 1210 Advanced Metal Working**

**5 credit hours**

**165 Classroom Hours = 30 Lecture Hours + 135 Lab Hours**

Auto body repair of frames, chassis, body interior and exterior, including glass, trim and upholstery removal and installation. Prerequisite: AUTB 1110 or permission of instructor. Fee \$20.

### **AUTB 1220 Advanced Auto Body Painting**

**5 credit hours**

**165 Classroom Hours = 30 Lecture Hours + 135 Lab Hours**

Emphasis on paint application and matching conventionally and with computers, including feather edging using single stage and base coat/clear coat, spot repairs, blending techniques and power buffing. Prerequisite: AUTB 1120 or permission of instructor. Fee \$30.

### **AUTB 1230 Automotive Electrical**

**2 credit hours**

**60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

Electrical system fundamentals, batteries, charging systems, horns, lights and practical problems with the electrical system.

### **AUTB 1240 Job Estimating**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Practice in writing estimates, repair methods and procedures, and business practices used in the auto body industry.

### **AUTB 1250 Auto Air Conditioning**

**2 credit hours**

**60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

Repair, charging and testing of auto air conditioning units. Fee \$30.

### **AUTB 1510 Frame Repair & Alignment**

**6 credit hours**

**180 Classroom Hours = 45 Lecture Hours + 135 Lab Hours**

Safety and function of equipment. Proper procedures for repairing structural damage to both unitized and full frame vehicles.

### **AUTB 1520 Wheel Alignment**

**3 credit hours**

**90 Classroom Hours = 22 Lecture Hours + 68 Lab Hours**

Basic front-end alignment, principles and functions of steering components.

### **AUTB 1530 Auto Body Mechanics**

**3 credit hours**

**90 Classroom Hours = 22 Lecture Hours + 68 Lab Hours**

Replacement of collision damaged drive train and mechanical components.

### **AUTB 1710 Auto Body Repair**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Auto body mechanics, safety, small dent removal, basic metal straightening and damage analysis. Fee \$60.

### **AUTB 1720 Auto Body Repair, Advanced**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Dent removal, plastic filling, sanding, sheet metal repair and replacement of glass. Fee \$60.

### **AUTB 1730 Auto Body Component Repairs**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Auto body, MIG, gas and plastic welding, and rust and plastic repair. Fee \$60.

### **AUTB 1740 Auto Body Major Component Repair**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Collision repair, including replacement of fenders, doors and quarter panels, and alignment of body parts. Fee \$60.

### **AUTB 1750 Auto Body Painting & Refinishing**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Paint application and safety, panel painting, color sanding, spray gun adjustment and primer techniques. Fee \$60.

### **AUTB 1760 Auto Body Painting, Advanced**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Advanced painting in relation to color matching, complete paint jobs, sanding and polishing. Fee \$60.

### **AUTB 1770 Auto Body Interior Repair**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Headliner installation and replacement of trim panel, dash pad and vinyl roof. Fee \$60.

### **AUTB 1780 Auto Body Interior Repair, Advanced**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Advanced interior trim repair, concentrating on headliner and vinyl roof installation. Fee \$60.

### **AUTB 2000 English Wheel Techniques**

**3 credit hours**

**105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

English wheels are the perfect tool for giving students hands on experience in metal shaping. With practice and patience students can form just about anything pertaining to automotive body panels, motorcycle gas tanks, and many other types of vehicles.

# COURSE DESCRIPTIONS

## **AUTB 2010 Adv Unibody/Frame Realignment**

**3 credit hours**

**105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

Auto Body repair of car frames and unibody cars. Prerequisites: AUTB 1005, AUTB 1510, and sophomore standing.

## **AUTB 2020 Repairing Automotive Plastics**

**3 credit hours**

**105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

After studying this course student should be able to repair automotive plastics, identify and explain the different types of plastics used in automobiles. Prerequisites: AUTB 1005, AUTB 1510, and sophomore standing.

## **AUTB 2030 Restoring Corrosion Protection**

**3 credit hours**

**105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

Changes in vehicle construction have demanded corrosion protection treatments from the manufacturer. This in turn places demands on the collision repair industry to replace this protection during and after the repair process. If the protection is allowed to deteriorate, it can affect the structural integrity and safety of the vehicle. Prerequisites: AUTB 1005 and sophomore standing.

## **AUTOMOTIVE TECHNOLOGY**

### **AUTO 1005 Safety**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Specific safety practices for auto mechanics shops.

### **AUTO 1105 Gasoline Engine Design & Fundamentals**

**3 credit hours**

**105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

Design and construction. Engine components, cooling, lubrication and ignition systems, engine classification and parts identification. . Prerequisite: AUTO 1005 and Corequisite: AUTO 1125. Fee \$30.

### **AUTO 1125 Automotive Engine Repair**

**4 credit hours**

**150 Classroom Hours = 15 Lecture Hours + 135 Lab Hours**

Engine overhaul, disassembly, service of cylinder head valve train, valves, crankshaft, main bearing, connecting rods and bearings, camshaft, timing gear, engine block, cylinder and rings. Corequisite: AUTO 1105 or permission of instructor. Fee \$50.

### **AUTO 1140 Applied Automotive Welding**

**2 credit hours**

**48 Classroom Hours = 24 Lecture Hours + 24 Lab Hours**

Gas welding, cutting, arc, and mig in the transportation field. Prerequisite: AUTO 1005.

### **AUTO 1170 Equipment Maintenance**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Shop safety and equipment maintenance; selection, and use of tools, drill sizes, tap and dies, files and pipe and brass fitting.

### **AUTO 1200 Automotive Suspension System**

**2 credit hours**

**60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

Manual and power steering, service procedures and operation wheel balancing on and off the automobile. Fee \$20.

### **AUTO 1215 Automotive Brake Systems**

**4 credit hours**

**150 Classroom Hours = 15 Lecture Hours + 135 Lab Hours**

Brake theory and system service, maintenance, operation and testing, including antilock brake systems. Fee \$20.

## **AUTO 1230 Mechanics Electrical Systems**

**4 credit hours**

**120 Classroom Hours = 60 Lecture Hours + 60 Lab Hours**

Basic electrical principles, automobile circuits, batteries, alternators, starters and other systems. Fee \$20.

## **AUTO 1265 Body Controls**

**2 credit hours**

**60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

Theory and repair of automotive accessory systems. Prerequisite: AUTO 1005 and Corequisite: AUTO 1230. Fee \$20.

## **AUTO 1500 Automotive Parts Management I**

**0.5 credit hour**

**23 Classroom Hours = 23 Lab Hours**

This course will prepare the student for a possible career in the automotive parts sales field.

## **AUTO 1505 Automotive Parts Management II**

**0.5 credit hour**

**23 Classroom Hours = 23 Lab Hours**

This course will prepare the student for a possible career in the automotive parts sales field.

## **AUTO 1710 Auto Mechanics**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Shop procedure and automotive engine design and operation in relation to repair and reconditioning.

## **AUTO 1720 Auto Mechanic Maintenance**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Engines, electrical, electronic and hydraulic systems; and proper maintenance practices.

## **AUTO 1725 Automotive Preventive Maintenance & Minor Repair**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

This course is designed for students to learn fundamental maintenance and repair of an automobile accomplished with a basic set of hand tools. Fee \$20.

## **AUTO 1730 Auto Engine Rebuild**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Practical hands-on instruction regarding principles of engine rebuilding, explain and demonstrate the use of boring bars, cylinder head rebuilding, and use of measuring devices to measure cylinder bores and other engine specifications needed to rebuild an engine.

## **AUTO 1735 Automotive Mechanical Customizing & Performance**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

This class is designed to instruct the student in engine performance enhancement and restoration. Fee \$25.

## **AUTO 1740 Auto Fuel Systems & Carburetion**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Fuel systems and carburetion in relation to service and maintenance. Fee \$20.

## **AUTO 1750 Auto Electrical Systems Diagnosis & Repair**

**2 credit hours**

**60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

The electrical diagnosis of charging, starting and wiring systems of the automobile. Will work with wiring diagrams, show how to test battery, alternator, starters, and wiring shorts using volt-ohm meters and test lights. Learn how to rebuild alternators and starters and make wire repairs. Fee \$20.

**AUTO 1755 Wheel Alignment****2 credit hours****60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

Wheel alignment maintenance and repair. Fee \$20.

**AUTO 1770 Transmissions-Standard & Automatic****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Principles, service and repair of standard and automatic transmissions. Fee \$20.

**AUTO 1790 Auto Computerized Tune-up****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Explain the workings of the computerized engine control system, using volt-ohm meters, retrieve trouble codes, pinpoint problems. Use of simple testers that are more readily available to the general mechanic, and demonstration of the hand-held scanners and the big scopes. Fee \$20.

**AUTO 2200 Automotive Service Management I****0.5 credit hour****23 Classroom Hours = 23 Lab Hours**

This course will prepare students for a career in the Automotive Service Advisory field.

**AUTO 2205 Automotive Service Management II****0.5 credit hour****23 Classroom Hours = 23 Lab Hours**

This course will prepare students for a career in the Automotive Service Advisory field.

**AUTO 2300 Adv. Electronics & Computers****4 credit hours****150 Classroom Hours = 60 Lecture Hours + 90 Lab Hours**

Preparation for diagnosing electrical problems and digital multimeter use. Electrical circuits, series, parallel, series parallel circuits, troubleshooting; checking resistance, load and capacities; operation of computerized electrical systems, (ECM) Electronic Control Modules and microprocessors. Prerequisites: AUTO 1230 or permission of instructor. Fee \$25.

**AUTO 2315 Automotive Drive Lines****4 credit hours****120 Classroom Hours = 30 Lecture Hours + 90 Lab Hours**

Clutch systems design, diagnosis and repair; rear axle systems design, diagnosis and repair; front wheel drive axle systems design, diagnosis and repair; drive shaft design, diagnosis and repair. Fee \$25.

**AUTO 2345 Engine Performance & Drivability****3 credit hours****105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

Procedures, problems, and diagnosis; including primary and secondary scope patterns, ignition systems, charging and starting systems, emission control designs and air pump maintenance. Prerequisites: AUTO 1005, AUTO 1230, and Co-requisites: AUTO 2300 and AUTO 2350. Fee \$25.

**AUTO 2350 Advanced Automotive Diagnostic****3 credit hours****105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

This class deals with the theory, operation, diagnoses, and repair of the various systems effecting the performance and drivability of the automobile as a whole. This class will focus mainly on scan tool and oscilloscope diagnostics.

**AUTO 2410 Standard Transmissions & Transfer Cases****3 credit hours****105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

Manual transmissions, transaxle, and transfer case design, operation, maintenance, and repair. Fee \$25.

**AUTO 2415 Automatic Transmissions****4 credit hours****150 Classroom Hours = 15 Lecture Hours + 135 Lab Hours**

Automatic transmission design, operation and disassembly; fluid couplings, torque converters, clutches, band materials, servos, valve bodies, pressure and power flow. Fee \$35.

**AUTO 2430 Air Conditioning & Climate Control****4 credit hours****150 Classroom Hours = 15 Lecture Hours + 135 Lab Hours**

Repair and troubleshooting of air conditioning and climate control systems. Prerequisite: TRAN 1005. Fee \$40.

**AUTO 2460 Preparing for ASE Certification****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

This class will prepare students to take ASE certification exams. It will cover ASE (Automotive Service Excellence) history, types of questions, certification areas, and reasons for becoming a certified technician.

**AVIATION****AVIA 1020 Introduction to Flight****1 credit hour****16 Classroom Hours = 16 Lecture Hours**

A short introduction to the realm of flight intended to familiarize the student with the actual flight operation of an aircraft. Involves approximately 10-15 hours of flight instruction. Course is completed when the student takes his/her first solo flight.

**AVIA 1210 Basic Ground Training****3 credit hours****48 Classroom Hours = 48 Lecture Hours**

Guides those interested in earning either a pilot's certificate or ground instructor certificate through all of the necessary subject areas. Successful completion prepares the student for the federal written exam.

**AVIA 2010 Intermediate Flight****2 credit hours****32 Classroom Hours = 32 Lecture Hours**

Approximately 40 hours of flight training which completes the application requirements for a Private Pilot's Certificate issued by the Federal Aviation Administration. The course is completed when the student successfully completes the oral examination and check ride with the FAA examiner. Prerequisite: AVIA 1020 or equivalent training.

**AVIA 2310 Advanced Ground Training****3 credit hours****48 Classroom Hours = 48 Lecture Hours**

Intended for those interested in gaining more than a basic knowledge of flight. Continues into advanced systems, instrument flight, and complex aircraft operation. Completion qualifies the student for the instrument flight written examinations. Prerequisite: AVIA 1210 or permission of instructor.

**AVIA 2350 Advanced Flight****3 credit hours****48 Classroom Hours = 48 Lecture Hours**

Thirty to forty hours of flight instruction required to qualify for the practical portion of the instrument rating. Prerequisite: AVIA 2310 or current enrollment.

**BIOLOGY****BIOS 1010 General Biology****4 credit hours** 📖 📱**75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

This course covers fundamental processes of cells and organisms, cell structure, genetics, evolution, classification, diversity, and interaction of organisms at the molecular, cellular, organismic, ecosystems, and biosphere level. It is designed as both a course for non-majors and as a foundation course



# COURSE DESCRIPTIONS

for those planning additional work in biology. Includes lab. . Prerequisite: High school biology and chemistry strongly recommended. Fee \$15.

## **BIOS 1011 General Biology Lab**

Lab for General Biology. Corequisite: BIOS 1010.

## **BIOS 1060 Birds of Nebraska**

**2 credit hours** 🔄

### **30 Classroom Hours = 30 Lecture Hours**

A survey of general avian biology, ecology, and systematic. Emphasis will be on natural history and identification of Nebraska species. Field trips required.

## **BIOS 1090 General Botany**

**4 credit hours** 🔄 📖

### **75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

A basic study of plants and plant-like organisms, including topics such as anatomy, physiology, growth, reproduction, morphology, taxonomy, genetics, and evolution. Leads to an understanding of economic importance and relationships to the environment. Prerequisite: BIOS 1010 or equivalent or permission of instructor. Fee \$30.

## **BIOS 1091 General Botany Lab**

Lab for General Botany. Corequisite: BIOS 1090.

## **BIOS 1100 Basic Anatomy & Physiology**

**3 credit hours** 🔄 📖

### **45 Classroom Hours = 45 Lecture Hours**

A basic study of the human body systems and their respective functions. Designed for medical office students and those students that need a beginning course in the subject. Non-lab course.

## **BIOS 1110 Microbiology**

**4 credit hours**

### **75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

An introductory study of the morphology, physiology, growth, and reproduction of microorganisms, with emphasis on bacteria. Prerequisite: BIOS 1010 and CHEM 1050 or 1090 or one year of high school chemistry within the last three years, or permission of instructor. Fee \$30.

## **BIOS 1111 Microbiology Lab**

Lab for Microbiology. Corequisite: BIOS 1110.

## **BIOS 1120 Introduction to Zoology**

**4 credit hours** 🔄 📖

### **75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

A survey of the animal kingdom with emphasis on broad zoological principles. The evolution, distribution, ecology and current importance of major animal groups and animal-like organisms will be studied. Prerequisite: BIOS 1010 or equivalent or permission of instructor. Fee \$30.

## **BIOS 1121 Introduction to Zoology Lab**

Lab for Introduction to Zoology. Corequisite: BIOS 1120.

## **BIOS 1200 Ecology/Environment**

**3 credit hours** 🔄 📖

### **45 Classroom Hours = 45 Lecture Hours**

An introductory analysis of the fundamental principles of environmental science - including natural resources, the scientific method, pressures on the global environment and concepts of sustainability and sustainable development.

## **BIOS 1210 Ecology/Environment w/Lab**

**4 credit hours** 🔄 📖

### **75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

An introductory analysis of the fundamental principles of environmental science - including natural resources, the scientific method, pressures on the global environment and concepts of sustainability and sustainable development. This course includes a lab portion.

## **BIOS 1400 Introduction to Nutrition**

**3 credit hours** 🔄 📖

### **45 Classroom Hours = 45 Lecture Hours**

Principles of nutritional science with regard to the functions of various nutrients in the human body and the special nutrient requirements

of individuals based on age, sex, occupation, and condition of health. Recommended for pre-nursing, physical education, and family and consumer science emphases.

## **BIOS 1600 Current Issues in Biology**

**3 credit hours** 🔄 📖

### **45 Classroom Hours = 45 Lecture Hours**

This course reflects issues discussed in the current world of science. The topics may cover Cancer, Biological Terrorism, HIV-AIDS, Emerging Infectious Diseases, Stem Cells, Alzheimer's and the Human Genome. Topic study will reflect the scientific and historical basis, the current status and the affect on society.

## **BIOS 2120 Genetics**

**3 credit hours** 🔄 📖

### **45 Classroom Hours = 45 Lecture Hours**

An introductory analysis of the fundamental principles of heredity including Mendelian inheritance, mutations, and applied genetics. Non-lab course.

## **BIOS 2140 Genetics**

**4 credit hours** 🔄

### **75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

An introductory analysis of the fundamental principles of heredity including Mendelian inheritance, mutations, and applied genetics. This is a lab required course.

## **BIOS 2141 Genetics Lab**

Lab for BIOS 2140 Genetics. Corequisite: BIOS 2140.

## **BIOS 2250 Human Anatomy & Physiology I**

**4 credit hours** 🔄

### **75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

A study of the anatomical and physiological processes of the systems comprising the human body. Subject matter includes the structure and function of cells and tissues of the human body. Emphasis will be placed on the skeletal, muscular and nervous systems. Prerequisite: BIOS 1010 or equivalent or a strong background in high school biology strongly recommended or permission of instructor. Fee \$30.

## **BIOS 2251 Human Anatomy & Physiology I Lab**

Lab for Human Anatomy and Physiology I. Corequisite: BIOS 2250.

## **BIOS 2260 Human Anatomy & Physiology II**

**4 credit hours** 🔄

### **75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

A continued study of the physiological processes of the human body; areas emphasized will be the endocrine, cardiovascular, lymphatic, respiratory, digestive, excretory and reproductive systems. Prerequisite: BIOS 2250 or permission of instructor. Fee \$15.

## **BIOS 2261 Human Anatomy & Physiology II Lab**

Lab for Human Anatomy and Physiology II. Corequisite: BIOS 2260.

## **BIOS 2300 Introduction to Biotechnology I**

**4 credit hours**

### **75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

Examination of fundamental principles of biotechnology including biotechnology developments past and present, cellular organization, measurements and solution preparation, DNA structure and function, sources of DNA, Polymerase Chain Reaction and Gel Electrophoresis. Designed for science majors.

## **BIOS 2301 Introduction to Biotechnology I Lab**

Lab for Introduction to Biotechnology. Corequisite: BIOS 2300.

## **BIOS 2310 Introduction to Biotechnology II**

**4 credit hours**

### **75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

Examination of fundamental principles of biotechnology including biotechnology developments past and present, advanced protein studies, and producing recombinant DNA. Designed for science majors.

## **BIOS 2311 Introduction to Biotechnology II Lab**

Lab for Introduction to Biotechnology II. Corequisite: BIOS 2310.

**BIOS 2500 Scientific Research Experience****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

Under supervision of a faculty member, students will conduct original research in the field of biology. Students will select their own or participate in ongoing research projects, write a literature review, design and conduct experiments, analyze data, and present their conclusions in a public seminar. Designed for students intending on attending graduate or professional school or pursuing careers in biological science.

**BUILDING CONSTRUCTION TECHNOLOGY****BLDC 1005 Safety****1 credit hour****15 Classroom Hours = 15 Lecture Hours**

Specific safety practices that apply to the building construction trade.

**BLDC 1105 Framing Construction****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

Basic introduction to residential framing and residential codes. Fee \$15.

**BLDC 1115 Framing Construction Lab****3 credit hours****135 Classroom Hours = 135 Lab Hours**

Lab for Framing Construction. Fee \$15.

**BLDC 1125 Exterior Finish****2 credit hours****30 Classroom Hours = 30 Lecture Hours + 135 Lab Hours**

Exterior project finish including window and door installation, soffit and fascia, sheathing, insulation, ventilation, siding and roofing.

**BLDC 1130 Drafting****2 credit hours****45 Classroom Hours = 22 Lecture Hours + 23 Lab Hours**

Drawing and designing a floor plan with emphasis on measurements, room size, utility placement, door and window arrangement and building specifications.

**BLDC 1135 Exterior Finish Lab****3 credit hours****135 Classroom Hours = 135 Lab Hours**

Lab for Exterior Finish. Fee \$15

**BLDC 1140 Blueprint Reading****2 credit hours****45 Classroom Hours = 22 Lecture Hours + 23 Lab Hours**

Blueprint reading in the construction field, including lines, symbols, abbreviations, schedules and building specifications for the purpose of building layout and estimating.

**BLDC 1160 Introduction to Computer Aided Design****2 credit hours****45 Classroom Hours = 22 Lecture Hours + 23 Lab Hours**

Drawing and designing a floor plan with emphasis on measurements, room size, utility placement, door and window arrangement and building specifications.

**BLDC 1180 Plumbing****1 credit hour****45 Classroom Hours = 45 Lab Hours**

An introduction to plumbing.

**BLDC 1210 Interior Wall & Cabinetry****5 credit hours****165 Classroom Hours = 30 Lecture Hours + 135 Lab Hours**

Students will learn about different types of drywall and their uses and how they relate to fire codes as well as moisture control. Installation and finishing of drywall, plastering, painting, and paneling. Construction of cabinet boxes as well as the types of joints on face frames and doors including modular, job built, and special cabinetry. Fee \$10.

**BLDC 1215 Interior Trim & Finish II****4 credit hours****120 Classroom Hours = 30 Lecture Hours + 90 Lab Hours**

Production, finish and installation of interior jambs, trim, doors, built-ins and cabinetry, plastic laminate, floor and wall covering.

**BLDC 1220 Interior Trim & Finish I****5 credit hours****165 Classroom Hours = 30 Lecture Hours + 135 Lab Hours**

Students will learn about estimating production costs, finish and installation of interior jambs, trim doors, built-ins and cabinetry, plastic/solid surface laminates, floor and wall covering and labor costs associated with interior applications.

**BLDC 1225 Building City Codes & State Standards****1 credit hour****15 Classroom Hours = 15 Lecture Hours**

A study of the uniform building code.

**BLDC 1240 Green Build Technology****2 credit hours****60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

New techniques to enhance existing structure weatherization as well as construction techniques using renewable resources. (Replaces BLDC 1550.)

**BLDC 1270 Spreadsheet & Estimating****1 credit hour****16 Classroom Hours = 16 Lecture Hours**

Residential blueprints, material take-off forms for formulas and estimating quantities and introduction to computer spreadsheets for estimating, job costing, and cost controls. (Replaces BLDC 1260.)

**BLDC 1510 Concrete, Masonry & Commercial Construction****6 credit hours****180 Classroom Hours = 45 Lecture Hours + 135 Lab Hours**

Hand and power tools, building materials, site preparation, concrete forming, flat concrete finishing, brick and block laying, and floor and wall construction.

**BLDC 1710 Carpentry Techniques & Power Tools****2 credit hours****45 Classroom Hours = 22 Lecture Hours + 23 Lab Hours**

Framing, sheathing, siding and shingling and use of power tools.

**BLDC 1720 Cabinetmaking I****2 credit hours****45 Classroom Hours = 22 Lecture Hours + 23 Lab Hours**

Cabinet construction, materials, techniques and use of power tools. Fee \$30.

**BLDC 1730 Finish Carpentry****2 credit hours****45 Classroom Hours = 22 Lecture Hours + 23 Lab Hours**

Finish techniques and materials for trim work, door installation and moldings.

**BLDC 1760 Concrete & Forming****2 credit hours****45 Classroom Hours = 22 Lecture Hours + 23 Lab Hours**

Estimating, layout, forming, placing and finishing concrete.

**BLDC 2115 Advanced Framing****4 credit hours****180 Classroom Hours = 180 Lab Hours**

Advanced section on framing techniques, layouts, and supervisory responsibilities. Prerequisites: BLDC 1105 and 1115. (Replaces BLDC 2110.)

**BLDC 2180 Plumbing****2 credit hours****60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

An introduction to the basics of plumbing.

# COURSE DESCRIPTIONS

## **BLDC 2220 Cabinetry**

**4 credit hours**

**120 Classroom Hours = 30 Lecture Hours + 90 Lab Hours**

Installation and finishing construction of built-ins and special cabinetry.

## **BLDC 2230 Countertops, Fabrication & Installation**

**2 credit hours**

**90 Classroom Hours = 90 Lab Hours**

This class outlines the basic fabrication and installation techniques for both laminate and solid surface. It will also cover the installation of both surface mounted and under mounted sinks. (Replaces BLDC 2125.)  
Prerequisite: BLDC 1005.

## **BLDC 2240 Construction Internship**

**1.5 credit hours**

**90 Classroom Hours = 90 Internship Hours**

Hands on experience working as an employee with a local construction business coordinated by Mid-Plains' Building Construction Department.

## **BLDC 2710 Carpentry Power Tools & Techniques, Advanced**

**2 credit hours**

**45 Classroom Hours = 22 Lecture Hours + 23 Lab Hours**

Extensive building framing, components and truss construction.

## **BLDC 2720 Advanced Cabinetmaking**

**2 credit hours**

**45 Classroom Hours = 22 Lecture Hours + 23 Lab Hours**

Constructing custom cabinets, casework, furniture and special projects. Fee \$30.

## **BLDC 2740 Cabinet & Furniture Making**

**2 credit hours**

**45 Classroom Hours = 22 Lecture Hours + 23 Lab Hours**

Cabinet and furniture history, design principles, materials, hardware, decoration, joinery, finishes and special construction.

## **BUSINESS**

### **BSAD 1000 Leadership & Team Development**

**1.5 credit hours** 📖

**24 Classroom Hours = 24 Lecture Hours**

Applies leadership practices common to successful leaders through team building activities. This class is designed for the Associate of Applied Science Degree in Business.

### **BSAD 1010 Personal & Professional Development**

**3 credit hours** 📖 📖

**45 Classroom Hours = 45 Lecture Hours**

Special emphasis on relating image and social awareness to job success. Covers on-the-job situations of problem-solving, time management, goal setting, business etiquette, listening skills, work groups, and the relationship between productivity and job attitude. A major emphasis will be placed on developing productive work ethics. This class is designed for the Associate of Applied Science Degree in Business.

### **BSAD 1030 Business & Professional Speaking**

**3 credit hours** 📖 📖

**45 Classroom Hours = 45 Lecture Hours**

The basic objective of this course is to provide students with a variety of communication experiences that might be encountered in the business world. These experiences are intended to help students achieve maximum effectiveness in their day-to-day relations with people at work. Classroom presentations are required. This class is designed for the Associate of Applied Science Degree in Business, Information Technology, Business Office Technology, and Graphic Design.

### **BSAD 1040 Intro to Work-Based Learning**

**4 credit hours**

**240 Classroom Hours = 240 Lab Hours**

Real World learning cannot be experienced in one hour a day, for 180 days of a standard school year. This eight-week summer course provides students the opportunity to be employees and managers of a graphic

sign company, School House Graphic Products. The work-based learning program will focus on skills needed to succeed in the job market, including leadership, listening, team membership, and communication skills. This work experience provides students with the opportunity to apply their knowledge, learn new techniques and get on-the-job training in the graphic sign industry. The summer job will cover on-the-job situations including the job application process, problem solving skills, time management, goal setting, business etiquette, listening skills, work groups, and the relationship between productivity and job attitude. A major emphasis will be placed on developing productive work ethics.

### **BSAD 1050 Introduction to Business**

**3 credit hours** 📖 📖

**45 Classroom Hours = 45 Lecture Hours**

An introductory study and overview of the role of business in society as well as a discussion of the various disciplines of business including an overview of business organization, management, marketing, human resource management, and finance. Also a study and discussion of various strategies for success of specific public and private firms as well as small business. Business vocabulary used to understand, analyze, and interpret business news and information. [Offered as BSAD 1020: Introduction to Business prior to Fall 2016]

### **BSAD 1060 Introduction to Sports Management**

**3 credit hours** 📖 📖

**45 Classroom Hours = 45 Lecture Hours**

The purpose of this course is to provide an exploration into the specialized field of sports management. Students will be introduced to the history of sports management, management principles and how to apply them to sports management, financial and economic principles as they apply to sports management, and legal and ethical issues within the industry.

### **BSAD 1070 Customer Service**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

The purpose of this course is to provide an exploration into the specialized field of sports management. Students will be introduced to the history of sports management, management principles and how to apply them to sports management, financial and economic principles as they apply to sports management, and legal and ethical issues within the industry.

### **BSAD 1080 Personal Finance and Business Operations**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course is designed to introduce the concepts associated with owning and operating a successful small business as well as the concepts of achieving financial independence through tax planning, protection planning, credit analysis and budgeting.

### **BSAD 1090 The Job Application Process**

**1 credit hour** 📖 📖

**15 Classroom Hours = 15 Lecture Hours**

This course will aid the student in developing methods for successful customer relations while improving upon an attitude of superior customer service which is critical to success in all organizations. Students will learn how to enhance customer relationships and differentiate between internal and external customers in a service and manufacturing organization.

### **BSAD 1100 Personal Finance**

**3 credit hours** 📖 📖

**45 Classroom Hours = 45 Lecture Hours**

A practical approach to managing one's personal finances that includes financial record keeping and personal federal income tax, major consumer purchases and financing, investment fundamentals, and other financial topics of interest. Note: This course may not transfer toward general education or degree requirements at some four-year colleges.

**BSAD 1110 Introduction to Events Management****3 credit hours** 📺 📖**45 Classroom Hours = 45 Lecture Hours**

The purpose of this course is to provide an exploration into the specialized field of “event management.” Students will become familiar with management techniques and strategies required for successful planning, promotion, implementation and evaluation of special events.

**BSAD 1120 Social Issues/Nonprofit Sector****3 credit hours** 📺 📖**45 Classroom Hours = 45 Lecture Hours**

This course examines the scope of the nonprofit sector and the role nonprofit organizations play in our society when dealing with complex social issues such as social services, poverty, homelessness, animal welfare, healthcare, child abuse, education, arts, religion, legal reform and other timely social issues.

**BSAD 1130 Entrepreneur Venture****1 credit hour****15 Classroom Hours = 15 Lecture Hours**

Students will gain an introductory understanding of entrepreneurship and the challenges, rewards, and components of owning and running a small business. This course is intended for WEC business technology students only.

**BSAD 1500 Leadership Behavior****1.5 credit hours****24 Classroom Hours = 24 Lecture Hours**

This course focuses on developing behaviors and habits that lead to positive and productive lifestyles. Students will understand that leadership is a 360-degree proposition – we lead ourselves before we lead others. With this insight, students will develop personal habits and exhibit behaviors that lead to positive influence with others.

**BSAD 2000 Introduction to Leadership Concepts****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

This course introduces leadership theory by focusing on definitions of leadership, exploring historical and contemporary leadership theory, and examining the role of leaders in various contexts. Students will develop foundational leadership and collaboration skills through a variety of group activities and exercises.

**BSAD 2010 Principles of Selling****3 credit hours** 📺**45 Classroom Hours = 45 Lecture Hours**

An introduction to salesmanship. Covers the sales process and techniques effectively employed in selling. Includes sales demonstrations, including demonstrations by students.

**BSAD 2020 Leadership Development****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

This course helps to prepare students to assume increasingly responsible leadership roles in their personal, professional and academic lives and their applicability to leaders of the past and present, but also includes substantial hands-on, experiential learning opportunities. Readings are from the PTK Leadership Training Manual, and the course is taught by PTK/Kellogg Foundation Certified Leadership Instructors.

**BSAD 2030 Practical Leadership****3 credit hours** 📺**45 Classroom Hours = 45 Lecture Hours**

The mission of the Leadership Institute is to develop effective community leaders from every section of Southwest Nebraska who will strengthen and transform the area.

**BSAD 2050 Strategic Planning & Leadership****3 credit hours** 📺 📖**45 Classroom Hours = 45 Lecture Hours**

This course is designed to teach leadership skills and strategic planning by having students take on the role of board members and consultants and expose them to the realities of strategic planning in a simulated environment. Students will gain the knowledge needed to facilitate, formulate, execute, and monitor strategic planning for any organization.

**BSAD 2060 Introduction to Sports Facilities Management****3 credit hours** 📖**45 Classroom Hours = 45 Lecture Hours**

The purpose of this course is to provide a general introduction to sports facilities management. Students will be introduced to the concepts of facility management, facilities planning, site design, construction considerations, facility systems, operations and maintenance. Students will be introduced to the concepts of marketing and sales as well as budgeting for events and facility upkeep. Legal responsibilities as well as security considerations will also be covered.

**BSAD 2070 Risk Management for Events & Sports****3 credit hours** 📺 📖**45 Classroom Hours = 45 Lecture Hours**

Students will learn to recognize potential risks in special and sporting events and to prioritize those risks for action and minimization. Practical strategies to manage risks of people, property and reputation are stressed. Students will also learn how to comply with legal regulations such as permitting, insurance, vendor contracts, federal laws, state laws and local laws as they pertain to events. Fire codes, handicap compliance and security considerations when dealing with minors will also be examined.

**BSAD 2080 Event Marketing & Sponsorship****3 credit hours** 📺**45 Classroom Hours = 45 Lecture Hours**

This course is a study of the principles and techniques of effective promotions. The course is designed to provide foundation skills in sponsorship, sales, public relations and event marketing. Emphasis is on creating an integrated sponsorship and marketing plan for events. Students will also focus on how the sponsorship plan fits into the overall budget of an event.

**BSAD 2100 Organizational Behavior****3 credit hours** 📺 📖**45 Classroom Hours = 45 Lecture Hours**

This course provides an understanding of the complex interrelationships of people in formal organizations that affect the achievement of organizational goals. Course topics include organizational culture, structure and design; team dynamics; motivation; leadership; conflict management; power, influence and organizational politics; communications; decision-making; and change implementation.

**BSAD 2110 Nonprofit Management & Leadership****3 credit hours** 📺 📖**45 Classroom Hours = 45 Lecture Hours**

This survey course will provide an overview of nonprofit law and operations. The course begins with the legal structure of the sector, and also covers both general management practices that apply to all public and private organizations (marketing, inter-organizational relations, human resources, ethics and financial management) and practices unique to nonprofits (boards and governance, volunteer management, legal responsibilities, fundraising, etc.).

**BSAD 2120 Fundraising for a Cause****3 credit hours** 📺 📖**45 Classroom Hours = 45 Lecture Hours**

Students will be introduced to the process and methods used in fundraising such as direct mail, online asks, major donors, bequest and special events. Special attention will be paid to donor-centered fundraising and ethics in fundraising. Students will analyze needs and develop fundraising strategies for a nonprofit organization of his/her choosing.

# COURSE DESCRIPTIONS

## **BSAD 2210 Supervisory Management**

**3 credit hours** 📄 📅

### **45 Classroom Hours = 45 Lecture Hours**

Comprehensive cases will be used to examine the functions of management that supervisors must perform. Productivity and quality measurements are analyzed. In addition, communication, ethics, and organizational policies are explored. This class is designed for the Associate of Applied Science Degree in Business.

## **BSAD 2250 Business Communications**

**3 credit hours** 📄 📅

### **45 Classroom Hours = 45 Lecture Hours**

This course focuses on the introduction to the basic styles of communication in the business world. The overall objective of this course is to familiarize students with the principles of written and oral communication needed for business. Focus will be given on how to effectively write business messages (routine, bad-news, goodwill, persuasive, etc.) and business reports. Focus will also be given on how to effectively communicate orally and deliver a formal presentation in the business work environment. Correct usage of the language is emphasized. This course is a Writing Intensive course. Prerequisite: Appropriate score on placement test or have passed ENGL 0990 and/or ENGL 0920 with a "C" or higher, or have passed OFFT 1070 with a "C" or higher.

## **BSAD 2340 Introduction to Marketing**

**3 credit hours** 📄 📅

### **45 Classroom Hours = 45 Lecture Hours**

This course explores strategic planning, marketing management philosophies, consumer markets, consumer buyer behaviors, advertising, sales promotions and public relations. A formalized marketing plan is written and presented in this class. This class is designed for the Associate of Applied Science Degree in Business.

## **BSAD 2350 Advertising**

**3 credit hours** 📄 📅

### **45 Classroom Hours = 45 Lecture Hours**

A course designed to apply advertising functions within the broader context of business and marketing. Prerequisite: BSAD 2340 or 2520.

## **BSAD 2370 E-Marketing**

**3 credit hours** 📄 📅

### **45 Classroom Hours = 45 Lecture Hours**

This course applies the techniques of using electronic marketing in the workplace. Strategies for businesses that may initiate or reassess the overall effectiveness and value of digital elements will be emphasized. The course will specifically focus on integrating E-marketing tools, including e-mail lists and databases, into total marketing efforts along with organizational goals and functions. Ethical and societal implications of e-commerce on the marketplace, customer base, and employee will be included. Prerequisite: BSAD 2340 or 2520.

## **BSAD 2440 Gender Issues in Management**

**1 credit hour**

### **15 Classroom Hours = 15 Lecture Hours**

An individualized program of study that will enable women to consider or prepare for a management position in today's business world. Units on leadership, woman's role in a "man's world," human relations, human behavior, communication, and management of time.

## **BSAD 2510 Business Computer Systems**

**4 credit hours** 📄 📅

### **60 Classroom Hours = 60 Lecture Hours**

This course explores the integration of technology into the business environment through the application of basic computer concepts and terminology. The course addresses basic competencies and application of computer skills in basic file management, word processing, spreadsheets, database and presentation software using the Office Suite. NOTE: Not open to students who have previously completed OFFT 2150.

## **BSAD 2520 Principles of Marketing**

**3 credit hours** 📄 📅

### **45 Classroom Hours = 45 Lecture Hours**

A study of the development of an effective marketing program including consumer behavior, product, pricing, distribution, and promotional strategies. [Offered as BSAD 2410: Principles of Marketing prior to Fall 2016]

## **BSAD 2540 Principles of Management**

**3 credit hours** 📄 📅

### **45 Classroom Hours = 45 Lecture Hours**

Introduction to management theory and practice with emphasis on the primary functions of planning, organizing, leading and controlling. Topics will include the ever-changing challenges and opportunities within the management field. [Offered as BSAD 2310: Principles of Management prior to Fall 2016]

## **BSAD 2710 Business Law I**

**3 credit hours** 📄 📅

### **45 Classroom Hours = 45 Lecture hours**

A study of the law on contracts, employment, insurance, property, and sales. Emphasis is placed upon the application of the Uniform Commercial Code.

## **BSAD 2720 Business Law II**

**3 credit hours** 📄 📅

### **45 Classroom Hours = 45 Lecture Hours**

A study of the law covering partnerships, corporations, real property, commercial transactions, negotiable instruments, government regulation of businesses, and related topics.

## **BSAD 2745 Business Internship**

**5 credit hours** 📄

### **255 Classroom Hours = 15 Lecture Hours + 240 Internship Hours**

Students will review job descriptions, qualifications, and employer expectations and receive information about their internship responsibilities. Students will experience on-the-job training through a cooperative arrangement with an organization, working a minimum of 240 clock hours under the direction of a sponsoring manager or supervisor. Emphasis is placed on the application of technical knowledge, communication skills, and relationships with others. Students will be required to attend a specified number of business or personal development seminars as approved by the instructor. This class is designed for the Associate of Applied Science in Business Degree Program. (Replaces BSAD 2730, 2740, and 2750.)

## **BSAD 2900 Project Management**

**3 credit hours** 📄 📅

### **45 Classroom Hours = 45 Lecture Hours**

Project management is the discipline of defining and managing the vision, tasks, and resources required to complete a project. This course provides an introduction to the project management process, resource management (time, money, and people), quality control, communications, and risk.

## **BSAD 2950 Vocational Career Tour**

**1 credit hour**

### **15 Classroom Hours = 15 Lecture Hours**

Career exploration into various vocational areas relating to skills, management, labor, experience, and educational requirements pertaining to employment salary and advancements. This unit consists of a 3-4 day field trip to metro/rural regions in the Midwest. Students participating must be members of a vocational organization. Note: This course may not transfer toward degree and/or program requirements at a four-year college. Contact transfer college for information.

BUSINESS OFFICE TECHNOLOGY (Formerly Office Technology)

## **OFFT 1030 Computer Keyboarding**

**1 credit hour**

### **15 Classroom Hours = 15 Lecture Hours**

Instruction designed to teach microcomputer keyboarding using computer-assisted instruction. The contents cover the alphanumeric

keyboard, the ten-key numeric keypad and selected microcomputer special function keys. Not intended for business technology majors. Note: This course may not transfer toward degree and/or program requirements at a four-year college. Contact transfer college for information. Fee \$5.

**OFFT 1050 Keyboarding Speed Building**  
**1.5 credit hours** 

**23 Classroom Hours = 23 Lecture Hours**

This course is designed for individuals who already know the keyboard but wish to improve their typing speed and accuracy for personal or business use. Emphasis is only on speed and accuracy improvement.

**OFFT 1070 Business English**  
**3 credit hours**  

**45 Classroom Hours = 45 Lecture Hours**

Preparation for written communication is vital to communicate effectively in today's workplace. This course emphasizes the basic English grammar, spelling, punctuation, correct word usage, sentence structure, and paragraph construction as it applies to effective written communication in business.

**OFFT 1130 Computer Keyboarding**  
**1.5 credit hours**

**23 Classroom Hours = 23 Lecture Hours**

Basic touch keyboarding instruction in skills needed to input information into computer terminals swiftly and efficiently.

**OFFT 1150 Input Keyboard Technology I**  
**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Introduction to touch keyboarding using the alphabetic and figure symbol keys on a standard computer keyboard. Students will prepare basic documents such as business letters, memos, tables, and basic reports formatting and be introduced to a popular word processing software application. Fee \$10.

**OFFT 1160 Input Keyboard Technology II**  
**3 credit hours**  

**45 Classroom Hours = 45 Lecture Hours**

Reinforce keyboarding techniques and develop speed and accuracy skills needed for effective office employment. Instruction includes hands-on use of various input devices. Extensive preparation of business documents includes the following: business letters, mail merges, memos, tables, reports, forms, and other business related documents. Prerequisite: Typing speed of 25-30 words per minute. Fee \$10.

**OFFT 1310 MOS Certification: Word I**  
**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course is designed to prepare the student for the entry-level MOS (Microsoft Office Specialist) Word exam. Upon completion of the course, the student will have covered objectives for the MOS Word exam. Partial preparation for MOS Certification. Fee \$5.

**OFFT 1320 MOS Certification: MS Excel I**  
**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course is designed to prepare the student for the entry-level MOS (Microsoft Office Specialist) Excel exam. Upon completion of the course, the student will have covered objectives for the MOS Excel exam. Partial preparation for MOS Certification. Fee \$5.

**OFFT 1330 MOS Certification: Access**  
**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course is designed to prepare the student for the entry-level MOS (Microsoft Office Specialist) Access exam. Upon completion of the course, the student will have covered objectives for the MOS Access exam. Partial preparation for MOS Certification. Fee \$5.

**OFFT 1340 MOS Certification: PowerPoint**  
**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course is designed to prepare the student for the MOS (Microsoft Office Specialist) PowerPoint exam. Upon completion of the course, the student will have covered objectives for the MOS PowerPoint Exam.

**OFFT 1350 MOS Certification: Outlook**  
**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course is designed to prepare the student for the MOS (Microsoft Office Specialist) Outlook exam. Upon completion of the course, the student will have covered objectives for the MOS Outlook Exam.

**OFFT 2050 Records Management**  
**3 credit hours**  

**45 Classroom Hours = 45 Lecture Hours**

A study of the record life cycle from creation to disposition. Emphasis is placed on applying the alphabetic filing rules and application to the basic filing systems—alphabetic, numeric, geographic and subject filing. Creation, storage, checkout procedures, retention, transfer and disposition of records. Microfilm, electronic storage and computerized storage and retrieval of records (database). Fee \$10.

**OFFT 2080 Business Mathematics & Calculators**  
**3 credit hours**  

**45 Classroom Hours = 45 Lecture Hours**

Basic math concepts applicable in business situations such as invoicing, discounts, pricing, payroll, basic banking procedures, interest, and practical business applications. Individualized and group instruction in the use and operation of the most commonly used electronic calculators. Prerequisite: Score into MATH 0900 or higher on the Math COMPASS placement test or permission of instructor. Fee \$10.

**OFFT 2150 Integrated Information Processing**  
**3 credit hours**  

**45 Classroom Hours = 45 Lecture Hours**

Introduces students to integrating MS Office Word, Excel, and Access computer applications. Students get experience in developing, creating, and integrating computer software programs to create workplace projects. NOTE: Computer and/or keyboarding skills necessary. Not open to students who have previously completed BSAD 2510.

**OFFT 2170 MS Office Integration**  
**3 credit hours**  

**45 Classroom Hours = 45 Lecture Hours**

This is an advanced computer applications integrated course. Focus will be on how to effectively use the various office suite applications and integrate them to meet project demands of today's electronic workplace. Prerequisite: OFFT 1160 and OFFT 2150 or BSAD 2510 or permission of instructor. Fee \$10.

**OFFT 2270 Transcription/Voice Activation**  
**3 credit hours**  

**45 Classroom Hours = 45 Lecture Hours**

Focus is given to utilizing the current technology tools in today's workplace to effectively transcribe and produce documents. Transcription techniques and skills – spelling, punctuation, proofreading and editing – are stressed. Students will learn how to operate popular voice activation software-- Dragon NaturallySpeaking. Prerequisites: OFFT 1160, typing speed of 50 words per minute, or permission of instructor. Fee \$10.

**OFFT 2310 MOS Certification: MS Word II**  
**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course is designed to prepare the student for the advanced-level MOS (Microsoft Office Specialist) Word Expert exam. Upon completion of the course, the student will have covered objectives for the MOS Expert Word exam. Partial preparation for MOS Certification. Fee \$5.

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## **OFFT 2320 MOS Certification: MS Excel II**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course is designed to prepare the student for the advanced-level MOS (Microsoft Office Specialist) Excel Expert exam. Upon completion of the course, the student will have covered objectives for the Expert Excel exam. Partial preparation for MOS Certification. Fee \$5.

## **OFFT 2350 Administrative Procedures & Management**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Focus is given to meeting the challenges in today's workplace – the digital age. Current issues in the workplace are addressed. Some of the topics include workplace etiquette, business ethics, effective communication techniques, leadership and management, e-business, digital tools, conferences, and future trends. Prerequisite: OFFT 1160.

## **OFFT 2440 Legal Terminology/Transcription**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course is designed to give students the knowledge and understanding of over 900 terms commonly used in the legal profession. The student will learn to define the terms and use them in legal context. Pronunciation guides are provided for each word, and the correct pronunciation is reinforced by taped dictation.

## **OFFT 2450 Legal Office Procedures I**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course introduces students to the legal workplace environment. Focus is given to the types of tasks that students will encounter in the law office setting. In this class emphasis is given to the legal environment, law office management, real estate and business organizations, and probate. Legal terms and forms for non-court documents pertaining to the areas of real estate, contracts, corporations, wills, and probate will be covered.

## **OFFT 2460 Legal Office Procedures II**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Continuation of OFFT 2450. Court procedures and court documents are stressed. In this class emphasis is given to the legal system, litigation process, substantive law, and legal research. The class begins with an overview of the structure of the court system. A study of and practice in preparing frequently used court documents and litigation documents such as motions, complaints, stipulations, answers, judgments, notices of appeal, and briefs will be covered. Prerequisite: OFFT 2450.

## **OFFT 2500 Medical Terminology**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course is designed to equip the student with a usable vocabulary unique to the medical profession field. The student will be able to define and use terms relating to structure of the human body, the skeletal system, muscular system, cardiovascular system, lymphatic and immune systems, respiratory system, digestive system, urinary system, nervous system, the eyes and ears, integumentary system, endocrine system, reproductive systems, diagnostic and imaging procedures, and general medical terminology.

## **OFFT 2520 Coding I**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

A course designed to provide advanced and in depth instruction in ICD10-CM and ICD10-PSC coding, claims management, application and case scenario studies, and interpretation of medical encounter forms. Prerequisite or Corequisite: OFFT 2500, or concurrent enrollment.

## **OFFT 2530 Medical Transcription I**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course is designed to develop proficiency in the use of medical reference texts as well as to develop proficiency in the art of medical transcription. Students will transcribe a number of medical reports and other medical documents covering various procedures and body systems. Prerequisites: OFFT 2500 and OFFT 1160 or equivalent or permission of instructor.

## **OFFT 2540 Medical Transcription II**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

The course provides individualized instruction to develop advanced proficiency in the field of medical transcription. Students will be expected to use the various medical reference materials to aid the transcription process. Students will do advanced work on medical reports and other medical-related documents all using a variety of dictators and covering numerous procedures and body systems. Prerequisites: OFFT 2500 and OFFT 2530.

## **OFFT 2550 Computerized Medical Office Procedures**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Designed to give the student experience similar to what could be expected in various medical-related offices. Medical records, financial records, insurance, scheduling, and telephone use are included. Students will learn to use the computer and medical office software to perform most of these functions. NOTE: Keyboarding ability and basic computer knowledge are necessary. Prerequisite: OFFT 2500 or permission of instructor.

## **OFFT 2560 Coding II**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

A course designed to provide advanced and in depth instruction in CPT and HCPCS, claims management, application and case scenario studies, and interpretation of medical encounter forms. Prerequisite: OFFT 2520.

## **OFFT 2570 Medical Billing & Reimbursement**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

A course designed to provide instruction on a variety of health insurance billing topics such as insurance terminology, documents and forms used for medical billing, electronic submission of claims, legal implications of billing, collections, and reimbursement negotiations. Prerequisite: OFFT 2520 Coding I or concurrent enrollment in Coding I.

## **OFFT 2700 Business Technology Internship Seminar**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Prepares students for internship experience by addressing specific job descriptions, job qualifications, and employer expectations. Students will exchange perceptions and expectations of the work environment. This class is designed for the Associate of Applied Science in Business Technology. Must be taken concurrently with OFFT 2710, 2720, or 2730. Prerequisites: Concurrent enrollment in a Business Technology Internship, permission of a Business Technology Internship supervisor and permission of advisor.

## **OFFT 2710 Business Technology Internship**

**1 credit hour**

**60 Classroom Hours = 60 Internship Hours**

On-the-job training through a cooperative arrangement with business, service, not-for-profit, legal and medical organizations. This class is designed for the Associate of Applied Science in Business Technology. Concurrent enrollment in OFFT 2700 is required. Prerequisite: Completion of at least 30 credit hours toward an AAS in Business Technology Degree, current enrollment in the Business Technology Internship Seminar, permission of the appropriate Business Technology Internship supervisor, and permission of advisor.

**OFFT 2720 Business Technology Internship****2 credit hours****120 Classroom Hours = 120 Internship Hours**

On-the-job training through a cooperative arrangement with business, service, not-for-profit, legal and medical organizations. This class is designed for the Associate of Applied Science in Business Technology. Concurrent enrollment in OFFT 2700 is required. Prerequisite: Completion of at least 30 credit hours toward an AAS in Business Technology Degree, current enrollment in the Business Technology Internship Seminar, permission of the appropriate Business Technology Internship supervisor, and permission of advisor.

**OFFT 2730 Business Technology Internship****3 credit hours****180 Classroom Hours = 180 Internship Hours**

On-the-job training through a cooperative arrangement with business, service, not-for-profit, legal and medical organizations. This class is designed for the Associate of Applied Science in Business Technology. Concurrent enrollment in OFFT 2700 is required. Prerequisite: Completion of at least 30 credit hours toward an AAS in Business Technology Degree, current enrollment in the Business Technology Internship Seminar, permission of the appropriate Business Technology Internship supervisor, and permission of advisor.

**CAREER PLANNING****CAPC 1710 Career Planning****1 credit hour****15 Classroom Hours = 15 Lecture Hours**

This class assists the student in examining the components of career planning. Planning skills and self-assessment instruments will help identify tentative career options. Decision-making strategies, resume writing, interviewing skills, and job search techniques will be reviewed.

**CAPC 1720 Career Assessment/Planning II****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

This class will assist the student in examining, identifying, and acknowledging their personal skills, aptitudes, and abilities they possess and will help them identify career options. Students will be given various assessments to include interest, aptitude and ability indications to help them with career decisions. Students will also develop decision-making strategies, design a resume, practice interviewing skills, and identify job search techniques.

**CHEMISTRY****CHEM 1050 Survey of Chemistry I****4 credit hours** 📖**75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

This course is for non-science major students to study basic chemistry principles, methods and techniques. Study of electronic configurations of atoms, characteristic properties of groups of elements, periodic table, the naming of chemical compounds, chemical reactions, the calculations in chemical reactions and gas laws. Prerequisites: Two years of high school algebra or one year of high school algebra and MATH 1010, or permission of instructor. Fee \$15.

**CHEM 1051 Survey of Chemistry I Lab**

Lab for Survey of Chemistry I. Corequisite: CHEM 1050.

**CHEM 1060 Survey of Chemistry II****4 credit hours****75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

Continuation of CHEM 1050 with an introduction to organic chemistry and nuclear chemistry. Study of radioactivity, nuclear decay, nuclear fission and fusion, functional groups, the structure, isomer, nomenclature, properties of organic compounds and the basic reactions in organic chemistry. Prerequisite: CHEM 1050 or permission of instructor. Fee \$15.

**CHEM 1061 Survey of Chemistry II Lab**

Lab for Survey of Chemistry II. Corequisite: CHEM 1060.

**CHEM 1090 General Chemistry I****4 credit hours****75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

The first semester of a comprehensive year course in chemistry that includes the principles and theories of modern chemistry. This course is designed for students who need a good theoretical background in chemistry, and it is the prerequisite for advanced chemistry courses. Prerequisites: Two years of high school algebra, one year of high school chemistry or permission of instructor. Fee \$15.

**CHEM 1091 General Chemistry I Lab**

Lab for General Chemistry I. Corequisite: CHEM 1090.

**CHEM 1100 General Chemistry II****4 credit hours****75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

The second semester of the comprehensive year course in chemistry. Prerequisite: CHEM 1090 or permission of instructor. Fee \$15.

**CHEM 1101 General Chemistry II Lab**

Lab for General Chemistry II. Corequisite: CHEM 1100.

**CHEM 2410 Organic Chemistry I****4 credit hours****75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

The chemistry of carbon compounds dealing with alkanes, alkenes, alkynes, aromatics, and cyclics. A study of reaction types, reaction mechanisms, and stereochemistry. Prerequisite: CHEM 1090 or 1100 or equivalent. Fee \$15.

**CHEM 2411 Organic Chemistry I Lab**

Lab for Organic Chemistry I. Corequisite: CHEM 2410.

**CHEM 2420 Organic Chemistry II****4 credit hours****75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

A continuation of CHEM 2410, including reactions and preparations of alcohols, phenols, ethers, aldehydes, ketones, carboxylic acids, and amines. Includes spectroscopic identification of organic compounds and the study of other selected topics. Prerequisite: CHEM 2410 or equivalent. Fee \$15.

**CHEM 2421 Organic Chemistry II Lab**

Lab for Organic Chemistry II. Corequisite: CHEM 2420.

**COMPUTER SCIENCE****CSC 1290 Digital Photos****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

This course will cover the most basic tools and techniques of editing digital pictures.

**CSC 1502 Beginning Computer****0.5 credit hour** 📖**7.5 Classroom Hours = 7.5 Lecture Hours**

This course is designed for individuals who have little or no computer experience. Topics include computer terminology, hardware components, software, and windows operating environment. Individuals will identify parts of the computer; use Windows operating environment to create individual folders and to move/copy files and to modify the desktop; and use a software application program to create, format, print, and save a variety of word processing documents.

**CSC 1504 Beginning Computer II****0.5 credit hour** 📖**7.5 Classroom Hours = 7.5 Lecture Hours**

This course is designed to follow Beginning Computer I. Students should have minimal experience working with computers or have taken Beginning Computer I. The class will take a brief look at Windows, Word, Excel and the Internet.

**CSC 1511 Show Me PC I****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

This course is designed for the non-traditional student who has NO previous experience with the computer. Instruction will include basic



# COURSE DESCRIPTIONS

computer terminology, Windows features, mouse and keyboard operations, basic word processing and spreadsheets and use of a database Wizards and templates. NOTE: This course may not transfer toward degree and/or program requirements at a four-year college. Contact transfer college for information. Fee \$5.

## **CSCE 1512 Show Me PC II**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

This course is designed for the non-traditional student who has had a basic introduction to computers. Course content will continue from CSCE 1511 and will cover the topics more in depth. An Internet unit will be covered. Prerequisite: CSCE 1511 or permission of instructor.

## **CSCE 1544 Introduction to Windows**

**1.5 credit hours**

**23 Classroom Hours = 23 Lecture Hours**

The course provides an introduction to the Windows operating environment. Topics include using notepad and its Date/Time function; designing a four-level tree file structure; using Find, Graphics and Wordpad; creating shortcuts; and copying and pasting within a document. Fee \$5.

## **CSCE 1562 QuickBooks**

**0.5 credit hour**

**7.5 Classroom Hours = 7.5 Lecture Hours**

This course provides a hands-on introduction to the features of QuickBooks. Students will practice using the basic features of the software.

## **CSCE 1563 QuickBooks**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

An introduction to the basic features of QuickBooks through hands-on practice. Students will enter and track various types of business information as well as explore how QuickBooks can save time and help organize business finances. Fee \$5.

## **CSCE 1565 QuickBooks**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

This course provides an introduction to QuickBooks Pro. Topics include creating a chart of accounts, recording transactions with customers and vendors, recording payroll, using time tracking, estimates and progress billing, and preparing financial statements. Fee \$5.

## **CSCE 1566 QuickBooks**

**3 credit hours** 🖥️

**45 Classroom Hours = 45 Lecture Hours**

This course provides an introduction to QuickBooks Pro. Topics include creating a chart of accounts, recording transactions with customers and vendors, recording payrolls, using time tracking, estimates and progress billing, preparing financial statements, and other supporting reports.

## **CSCE 1581 Quicken**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Simplified accounting applications for personal and business use. Fee \$5.

## **CSCE 1603 Word Processing on Microcomputers**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course is designed as an introduction to word processing on computers. Students will learn how to create, save, revise, and print documents. Topics will include formatting and enhancing documents, creating tables, and preparing mail merge documents. Fee \$5.

## **CSCE 1604 Introduction to Microsoft Word**

**1.5 credit hours** 🖥️

**23 Classroom Hours = 23 Lecture Hours**

This is an introduction to basic features of the Microsoft Word software program. Focus will be given to utilizing graphics, templates, report styles, tables, and WordArt. This course is an elective for students who

lack computer skills, for persons needing a computer elective in another program, or for personal use. Prerequisite: Basic computer knowledge or permission of instructor. Fee \$5.

## **CSCE 1605 Microsoft Word for Windows**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

This course is designed to teach the student the basics of the Microsoft Word program. In addition to creating, saving, revising, and printing documents, students will perform basic formatting and editing functions, work with tables, graphics, mail merge documents, sorting, styles, columns and Wizards. Students will learn to create folders and organize documents. Fee \$5.

## **CSCE 1624 Introduction to Corel WordPerfect**

**1.5 credit hours**

**23 Classroom Hours = 23 Lecture Hours**

This course is designed as an introduction to the basic features of Corel WordPerfect Program with Windows. Formatting, editing features, printing, merging, tables, columns, TextArt, language references, page numbering, and handling files will be covered. This course is an elective for students who lack computer skills, for persons needing a computer elective in another program, or for personal use. Prerequisite: Basic computer knowledge, keyboarding ability, or permission of instructor. Fee \$5.

## **CSCE 1642 Excel Basic**

**0.5 credit hour**

**8 Classroom Hours = 8 Lecture Hours**

This course will focus on Excel basic functions and features. Students will learn to create, save, edit, and print worksheets. Topics include creating worksheets, moving and copying data, entering and editing formulas, formatting text and numbers, and printing worksheets.

## **CSCE 1643 Spreadsheets on Microcomputers**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course is designed as an introduction to spreadsheets. Students will learn to create, save, edit and print worksheets. Topics will include formulas and functions, formatting, charting, and grouping. Fee \$5.

## **CSCE 1644 MS Office Excel**

**1.5 credit hours** 🖥️

**23 Classroom Hours = 23 Lecture Hours**

This course is designed to provide the fundamental skills and concepts of using the Excel spreadsheet software in a hands-on environment. Students will benefit from the step-by-step approach that is emphasized in the course. Fee \$5.

## **CSCE 1645 Microsoft Excel for Windows**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

This course is designed to teach the student the basics of the Microsoft Excel program. In addition to creating, saving, revising, and printing documents, students will perform basic formatting and editing functions, work with formulas and functions, multiple worksheets, charts, database lists, and graphics. Students will learn to create folders and organize documents. Fee \$5.

## **CSCE 1647 Advanced MS Office Excel**

**1.5 credit hours**

**23 Classroom Hours = 23 Lecture Hours**

This course is designed to provide the advanced skills and concepts of using spreadsheet software in a hands-on environment. Students will benefit from the step-by-step approach that is emphasized in the course. Prerequisite: CSCE 1644

## **CSCE 1663 Database on Microcomputers**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This hands-on course provides the skills needed to define, create, maintain a database, extract and report vital information in a variety of ways. The key is building and retrieving information from typical business databases.

In addition, students learn to modify the structure of an existing database and perform operations on related databases. Fee \$5.

**CSC 1664 MS Office Access**

**1.5 credit hours** ☺

**23 Classroom Hours = 23 Lecture Hours**

This course is designed to provide the fundamental skills and concepts of using the Access database software in a hands-on environment. Students will benefit from the step-by-step approach that is emphasized in the course. Fee \$5.

**CSC 1665 Microsoft Access for Windows**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Course designed to introduce the student to a widely used database program. Instruction will move from the basic to advanced features of Access for Windows.

**CSC 1682 Using Internet**

**0.5 credit hour**

**7.5 Classroom Hours = 7.5 Lecture Hours**

This course provides an introduction to the use of the Internet. Topics include searching the World Wide Web, exploring search engines, and exchanging e-mail.

**CSC 1683 Introduction to Internet**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course is a study of Internet and the use of web browsers to access the World Wide Web. Topics include the use of e-mail, Usenet News, newsgroups, FTP, gopher, and search engines. Note: This course may not transfer toward degree and/or program requirements at a four-year college. Contact transfer college for information.

**CSC 1685 Using Internet**

**0.5 credit hour**

**7.5 Classroom Hours = 7.5 Lecture Hours**

This course is a continuation of CSC 1682. Prerequisite: CSC 1682.

**CSC 1691 Front Page**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course provides an introduction to Microsoft FrontPage. Topics include designing and creating a web page; creating effective images; and using graphics, tables, frames, animated GIFs, Java applets and input forms.

**CSC 1692 Web Page Design**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course covers the steps for writing HTML files, creating web pages, and uploading them to the Internet.

**CSC 1693 Introduction to HTML-Web Pages**

**1.5 credit hours**

**23 Classroom Hours = 23 Lecture Hours**

An introduction to creating web pages for the Internet using hypertext language (HTML). Note: This course is not designed to transfer to a four-year college. Fee \$5.

**CSC 1711 Microsoft Office**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Microsoft Office is a comprehensive survey of the four major applications in the Microsoft Office Suite: Word, Excel, Access, and PowerPoint.

**CSC 1721 Microsoft Works (PC)**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Microcomputer operation and software applications for word processing, spreadsheets, and databases.

**CSC 1722 Microsoft Works (PC)**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Advanced microcomputer software operations for spreadsheets, databases, and integrated applications.

**CSC 1723 Microsoft Works (MAC)**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Microcomputer operation and software applications for word processing, spreadsheets, and databases.

**CSC 1724 Microsoft Works (MAC)**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Advanced microcomputer software operations for spreadsheets, databases, and integrated applications.

**CSC 1727 ClarisWorks Computer Applications**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Macintosh microcomputer operation and software applications for word processing, spreadsheets and databases.

**CSC 1728 ClarisWorks Computer Applications**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Macintosh microcomputer operation and software applications for word processing, spreadsheets and databases. Includes integration of word processing, spreadsheets, and databases.

**CSC 1744 Advanced Windows**

**1.5 credit hours**

**23 Classroom Hours = 23 Lecture Hours**

Continuation of CSC 1544. DOS applications, sharing data, features of multimedia, basic telecommunications concepts, networks, and general troubleshooting techniques. This course uses an object-based user interface. Prerequisites: CSC 1544 or permission of instructor. Fee \$5.

**CSC 1752 MS Office PowerPoint**

**0.5 credit hour**

**7.5 Classroom Hours = 7.5 Lecture Hours**

Fundamental skills to use presentation software.

**CSC 1753 MS Office – PowerPoint**

**1 credit hour** ☺

**15 Classroom Hours = 15 Lecture Hours**

This course provides an overview of fundamental skills necessary to effectively use Microsoft PowerPoint. Microsoft PowerPoint is a presentation application from which not only overhead type slides can be developed but also computer driven presentations. Fee \$5.

**CSC 1754 MS Office – PowerPoint**

**1.5 credit hours** ☺

**23 Classroom Hours = 23 Lecture Hours**

An introduction to a complete presentation graphics program to produce professional-looking presentations. Students will become acquainted with the proper way to build a presentation through a series of projects. Fee \$5.

**CSC 2020 Computers in Society**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

An elementary description of the components and principles of digital computers. Background and implications of information processing, computer influences on society, and uses of computers. Hands-on computer applications and minimal programming applications, use of appropriate language to reinforce concepts of problem solving and critical thinking. Fee \$10.

# COURSE DESCRIPTIONS

## **CSCE 2080 Effective Online Pedagogy**

**2 credit hours** 

**30 Classroom Hours = 30 Lecture Hours**

This course provides direction and pedagogy for faculty members to develop and effectively deliver an online class. Emphasis will be given to maintaining instructional quality and integrity which are keys to the effectiveness and sustainability of online learning.

## **CSCE 2085 Online Course Design**

**2 credit hours** 

**30 Classroom Hours = 30 Lecture Hours**

This course will provide a solid foundation for those involved with the design and development of online courses. Topics will include designing and managing a course, managing users, the grade center, assignments, and assessment tools. Prerequisites: CSCE 2090, CSCE 2080 or permission of instructor.

## **CSCE 2510 Desktop Publishing/PhotoShop**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Students will be introduced to PhotoShop software to learn how to produce high-quality digital images. A large number of editing tools and special effect capabilities will be used to manipulate scanned images, slides, and original artwork.

## **CSCE 2570 Desktop Publishing**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course teaches desktop publishing techniques. Students will learn to efficiently use design software such as Adobe Photoshop and Adobe PageMaker/InDesign to create sophisticated, real-world projects. Emphasis will be given to planning, designing, and utilizing the software tools and techniques to develop camera-ready professional documents for today's workplace such as flyers, business cards, brochures, newsletters, and other advertising promotional materials. Fee \$10.

## **CSCE 2670 Design Technologies**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

This is an advanced course using a variety of popular desktop publishing, multi-media, web and photo editing software packages. This course will provide an in-depth study of layout, design, photo imaging, animation, and hypermedia to create professional documents that will meet the challenging needs of businesses today. Focus will be given to integrating various software components to create dynamic presentation materials for the workplace and e-business environments. Prerequisite: CSCE 2570.

## **CRIMINAL JUSTICE**

### **CRIM 1010 Introduction to Criminal Justice**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

Provides an overview of the history, development, and philosophies of crime control within a democratic society. Examines the criminal justice system with emphasis on the police, the prosecution and defense, the courts, and the correctional agencies.

### **CRIM 1020 Introduction to Corrections**

**3 credit hours**  

**45 Classroom Hours = 45 Lecture Hours**

Outlines corrections in a systematic process showing the evolving changes within institutional and community based corrections. Topics include, but are not limited to, the history of corrections, the influence of social thought and philosophy on the development of corrections, the rights of the incarcerated inmate, and the duties of the correctional officer.

### **CRIM 1030 Courts & the Judicial Process**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Survey of the United States judicial system. Topics include, but are not limited to, legal and constitutional concepts, institutions, and process. Coverage includes adult and civil courts.

### **CRIM 2030 Police & Society**

**3 credit hours**  

**45 Classroom Hours = 45 Lecture Hours**

Examines the role of the police in relationship to law enforcement and American society. Topics include, but are not limited to, the role and function of police, the nature of police organizations and police work, and the patterns of police-community relations.

### **CRIM 2090 Juvenile Justice**

**3 credit hours**  

**45 Classroom Hours = 45 Lecture Hours**

Examines the origins, philosophy, and objectives of the juvenile justice system. Topics include, but are not limited to, causation of crime (i.e. race/gender, socioeconomic relevance, and victimization), the juvenile court system, the law enforcement approach, corrections and prevention.

### **CRIM 2150 Contemporary Issues in Criminal Justice**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course will expose students to current social issues impacting the Criminal Justice field and its professionals, victims, and defendants. Possible topics include racism, sexism, homophobia, poverty, hate crimes, capital punishment, addiction, ethic, gangs, child abuse, terrorism, sexual assault, domestic violence, suicide, mental illness, pornography, prostitution, and other timely topics.

### **CRIM 2180 Criminal Justice Organization & Management**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

Covers contemporary concepts and principles of organization and management as they relate to the administration of criminal justice agencies.

### **CRIM 2200 Criminal Law**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

Outlines the purpose and function of criminal law. Topics include, but are not limited to, the rights and duties of citizens and police in relation to local, state, and federal law (i.e. arrest, search and seizure, confessions); the development, application and enforcement of laws; constitutional issues; and sentencing.

### **CRIM 2210 Criminology**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

Examines crime and criminology from a broad social perspective. Emphasizes the nature and causes of crimes, investigation and prosecution, and treatment and prevention.

### **CRIM 2260 Criminal Investigation**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Introduces criminal investigation procedures. Reviews the historical development and investigative processes related to law enforcement functions. Topics include, but are not limited to, the proper collection, organization and preservation of evidence using basic investigative tools; examining the primary sources of information; analyzing the importance of writing skills; and reviewing the constitutional (legal) limitations of the investigation.

**CRIM 2310 Rules of Evidence****3 credit hours** **45 Classroom Hours = 45 Lecture Hours**

Emphasizes the concept of evidence and the rules governing its admissibility. Includes theoretical and pragmatic consideration of constitutional requirements affecting evidence and procedure.

**CRIM 2950 Criminal Justice Internship****1 credit hour****60 Classroom Hours = 60 Internship Hours**

Internship with an organized correction, law enforcement, or other criminal justice agency. Prerequisite: nine (9) credit hours of criminal justice classes or permission of instructor. Arrange with instructor.

**CRIM 2960 Criminal Justice Internship****2 credit hours****120 Classroom Hours = 120 Internship Hours**

Internship with an organized correction, law enforcement, or other criminal justice agency. Prerequisite: nine (9) credit hours of criminal justice classes or permission of instructor. Arrange with instructor.

**CRIM 2970 Criminal Justice Internship****3 credit hours****180 Classroom Hours = 180 Internship Hours**

Internship with an organized correction, law enforcement, or other criminal justice agency. Prerequisite: nine (9) credit hours of criminal justice classes or permission of instructor. Arrange with instructor.

**CUSTODIAL AND MAINTENANCE TRAINING****CUST 1710 Professional Cleaning I****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

An overview of the professional custodian; standard time for task completion; development of quality/cleaning standards; specialty cleaning and safe handling of cleaning chemicals; floor finishes/coatings; and care and use of tools and equipment. Fee \$10

**CUST 1720 Workplace Communication****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

Skills needed to successfully communicate with co-workers and supervisors will be explored. Students will learn how to plan, prepare and deliver an effective written or oral presentation. Electronic communication methods will also be explored.

**CUST 1730 Electricity****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

Instruction in basic electricity, including how electricity works and how to make minor repairs that will be helpful on the job as well as the home. Fee \$10.

**CUST 1740 Plumbing****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

Identify various components of a plumbing system; read gauges and meters; demonstrate valves; describe hot and cold water systems; and demonstrate routine maintenance and repairs on plumbing systems. Fee \$10.

**CUST 1770 Basic Computer Applications****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

Starts with the "ON" switch and continues through creating, saving, printing documents, and will include word processing, spreadsheets and Internet.

**CUST 1780 Building Maintenance/Preventive Maintenance****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

Recognize the need for overall regular maintenance, identify routine problems and solutions, describe maintenance of windows, and describe installation/maintenance of doors and hardware.

**CUST 1810 Professional Cleaning II****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

Effective cleaning techniques to increase the indoor air quality (IAQ) and prevent sick building syndrome (SBS). Areas covered: ceiling and light units, walls and baseboards, furniture, chalkboards, rooms and offices, restrooms, windows, brick walls (interior and exterior), floors (vinyl, concrete, terrazzo, marble, brick, quarry and ceramic tile).

**CUST 1830 Grounds Care Management****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

Identification of various types of grasses, trees and shrubs; proper care of plants, including pruning, fertilizing and irrigation; and recognition of pesticides/herbicides and the safety precautions needed when using chemicals.

**CUST 2710 Professional Cleaning III****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

Introduces methods/procedures, chemicals and equipment used to maintain carpeted floors.

**CUST 2720 Boilers****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

Safe and efficient operation of heating systems. Learn to open and close a boiler for inspection, make minor repairs, keep operating records, and understand water treatment on steam and hot water heating systems.

**CUST 2740 Gas, Electric Heat & Controls****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

Principles of gas and electric heat, including heat pumps, and heating system efficiency and controls.

**CUST 2750 Safety/Fire Prevention****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

Knowledge of fire extinguisher and usage; prevention, proper storage and labeling; electrical outlets; testing procedures and record keeping; alarm systems.

**CUST 2760 Supervision/Management****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

Effective supervision techniques, leadership roles, decision making responsibilities, effective communication, and quality management concepts.

**CUST 2770 Budget/Purchasing for Custodial/Maintenance****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

An introduction to purchasing of supplies, chemicals, and equipment for a custodial department. Overview of how to budget, how the budget works, preparation of a bid sheet, and testing of products.

**CUST 2780 Air Conditioning****0.5 credit hour****7.5 Classroom Hours = 7.5 Lecture Hours**

The latest techniques in preventive and corrective maintenance on air conditioning systems.

# COURSE DESCRIPTIONS

## **CUST 2820 Self-Esteem/Human Relations**

**0.5 credit hour**

**7.5 Classroom Hours = 7.5 Lecture Hours**

Through the use of activities, students will be shown how a pleasing personality and a respect for human values can lead to job satisfaction and increased productivity.

## **CUST 2830 Painting**

**0.5 credit hour**

**7.5 Classroom Hours = 7.5 Lecture Hours**

Chemical properties of paint, how paint is manufactured, what determines the quality of paint, water based paints, alkyds and epoxies, exterior painting, interior painting, troubleshooting, lead, tools, spray equipment, estimating, color computers and setting up a maintenance program.

## **CUST 2860 Hazardous Material Management**

**0.5 credit hour**

**7.5 Classroom Hours = 7.5 Lecture Hours**

Describe where hazardous materials are found, understand employer and employee responsibilities, learn your right to know, understand material safety data sheets, identify common hazardous materials used daily.

## **CUST 2870 Facility Security**

**0.5 credit hour**

**7.5 Classroom Hours = 7.5 Lecture Hours**

How to develop a plan for establishing a secure facility. The importance of locked doors, visitor procedures and identifying potentially dangerous situations. Responding to an emergency: notifying police and emergency response individuals, vacating the building and selecting a secure area for all occupants.

## **DENTAL ASSISTING**

### **DENT 1100 Head and Neck Anatomy**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Overview of head and neck structures and their functions.

### **DENT 1110 Dental Assisting Concepts**

**5 credit hours**

**105 Classroom Hours = 60 Lecture Hours + 45 Lab Hours**

Orientation to dentistry: terminology, history, career opportunities, job duties, relationship to other health occupations, interpersonal communications and ethical considerations. Instrument identification, uses and maintenance of dental equipment, safety and infection control protocols, principles of four-handed dentistry are utilized for basic examination and restorative procedures. Placement of matrix bands is taught to pre-clinical level. Fee \$40.

### **DENT 1120 Dental Materials**

**3 credit hours**

**75 Classroom Hours = 30 Lecture Hours + 45 Lab Hours**

Structure and properties of dentistry materials and use of dental laboratory equipment to manipulate them. Included are dental stones, impression materials, and different types of restorative materials. Fee \$25.

### **DENT 1130 Dental Science**

**4 credit hours**

**60 Classroom Hours = 60 Lecture Hours**

Microbiology, embryology, histology, morphology. Emphasis is on tooth structure and function.

### **DENT 1220 Dental Assisting Clinical Practice I**

**2 credit hours**

**90 Classroom Hours = 90 hours practicum**

Students will be assigned to area dental offices chair-side applications for general restorative procedures.

### **DENT 1230 Prevention & Nutrition**

**3 credit hours**

**75 Classroom Hours = 30 Lecture Hours + 45 Lab Hours**

Nutrition, dietary counseling, correlation between diet and dental health with emphasis on preventive dentistry. Basic pathology and coronal polishing are included in this course. Students who successfully complete the Prevention and Nutrition course along with other courses required for the dental assisting diploma, will receive certification to perform coronal polishing in the state of Nebraska. Prerequisites: DENT 1110, DENT 1120, DENT 1130, DENT 1140 or BIOS 1100. Fee \$15.

### **DENT 1250 Dental Radiology**

**4 credit hours**

**90 Classroom Hours = 45 Lecture Hours + 45 Lab Hours**

Understanding of the basic principles of x-ray production, processing, and image receptor placement. Knowledge of radiation protection in dentistry and basic interpretation of common dental diseases, such as caries and alveolar bone loss. This course certifies students to expose dental radiographs in the state of Nebraska. Prerequisites: DENT 1110, DENT 1120, DENT 1130, DENT 1140 or BIOS 1100. Fee \$50.00

### **DENT 1260 Dental Assisting Procedures**

**4 credit hours**

**120 Classroom Hours = 30 Lecture Hours + 90 Lab Hours**

Dental specialty procedures and office management skills are studied. Fee \$40.

### **DENT 1270 Pharmacology & Medical Emergencies**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Understanding drugs commonly used in a dental office, including acquisition, care and storage, legal considerations and proper administration. Students are prepared to deal with possible medical emergencies that may occur in the dental setting.

### **DENT 1510 Dental Assisting Seminar**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Seminars addressing job seeking skills, material updates and interpersonal communications.

### **DENT 1520 Dental Assisting Clinical Practice II**

**5 credit hours**

**225 Classroom Hours = 225 Hours practicum**

Students will be assigned to area dental offices for procedures including advanced chair side applications, orthodontics, endodontics, periodontics and prosthodontics.

## DIESEL TECHNOLOGY

### **DSLTL 1005 Safety**

**1 credit hour**

**120 Classroom Hours = 30 Lecture Hours + 90 Lab Hours**

Specific safety practices for diesel mechanic shops. (Replaces TRAN 1005.)

### **DSLTL 1100 Heavy Duty Engine Design & Fundamentals**

**4 credit hours**

**120 Classroom Hours = 30 Lecture Hours + 90 Lab Hours**

Engine identification and design and function of major components, diesel engine classification and parts identification. Prerequisite: DSLTL 1005. Fee \$15.

### **DSLTL 1115 Heavy Duty Engine Systems Reconditioning**

**4 credit hours**

**150 Classroom Hours = 30 Lecture Hours + 135 Lab Hours**

Shop procedures, tool selection and use. Major and minor engine overhaul and component reconditioning. Corequisites: DSLTL 1005 and DSLTL 1100 or permission of instructor. Fee \$20.

### **DSLTL 1130 Mechanics Electrical**

**4 credit hours**

**120 Classroom Hours = 30 Lecture Hours + 90 Lab Hours**

Basic electrical principles, electrical circuits, batteries, charging systems, engine controls. Fee \$20.

### **DSLTL 1170 Equipment Maintenance**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Drill sizes, tap and dies, files, pipe and brass fitting, and shop equipment maintenance. Corequisite: DSLTL 1005.

### **DSLTL 1190 Preventive Maintenance**

**3 credit hours**

**75 Classroom Hours = 30 Lecture Hours + 45 Lab Hours**

Introduces the student to correct procedures and practices of vehicle preventative maintenance and inspections.

### **DSLTL 1200 Powertrain Repair**

**4 credit hours**

**120 Classroom Hours = 30 Lecture Hours + 90 Lab Hours**

Design function and repairing of transmissions, axle assemblies, clutches and drivelines. Fee \$15.

### **DSLTL 1215 Mechanical Hydraulic Systems**

**4 credit hours**

**120 Classroom Hours = 30 Lecture Hours + 90 Lab Hours**

Hydraulics applied to design and function, troubleshooting and repair. Fee \$15.

### **DSLTL 1230 Mechanics Air Conditioning**

**2 credit hours**

**90 Classroom Hours = 10 Lecture Hours + 80 Lab Hours**

Air conditioning and heater system diagnosis and repair procedures. Prerequisite: DSLTL 1005. Fee \$10.

### **DSLTL 1250 Applied Welding for Prime Movers**

**2 credit hours**

**45 Classroom Hours = 22 Lecture Hours + 23 Lab Hours**

Soldering, brazing, gas welding, and cutting torches used in the transportation and prime mover fields.

### **DSLTL 1270 Hydraulic & Anti-lock Brakes**

**2 credit hours**

**60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

Theory and application of hydraulic and anti-lock brake systems as used in medium and heavy-duty trucks. Fee \$10.

### **DSLTL 1710 Diesel Mechanics**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Shop procedures and diesel engine design and operation in relation to repair and reconditioning.

### **DSLTL 1720 Diesel Mechanics Maintenance**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Engines and electrical and hydraulic systems and proper maintenance practices.

### **DSLTL 1730 Diesel Hydraulics**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Hydraulic components, troubleshooting and repair.

### **DSLTL 1740 Transmissions & Drivelines**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Clutches, drivelines, transmissions and differentials, troubleshooting and repair.

### **DSLTL 1770 Diesel Troubleshooting & Tune-up**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

All makes of diesel engine operation, troubleshooting, repair and tune-up.

### **DSLTL 1780 Diesel Overhaul & Tune-Up, Cummins**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Cummins diesel engine operation, troubleshooting, repair and tune-up.

### **DSLTL 1790 Diesel Overhaul & Tune-Up, Detroit**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Detroit diesel engine operation, troubleshooting, repair and tune-up.

### **DSLTL 2300 Fuel Systems**

**4 credit hours**

**150 Classroom Hours = 15 Lecture Hours + 135 Lab Hours**

Diesel fuel filters, supply pumps, fuel characteristics and storage, combustion analysis and effect on combustion chamber design. Prerequisite: Sophomore standing. Fee \$15.

### **DSLTL 2318 Fuel Systems Overhaul**

**4 credit hours**

**150 Classroom Hours = 15 Lecture Hours + 135 Lab Hours**

Theory of operation, repair and calibration of Roosa Master, C.A.V., United Technologies, Bosch, and Simms. Repair and calibration of injection nozzles and injectors; installation and troubleshooting. Prerequisite: Sophomore standing. Fee \$15.

### **DSLTL 2350 Heavy Duty Suspensions**

**3 credit hours**

**75 Classroom Hours = 30 Lecture Hours + 45 Lab Hours**

Repair and maintenance of heavy-duty suspension systems. Fee \$10.

### **DSLTL 2400 Engine Testing**

**4 credit hours**

**150 Classroom Hours = 15 Lecture Hours + 135 Lab Hours**

Overhaul procedure of major components and subcomponents; run in and troubleshooting procedure for Detroit, Caterpillar and Cummins diesel engines and foreign made engines. Prerequisite: Sophomore standing or permission of instructor. Fee \$15.

### **DSLTL 2425 Engine Overhaul**

**3 credit hours**

**135 Classroom Hours = 0 Lecture Hours + 135 Lab Hours**

Engine removal and disassembly. Service of cylinder head, valve train, valves, crankshaft, timing gears, engine block, cylinders, rings and connecting rods. Fee \$15.

# COURSE DESCRIPTIONS

## **DSLTL 2440 Electronic Fuel Controls**

**3 credit hours**

**75 Classroom Hours = 30 Lecture Hours + 45 Lab Hours**

Operational theory, troubleshooting and programming using hand held diagnostic and laptop computers. Prerequisite: DSLTL 2300 and DLST 2318. Fee \$5.

## **DSLTL 2470 Air & Engine Brakes**

**2 credit hours**

**60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

Theory, operation and repair of braking systems used in agriculture, trucks and heavy equipment. Fee \$5.

## **DSLTL 2490 Allison Transmissions**

**2 credit hours**

**60 Classroom Hours = 15 Lecture Hours + 45 Lab**

Allison automatic transmission design, operation, and overhaul. Prerequisite: DSLTL 1005 and sophomore standing.. Fee \$5.

## **ECONOMICS**

### **ECON 1000 Contemporary Economic Issues**

**3 credit hours** 📖 📱

**45 Classroom Hours = 45 Lecture Hours**

This course is designed to help students acquire an understanding of the U.S. economy. (Not open to students who have previously completed ECON 2110 or ECON 2120.)

### **ECON 2110 Principles of Economics-Macro**

**3 credit hours** 📖 📱

**45 Classroom Hours = 45 Lecture Hours**

This course is a study of the "big ideas" of macroeconomics such as GDP, inflation, unemployment, labor, and international trade. A look at public-policy decision making using macro theories such as: monetary policy, fiscal policy and other economic-stabilization theories, is also presented. This course will also examine the economic challenges facing our economy.

### **ECON 2120 Principles of Economics-Micro**

**3 credit hours** 📖 📱

**45 Classroom Hours = 45 Lecture Hours**

Analysis of competitive and non-competitive markets, including the behavior of producers and consumers. Topics include price and income elasticity, income distribution, production costs, resource allocation, comparative advantage and current economic problems.

## **EDUCATION**

### **EDUC 1010 College Success**

**3 credit hours** 📖 📱

**45 Classroom Hours = 45 Lecture Hours**

This course is designed to increase student success in college by assisting the students in obtaining skills necessary to reach their educational goals. Study skills, life skills, career goals, college resources and elements of Blackboard will be covered.

### **EDUC 1160 Early Language & Literacy**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course will focus on the development of literacy and language skills from birth to age eight. The student will plan and prepare developmentally appropriate language and literacy activities.

### **EDUC 1310 Introduction to Professional Education**

**3 credit hours** 📖 📱

**45 Classroom Hours = 45 Lecture Hours**

An overview of education in the United States viewed in terms of history, philosophy, finance and governance. Encourages critical thought regarding the role of education in our multicultural society, the role of the teacher, and educational practices in schools. The course is designed to help students explore education as a prospective career.

### **EDUC 1500 International Education Exchange**

**1 credit hour**

**45 Classroom Hours = 45 Practicum Hours**

This course will provide an international education exchange experience with a college in another country. The exchange will include curriculum activities in a certain discipline as well as cultural experiences unique to the country being visited.

### **EDUC 1700 Professional Practicum**

**1 credit hour**

**50 Classroom Hours = 50 Practicum Hours**

Designed to acquaint the student with the classroom situation and atmosphere by participation in the teaching-learning process. Includes observation and assistance in classroom-related activities under supervision of an experienced teacher. Prerequisite: EDUC 1310. (Replaces EDUC 2910.)

### **EDUC 1701 Professional Practicum**

**1 credit hour**

**50 Classroom Hours = 50 Practicum Hours**

Designed to acquaint the student with the classroom situation and atmosphere by participation in the teaching-learning process. Includes observation and assistance in classroom-related activities under supervision of an experienced teacher. Prerequisite: EDUC 1310. (Replaces EDUC 2920.)

### **EDUC 1702 Professional Practicum**

**1 credit hour**

**50 Classroom Hours = 50 Practicum Hours**

Designed to acquaint the student with the classroom situation and atmosphere by participation in the teaching-learning process. Includes observation and assistance in classroom-related activities under supervision of an experienced teacher. Prerequisite: EDUC 1310. (Replaces EDUC 2930.)

### **EDUC 1703 Professional Practicum**

**1 credit hour**

**50 Classroom Hours = 50 Practicum Hours**

Designed to acquaint the student with the classroom situation and atmosphere by participation in the teaching-learning process. Includes observation and assistance in classroom-related activities under supervision of an experienced teacher. Prerequisite: EDUC 1310. (Replaces EDUC 2940.)

### **EDUC 1900 Field Experience: Human Services**

**1 credit hour**

**50 Classroom Hours = 50 Lab Hours**

The student will be assigned to a human services agency that works with youth and families. Must be taken concurrently with EDUC 2890. This is for UNK transfer students.

### **EDUC 2000 Educational Psychology**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course is a study of the three focal areas in education: the learner, the learning process, and the learning environment. It is a survey of the principles of psychology as applied to classroom teaching; emphasis on development, learning, motivation, evaluation, adjustment, and educational techniques and innovations. (Replaces PSYC 2310.)

### **EDUC 2300 Introduction to the Exceptional Learner**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This introductory course is a study of the characteristics of students with disabilities or exceptionalities. Emphasis is on the psychosocial implications, identification differences, learning characteristics and manifest behaviors. The effects of educational practices and attitudes, and nature of and forces for social change will be explored. This course will include 10 hours of observation in a special education classroom. Prerequisites: EDUC 1310 and PSYC 2000 or permission of instructor.

**EDUC 2350 Children's Literature****3 credit hours** 📖 📄**45 Classroom Hours = 45 Lecture Hours**

The history and development of children's books. Survey of authors and illustrators. Wide reading practice with emphasis on setting up criteria for evaluating a wide range of literature for children according to a child's needs. Recommended for elementary education majors.

**EDUC 2590 Instructional Technology****3 credit hours** 📖**45 Classroom Hours = 45 Lecture Hours**

This course is an introduction to a variety of technologies and strategies for use in the instructional process to accommodate all learners. The focus will also be on the social, ethical, legal, and human issues surrounding the use of technology. Prerequisites: EDUC 1310 and PSYC 2310 or permission of instructor. Fee \$5. (Replaces EDUC 2240.)

**ELECTRICAL TECHNOLOGY****ELTR 1005 Safety****1 credit hour****15 Classroom Hours = 15 Lecture Hours**

Deals with specifics on hazards in the workplace for electricians.

**ELTR 1115 Direct Current Theory****4 credit hours****120 Classroom Hours = 30 Lecture Hours + 90 Lab Hours**

Course of study includes concepts of electrical charges, characteristics of direct current, defines resistance, voltage amperage. It also introduces the student to Ohm's Law, series circuits, parallel circuits, series/parallel circuits, and electromagnetism. Prerequisites: ELTR 1005 and ELTR 1150, (Replaces ELTR 1110 and 1120.)

**ELTR 1130 Alternating Current Theory****4 credit hours****120 Classroom Hours = 50 Lecture Hours + 70 Lab Hours**

This course covers AC voltages, frequency, wave forms, inductors, capacitors, transformers, and three phase systems. Prerequisites: ELTR 1005, ELTR 1150, and ELTR 1115. (Replaces ELTR 1135 and 1210)

**ELTR 1150 Applied Math****2 credit hours****50 Classroom Hours = 50 Lecture Hours**

Mathematics required for understanding electrical circuits, including basic algebra, word problems, and power ratios.

**ELTR 1200 Construction Wiring****9.5 credit hours****293 Classroom Hours = 68 Lecture Hours + 225 Lab Hours**

Conduit bending, voltage drop, lighting, blueprint reading, transformers, conduit fill, conductor sizing and derating, NEC, short circuit calculations, and service calculations. Prerequisite: ELTR 1115, 1150, and 1130. Fee \$50.

**ELTR 1235 Electric Motor Controls****8 credit hours****270 Classroom Hours = 45 Lecture Hours + 225 Lab Hours**

Use of 2-wire and 3-wire control, pneumatic, solid state, and synchronous timers are covered. The drawing of ladder and wiring diagrams are also included. Includes the use of magnetic motor starters, control relays, and contactors. Prerequisites: ELTR 1005, ELTR 1150, and ELTR 1250.

**ELTR 1255 Residential Wiring****6 credit hours****210 Classroom Hours = 30 Lecture Hours + 180 Lab Hours**

Residential wiring takes the student through every step in detail from designing the electrical installation to the final finished installation. The student will learn the National Electrical Code (NEC) sections dealing with residential wiring. Prerequisites: ELTR 1005, ELTR 1150, and ELTR 1115. (Replaces ELTR 1160.)

**ELTR 1370 Industrial Controls****8 credit hours****270 Classroom Hours = 45 Lecture Hours + 225 Lab Hours**

In the current industry electricians are more and more exposed to PLC control and variable frequency drives. At first, these controls seem difficult to understand. This course is designed to teach you and help you understand them in an easy-to-understand way. Prerequisites: ELTR 1005, ELTR 1150, ELTR 1235, and ELTR 1250. (Replaces ELTR 1510 and 1550.)

**ELTR 1380 Electrical Technology Internship****10 credit hours****600 Internship Hours**

Hands-on experience working as an employee with an electrical contractor. Prerequisite: ELTR 1200.

**ELTR 1560 Adv. Construction Wiring****2 credit hours****60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

Advanced training for construction wiring. Prerequisites: ELTR 1005 and ELTR 1200. (Replaces ELTR 1545).

**ELTR 1820 National Electrical Code Study****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

All electrical work is governed by the National Electrical Code and enforced by the authority having jurisdiction (City, County, State, and Federal). Interpreting the code is very important. A misinterpretation may lead to expensive changes in construction materials or methods, with the cost being charged against the electrical contractor.

**ELTR 2200 Instrumentation & Process Control****4 credit hours****90 Classroom Hours = 45 Lecture Hours + 45 Lab Hours**

This course is designed to introduce the student to instrumentation and process control.

**EMERGENCY MEDICAL TRAINING****EMTL 1050 CPR Instructor****1 credit hour****15 Classroom Hours = 13 Lecture Hours + 2 Lab Hours**

Certification class for becoming a BLS CPR and First Aid instructor. The class covers instructional methods and materials used in classroom training. (Replaces HLTH 1050.)

**EMTL 1110 CPR Rescuer****0.5 credit hour****7.5 Classroom Hours = 4.5 lecture + 3 Lab Hours**

This course is intended to provide the student with training, as an individual or as a team member, to administer adult, child, and infant CPR. Usage of an AED, pocket mask and bag valve mask is also included. This class fulfills the CPR requirement for most other health related trainings. Fee \$15 (book and 2 year certification card). (Replaces HLTH 1110.)

**EMTL 1130 Standard First Aid/Adult CPR****0.5 credit hour****7.5 Classroom Hours = 4.5 Lecture hours + 3 Lab Hours**

A study and application of the principles and techniques in the administration of first aid and Basic Life Support CPR. The class utilizes lecture and discussion format, including demonstration and practical sessions. (Replaces HLTH 1130.)

**EMTL 1310 American Heart First Aid Plus****0.5 credit hour****8 Classroom Hours = 4.5 lecture + 3.5 Lab Hours**

General Principles of first aid for medical and injury emergencies are provided training in this class. Single responder CPR, AED and environmental emergencies are included in the training. This class meets the requirements for some daycare and law enforcement providers. Fee \$15. (Replaces HLTH 1310.)



# COURSE DESCRIPTIONS

## **EMTL 1410 Emergency Medical Responder (EMR)**

**3 credit hours**

**60 Classroom Hours = 40 Lecture Hours + 20 Lab Hours**

The primary focus of this class is to train the responder to initiate immediate lifesaving care to critical patients who access the emergency medical system. This training will be basic knowledge and skills necessary to provide lifesaving interventions while awaiting additional EMS response and how to assist higher-level trained personnel at the scene and during transport. These trained skills are performed with minimal equipment and under medical direction. Fee \$5. (Replaces HLTH 1410.)

## **EMTL 1520 Emergency Medical Technician (EMT) I**

**4 credit hours**

**75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

Emergency Medical Technician I Course is designed as the first course of a two course offering for successful completion of an EMT Course following the National EMS Educational Standards and Guidelines. The course is the first component in the training that will provide basic knowledge and skills necessary to provide patient care and transportation as a component of a comprehensive EMS response team. This emergency medical course will include the following modules: Preparatory, Airway Management, Patient Assessment, Pharmacology, and Trauma. Upon successful completion of EMTL 1520 EMT I the student will be required to complete the EMTL 1530 EMT II in order to successfully complete the entire EMT training. Successful completion of both EMTL 1520 and EMTL 1530 will allow a student to sit for the National Registry written and practical exams and apply for the State of Nebraska EMT certification. (EMTL 1520 and EMTL 1530 Replaces EMTL 1510.)

## **EMTL 1530 Emergency Medical Technician (EMT) II**

**4 credit hours**

**75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

The Emergency Medical Technician II Course is the second component of a two course offering for successful completion of an EMT course following the National EMS Educational Standards and Guidelines. This course will provide basic knowledge and skills necessary to provide patient care and transportation as a component of a comprehensive EMS response team. This emergency medical course will include the following modules: Medical Emergencies, Special Patients/Populations, Ambulance Operations (including NIMS 100 & 700, HAZWOPER). Upon successful completion of the EMTL 1520 EMT I and EMTL 1530 EMT II the student will be allowed to sit for the National Registry written and practical exams and apply for the State of Nebraska EMT certification. Prerequisite: EMTL 1520 EMT I within one year. (EMTL 1520 and EMTL 1530 Replaces EMTL 1510.)

## **EMTL 1550 Emergency Medical Technician (EMT) Refresher**

**2 credit hours**

**35 Classroom Hours = 25 Lecture Hours + 10 Lab Hours**

A classroom review of emergency medical care focused on procedures and skills that meet the requirements for National and State of Nebraska relicensure. Prerequisites: EMTL 1520 or EMTL 1530 or proof of licensure, and a current BLS CPR certification. Fee \$10. (Replaces HLTH 1550.)

## **EMTL 1640 Intravenous Therapy**

**2 credit hours**

**48 Classroom Hours = 36 Lecture Hours + 12 Clinical Hours**

This course provides instruction in preparatory, respiratory and circulatory systems, pharmacology, and correct techniques of peripheral venipuncture for IV therapy. (Replaces HLTH 1640.)

## **EMTL 2100 PHTLS (Pre-Hospital Trauma Life Support)**

**1 credit hour**

**16 Classroom Hours = 12 Lecture Hours + 4 Lab Hours**

The PHTLS Provider course is an intensive two-day course which will introduce the student to knowledge of the physiology, patho-physiology, and kinetics of injury. This course will advance the student's level of competence to specific pre-hospital trauma intervention skills and provide an overview of the management of the multi-system trauma patient. Prerequisites: EMTL 1510 or EMTL 1530.

## **EMTL 2110 AMLS (Advanced Medical Life Support)**

**1 credit hour**

**16 Classroom Hours = 12 Lecture Hours + 4 Lab Hours**

The AMLS Provider course is an intensive two-day course which will introduce the student to knowledge of the physiology, pathophysiology of the medical patient. This course will advance the student's level of competence to specific medical conditions and provide an overview of the treatment and management of the medical patient. Prerequisites: EMTL 1110, EMTL 1510 or EMTL 1530.

## **EMTL 2170 Advanced Cardiac Life Support (ACLS)**

**1 credit hour**

**15 Classroom Hours = 8 Lecture Hours + 7 Lab Hours**

ACLS course is designed for medical, nursing, paramedic or allied health care personnel whose daily occupation demands proficiency in the knowledge and skills of advanced life support and who are authorized by state law to perform some or all of these functions. Other individuals may audit the class at the discretion of the course director. Prerequisite: current certification in BLS CPR. (Replaces HLTH 2170.)

## **EMTL 2550 Paramedic Refresher**

**3 credit hours**

**48 Classroom Hours = 48 Lecture Hours**

A 48 clock hour classroom review for recertification of the Paramedic. Prerequisite: Paramedic course.

## **EMTL 2630 Introduction to Paramedic**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Introduction to the foundation of the paramedic practice including; roles and responsibilities, well being of the paramedic, injury and illness prevention, medical legal, ethics, body systems, concepts of pathophysiology, and life span development. Prerequisites: Current Healthcare CPR Certification or equivalent; Current EMT Certification; Corequisites: EMTL 2640, EMTL 2650, and EMTL 2660.

## **EMTL 2640 Paramedic Pharmacology**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Introduction to the basic principles of pharmacology, drug and chemical classification, and medication administration used in prehospital emergency setting. Corequisites: EMTL 2630, EMTL 2650, and EMTL 2660.

## **EMTL 2650 Airway Management and Ventilation**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Introduction to knowledge of the airway anatomy and physiology, and the establishment and management techniques for a patent airway.

Corequisites: EMTL 2630, EMTL 2640, and EMTL 2660.

## **EMTL 2660 Patient Assessment**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Introduction of cognitive and psychomotor principles of patient assessment including therapeutic communication, patient history taking, communications, documentation, patient care, and transport. Corequisites: EMTL 2630, EMTL 2640, and EMTL 2650.

## **EMTL 2670 Shock Resuscitation & Trauma**

**5 credit hours**

**75 Classroom Hours = 75 Lecture Hours**

Introduce the paramedic student to the pathophysiological principles of shock and trauma injuries in order to perform an appropriate assessment and to formulate and implement a treatment plan for the trauma patient. Prerequisites: EMTL 2630, EMTL 2640, EMTL 2650, and EMTL 2660, Corequisite: EMTL 2680.

**EMTL 2680 Medical Emergencies I (Cardiac Emergencies)****5 credit hours****75 Classroom Hours = 75 Lecture Hours**

Introduction of cognitive and psychomotor principles of the cardiovascular anatomy and physiology, epidemiology of cardiovascular disease, cardiac rhythms, ECG monitoring, mechanisms of cardiac dysrhythmias, pathophysiological principles of cardiac assessment, and the formulation and implementation of algorithms and deflation for treatment plans of the cardiac patient. Prerequisites: EMTL 2630, EMTL 2640, EMTL 2650, and EMTL 2660; Corequisite: EMTL 2670.

**EMTL 2690 Medical Emergencies II****8 credit hours****120 Classroom Hours = 120 Lecture Hours**

Introduce the paramedic student to the pathophysiological principles of medical emergencies in order for the student to perform an appropriate assessment and to formulate and implement a treatment plan for the medical patient with respiratory, allergy and anaphylactic, neurological, non-traumatic abdominal, toxicological, renal, endocrine, environmental, infectious disease, gynecological, and behavioral emergencies.

Prerequisites: EMTL 2630, EMTL 2640, EMTL 2650, EMTL 2660, EMTL 2670, and EMTL 2680; Corequisites: EMTL 2760 and EMTL 2780.

**EMTL 2730 Special Considerations****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Introduction to knowledge of assessment, formulation and implementation of treatment plans for the special patient populations including obstetrics and gynecology, neonatology, pediatrics, geriatrics, abuse and assault, patients with special challenges, social issues, and care for the patient with a chronic illness. Prerequisites: EMTL 2630, EMTL 2640, EMTL 2650, EMTL 2660, EMTL 2670, EMTL 2680, EMTL 2690, EMTL 2760, EMTL 2780; Corequisites: EMTL 2750, EMTL 2770, and EMTL 2790.

**EMTL 2740 EMS Instructor Trainer****3 credit class****45 classroom hours = 45 Lecture Hours**

A course designed to teach the methods needed to effectively instruct others in emergency medical services courses. Lecture, discussion, and performance are components of this class. The course meets one of the State of Nebraska requirements for licensure as an EMS instructor. Prerequisite: Current certification as an EMS Provider. (Replaces HLTH 2740.)

**EMTL 2750 Operations & Putting It All Together****1 credit hour****15 Classroom Hours = 15 Lecture Hours**

Introduction to knowledge in assessment-based management, clinical decision making, and transporting of the critical patient. This course will prepare the paramedic student for ambulance operations, crime scene awareness, dispatch activities, emergency vehicle operations, EMS operations command and control, vehicle rescue, tactical EMS, and response to hazardous materials incidents. Prerequisites: EMTL 2630, EMTL 2640, EMTL 2650, EMTL 2660, EMTL 2670, EMTL 2680, EMTL 2690, EMTL 2760, and EMTL 2780; Corequisites: EMTL 2730, EMTL 2770, and EMTL 2790.

**EMTL 2760 Clinical Practicum I****2 credits****92 Classroom Hours = 92 Clinical Hours**

Students rotate through a variety of clinical settings including emergency departments, operating rooms, respiratory therapy, progressive care, and critical care units. The student will have an emphasis on skills including patient assessment, airway management, endotracheal intubation, medication administration, and intravenous cannulation. This class also requires a community service component of 15 contact hours for completion of the paramedic program. Prerequisites: EMTL 2630, EMTL 2640, EMTL 2650, EMTL 2660, EMTL 2670, and EMTL 2680; Corequisites: EMTL 2690 and EMTL 2780.

**EMTL 2770 Clinical Practicum II****3 credit hours****138 Classroom Hours = 138 Clinical Hours**

Student will rotate through a variety of clinical settings including emergency departments, operating rooms, respiratory therapy, progressive care, psychiatric departments, pediatric, Obstetrics/delivery, and intensive care units. The student will have an emphasis on skills including patient assessment, airway management, endotracheal intubation, medication administration, intravenous cannulation, cardiac rhythm recognition, and infant births. Prerequisites: EMTL 2630, EMTL 2640, EMTL 2650, EMTL 2660, EMTL 2670, EMTL 2680, EMTL 2690, EMTL 2760, and EMTL 2780; Corequisites: EMTL 2730, EMTL 2750, and EMTL 2790.

**EMTL 2780 Field Practicum I****2 credits****80 Classroom Hours = 80 Practicum Hours**

Students will focus on the practical application of emergency care in an EMS field setting including scene management, patient assessment, treatment, and communications under the direct supervision of a field preceptor. The practicum's emphasis is implementation of paramedic skills and the role of a team leader as an integral portion in the final evaluation process for completion of the paramedic program. Prerequisites: EMTL 2630, EMTL 2640, EMTL 2650, EMTL 2660, EMTL 2670, and EMTL 2680; Corequisites: EMTL 2690 and EMTL 2760.

**EMTL 2790 Field Practicum II****3 credit hours****120 Classroom Hours = 120 Practicum Hours**

Students will focus on the practical application of emergency care in an EMS field setting including scene management, patient assessment, treatment, and communications under the direct supervision of a field preceptor. The practicum's emphasis is implementation of paramedic skills and the role of a team leader as an integral portion in the final evaluation process for completion of the paramedic program. Prerequisites: EMTL 2630, EMTL 2640, EMTL 2650, EMTL 2660, EMTL 2670, EMTL 2680, EMTL 2690, EMTL 2760, and EMTL 2780; Corequisites: EMTL 2730, EMTL 2750, and EMTL 2770.

**ENGINEERING****ENGR 1000 Engineering Fundamentals****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

This course is a one-semester introductory engineering course for students who are considering engineering as a career. The course will include an overview of the major engineering fields and subdivisions, including histories, achievements, failures and present outlooks to engineering today. The course will also include several individual and group projects designed to give the students experience in technological design, project planning, teamwork and communication.

**ENGR 1010 Introduction to Engineering Design****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

This course is a one-semester multidisciplinary freshman design course that will introduce students to the engineering problem solving process in the context of several disciplines and develop teamwork and communication skills.

**ENGR 1020 Programming & Problem Solving****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

This course is a one semester, three-credit hour, computer programming course that teaches structured programming and problem solving using computers. The course will consist of a sequence of programming assignments that require students to write computer programs to solve engineering problems. Each problem will come from a different engineering discipline.

# COURSE DESCRIPTIONS

## **ENGR 2010 Introduction to Circuits & Electronics**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This is a one semester, three credit hour course in the basic analysis of passive and electronic circuits. This course will be based on existing UNL courses ELEC 211 (Electrical Engineering for Non-Majors) and ELEC 215 (Circuits I). This course will be accepted by almost all of the UNL College of Engineering degree programs. Prerequisites: MATH 1600 and MATH 1900. PHYS 1410 and PHYS 1420 are strongly suggested.

## **ENGR 2011 Introduction to Circuits & Electronics Lab**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Lab course to accompany ENGR 2010. Includes DC and AC circuitry, circuit analysis, discrete semiconductors, analog integrated circuits and digital circuitry. Prerequisite: ENGR 2010.

## **ENGR 2020 Engineering Statics**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

The action of forces on engineering structures and machines. Force systems, static equilibrium of frames and machines, centroids, friction, moment of inertia. Prerequisites: MATH 1900 and PHYS 1410.

## **ENGR 2500 Engineering Internship Seminar**

**1 credit hour**

**15 Classroom Hours = 5 Lecture Hours**

Engineering Internship Seminar is a course designed to guide students through a successful internship experience. Each week students will meet with the instructor to report on their work, turn in timesheets, review logbooks and receive instructions. The course may also include training on specific internship-related issues as needed. Students will be required to give detailed presentations of their work at the end of each semester they are in the class. Students working more than 60 hours in their internship can get additional credits by enrolling concurrently in ENGR 2510 (1 cr., minimum 60 hours ENGR 2520 (2 cr., minimum 120 hours) or ENGR 2530 (3 cr., minimum 180 hours).

## **ENGR 2510 Engineering Internship Seminar**

**1 credit hours**

**60 Classroom Hours = 60 Internship Hours**

Engineering Internship is a companion course to ENGR 2500 for students who log at least 60 hours of internship work during the semester they are enrolled in the course. This course must be taken concurrently with ENGR 2500.

## **ENGR 2520 Engineering Internship Seminar**

**2 credit hour**

**120 Classroom Hours = 120 Internship Hours**

Engineering Internship is a companion course to ENGR 2500 for students who log at least 120 hours of internship work during the semester they are enrolled in the course. This course must be taken concurrently with ENGR 2500.

## **ENGR 2530 Engineering Internship Seminar**

**3 credit hours**

**180 Classroom Hours = 180 Internship Hours**

Engineering Internship is a companion course to ENGR 2500 for students who log at least 180 hours of internship work during the semester they are enrolled in the course. This course must be taken concurrently with ENGR 2500.

## **ENGLISH**

### **ENGL 0920 College Prep Reading**

**3 credit hours** 📖

**45 Classroom Hours = 45 Lecture Hours**

This reading skills course is designed to improve vocabulary, reading rate, comprehension, and study skills to be successful in college. Note: This course does not satisfy the general education requirement for an associate degree and cannot be used as an elective. This course is not

designed to transfer to a four-year college. This course can act as a prerequisite for ENGL 1010. Students achieving a reading COMPASS score between 0 and 79 or equivalent scores on the ACT or SAT are placed in this class. Students scoring below 25 are also strongly encouraged to join ABE classes. [Offered as READ 0920: College Prep Reading prior to Fall 2016]

### **ENGL 0980 Language Skills**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This developmental course is designed to improve basic English skills. Emphasis is placed on spelling, basic grammar, and sentence development. Note: This course does not satisfy the general education requirement for an associate degree and cannot be used as an elective. This course is not designed to transfer to a four-year college. This course can act as a prerequisite for ENGL 0990. Students achieving a writing COMPASS score between 0 and 38 or equivalent scores on the ACT or SAT are placed in this class. Students scoring below 25 are also strongly encouraged to join ABE classes.

### **ENGL 0990 College Prep Writing**

**3 credit hours** 📖

**45 Classroom Hours = 45 Lecture Hours**

College Prep Writing is a review of grammar and sentence writing skills including usage of words, parts of speech, parts of a sentence, agreement of subject and verb, punctuation of sentences, vocabulary development, and paragraph development. This course strengthens English proficiency before attempting college composition. Note: This course does not satisfy the general education requirement for an associate degree and cannot be used as an elective. This course is not designed to transfer to a four-year college. This course can act as a prerequisite for ENGL 1010. Students achieving a writing COMPASS score between 39 and 73 or equivalent scores on the ACT or SAT or passed ENGL 0980 with a "C" or higher are placed in this class. Prerequisite: Minimum COMPASS, ACT, or SAT score or completion of ENGL 0980 with a "C" or higher.

### **ENGL 1010 English Composition I**

**3 credit hours** 📖

**45 Classroom Hours = 45 Lecture Hours**

English Composition I is designed to develop writing skills. Students write short papers and essays based upon their personal experience and/or assigned papers. The course emphasizes the clear written expression of ideas and the importance of organization, word choice, logic, and sentence construction. The process of planning, writing, revising, researching, documenting, and editing essays for a particular audience is also emphasized. Students must have achieved a 74 on the COMPASS writing exam or the equivalent on the ACT or SAT or have passed ENGL 0990 with a "C" or higher. Students must have achieved an 80 on the COMPASS reading exam or the equivalent on the ACT or SAT or have passed ENGL 0920 with a "C" or higher. Prerequisite: Minimum COMPASS reading and writing scores or the equivalent as outlined above.

### **ENGL 1020 English Composition II**

**3 credit hours** 📖

**45 Classroom Hours = 45 Lecture Hours**

Focuses on extended source-based writings and/or projects, including a required research paper. Emphasized organizational strategies for research, the integration of multiple resources, and the ethical use of information source to produce informative and/or argumentative texts. Prerequisite: Completion of ENGL 1010 with a "C" or higher.

### **ENGL 1040 Basic Technical Communications**

**3 credit hours** 📖

**45 Classroom Hours = 45 Lecture Hours**

Designed for students in vocational-technical programs in which an emphasis on job-related writing is desired. Course content will range from structure and development of the paragraph to identifying, selecting, planning, and writing a variety of clear, well-organized, thorough reports. Prerequisite: Minimum score on placement exam or satisfactory completion of ENGL 0990 and ENGL 0920.

**ENGL 1520 Creative Writing****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

An introduction to the composition of creative pieces in both prose and poetic forms. Fiction elements including description, characterization, dialogue, plot construction/theme, and a variety of poetic forms, including strict rhyme and scansion, blank verse and free verse will comprise the writing assignments. This course is not applicable to the six-hour English composition credit requirement. Prerequisite: Completion of ENGL 1010 with a "C" or higher.

**ENGL 2010 Genre Survey: Short Story & Novel****3 credit hours** **45 Classroom Hours = 45 Lecture Hours**

Elements and theories of fiction. Study of selected short stories and novels. Emphasis on critical discussion and writing. Prerequisite: ENGL 1010 with 'C' or higher.

**ENGL 2030 Genre Survey: Poetry****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Elements and theories of poetry. Study of selected poems stressing the development of a method of analysis and criticism. Emphasis on critical discussion and writing. Prerequisite: ENGL 1010 with 'C' or higher.

**ENGL 2040 Genre Survey: Drama****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Chronological approach to the study of drama with emphasis on the conceptual and formal evaluation of the genre. Representative plays from each period are studied stressing development of a method of critical analysis, critical listening and reading skills, interpretive reading, and critical discussion and writing. Prerequisite: ENGL 1010 with 'C' or higher.

**ENGL 2050 The Novel****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

An introduction to selected English, American, and Continental novels. Includes traditional and contemporary novels. Prerequisite: ENGL 1010 with 'C' or higher.

**ENGL 2060 20th Century Fiction****3 credit hours** **45 Classroom Hours = 45 Lecture Hours**

A study of 20th century fiction in English, including both the novel and short story. Emphasis is on influential works of recognized modern literacy figures. Prerequisite: ENGL 1010 with 'C' or higher.

**ENGL 2100 Introduction to Literature****3 credit hours** **45 Classroom Hours = 45 Lecture Hours**

This survey course introduces students to the major genres and conventions associated with literature including fiction, poetry, and drama. By employing critical reading/thinking skills and analytical and creative writing skills, students will understand literature more fully. The course exposes students to a range of authors representing a variety of cultural and ethnic backgrounds. Reading/Writing skills at ENGL 1010 level or its equivalent. Prerequisite: ENGL 1010 with "C" or higher.

**ENGL 2110 Nebraska Writers****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Study of selected Nebraska writers from the perspectives of how they perceived and what they contributed to the American temper. Selected works of these authors will be studied from structural, thematic, and stylistic points of view. This course does not fulfill the humanities-literature requirement for the Associate of Arts degree. Prerequisite: ENGL 1010 with 'C' or higher.

**ENGL 2300 Shakespeare****3 credit hours** **45 Classroom Hours = 45 Lecture Hours**


A critical study of selected works of Shakespeare. Prerequisite: ENGL 1010 with 'C' or higher.

**ENGL 2440 Film as Literature****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Introduction to the study of films as literary and cultural texts, using critical theories to analyze various film genres (such as Film Noir, the Western, etc.) from the 1900s to the present day. Includes analysis of narrative, character, form and cultural/historical context. Prerequisite: ENGL 1010 or instructor permission.

**ENGL 2450 Television as Literature****3 credit hours** **45 Classroom Hours = 45 Lecture Hours**


Introduction to the study of television shows as literary and cultural texts, using critical methods to analyze varied television genres; examines narrative, character, form and cultural/historical context. Prerequisite: ENGL 1010 with 'C' or higher.

**ENGL 2460 American Literature Post 1865****3 credit hours** **45 Classroom Hours = 45 Lecture Hours**

This survey of American authors of the 19th and 20th centuries will introduce students to some of the important writers and literary, artistic, and cultural movements in the United States of this time. The students will develop the ability to read, appreciate, understand and critically assess a variety of literary works from different historical periods, from different ethnic communities and in different genres. Prerequisite: ENGL 1010 with 'C' or higher.

**ENGL 2510 Science Fiction – Supernatural Literature****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

A study of science fiction and supernatural stories and novels emphasizing themes and techniques common to these literary forms. Prerequisite: ENGL 1010 with 'C' or higher.

**ENGL 2520 Literature of Nature****3 credit hours** **48 Classroom Hours = 48 Lecture Hours**

Begins with an examination of the rural dream in America and proceeds to examples of long and short fiction concerned with life in the outdoors. Prerequisite: ENGL 1010 with 'C' or higher or permission of instructor.

**ENGL 2550 Short Fiction****3 credit hours** **45 Classroom Hours = 45 Lecture Hours**

An introduction to the short story. Includes various types of American, English, and Continental short fiction. Emphasis on theme and form. Prerequisite: ENGL 1010 with 'C' or higher.

**ENTREPRENEURSHIP****ENTR 1050 Introduction to Entrepreneurship****3 credit hours** **45 Classroom Hours = 45 Lecture Hours**

The student will evaluate the business skills and commitment necessary to successfully operate an entrepreneurial venture and review the challenges and rewards of entrepreneurship. The student will understand the role of entrepreneurial businesses in the United States and the impact on our national and global economy

**ENTR 2040 Entrepreneurship Feasibility Study****3 credit hours** **45 Classroom Hours = 45 Lecture Hours**

The student will evaluate a business concept and create a business plan. Students will assess the strengths and weaknesses of a business concept; apply research data into the plans; and prepare the financial projections

# COURSE DESCRIPTIONS

for the business concept. Students will identify and evaluate various resources available for funding small businesses.

## **ENTR 2050 Marketing for the Entrepreneur**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

In the course, the student will gain insights essential for marketing their entrepreneurial venture utilizing innovative and financially responsible marketing strategies. Students will develop an understanding of traditional and non-traditional entrepreneurial marketing strategies. Prepare marketing strategies with associated tactics to launch and sustain an entrepreneurial venture.

## **ENTR 2060 Entrepreneurship Legal Issues**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

The student will explore legal issues related to business entities including sole proprietorship, general partnerships, limited partnerships, and corporations. Students will review contract law, articles of incorporations and the filing process, employment law (including FEPA, ADA, and FMLA), personnel policies and procedures, the hiring process, job descriptions, disciplinary actions, and business insurance.

## **ENTR 2070 Entrepreneurship Financial Topics**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course will cover financial topics for small business. Financial topics include budgeting, creation of financial statements, and learning how to work with an accounting professional. Other topics covered are income tax, sales and use tax, payroll tax, unemployment tax, employee benefits and retirement planning.

## **ENTR 2090 Entrepreneurship Business Plan**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

The student will evaluate a business concept and create a business plan. Students will assess the strengths and weaknesses of a business concept; apply research data into the plans; and prepare the financial projections for the business concept. Students will identify and evaluate various resources available for funding small businesses.

## **ENTR 2091 Entrepreneurship Business Plan**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Learn core entrepreneurship concepts through the development of a business concept, personal vision and investigate the market and financial feasibility by testing the concept against a model business.

## **FAMILY AND CONSUMER SCIENCES**

### **FACS 1050 Expressive Arts**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course focuses on the selection, construction, and use of materials, activities and experiences that encourage the young child's creativity and aesthetic appreciation through the visual arts, music, body movement, and dramatic play. Curriculum is designed for 3-8 year olds

### **FACS 1060 Healthy Lifestyles**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course will enable students to apply principles of healthy living including nutrition, exercise, stress reduction, arranging and maintaining a safe environment to their personal and professional life. Special emphasis placed on supporting families as they incorporate goals of healthy living into their daily activities.

### **FACS 1070 Observation, Assessment & Guidance**

**3 credit hours**

**55 Classroom Hours = 40 Lecture Hours + 15 Lab Hours**

This course introduces a variety of observation, assessment, and guidance strategies used in early childhood education settings birth through age eight.

### **FACS 1110 Infant Toddler Development**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course focuses on typical / atypical development of children in the prenatal period of development through 36 months. Planning curriculum in the domains of physical growth and motor skills, cognition and language, and social / emotional development are examined.

### **FACS 1120 Child Development**

**4 credit hours** 

**75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

This course focuses on typical/atypical development of the child ages 3-12 years in the domains of physical growth and motor skills, cognition and language, and social/emotional development. Observation and participation in laboratory experiences for two hours per week is required. Students must be cleared through appropriate background checks and be physically able to participate in experiences with young children.

### **FACS 1150 Introduction to Early Childhood Education**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

An overview of early childhood education, history, trends and the philosophies of various programs, diversity, inclusion, licensing standards, current legislation, professionalism, and advocacy are examined.

### **FACS 1210 Design Essentials**

**3 credit hours**

**60 Classroom Hours = 30 Lecture Hours + 30 Lab Hours**

Development of appreciation of aesthetically pleasing line, space, shape, color, form, and texture; judgment in the use of things pertaining to everyday living. Selecting, evaluating, and arranging many forms of art expression.

### **FACS 1221 Infant Toddler Practicum**

**3 credit hours**

**105 Classroom Hours = 15 Lecture Hours + 90 Practicum Hours**

This course is designed to provide an understanding of the developmental stages of children six weeks through 36 months-of-age by participating in hands-on learning experiences in selected child care settings. Students will develop an awareness of appropriate adult/child interaction while developing positive employee skills. Basic skills in planning and implementing a daily routine and curriculum activities for infants and toddlers are also presented. Students are required to complete a minimum of 90 clock hours of practical work experience in addition to attendance and participation at seminar sessions. A passing grade of "C" or better is required for ECED majors. Students must pass appropriate background checks and be physically able to interact with young children. Prerequisite: Permission of Instructor.

### **FACS 1230 Clothing and Human Behavior**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Analysis of social, cultural, aesthetic and economic influences on clothing and human behavior.

### **FACS 1410 Food Preparation**

**3 credit hours**

**75 Classroom Hours = 30 Lecture Hours + 45 Lab Hours**

Fundamental and scientific principles of food preparation with emphasis on composition, quality control, and nutritive contributions. Includes cultural, social, and economic issues related to food selection. Fee \$15.

**FACS 1520    Preschool/School Age Practicum****3 credit hours****105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

This course is designed to provide an understanding of the developmental stages of children from three to eight years of age by participating in hands-on learning experiences in selected child care settings. Students will develop an awareness of appropriate adult/child interaction while developing positive employee skills. Basic skills in planning and implementing a daily routine and curriculum activities for children from 3-8 years of age are also presented. Students are required to complete a minimum of 90 clock hours of practical work experience. Attendance at discussion sessions is required. Students must also participate in weekly seminar discussions and lectures. A grade of "C" or better is required for all ECED majors. Students must be cleared through appropriate background checks and be physically able to participate in experiences with young children. Prerequisite: Permission of Instructor.

**FACS 1600    Human Development****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

A developmental life cycle approach to the study of the individual from conception to old age including death. Each stage of life is studied from the perspective of how individual development is fostered within the family system.

**FACS 1620    First Connections****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

First Connections is a web based course designed to make exemplary technology-based training opportunities available to early childhood care and education personnel working with infants and toddlers, including those with special needs, primarily in home-based child care. Course content includes safety, creating healthy learning environments, all aspects of infant and toddler development, behavior guidance and professionalism. Note: This course may not transfer to a four-year college.

**FACS 2060    Early Childhood Education Curriculum Planning****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

This course prepares students to plan a developmentally appropriate curriculum and environments for children ages 3-8 years of age. Topics include writing goals and objectives, lesson plans, daily schedules, working with parents, and inclusionary practices.

**FACS 2070    Family & Community Relationships****3 credit hours****55 Classroom Hours = 45 Lecture Hours + 10 Lab Hours**

This course focuses on the development of skills, techniques and attitudes needed to form successful collaboration with diverse family systems and communities. Ten hours of community service learning required.

**FACS 2300    Visual Merchandising****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Fundamentals of planning promotional activities and store design in the current retail environment. Design principles will be discussed in relationship to in-store and window displaying, signage, and general merchandising within a context of a store image, salesmanship, and promotion.

**FACS 2360    Administration of Early Childhood Programs****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

This course provides students with the opportunity to examine and interpret standards pertaining to the establishment and operation of centers for young children. It covers the various types of child care and early education settings, roles and responsibilities of administrator. Issues related to licensing, early learning guidelines, accreditation and ensuring quality are covered in addition to; site selection, policy formation, administrative forms, staffing needs, fiscal management, equipment

selection, program evaluation, staff development, parent involvement, and administrative styles and techniques.

**FACS 2400    Family & Consumer Sciences Internship****1 credit hour****60 Classroom Hours = 60 Internship Hours**

The student enrolled in this course receives work experience in approved training stations, supervised by the college coordinator and the employer. The student is compensated for his/her services. The occupational areas include fashion merchandising, food services, interior design, and other related FACS occupations. Prerequisite: Enrollment in a Family and Consumer Sciences program, current enrollment in the Related Studies Seminar, and permission of instructor.

**FACS 2450    Family & Consumer Sciences Internship****2 credit hours****120 Classroom Hours = 120 Internship Hours**

The student enrolled in this course receives work experience in approved training stations, supervised by the college coordinator and the employer. The student is compensated for his/her services. The occupational areas include fashion merchandising, food services, interior design, and other related FACS occupations. Prerequisite: Enrollment in a Family and Consumer Sciences program, current enrollment in the Related Studies Seminar, and permission of instructor.

**FACS 2500    Family & Consumer Sciences Internship****3 credit hours****180 Classroom Hours = 180 Internship Hours**

The student enrolled in this course receives work experience in approved training stations, supervised by the college coordinator and the employer. The student may be compensated for his/her services. The occupational areas include fashion merchandising, food services, interior design, human services and other related FACS occupations. Prerequisite: Enrollment in a Family and Consumer Sciences program, current enrollment in the Related Studies Seminar, and permission of instructor.

**FACS 2960    Early Childhood Education Student Teaching****4 credit hours****150 Classroom Hours = 15 Lecture Hours + 135 Practicum Hours**

This course is designed to give students increasing responsibility for program planning, implementation and evaluation in an early childhood program. In addition to leading activities for children students focus on parent involvement, staff interaction and problem solving. Students will explore three different programs and age groups of children throughout the semester as well as prepare job search materials for their future. In order to take Child Care Student Teaching students must have completed the entire early childhood education core of classes, or have permission of instructor. A grade of "C" or better is required for all ECED majors. Students must be cleared through appropriate background checks and be physically able to participate in experiences with young children. Success completion of this course involves the preparation and presentation of a professional portfolio.

**FIRE SCIENCE TRAINING****FRST 1110    Introduction to Firemanship****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

The course is designed to acquaint the new fire fighter with the fire department and all the basics of firemanship. The student will learn the equipment, skills, and terminology used in every phase of the job as a firefighter. Fee \$5.

**FRST 1120    Fire Service Science****3 credit hours****48 Classroom Hours = 48 Lecture Hours**

A course including fundamentals in basic science and chemistry as applied to fire service including flammability ranges of various construction materials and manufactured products. Fee \$5.

# COURSE DESCRIPTIONS

## **FRST 1215 Mechanical System for Building/Blueprint Reading**

**4 credit hours**

**60 Classroom Hours = 60 Lecture Hours**

The firefighter will study the latest developments in building materials and design, as well as those materials and structures presently in use, as to their behavior to abnormal heat and pressure. The student will also express their observation of building structures and fixtures on paper, drawn to scale, using standardized symbols. Fee \$5.

## **FRST 1220 Fire Prevention**

**3 credit hours**

**52.5 Classroom Hours = 52.5 Lecture Hours + 15 Lab Hours**

This course provides fundamental knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; plans review; fire inspection; fire and life safety education; and fire investigation. Fee \$5.

## **FRST 1300 Strategy & Tactics**

**3 credit hours**

**60 Classroom Hours = 30 Lecture Hours + 30 Lab Hours**

This course provides the principles of fire ground control through utilization of personal, equipment and extinguishing agents. Prerequisite: FRST 1650.

## **FRST 1310 Fire Protection Hydraulics**

**4 credit hours**

**60 Classroom Hours = 60 Lecture Hours**

Students are instructed in basic hydraulic laws and formulas applied to fire service. Enables student to apply calculations to water supply problems and relate this information to practical field applications. Fee \$5.

## **FRST 1320 Essentials of Electricity**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

This course will enable the firefighter to better understand the requirements of electric power construction. Students will apply their understanding of electricity to determine potential hazards and methods for dealing with such circumstances. Fee \$5.

## **FRST 1420 Fire Protection Systems**

**3 credit hours**

**48 Classroom Hours = 48 Lecture Hours**

This course provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers. Fee \$5.

## **FRST 1510 Fire Fighter I**

**4 credit hours**

**60 Classroom Hours = 60 Lecture Hours**

This course contains the information and skills needed to perform basic fire fighting functions on the fire ground. Upon completion, students are eligible to take the Nebraska State Fire Fighter I Certification Test. Fee \$5.

## **FRST 1511 Fire Fighter I & Hazmat Operations**

**5 credit hours**

**120 Classroom Hours = 30 Lecture Hours + 90 Lab Hours**

This course contains the information and skills needed to perform basic firefighting function on the fire ground. Upon completion, students are eligible to take the Nebraska State Fire Fighter I Certification Test. (Replaces FRST 1410) Prerequisite: EMTL 1310 or taken concurrently.

## **FRST 1520 Fire Fighting Tactics**

**2 credit hours**

**32 Classroom Hours = 32 Lecture Hours**

This course instructs the student on the strategy and tactics of controlling structural fires and wildland or cropland fires. It is comprised of the decision-making process in determining the strategy that dictates tactics. Fee \$5.

## **FRST 1610 Fire Investigation I**

**3 credit hours**

**60 Classroom Hours = 30 Lecture Hours + 30 Lab Hours**

This course is intended to provide the students with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter and types of fire causes. Fee \$5.

## **FRST 1620 Fire Science Computers**

**2 credit hours**

**30 Classroom Hours – 30 Lecture Hours**

This course provides an introduction to the Windows and the CAD fire Zone operating environment. This course is designed to meet the needs of fire personnel. The students will learn tools that allow the user to be acquainted in the operations of Windows and to easily create accurate professional looking pre-fire diagrams perfectly to scale.

## **FRST 1630 Firefighter Physical Fitness & Conditioning**

**1 credit hour**

**24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

This course will provide information and techniques for developing and maintaining a physical fitness program to enhance the firefighter's ability to provide firefighting related functions including: methods of exercise related to building strength and conditioning, aerobic conditioning, and proper nutrition.

## **FRST 1640 Fire Investigation II**

**3 credit hours**

**60 Classroom Hours = 30 Lecture Hours + 30 Lab Hours**

This course is intended to provide the students with advanced technical knowledge on the rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and courtroom testimony. Prerequisite: FRST 1610.

## **FRST 1650 Principles of Emergency Services**

**4 credit hours**

**67.5 Classroom Hours = 52.5 Lecture Hours + 15 Lab Hours**

This course provides an overview to fire protection and emergency services; career opportunities in fire protection and related fields; culture and history of emergency services; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics; life safety initiatives.

## **FRST 1660 Principles of Fire & Emergency Service**

**Administration**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course introduces the student to the organization and management of a fire and emergency services department and the relationship of government agencies to the fire service. Emphasis is placed on fire and emergency services, ethics, and leadership from the perspective of the company officer. Prerequisite: FRST 1650.

## **FRST 1670 Principles of Fire & Emergency Services Safety & Survival**

**3 credit hours**

**30 Classroom Hours = 30 Lecture Hours + 30 Lab Hours**

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services.

## **FRST 1700 Wild Land Firefighting**

**3 credit hours**

**30 Classroom Hours = 30 Lecture Hours + 30 Lab Hours**

The students will learn and understand the S-110, S-130 and S-190 wildland firefighting programs. These programs cover the ICS system, fire behavior and general firefighting.

**FRST 1770 Fire Apparatus Operations****2 credit hours****45 Classroom Hours = 15 Lecture Hours + 30 Lab Hours**

This course provides fundamental knowledge relating to apparatus driving, operating and overall knowledge of the vehicle.

**FRST 1800 Legal Aspects of the Fire Service****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

This course will address the Federal, State and local laws that regulate emergency services and include a review of national standards, regulations and consensus standards.

**FRST 1900 Fire Behavior & Combustion****3 credit hours****60 Classroom Hours = 30 Lecture Hours + 30 Lab Hours**

This course explores the theories and fundamentals of how and why fires start, spread and are controlled.

**FRST 1980 Building Construction for Fire Prevention****3 credit hours****60 Classroom Hours = 30 Lecture Hours + 30 Lab Hours**

This course provides the components of building construction related to firefighter life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations and operating at emergencies. Prerequisite: FRST 1650.

**FRST 2000 Rescue I****2 credit hours****45 Classroom Hours = 15 Lecture Hours + 30 Lab Hours**

This course provides fundamental knowledge relating to the field of rescue. Topics include: vehicle extrication, basic ropes, water rescue, confined space and basic search for missing persons.

**FRST 2010 Rescue II****2 credit hours****45 Classroom Hours = 15 Lecture Hours + 30 Lab Hours**

This course provides fundamental knowledge relating to rescue, topics include: truck, bus and farm vehicle extrication, high and low level rope rescue, trench rescue, ice rescue and grain bin rescue and recovery.

**FRENCH****FREN 1010 French I****5 credit hours****80 Classroom Hours = 80 Lecture Hours**

An introduction to the grammatical and conversational study of French.

**FREN 1020 French II****5 credit hours****80 Classroom Hours = 80 Lecture Hours**

Continuation of FREN 1010. More intense concentration on verbs and conversation. Prerequisite: FREN 1010 or one year of high school French.

**FREN 2010 French III****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Review of grammar, conversation and reading of French literature. Emphasis is given to the practical use of spoken and heard language. Prerequisite: FREN 1020 or two years of high school French.

**FREN 2020 French IV****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

A continuation of FREN 2010. Emphasis is given to composition, reading, and conversation. Prerequisite: FREN 2010.

**GEOGRAPHY****GEOG 1010 Physical Geology****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Students will learn the fundamental processes that shape the earth. Topic areas include minerals, rocks, and ores; the surface features and internal character of the earth; and the forces that are constantly changing it. This is a non-lab course.

**GEOG 1040 World Regional Geography****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

A global summary of geographic processes at the regional level. The physical, economic, political and cultural variations underlying patterns of human settlement are emphasized.

**GEOG 1050 Physical Geography****4 credit hours****75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

An introduction to the forces, events, materials, and organisms that contribute to our physical environment. Includes topics dealing with weather, earth materials, climate, weathering, landforms, ecosystems and environmental regions. Note: Applicable to the physical sciences requirements at most institutions. Laboratory required. Fee \$15.

**GEOG 1051 Physical Geography Lab**

Lab for Physical Geography. Corequisite: GEOG 1050.

**GEOG 1400 Cultural Geography****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

A study of the role of place in human settlement and other patterns of social activity. Considers variations in human life around the world.

**GRAPHIC DESIGN/VISUAL COMMUNICATIONS****GDVC 1400 Introduction to Graphic Design****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Students will be introduced to the art of visual communication as they study production methods, compositional practices, and graphic design history and trends. Creative development will be the focus of design and computer related studio exercises required for the course.

**GDVC 1450 Typography****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Students will become familiar with the history of typography as they learn the fundamental differences between fonts, and the requirements for quality type reproduction. Students will apply this information as they create aesthetically pleasing typographic documents and explore creative use of typography.

**GDVC 1500 Digital Imaging****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Students will learn the fundamentals of image manipulation with Adobe Photoshop and put these skills to use in a variety of visual problem solving situations. The images will be imported and saved in formats to be used in diverse applications.

**GDVC 1550 Illustration****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Students will develop skills in digital illustration and comparisons will be made between traditional illustration methods and digital methods. Students will research the work of other illustrators and develop their own style as they work on real world project scenarios.



# COURSE DESCRIPTIONS

## **GDVC 2400    Multimedia**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Students will learn basic video editing skills as they create their own documentaries and movies using video and audio editing software. They will output these projects for use in presentations, as DVDs, and on the Web.

## **GDVC 2450    3-D & Animation**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Students will create three-dimensional digital shapes and animate them with custom backgrounds, texture, and lighting as they develop skill in the use of 3-D and animation software.

## **GDVC 2600    Portfolio**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Students will design their own ID package and refine their portfolio to help them prepare for employment after graduation. They will create a print, DVD, and a web portfolio. Included in the course will be the exhibition of student work for public display.

## **GDVC 2700    Internship**

**3 credit hours**

**180 Classroom Hours = 180 Internship Hours**

Students will review employer expectations and receive information about their internship responsibilities. Students will experience on-the-job training through a cooperative arrangement with an organization or business, working a minimum of 180 clock hours under the direction of a sponsoring supervisor. Emphasis is placed on the application of design skills, technical knowledge and communication skills. This class is designed for the Associate of Applied Science in Graphic Design Degree Program.

## **HEALTH**

### **HLTH 1000    Intro to Health Occupations**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course is designed to introduce the student to various career options and employment opportunities in the healthcare professions. The student will be provided with basic information that is pertinent to all aspects of the delivery of healthcare services. The ethical, legal, and professional considerations involved in health occupations will be explored. Local healthcare professionals will be invited to share their career choices in order to assist the student in making informed decisions regarding their vocational future.

### **HLTH 1010    Medical Terminology**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

An independent programmed study of the basic Greek and Latin roots of medical and scientific terms. Combines word formations through root, prefix, and suffix with identification of terms related to medicine or allied health areas.

### **HLTH 1250    Introduction to Health Care Informatics**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

This course is designed as an overview of healthcare informatics. It introduces students to the applications of informatics systems in healthcare practice, educate, research and administration. This course integrates healthcare science with computer technology and information science to identify, gather, process, and manage health information. Students are introduced to computer hardware, software, databases and communication applications. This course will also discuss Internet use by health care consumers and the current and future role of telehealth in medical practice. Ethical, security, and confidential issues as they relate to computer usage in health care will be discussed. Students will learn how the health care environment has evolved to include technology in

assessing patients, developing and implementing healthcare information systems to work more efficiently, allocate resources more effectively and improve patient care.

### **HLTH 1500    Community First Aid & Safety**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

American Red Cross Community First Aid and Safety. American Red Cross certificate may be earned.

### **HLTH 2300    Health Education**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

A look at new concepts and trends as related to personal and community health. Topics to be covered include such things as fitness and nutrition, weight control, disease, human sexuality, aging, death, mental health and the role of drugs in our society.

### **HLTH 2950    Medication Techniques**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

A study of medication administration, drug actions and interactions, side effects and adverse reactions with the emphasis on psychotropic drugs as required for all persons handling medication in custodial foster homes, boarding homes for the aged, mental health centers, and centers for the developmentally handicapped. Prerequisite: Current employment in a human services organization.

## **HEATING, VENTILATION, AND AIR CONDITIONING TECHNOLOGY**

### **HVAC 1005    Safety**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Specific safety practices that apply to the HVAC shop.

### **HVAC 1315    Electrical Theory**

**3.5 credit hours**

**53 Classroom Hours = 53 Lecture Hours**

Basic electron theory and how we use electrical energy for heating ventilation and air conditioning. Use of electrical meters and circuits to check and troubleshoot HVAC equipment. Safety practices are an integral part of this course. Corequisite: HVAC 1005. (Replaces HVAC 1310.)

### **HVAC 1320    Electrical Applications Lab**

**1 credit hour**

**45 Classroom Hours = 45 Lab Hours**

This course will cover Atomic theory, Ohm's Law, Watt's Law, wiring diagrams and symbols, use of electric meters, types of electric motors, controls, and troubleshooting in a lab application. Corequisites: HVAC 1310, 1340, and 1350.

### **HVAC 1330    Sheetmetal Installation**

**3 credit hours**

**75 Classroom Hours = 30 Lecture Hours + 45 Lab Hours**

The student will be introduced to tools and materials used in sheetmetal work, as well as the procedures used in making heating and cooling ducts and the installation of actual projects.

### **HVAC 1340    Furnace Fundamentals**

**4 credit hours**

**60 Classroom Hours = 60 Lecture Hours**

A study of gas and electric furnaces. Students will study and understand applications of installations and repair. Corequisite: HVAC 1310, 1320, and 1350.

### **HVAC 1350    Furnace Fundamentals Lab**

**3 credit hours**

**135 Classroom Hours = 135 Lab Hours**

A study of gas and electric furnaces. Students will study and understand applications of installations and repair in a lab application. Corequisites: HVAC 1320 and 1340.

**HVAC 1360 Fall Internship****1.5 credit hours****90 Classroom Hours = 90 Internship Hours**

Hands on experience working as an employee with a local HVAC business and coordinated by Mid-Plains HVAC Department.

**HVAC 1400 Spring Internship****1.5 credit hours****90 Classroom Hours = 90 Internship Hours**

Hands on experience working as an employee with a local HVAC business and coordinated by Mid-Plains HVAC Department.

**HVAC 1410 A/C Cycle Theory****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

This course will cover basic A/C principles, refrigerants, and the refrigeration cycle. Prerequisite: HVAC 1320 and Corequisites: HVAC 1475 and 1480.

**HVAC 1425 A/C Cycle Lab****2 credit hour****90 Classroom Hours = 90 Lab Hours**

This course includes working with actual models of window air conditioners and mock-up trainers while applying shop tools and techniques. Fee \$15.

**HVAC 1435 A/C Controls Theory****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

This course will cover residential and commercial A/C wiring diagrams, schematics and electrical control devices including troubleshooting and repair. Prerequisite: HVAC 1310 and Corequisites: HVAC 1445 and 1460.

**HVAC 1440 A/C Controls Lab****1 credit hour****45 Classroom Hours = 45 Lab Hours**

This course will cover residential and commercial A/C wiring diagrams, schematics and electrical control devices including troubleshooting and repair. Prerequisite: HVAC 1310.

**HVAC 1445 A/C Applications Refrigerant/Reclaim****4 credit hours****60 Classroom Hours = 60 Lecture Hours**

The student will study design and do maintenance, troubleshooting, repair, and fine tuning of residential and commercial air conditioning. Prerequisite: HVAC 1310 and Corequisite: HVAC 1435.

**HVAC 1460 A/C Applications Lab****1 credit hour****45 Classroom Hours = 45 Lab Hours**

The student will study design and do maintenance, troubleshooting, repair, and fine tuning of residential and commercial air conditioning. Corequisite: HVAC 1435. Fee \$10.

**HVAC 1475 Heat Pumps Theory****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

A study of heat pumps and electrical sequence of heat pumps. Prerequisites: HVAC 1310 and Corequisite: HVAC 1410.

**HVAC 1480 Heat Pumps Lab****1 credit hour****45 Classroom Hours = 45 Lab Hours**

A study of heat pumps. Students will have applications of tracing, troubleshooting, and repair. Prerequisites: HVAC 1310 and Corequisite: HVAC 1410. Fee \$10.

**HVAC 1483 HVAC Internship****3 credit hours****180 Classroom Hours = 180 Internship Hours**

On-the-job training through a cooperative arrangement with HVAC businesses. Students work a minimum of 180 hours under the direction of a sponsoring manager or supervisor to apply classroom knowledge

and training. Prerequisite: The student must have completed both fall and spring semesters in the HVAC program.

**HVAC 1484 HVAC Basic Internship****4 credit hours****240 Classroom Hours = 240 Internship Hours**

On-the-job training through a cooperative arrangement with HVAC businesses. Students work a minimum of 240 hours under the direction of a sponsoring manager or supervisor to apply classroom knowledge and training. Prerequisite: The student must have completed both fall and spring semesters in the HVAC program.

**HVAC 1485 HVAC Basic Internship****5 credit hours****300 Classroom Hours = 300 Internship Hours**

On-the-job training through a cooperative arrangement with HVAC businesses. Students work a minimum of 300 hours under the direction of a sponsoring manager or supervisor to apply classroom knowledge and training. Prerequisite: The student must have completed both fall and spring semesters in the HVAC program.

**HVAC 1490 HVAC Internship****8 credit hours****480 Classroom Hours = 480 Internship Hours**

On-the-job training through a cooperative arrangement with HVAC businesses. Students work a minimum of 480 hours under the direction of a sponsoring manager or supervisor to apply classroom knowledge and training. Prerequisite: The student must have completed both fall and spring semesters in the HVAC program.

**HVAC 1500 Commercial Refrigeration Electrical Mechanical****6 credit hours****90 Classroom Hours = 90 Lecture Hours**

This course helps to prepare the student to install, service, and repair some light commercial refrigeration systems as ice machines, reach-in coolers and freezers, walk-in coolers and freezers. This course helps to prepare the student to install, service and repair some light commercial refrigeration systems as ice machines, reach-in coolers and freezers, walk-in coolers and freezers. Prerequisites: HVAC 1410, HVAC 1425, HVAC 1435, and HVAC 1440.

**HVAC 1510 Commercial Refrigeration Electrical Mechanical Lab****2 credit hours****90 Classroom Hours = 90 Lab Hours**

Students will advance through several practical lab competencies designed to develop hands-on skills needed when working on light commercial refrigeration equipment. Prerequisites: HVAC 1410 and HVAC 1435.

**HVAC 1710 Refrigeration & Air Conditioning****2 credit hours****45 Classroom Hours = 22 Lecture Hours + 23 Lab Hours**

Refrigeration cycle, component principles, repair applications and shop projects. Heating and cooling unit installation and service. Fee \$10.

**HISTORY****HIST 1000 Western Civilization I to 1715****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

This course will explore the essential ideas, themes, and issues that have shaped the development of Western civilization from prehistoric times to the advent of modern European notions of absolutism and constitutionalism. The course will include ancient civilization, the emergence of European Christendom, feudalism, manorialism, urbanization, medieval kingdoms, Renaissance and Reformation thought, religious conflict, the scientific revolution, and expansion beyond Europe.

# COURSE DESCRIPTIONS

## **HIST 1010 Western Civilization II Since 1715**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course will analyze the impact of social, economic, political, cultural, and intellectual changes upon Europe from the close of Louis XIV's reign until the contemporary period. The course will include the Enlightenment, capitalism, industrialization, the French Revolution, liberalism, democracy, nationalism, imperialism, socialism, the Russian Revolution, fascism, World War I, the Great Depression, World War II, the Cold War era, and the Revolutions of 1989.

## **HIST 1050 World History I**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course will explore the essential ideas, themes, and issues that have shaped the development of world civilizations from prehistoric times to the advent of European expansion during the beginning of the 16th century. The course will include a review of civilizations in the Middle East, Asia, Africa, the Americas, and Europe.

## **HIST 1060 World History II**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course will analyze the impact of social, economic, political, cultural, and intellectual changes in the context of world civilizations from the beginning of the 16th century until the contemporary period. Specific historical trends within the Middle Eastern, Asian, African, European, and Western Hemispheric context from the 16th century until the present will be studied.

## **HIST 2010 American History I to 1877**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

A survey of American history from the pre-colonial era through the period of the Reconstruction. Emphasis will be placed upon the political, economic, cultural, social, religious, and institutional development of the nation. The course will include colonial development, the American Revolution, constitutional evolution and the establishment of a new republic, Jacksonian democracy, the market revolution and reform movements, slavery, westward expansion, the War with Mexico, sectionalism, the Civil War, and social problems in the growth of the American nation.

## **HIST 2020 American History II Since 1877**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

A survey of American history since the Reconstruction that includes a social, cultural, political, intellectual, and economic analysis of the following major issues: industrialized corporate capitalism and its struggle with labor, Gilded Age politics, Populism, the continued settlement of the frontier West and its resistance, immigration, imperialism and the Spanish-American War, Progressivism, World War I and the paradoxes of the interwar period, the Great Depression, the New Deal, World War II, post-war prosperity, cultural disillusionment and the civil rights movement, the conflicts in Korea and Vietnam, the Reagan Revolution, and America as the dominant contemporary world power.

## **HIST 2130 Nebraska & the West**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

A survey of Nebraska history as it relates to the development of the Great Plains and the American West that includes social, cultural, political, intellectual, economic, and geographical themes.

## **HUMANITIES**

### **HUMS 1100 Introduction to Humanities**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This is a survey course focusing on art, music, theatre, film, dance, architecture, and philosophy. It examines the unfolding of global humanistic traditions in order to reawaken our sense of wonder and

curiosity about the meaning of life. The course gives the students criteria from which to evaluate their own times and situation and in addition, enriches students' historical perspectives. It shows how the various arts intersect, influence, and are influenced by their times.

## **INFORMATION TECHNOLOGY**

### **INFO 1000 Introduction to Information Technology**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course provides an overview of information technology. Concepts to be covered include: history of data processing, computer hardware, computer software, problem-solving techniques, and business use of computers, social aspects, and careers. Fee \$10.

### **INFO 1010 Microcomputer Applications**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course provides an interactive study of microcomputer-based productivity tools. Concepts and fundamental skills in the applications of word processing, spreadsheet, database, and Internet search tools will be covered. NOTE: Keyboarding skills or permission of instructor. Fee \$10.

### **INFO 1025 Operating Systems I**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course provides the student with a survey and comparison of all major operating systems. Students will install and learn to use current Windows operating systems. Students will learn about the special concerns of Windows on a network, on the Internet, and on notebook computers. They will be introduced to Linux and the Mac OS. This course provides preparation for the current CompTIA A+ Operating System exam. No Prerequisite. Fee \$10. (Replaces INFO 2020.)

### **INFO 1030 Database Concepts & Design**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course is an introduction to database development and design. In this course, the basics of database design and manipulation will be covered. Topics include relationships, database normalization, integrity constraints, DBMS software and functions, and database administrative functions. Prerequisite: INFO 1010 or permission of instructor. Fee \$10.

### **INFO 1050 Networking Essentials**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course is designed for individuals and information systems professionals interested in learning about networking technologies. Topics include terminology, network design, networking media, network interface cards, networking models, communications and protocols, network architectures, operating systems, networking environments, administration and support, and enterprise and distributed networks. Fee \$10.

### **INFO 1060 LINUX I**

**3 credit hours**

**48 Classroom Hours = 48 Lecture Hours**

This course will provide an introduction to LINUX including history, functions and commands. The course will also include installation and configuration, file systems, and shell scripting, editors, utilities, and applications.

### **INFO 1070 Introduction to Computer Science**


**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course is intended for the serious computer science or computer systems student. An introduction to various aspects of the body of knowledge known as computer science. Topics include concepts of computer hardware and software, CPU concepts, program development and applications, ethics and career opportunities in computer science and computer information systems including an introduction to structured programming using an appropriate state-of-the-art structured language.

(Replaces CSCE 1791 Introduction to Computer Science.) Prerequisite: CSCE 1543 or 1544, MATH 1150 or permission of instructor. Fee \$5.

### **INFO 1100 Computer Game Design & Programming**

**3 credit hours** 

#### **45 Classroom Hours = 45 Lecture Hours**

Alice is a modern programming environment designed to be a student's first exposure to programming. Alice is an engaging and fun way to teach fundamental programming concepts. Alice's extensive gallery of 3D objects provides inspiration for students to learn programming through storytelling and video game creation. Fee \$10.

### **INFO 1150 COBOL Programming**

**3 credit hours**

#### **45 Classroom Hours = 45 Lecture Hours**

Structured programming and data processing in a commercial environment. Introduction to the study of the COBOL programming language with business applications. (Replaces CSCE 1801 Structured COBOL Programming.) Prerequisite: MATH 1150 or permission of instructor.


### **INFO 1160 C++ Programming**

**3 credit hours** 

#### **45 Classroom Hours = 45 Lecture Hours**

This course is intended for the serious computer science or computer information systems student. The student will be introduced to fundamentals of the C++ language, simple C++ data structures, algorithmic analysis, and C++ functions. (Replaces CSCE 1803 C++ Programming.) Prerequisite: MATH 1150 or its equivalent or permission of instructor.


### **INFO 1170 Visual Basic Programming**

**3 credit hours** 

#### **45 Classroom Hours = 45 Lecture Hours**

Introduction to the standards and conventions of programming the graphical user interface (GUI). Emphasis on proper design, placement and coding of the graphical features of the interface. Similarities to and differences from traditional programming languages will be explored. Visual Basic utilized to develop programs that demonstrate GUI design, the use of simple and array variables, database access, animation, sequential and random file access. (Replaces CSCE 1805 Programming in Visual Basic.) Prerequisite: MATH 1150 or permission of instructor. Fee \$10.

### **INFO 1200 Fundamentals of Computer Hardware**

**3 credit hours** 

#### **45 Classroom Hours = 45 Lecture Hours**

Students will be introduced to the physical components of microcomputers, including system components, bus architectures, ports, connectors, and cables. They will examine some of the safety issues and procedures pertinent to working with computers. Physical components, including expansion boards, storage systems, and peripheral devices, which can be used with PCs, will be examined. Portable computing and networking will be explored. Fee \$10.


### **INFO 1220 PC Troubleshooting/Repair**

**3 credit hours** 

#### **45 Classroom Hours = 45 Lecture Hours**

This course is designed to provide the participants with a solid foundation and practice in maintaining, troubleshooting and upgrading computer systems. Topics to be covered include: procedures and techniques for disassembling and inspecting systems; basics of circuitry networking and connectivity, common error messages and what they mean; installing, troubleshooting and servicing major system components from hard drives to CPUs; maximizing system performance – RAM to registry tweaking; hands-on workshop in "tearing down" and rebuilding systems. Prerequisite: INFO 1200. Fee \$10.

### **INFO 1260 Customer Support/Help Desk**

**3 credit hours** 

#### **45 Classroom Hours = 45 Lecture Hours**

This course includes valuable information and everyday solutions for addressing the attitudes, behaviors, and relationships between customers

and the support team. Prerequisite: Twenty-four (24) hours of INFO courses completed or permission of instructor. Fee \$10.

### **INFO 1310 Introduction to Multimedia**

**3 credit hours**

#### **45 Classroom Hours = 45 Lecture Hours**

This course is an introduction to the major facets of multimedia design, development, and implementation. Topics include capture, manipulation, and use of various media types.

### **INFO 1400 Systems Analysis & Design I**

**3 credit hours** 

#### **45 Classroom Hours = 45 Lecture Hours**

This course provides an in-depth study of the systems development life cycle, including system concepts and terms; need identification, feasibility determination and requirements assessment; goals, tools, and strategies for system and information analysis; interviewing techniques, and specific requirements for a computer system. Prerequisite: INFO 1030. Fee \$10.

### **INFO 1410 JAVA Programming**

**3 credit hours**  

#### **45 Classroom Hours = 45 Lecture Hours**

This course assumes no prior programming experience from the student. This course teaches object-oriented programming and students will learn how to develop true object-oriented programs. Prerequisite: MATH 1150 or permission of instructor. Fee \$10.

### **INFO 1450 JavaScript**

**3 credit hours**

#### **45 Classroom Hours = 45 Lecture Hours**

JavaScript is an easy-to-use programming language that can be embedded in the header of web pages. It can enhance the dynamics and interactive features of a page by allowing users to perform calculations, check forms, write interactive games, and special effects, customize graphics selections, create security passwords and more. This course will present the fundamentals of JavaScript. Students will learn how to write functions, use data from text boxes, create IF-THEN conditionals, program loops, and generally make their web page "smarter."

### **INFO 1500 Web Development Tools I**

**3 credit hours** 

#### **45 Classroom Hours = 45 Lecture Hours**

This course is designed to give students the necessary skills to design, create and enhance a Web site using current Web development tools. Through the use of realistic scenarios, students acquire the ability to develop, plan, and implement a Web site. INFO 1696 is recommended but not required as a prerequisite to the course. (Software used: Flash).

### **INFO 1520 Web Development Tools II**

**3 credit hours**

#### **45 Classroom Hours = 45 Lecture Hours**

This course is designed to help students learn to enhance a Web site using a variety of authoring tools, scripts and commands. Topics include creating Web pages using advanced tools and techniques such as advanced tables and CSS, modifying client- and server-side scripts, using forms to collect information, accessing a database, understanding Active Server Pages, and publishing a Web site. Prerequisite: INFO 1500.

### **INFO 1540 Internet Business Strategies**

**3 credit hours**

#### **45 Classroom Hours = 45 Lecture Hours**

This course is designed to provide students with the knowledge and skills necessary to manage and promote the development of a business Web site from inception to evaluation. By implementing realistic business scenarios, students have the opportunity to create a business plan, develop a marketing strategy and implement a promotional campaign. Prerequisite: INFO 1500.

# COURSE DESCRIPTIONS

## **INFO 1620 Network Administration I**

**3 credit hours** 🕒

**45 Classroom Hours = 45 Lecture Hours**

This course provides support professionals with desktop operating system skills necessary to use the desktop interface and tools necessary for implementing and administrating an industrial strength workstation in a small or large network. Partial preparation for Microsoft certification exam 70-210. Prerequisite: INFO 1050. Fee \$10.

## **INFO 1695 Web Page Design I**

**3 credit hours** 🕒

**45 Classroom Hours = 45 Lecture Hours**

This course is for the beginning web page designer. Students will learn to use hypertext markup language (HTML) to design web pages. Topics include text formatting, linking, lists, images, tables, frames, styles, cascading style sheets, forms and frames. Web site/page design elements and Web publishing/maintenance principles will be presented. Fee \$5.

## **INFO 1696 Web Design II**

**3 credit hours** 🕒

**45 Classroom Hours = 45 Lecture Hours**

Current state of the art software will be used to explore the dynamics of web page design. Topics including dynamic HTML, rich media such as Flash elements, animation, digital movies, sound, templates, and an introduction to database functionality will be explored. Web site/page design elements and Web publishing/maintenance principles will be reinforced. INFO 1695 is recommended but not required as a prerequisite to this course. (Software used: Dreamweaver). Fee \$5.

## **INFO 2025 Operating Systems II**

**3 credit hours** 🕒

**45 Classroom Hours = 45 Lecture Hours**

This course is an introduction to basic administration tasks using command line for Windows operating systems. Students will work with each of these operating systems in both a standalone and a network environment. Prerequisite: INFO 1025 or permission of instructor. Fee \$10. (Replaces INFO 1020.)

## **INFO 2060 LINUX II**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

A review of the LINUX system including basic commands, file name substitution, I/O redirection, and pipes. The course also includes an in-depth scripting of the shell and program commands and functions. Prerequisite: INFO 1060.

## **INFO 2150 Advanced COBOL Programming**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Study of advanced structured COBOL programming techniques and applications with respect to table handling, sub-programs, sequential files, direct files, and indirect sequential files. (Replaces CSCE 2801 Advanced COBOL Programming.) Prerequisite: INFO 1150 or permission of instructor.

## **INFO 2160 Advanced C++ Programming**

**3 credit hours** 🕒

**45 Classroom Hours = 45 Lecture Hours**

This course is intended for the serious computer science or computer information systems student. It is a continuation of the INFO 1160. The fundamental concepts of C++ Object Oriented Programming (OOP) will be the primary focus of the course. (Replaces CSCE 2803 Advanced C++ Programming.) Prerequisite: INFO 1160 or permission of instructor.

## **INFO 2170 Advanced Visual Basic Programming**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

After a brief review of language constructs and intrinsic controls, the course addresses four functional areas: an analysis of ActiveX Data Objects (ADO) and ADO controls; Visual Basic add-in controls including the Windows Common Controls; MDI programming; and accessing the windows API, developing HTML help systems, and program deployment.

A large portion of the course is devoted to object-oriented programming in the context of Visual Basic. (Replaces CSCE 2805 Advanced Visual Basic Programming.) Prerequisite: INFO 1170. Fee \$10.

## **INFO 2300 Advanced Word Processing/Word**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course provides the basic word processing user with more advanced techniques. Advanced formatting, mail merge, long and multiple documents, graphics, on-screen forms, macros, templates, and styles are among topics covered. Integration of word processing, spreadsheets, and database will be covered. Critical thinking and decision making skills will be emphasized. NOTE: Introductory word processing skills are required. Prerequisite: Permission of Instructor. Fee \$10.

## **INFO 2320 Advanced Spreadsheets**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course focuses on advanced commands, including using functions and creating macros. The student will learn to integrate spreadsheets with other Windows programs and the World Wide Web. NOTE: Introductory spreadsheet skills are required. Prerequisite: Permission of Instructor. Fee \$10.

## **INFO 2340 Advanced Database**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Students will create an advanced database application utilizing real world business problems. The student will gain an in-depth understanding of the underlying data structure, as well as creating multiple tables. NOTE: Introductory database skills are required. Prerequisite: Permission of Instructor. Fee \$10.

## **INFO 2400 Systems Analysis & Design II**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Projects to apply programming languages and systems study in the creation of a total application. Includes logical and physical design, quality assurance, and system construction and testing. Prerequisite: INFO 1400.

## **INFO 2410 Advanced JAVA Programming**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course focuses on advanced commands, including reusable classes and packages, GUI objects and event-driven programming. Prerequisite: INFO 1410.

## **INFO 2500 CapStone Project**

**3 credit hours** 🕒

**45 Classroom Hours = 45 Lecture Hours**

Students consolidate knowledge and skills gained in coursework in the capstone experience. Course is designed to further strengthen the knowledge and skills gained in coursework in his/her specific Information Technology emphasis area. Students demonstrate a capability for independent work and experience communicating such work to others, both at a professional and layman's level via a project based experience. Prerequisite: permission of instructor.

## **INFO 2600 Network Administration II**

**3 credit hours** 🕒

**45 Classroom Hours = 45 Lecture Hours**

This course provides the core foundation for supporting a server operating system. It provides support professionals with server administration skills necessary to install, configure, customize, optimize, network, integrate, and troubleshoot the current Windows server operating system. It provides students with the knowledge and skills necessary to perform post-installation and day-to-day administration tasks in a network. Partial preparation for Microsoft's current server certification exam. Prerequisite: INFO 1620. Fee \$10.

**INFO 2630 Security +****3 credit hours** **48 Classroom Hours = 48 Lecture Hours**

This course provides an in-depth coverage of all the current risks and threats to an organization's data along with a structured way of addressing the safeguarding of critical electronic assets. The theoretical and historical background necessary to understand various types of risks as well as hands on, practical techniques for working in the security field will be provided. Partial preparation for Comp TIA's Security + exam. Prerequisite: INFO 1050.

**INFO 2700 Administering Directory Services****3 credit hours** **45 Classroom Hours = 45 Lecture Hours**

This course prepares students to have the ability to install, configure, and troubleshoot Windows Active Directory™ components, DNS for Active Directory and Active Directory security solutions. In addition, students will gain the skills required to manage, monitor, and optimize the desktop environment by using Group Policy. Partial preparation for Microsoft certification exam 70-217. Prerequisites: INFO 1620 and INFO 2600.

**INFO 2900 Internship****3 credit hours**  **180 Classroom Hours = 180 Internship Hours**

The internship program provides students with the opportunity to apply their knowledge, learn new techniques and get on-the-job training at an approved work site. Prerequisite: Successful completion of thirty (30) credit hours of Information Technology or permission of instructor. Fee \$10.

**INSTITUTIONAL FOOD SERVICE****INFS 1810 Nutritional Therapy****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

In this unit students will cover normal nutrition, nutrients, digestion and absorption, nutritional needs across the life cycle, food customs, dietary guidelines and nutrition deficiency and excess. Therapeutic nutrition addresses diseases and dietary modifications. Long term care, Minimum Data Sets, and the care planning process are covered.

**INFS 1820 Managed Food Services****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

This unit addresses food and equipment, purchasing, food production, and the operation of a food service department.

**INFS 1830 Sanitation & Safety****1 credit hour****16 Classroom Hours = 14 Lecture Hours + 2 Lab Hours**

Sanitation in the food industry. Microbiology, sanitary food handling and storage, personal health and hygiene, housekeeping, pest control, HACCP food safety program and safety procedures.

**INFS 1840 Human Resources Management****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

This unit covers aspects of human relations, interdepartmental relations with food service, state and federal regulations, and develops skills needed to operate a food service department.

**JOURNALISM****JOUR 1000 Mass Media in America****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

A general survey of the mass media. The nature, processes, effects, personnel and structure of mass entertainment and information media.

**JOUR 1080 Newswriting I****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

An introduction to newswriting with emphasis on adhering to newspaper style and writing for publication. Through written work, students will learn the fundamentals of producing copy on meetings, speeches, interviews, spot news, and feature material.

**JOUR 1090 Newswriting II****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Continuation of JOUR 1080 with emphasis on covering beat areas such as police and courts, sports, education, and local government. Prerequisite: JOUR 1080 or permission of instructor.

**JOUR 1100 Internship in Mass Media I****3 credit hours****180 Classroom Hours = 180 Internship Hours**

Supervised field experience with newspaper, TV or radio station, or other cooperative agency in a media-related field. Evaluation and review required with the sponsoring faculty member. Prerequisites: JOUR 1000 and JOUR 1080 or permission of instructor.

**JOUR 1110 Internship in Mass Media II****3 credit hours****180 Classroom Hours = 180 Internship Hours**

Continuation of JOUR 1100. Supervised field experience with newspaper, TV or radio station, or other cooperative agency in a media-related field. Evaluation and review required with the sponsoring faculty member. Prerequisite: JOUR 1100 or permission of instructor.

**JOUR 1200 Applied Journalism I****1 credit hour****30 Classroom Hours = 30 Lab Hours**

Students may receive one credit hour per semester as a member of a newspaper, television staff, or other media-related organization. NOTE: Must meet with instructor prior to enrolling.

**JOUR 1210 Applied Journalism II****1 credit hour****30 Classroom Hours = 30 Lab Hours**

A continuation of JOUR 1200.

**JOUR 2200 Applied Journalism III****1 credit hour****30 Classroom Hours = 30 Lab Hours**

A continuation of JOUR 1210.

**JOUR 2210 Applied Journalism IV****1 credit hour****30 Classroom Hours = 30 Lab Hours**

A continuation of JOUR 2200.

**LICENSED PRACTICAL NURSING****LPNR 2120 IV Certification Preparation****4 credit hours****70 Classroom Hours = 55 Lecture Hours + 15 Lab Hours**

Optional post graduate course to prepare LPNs to perform expanded duties to IV therapy as allowed by state law. Upon completion, LPNs are eligible to be certified after successful completion of the certifying examination. Prerequisites: Pharmacology / drug calculations exam, one letter of reference, and hold current LPN license. Fee \$15.

**LOGISTICS/MATERIALS MANAGEMENT****WARE 1100 Introduction to Logistics****3 credit hours** **45 Classroom Hours = 45 Lecture Hours**

This course will provide a broad overview of logistics management. The role of logistics management and supply-chain management will be explored. Topics discussed in this course will include transportation management, inventory management, warehousing, supply management

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and international logistics. Customer service, logistics systems analysis and control will also be addressed.

## **WARE 1200 Global Logistics**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

This course will provide a broad overview of global logistics management. Topics discussed in this course will include the role of government in the movement of products across borders, international sourcing strategies, transportation issues, documentation, and export considerations including inventory management and warehousing.

## **WARE 1250 Transportation Logistics**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

This course is designed to familiarize the student with the types of decisions a transportation or logistics manager has to make on a daily basis. The various modes of transportation will be analyzed. Transportation documents and regulations will be examined. Students will learn how to evaluate carrier performance and the types of information that is available to making good transportation decisions.

## **WARE 2150 Supply Chain Management**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

This course examines the role of supply chain management and how it can be used to improve both customer satisfaction and net income. The major components of supply chain management will be evaluated including information systems, sourcing, transportation and network design. The importance of planning and collaboration will also be explored. Examples of effective supply-chains will be examined.

## **WARE 2400 Purchasing Logistics**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

This course familiarizes the student with the theory and application of purchasing and materials management concepts. Topics which will be addressed include purchasing organization and administration, quality management, supplier relationships, and negotiations.

## **MACHINE SHOP TECHNOLOGY**

### **MACH 1710 Machine Shop Fundamentals**

**2 credit hours**

**45 Classroom Hours = 23 lecture Hours + 22 Lab Hours**

Operations including hand tools, drill press and lathe. Fee \$15.

### **MACH 1720 Machine Shop & Lathe Operation**

**2 credit hours**

**45 Classroom Hours = 23 lecture Hours + 22 Lab Hours**

General machine shop and lathe operation. Fee \$15.

### **MACH 1730 Machine Shop & Lathe Operation, Advanced**

**2 credit hours**

**45 Classroom Hours = 23 lecture Hours + 22 Lab Hours**

Advanced lathe set up and operation. Fee \$15.

### **MACH 1740 Machine Shop & Milling Operation**

**2 credit hours**

**45 Classroom Hours = 23 lecture Hours + 22 Lab Hours**

Milling machine set up and operation using various bits and mill cutters. Fee \$15.

### **MACH 1750 Machine Shop & Milling Operation, Advanced**

**2 credit hours**

**45 Classroom Hours = 23 lecture Hours + 22 Lab Hours**

Advanced milling machine set up and operation using vertical, horizontal and universal milling machines. Fee \$15.

### **MACH 1770 Machine Shop & Grinding Operation**

**2 credit hours**

**45 Classroom Hours = 23 lecture Hours + 22 Lab Hours**

Surface and cylindrical grinder operations and set up. Fee \$15.

### **MACH 1780 CNC Lathe & Milling Machine**

**2 credit hours**

**45 Classroom Hours = 23 lecture Hours + 22 Lab Hours**

Computerized controls to operate lathes and mills. Fee \$15.

### **MACH 1790 Machine Shop Tool & Die**

**2 credit hours**

**45 Classroom Hours = 23 lecture Hours + 22 Lab Hours**

Tool and die manufacture including math for the machinist. Fee \$15.

## **MATHEMATICS**

### **MATH 0010 Math Study Skills**

**1 credit hour** 

**15 Classroom Hours = 15 Lecture Hours**

Math Study Skills offers techniques to improve students' math skills for a higher level of success with math assignments and tests at all levels. The course is strongly recommended for students whose placement scores indicate MATH 0100 or MATH 0900 and for students who have math anxiety or who are having difficulty passing MATH 1010. Topics included are study skills, test anxiety, memory techniques, and test taking. Note: MATH 0010 does not meet any program or transfer requirement.


### **MATH 0090 Math For Health Occupations**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

This course is a review of the four fundamental operations on fractions and decimals, Roman numerals, ratio and proportion, percentages and the metric, English, apothecary and household systems of measurement. Note: This course does not satisfy the general education requirement for the Associate degree and cannot be used as an elective. This course is not designed to transfer to a four-year college.

### **MATH 0100 Fundamentals of Mathematics**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

This course is a review of the four fundamental operations on whole numbers, operations on fractions and decimals, solution of practical problems involving percentages, investments, ratio, proportion and introduction to algebra. Note: This course does not satisfy the general education requirement for the Associate degree and cannot be used as an elective. This course is not designed to transfer to a four-year college.

### **MATH 0900 Elementary Algebra**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

Reviewing real number operations, algebraic expressions, exponents, solving linear equations, graphing, operations with polynomials, solving quadratics, solving word problems. Note: This course does not satisfy degree requirements and cannot be used as an elective. This course is not designed to transfer to a four-year college. Prerequisite: Completion of MATH 0100 with at least a "C" or adequate score on the math placement exam.

### **MATH 1010 Intermediate Algebra**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

Properties of real numbers, factoring, exponents and radicals, linear and fractional equations, linear and nonlinear inequalities, quadratic equations, and functions and graphs. Note: This course will not satisfy the general education requirement for the Associate of Arts degree but can be used as an elective. This course may not be accepted in transfer toward the general education requirement for a baccalaureate degree. Prerequisite: Completion of MATH 0900 with at least a "C" or an adequate level on the math placement test.

### **MATH 1150 College Algebra**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

This course is the study of relations, functions and their graphs, equations and inequalities, polynomial and rational functions, exponential and

logarithmic functions, systems of equations and inequalities. Note: This course will satisfy the general education requirement for the Associate of Arts Degree. Prerequisite: Completion of MATH 1010 with at least a "C" or adequate level on the math placement test.

### **MATH 1200 Elements of Statistics**

**3 credit hours** 📺 📖

#### **45 Classroom Hours = 45 Lecture Hours**

Frequency distributions, elementary probability theory, measures of dispersion and central tendency, normal distributions, confidence intervals, hypotheses testing, regression and correlation. Prerequisite: Completion of MATH 1010 or MATH 1150 with at least a "C" or adequate level on the math placement exam or permission of instructor.

### **MATH 1250 Trigonometry**

**3 credit hours**

#### **45 Classroom Hours = 45 Lecture Hours**

Designed for students who plan further study at the calculus level. Numerical trigonometry, trigonometric analysis, inverse trigonometric functions, and complex numbers. Prerequisite: Completion of MATH 1150 with at least a "C" or adequate level on the math placement test.

### **MATH 1350 Applied Calculus For Managerial & Social Science**

**3 credit hours**

#### **45 Classroom Hours = 45 Lecture Hours**

Concepts of differential and integral calculus with applications to business, economics and the social sciences. Prerequisite: Completion of MATH 1150 with at least a "C" or adequate score on the math placement test. Note: Credit will not be given in both MATH 1350 and MATH 1600.

### **MATH 1600 Analytic Geometry & Calculus I**

**5 credit hours**

#### **75 Classroom Hours = 75 Lecture Hours**

This course is a study of analytical geometry and single variable calculus. Topics include limits, continuity, derivatives, applications of derivatives, integrals, and applications of integrals. Prerequisite: Completion of MATH 1150 and MATH 1250 with at least a "C" or an adequate level on the math placement test and trigonometry in high school. Note: Credit will not be given for both MATH 1350 and MATH 1600.

### **MATH 1900 Analytic Geometry & Calculus II**

**5 credit hours**

#### **75 Classroom Hours = 75 Lecture Hours**

A continuation of MATH 1600. Trigonometric, logarithmic, exponential functions, methods of integration, polar coordinates, applications and infinite series. Prerequisite: Completion of MATH 1600 with at least a "C".

### **MATH 2000 Modern Elementary School Mathematics I**

**3 credit hours**

#### **45 Classroom Hours = 45 Lecture Hours**

Required for the elementary education major. Problem solving, systems of numeration, non-decimal bases, basic number theory, operations on whole numbers, integers, rational numbers. Prerequisite: Completion of MATH 1150 with at least a "C" or 4 years of high school math, or permission of instructor.

### **MATH 2100 Modern Elementary School Mathematics II**

**3 credit hours**

#### **45 Classroom Hours = 45 Lecture Hours**

Required for the elementary education major. Modular arithmetic, ratio and proportion, percent, introduction to probability, brief introduction to descriptive statistics, measurement and metric system, measurement of plane and solid geometric figures, geometric constructions and coordinate geometry. Prerequisite: Completion of MATH 2000 with at least a "C" or permission of instructor.

### **MATH 2450 Analytic Geometry & Calculus III**

**5 credit hours**

#### **75 Classroom Hours = 75 Lecture Hours**

A continuation of MATH 1900. Functions of more than one variable, vector and vector functions, partial derivatives, multiple integrals and applications. Prerequisite: Completion of MATH 1900 with at least a "C".

### **MATH 2600 Differential Equations**

**3 credit hours**

#### **45 Classroom Hours = 45 Lecture Hours**

Elementary differential equations with applications including methods of solving equations of order one, linear differential equations, linear equations with constant coefficients, undetermined coefficients, variation of parameters, inverse operators, solution of systems of differential equations and solution of differential equations by matrix methods and the LaPlace transform. Prerequisite: Completion of MATH 2450 with at least a "C".

## **MEDICAL LABORATORY TECHNICIAN**

### **MEDT 1000 MLT Orientation**

**2 credit hours**

#### **64 Classroom Hours = 16 Lecture Hours + 48 Lab Hours**

An introduction to medical laboratory technology including medical terminology, the role, function, ethics, conduct, certification, education, employment, and basic medical laboratory techniques. Basic mathematics review and lab related math such as the metric system, temperature conversions, concentration units, dilutions, ratios and statistics used in quality control are covered. Also included is laboratory safety to include physical, chemical and biological hazards, laboratory safety, barriers and isolation techniques. Students are instructed in the collection and preparation of specimens to include venipuncture and capillary sticks, reporting of laboratory results, and quality assurance methods. Lecture and lab. Fee \$25.

### **MEDT 1010 Fundamentals of Phlebotomy**

**2 credit hours**

#### **64 Classroom Hours = 16 Lecture Hours + 48 Lab Hours**

The student will be trained to perform a variety of blood collection methods using proper techniques and precautions including: vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture specimen collection on adults, children and infants. Emphasis will be placed on infection prevention, proper patient identification, proper labeling of specimens and quality assurance. Students will be taught specimen handling, processing, and accessioning. Prerequisites: High school diploma or GED; Must be 18 years of age or permission of the instructor.

### **MEDT 1060 Laboratory Math**

**1 credit hour**

#### **18 Classroom Hours = 18 Lecture Hours**

A review of basic mathematics progressing into solutions, dilutions, colorimetry, standard curves, quality control and special calculations. Lecture only. Prerequisite: Successful completion of MEDT 1000.

### **MEDT 1100 Hematology**

**5 credit hours**

#### **128 Classroom Hours = 38 Lecture Hours + 90 Lab Hours**

The study of the formation, function, and identification of normal mature, immature, and abnormal human blood cells; cellular morphology in anemias and leukemias and other blood disorders; the mechanism of blood coagulation; and the laboratory tests necessary to determine the levels and function of these many different cells and components. Lecture and lab. Prerequisites: Successful completion of MEDT 1000. Fee \$30.

### **MEDT 1450 Biochemistry Concepts**

**1 credit hour**

#### **15 Classroom Hours = 15 Lecture Hours**

A brief introduction to the chemistry and metabolism of fats, carbohydrates, proteins and other biologically important compounds. Lecture/ demonstration. Prerequisites: MEDT 1000, BIOS 1010, BIOS 2130, CHEM 1050/1060 or CHEM 1090/1100, and permission of the MLT program director.



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## **MEDT 1710 Immunology**

**1.5 credit hours**

**24 Classroom Hours = 24 Lecture Hours**

The basic theoretic concepts of immunology are explained; the underlying theory of the immune system and its various cellular and chemical components. Lecture only. Prerequisite: Successful completion of MEDT 1000.

## **MEDT 2010 Serology**

**1.5 credit hours**

**36 Classroom Hours = 24 Lecture Hours + 12 Lab Hours**

The basic theory and concepts in serology are covered with emphasis on the many different serology test procedures utilized in the modern day laboratory. Lecture and lab. Prerequisite: Successful completion of MEDT 1710. Fee \$10.

## **MEDT 2100 Medical Microbiology**

**5 credit hours**

**114 Classroom Hours = 63 Lecture Hours + 51 Lab Hours**

The morphology, isolation and identification of microorganisms pathogenic to man, including bacteria, fungi, parasites, and viruses. Specimen collection and handling, antimicrobial susceptibility testing and infectious disease control are included. Lecture and lab. Prerequisites: Successful completion of MEDT 1000 and BIOS 1110. Fee \$30.

## **MEDT 2200 Special Chemistry**

**2 credit hours**

**36 Classroom Hours = 30 Lecture Hours + 6 Lab Hours**

Theory and techniques in electrophoresis, radioimmunoassay, toxicology, endocrinology and specialized body fluids testing. Lecture and lab. Prerequisites: MEDT 2100 and permission of the MLT program director. Fee \$25.

## **MEDT 2250 Urinalysis**

**2 credit hours**

**42 Classroom Hours = 30 Lecture Hours + 12 Lab Hours**

The study of chemical and cellular changes in the urine in health and illness. Lecture and lab. Prerequisite: Successful completion of MEDT 1000. Fee \$15.

## **MEDT 2300 Parasitology**

**2 credit hours**

**36 Classroom Hours = 30 Lecture Hours + 6 Lab Hours**

A study of parasites of the blood, tissues and intestinal tract and related organs of humans, including specimen processing and staining and parasite recognition. Lecture and lab. Prerequisites: MEDT 2100 and permission of the MLT program director. Fee \$25.

## **MEDT 2410 Clinical Chemistry**

**5 credit hours**

**132 Classroom Hours = 66 Lecture Hours + 66 Lab Hours**

General principles and techniques of test procedures performed in clinical chemistry laboratories, with practice in manual and semiautomated techniques, and techniques in electrophoresis, toxicology, endocrinology and specialized body fluids testing. Lecture and lab. Prerequisites: Successful completion of MEDT 1000 and CHEM 1060 or CHEM 1100. Fee \$30.

## **MEDT 2500 Blood Banking**

**4 credit hours**

**96 Classroom Hours = 51 Lecture Hours + 45 Lab Hours**

The fundamental principles of immunology related to blood banking; donor selection, blood collection, and processing blood components, preparation and administration of blood and blood products; blood group genetics and inheritance. Basic blood banking techniques will be performed. Lecture and lab. Prerequisite: Successful completion of MEDT 2010. Fee \$30.

## **MEDT 2600 Advanced Hematology**

**2 credit hours**

**54 Classroom Hours = 24 Lecture Hours + 30 Lab Hours**

A study of immature blood cells, abnormal cells, and cellular morphology in anemias and leukemias as well as other diseases. Lecture and lab. Prerequisites: MEDT 1100 and permission of the MLT program director. Fee \$25.

## **MEDT 2690 MLT Clinical Seminar**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

A review of the knowledge base, didactic theory and clinical laboratory skills applicable to the medical laboratory through lecture. Lecture only. Prerequisites: MEDT 2410, MEDT 2100, MEDT 2500, MEDT 2600, MEDT 2010, and permission of the MLT program director.

## **MEDT 2720 Clinical Hematology Practicum**

**4 credit hours**

**192 Classroom Hours = 192 Clinical Hours**

The theory, practical application and technical performance of hematological, coagulation, immunological, serological, and phlebotomy procedures. Prerequisites: Successful completion of MEDT 1100.

## **MEDT 2730 Clinical Chemistry Practicum**

**4 credit hours**

**192 Classroom Hours = 192 Clinical Hours**

The theory, practical application and technical performance of clinical chemistry procedures. Prerequisites: Successful completion of MEDT 2410.

## **MEDT 2740 Clinical Microbiology Practicum**

**4 credit hours**

**192 Classroom Hours = 192 Clinical Hours**

The theory, practical application and technical performance of procedures used for isolation and identification of bacterial, mycotic, parasitic and viral organisms infecting humans. Prerequisites: Successful completion of MEDT 2100.

## **MEDT 2750 Clinical Blood Bank Practicum**

**4 credit hours**

**192 Classroom Hours = 192 Clinical Hours**

The theory, practical application and technical performance of blood bank procedures required for transfusion of blood and blood components and for handling and storage of blood and blood components. Prerequisites: Successful completion of MEDT 2500.

## **MEDT 2760 Clinical Urinalysis Practicum**

**1 credit hour**

**48 Classroom Hours = 48 Clinical Hours**

The theory, practical application and technical performance of procedures utilized in the analysis of urine and other body fluids. Prerequisites: Successful completion of MEDT 2250.

## **MEDT 2770 Clinical Special Studies Practicum**

**1 credit hour**

**48 Classroom Hours = 48 Clinical Hours**

The theory, practical application and technical performance of specialized clinical chemistry laboratory and blood banking procedures used in diagnostic laboratory medicine. Prerequisites: Successful completion all program required MEDT prefixed courses and all general education program requirements.

## **MUSIC**

### **MUSC 1000 Fundamentals of Music**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Music Fundamentals is a course designed for music majors as well as students in other disciplines who wish to acquire a basic knowledge of musicianship and theory.

**MUSC 1010 Music Appreciation****3 credit hours** 📺 📖**45 Classroom Hours = 45 Lecture Hours**

An introduction and overview of the history of Western art music, from the Middle Ages to modern times. Includes the elements of music, historical style periods, and major composers and selected works. [Offered as MUSC 1010: Concert Choir prior to Fall 2016]

**MUSC 1030 Select Choir****1 credit hour** 🎵**30 Classroom Hours = 30 Lab Hours**

A select mixed singing group performing chamber choral repertoire including madrigals, motets, jazz, and a cappella work. Audition required. Repeatable up to six times for credit. (Replaces MUSC 1040, 2030, and 2040.)

**MUSC 1050 Concert Choir****1 credit hour** 🎵**30 Classroom Hours = 30 Lab Hours**

A large mixed choir performing choral works as well as chamber music. Public concerts and tours. Open to all students. Repeatable up to six times for credit. [Offered as MUSC 1010: Concert Choir prior to Fall 2015]

**MUSC 1070 Concert Band****1 credit hour** 🎵**30 Classroom Hours = 30 Lab Hours**

An instrumental group performing the best of symphonic band literature, pep band works, and chamber music. Public concerts and tours. Open to all students through audition. Repeatable up to four times for credit. (Replaces MUSC 1080, 2070, and 2080.)

**MUSC 1090 Chamber Ensemble****1 credit hour****30 Classroom Hours = 30 Lab Hours**

Development of music ensemble experience through participation in and performance with the chamber Ensemble. Open to all students. Repeatable up to six times for credit.

**MUSC 1100 Jazz Band****1 credit hour****30 Classroom Hours = 30 Lab Hours**

An instrumental ensemble performing all forms of jazz music. Public concerts and tours. Open to all students through audition. Repeatable up to six times, [Offered as MUSC 1050: Jazz Band prior to Fall 2016]

**MUSC 1120 Sandhills Symphony Orchestra****1 credit hour****30 Classroom Hours = 30 Lab Hours**

Develop orchestral experience through participation in the Sandhills Symphony Orchestra of North Platte. Open to all students. Repeatable up to six times for credit.

**MUSC 1300 Music Theory I****3 credit hours** 🎵**45 Classroom Hours = 45 Lecture Hours**

Rudiments of music, including melodic and rhythmic notation, scales, key signatures, intervals, chord structure, and elementary harmonic analysis. Taken concurrently with MUSC 1400 Piano Techniques I and MUSC 1960 Sight Singing and Ear Training I. Open to all students.

**MUSC 1310 Music Theory II****3 credit hours** 🎵**45 Classroom Hours = 45 Lecture Hours**

Continuation of MUSC 1300. Harmonic analysis: chorales and other melodies, using diatonic triads, dominant and leading tone seventh chords, and modulations. Taken concurrently with MUSC 1410 and MUSC 1970.

**MUSC 1400 Piano Techniques I****1 credit hour****30 Classroom Hours = 16 Lecture Hours + 16 Lab Hours**

Beginning keyboard fundamentals. This class is a lab taken concurrently with MUSC 1300 and MUSC 1960. Open to all students.

**MUSC 1410 Piano Techniques II****1 credit hour** 🎵**30 Classroom Hours = 16 Lecture Hours + 16 Lab Hours**

Continuation of MUSC 1400. This class is a lab taken concurrently with MUSC 1310 and MUSC 1970. Open to all students.

**MUSC 1420 Piano Techniques III****1 credit hour****30 Classroom Hours = 16 Lecture Hours + 16 Lab Hours**

A continuation of MUSC 1410. This class is a lab taken concurrently with MUSC 2300 and MUSC 1980. Open to all students.

**MUSC 1430 Piano Techniques IV****1 credit hour****30 Classroom Hours = 16 Lecture Hours + 16 Lab Hours**

A continuation of MUSC 1410. This class is a lab taken concurrently with MUSC 2310 and MUSC 1990. Open to all students.

**MUSC 1670 Group Piano****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

Designed for the beginning piano student. The class is taught in a group setting. Prior background in music is not required. Success in the class requires regular practice.

**MUSC 1680 Group Guitar I****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

Instruction in note reading, tuning, basic chords, and in picking and strumming patterns. Outside practice required.

**MUSC 1690 Group Guitar II****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

A continuation from Group Guitar I in note reading, tuning, basic chords, and in picking and strumming patterns. Prerequisite: MUSC 1680 or permission of instructor.

**MUSC 1700 Group Vocal Instruction****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

Introductory voice class for students not majoring in voice. It is required as a prerequisite for taking private non-major vocal lessons. One hour per week class instruction, plus weekly one-hour, three-person, semi-private lessons.

**MUSC 1710 - 1780 Applied Music for Non-Majors****1 credit hour****15 Classroom Hours = 15 Lecture Hours**

Development of technical, stylistic, and performing proficiencies through a variety of musical literature. Open to all students. Repeatable up to six times for credit. (Replaces MUSC 1810-1870, 2710-2770, and 2810-1870.) Fee \$50.

1710	Piano
1720	Organ
1730	Voice
1740	Brass Instruments
1750	Percussion Instruments
1770	Stringed Instruments
1780	Woodwind Instruments

# COURSE DESCRIPTIONS

## **MUSC 1715 – 1785 Applied Music for Majors I**

**2 credit hours**

**30 Classroom Hours = 30 Lecture hours**

Individual instruction in music for students studying their principal instrument. Emphasis is placed on strong performance skills and includes significant Jury requirements. Fee \$100.

1715	Piano
1725	Organ
1735	Voice
1745	Brass Instruments
1755	Percussion Instruments
1775	Stringed Instruments
1785	Woodwind Instruments

## **MUSC 1815 – 1875 Applied Music for Majors II**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Individual instruction in music for students studying their principal instrument. Emphasis is placed on strong performance skills and includes significant Jury requirements. A continuation of MUSC 1715 - 1785. Fee \$100.

1815	Piano
1825	Organ
1835	Voice
1845	Brass Instruments
1855	Percussion Instruments
1865	Woodwind Instruments
1875	Stringed Instruments

## **MUSC 1960 Sight Singing & Ear Training I**

**1 credit hour** 🔄

**30 Classroom Hours = 15 Lecture Hours + 15 Lab Hours**

Sight singing of standard materials: melodic, rhythmic and harmonic dictation. This class is a lab taken concurrently with MUSC 1300 and MUSC 1400. Open to all students.

## **MUSC 1970 Sight Singing & Ear Training II**

**1 credit hour** 🔄

**30 Classroom Hours = 15 Lecture Hours + 15 Lab Hours**

Continuation of MUSC 1960. This class is a lab taken concurrently with MUSC 1310 and MUSC 1410. Open to all students.

## **MUSC 1980 Sight Singing & Ear Training III**

**1 credit hour**

**30 Classroom Hours = 15 Lecture Hours + 15 Lab Hours**

Continuation of MUSC 1970. This class is a lab taken concurrently with MUSC 2300 and MUSC 1420. Open to all students.

## **MUSC 1990 Sight Singing & Ear Training IV**

**1 credit hour**

**30 Classroom Hours = 15 Lecture Hours + 15 Lab Hours**

Continuation of MUSC 1980. This class is a lab taken concurrently with MUSC 2310 and MUSC 1430. Open to all students.

## **MUSC 2300 Music Theory III**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Continuation of MUSC 1310. Harmonic analysis: an intensive study of diatonic and chromatic harmonic structures and processes – mostly from the Romantic period, sight singing, ear training, and piano techniques.

## **MUSC 2310 Music Theory IV**

**3 credit hour**

**45 Classroom Hours = 45 Lecture Hours**

Continuation of MUSC 2300. Introduction to late 16th and 18th century counterpoint. Harmonic analysis: mostly from the Romantic period, sight singing, ear training, and piano techniques.

## **MUSC 2330 Public School Music I**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Methods and materials for the integration of music in the elementary classroom are presented. Stress is placed on demonstration and class participation. The course is required for elementary education majors.

## **MUSC 2715 – 2775 Applied Music for Majors III**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Individual instruction in music for students studying their principal instrument. Emphasis is placed on strong performance skills and includes significant Jury requirements. A continuation of MUSC 1815 - 1875. Fee \$100.

2715	Piano
2725	Organ
2735	Voice
2745	Brass Instruments
2755	Percussion Instruments
2765	Woodwind Instruments
2775	Stringed Instruments

## **MUSC 2815 – 2875 Applied Music for Majors IV**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Individual instruction in music for students studying piano as their principal instrument. Emphasis is placed on strong performance skills and includes significant Jury requirements. A continuation of MUSC 2715 - 2775. Fee \$100.

2815	Piano
2825	Organ
2835	Voice
2845	Brass Instruments
2855	Percussion Instruments
2865	Woodwind Instruments
2875	Stringed Instruments

## **NURSING**

### **NURS 1100 Nursing Concepts I: Adult Health Nursing**

**5 credit hours**

**135 Classroom Hours = 45 Lecture Hours + 90 Lab Hours**

This course provides for the acquisition and application of fundamental concepts important to the practice of nursing including those related to patient-centered care, the healthcare environment, and professional nursing practice. Includes care of acute and chronically ill adults and elderly patients with a focus on maintaining health status, preventing illness, and improving health status. Application of knowledge and skills occurs in the nursing laboratories and clinical setting. Fee \$190.

### **NURS 1101 Critical Thinking in Nursing Practice**

**2 credit hours**

**30 Classroom hours = 30 Lecture Hours**

This course introduces the learner to critical thinking used in nursing. In this course the student learns to use critical thinking skills and strategies that underscore the clinical reasoning represented in the nursing process as well as dealing with aspects of the healthcare system for safe practice in the current healthcare environment. This course forms the basis for the thinking processes applied throughout all nursing courses. Fee \$90.

### **NURS 1200 Nursing Concepts II: Family Health Nursing**

**4 credit hours**

**120 Classroom hours = 30 Lecture Hours + 90 Lab Hours**

This course builds on the fundamental concepts providing for the acquisition of additional concepts and application of concepts of nursing applied to the care of the reproducing family and children. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Prerequisites: NURS 1100 and 1101. Fee \$120.

**NURS 1201 Nursing Concepts II: Mental Health & Gerontology Nursing**

**3 credit hours**

**75 Classroom hours = 30 Lecture Hours + 45 Lab Hours**

This course builds on the fundamental concepts providing for the acquisition of additional concepts and application of concepts of nursing applied to the care of patients with mental health conditions and to the care of the elderly. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Prerequisites: NURS 1100 and 1101. Fee \$90.

**NURS 1300 Practical Nursing Exit Course**

**6 credit hours**

**150 Classroom hours = 60 Lecture Hours + 90 Lab Hours**

The purpose of this course is to prepare students completing the first year of the AD Nursing Program who choose to engage in nursing at the level of the Practical Nurse scope of practice. This course provides additional nursing content and skills needed at the PN level. The course includes competencies needed for the LPN-C credential in IV therapy. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Once the student passes the NCLEX-PN they would be eligible to take the LPN-C certification for the State of Nebraska. Prerequisites: NURS 1200 and 1201. Fee \$60.

**NURS 1400 LPN to ADN Transition Course**

**3 credit hours**

**75 Classroom hours = 30 Lecture Hours + 45 Lab Hours**

The LPN Transition into AD Nursing introduces major program concepts with application of those concepts to Registered Nursing practice. The course integrates select nursing theory taught in the first two semesters of the nursing program to augment the knowledge of the Licensed Practical Nurse in preparation for articulation into the Associate Degree Nursing Program. The course includes concepts of adult health nursing applied to the care of acutely ill patients, mental health nursing, and family health nursing for safe, patient-centered nursing care. Application of knowledge and skills occurs in the nursing skills and simulation laboratories.

**NURS 1500 Nursing Concepts IV: Adult Health Nursing, Patients with Stable and Unstable Conditions**

**6 credit hours**

**150 Classroom hours = 60 Lecture Hours + 90 Lab Hours**

This course further expands on the concepts of nursing practice with application to the care of adult patients with stable and unstable conditions. Mental health concepts are integrated throughout the course. Advanced IV therapy is a focus of the course. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Prerequisites: NURS 1200 and 1201 or NURS 1400. Fee \$60.

**NURS 2100 Nursing Concepts V: Care of Patients across the Lifespan with Complicated Conditions**

**8 credit hours**

**240 Classroom hours = 60 Lecture Hours + 180 Lab Hours**

This course builds on all previous nursing courses to further refine and apply the concepts of nursing practice to the care of patients with complicated conditions. The course focuses on a variety of patient populations through clinical experiences and simulation to provide the necessary patient care experiences. Application of knowledge and skills occurs in the nursing laboratories and a variety of clinical settings. Prerequisite: NURS 1500. Fee \$170.

**NURS 2200 Nursing Concepts VI: Care of Patients across the Lifespan with Complex Conditions**

**8 credit hours**

**240 Classroom hours = 60 Lecture Hours + 180 Lab Hours**

This course builds on all previous nursing courses in the AD program by applying the concepts of nursing practice to the care of patients with complex conditions. The course focuses on a variety of patient populations through clinical experiences and simulation to provide the necessary patient care experiences. Student performance is evaluated against the program learning outcomes. Application of knowledge and skills occurs

in the nursing laboratories and a variety of clinical settings. Prerequisite: NURS 2100. Fee \$190.

**NURS 2201 Nursing Concepts II: Transition to RN Practice**

**4 credit hours**

**60 Classroom hours = 60 Lecture Hours**

This theory course focuses on strengthening the students' knowledge base and thinking skills in preparation for current practice by applying clinical reasoning to case studies focused on patients across the lifespan experiencing multisystem health issues. Application of content occurs in the simulation laboratory. Includes a focused review for the NCLEX-RN. Prerequisite: NURS 2100. Fee \$80.

**NURSING ASSISTANT/AIDE**

**NURA 1100 Nursing Assistant**

**4 credit hours**

**76 Classroom Hours = 60 Lecture Hours + 16 Lab Hours**

This course will provide training for a non-licensed individual to provide safe, effective, and caring services to patients, residents, and clients in a variety of health care settings. Upon successful completion of the course, students will receive a certificate of completion from MPCC and qualify for placement on the State of Nebraska Nurse Aide Registry. Must be 16 to take this course. Fee \$5.

**NURA 1360 Medication Aide**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

The content of this course will meet the 40-hour training requirement by the Nebraska State Department of Health and Human Services, Credentialing Division for childcare providers, staff members of schools, and persons providing medications in a recipient's home or ICF-MR or AL facility. Individuals must be 18 years of age to take this course.

Prerequisite: NURA 1100 or permission from course coordinator.

**PHARMACOLOGY**

**PHAR 1500 Pharmacology**

**2 credit hours** 📺 📖

**30 Classroom Hours = 30 Lecture Hours**

Basic information in the major areas of pharmacology including general principles, pharmacokinetics, drug interactions, chemotherapy and the pharmacology of the nervous, cardiovascular, renal, gastrointestinal and endocrine systems. Prerequisites: BIOS 2250. Can be taken concurrent with BIOS 2260 and BIOS 1100.

**PHILOSOPHY**

**PHIL 1010 Introduction to Philosophy**

**3 credit hours** 📖

**45 Classroom Hours = 45 Lecture Hours**

This course introduces students to the components of philosophy through readings from the history of philosophy (ancient, modern, and contemporary) combined with the examination of topics such as metaphysics, logic, ethics, epistemology, aesthetics, philosophy of religion, freedom, and self-identity. The course exposes students to a range of ideas and readings representing a variety of cultural and ethnic backgrounds.

**PHIL 1150 Introduction to Logic & Critical Thinking**

**3 credit hours** 📺 📖

**45 Classroom Hours = 45 Lecture Hours**

Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information. Students will encounter an analytical method of language analysis, logic, fallacies, construction of valid arguments, the notion of evidence, relevant questioning, and problem solving techniques. [Offered as PHIL 1100: Introduction to Critical Thinking prior to Fall 2016]

# COURSE DESCRIPTIONS

## **PHIL 2200 Elements of Ethics**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course considers a wide range of basic issues and schools of thought in moral philosophy. Ethics is the philosophical study of moral judgments and fundamentally implores the student to ponder the following question: Which moral judgments are correct, and why?

## **PHIL 2610 Comparative Religions**

**3 credit hours** 

**45 Classroom Hours = 45 Lecture Hours**

This course will offer a cross-cultural introduction to the world's major religious/philosophical traditions of faith systems through a comparison of historical origins, rituals, beliefs, practices worldviews, original religious texts, and other important sources. Interdisciplinary approach to study of religion and various approaches to study of religious systems are a part of the work religions traditions assessment.

## **PHYSICAL EDUCATION**

### **PHED 1010 Swimming I**

**1 credit hour**

**24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

A co-educational course designed to introduce very basic fundamentals of swimming such as breath holding, basic floats, kicking and basic strokes for swimming. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

### **PHED 1020 Swimming II**

**1 credit hour**

**24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

A co-educational course designed to improve basic strokes and learn more advanced strokes such as the breaststroke, sidestroke, and back crawl. Prerequisites: PHED 1010 or permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

### **PHED 1030 Swimming & Conditioning**

**1 credit hour**

**24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

An independent study course designed for students whose schedules or preferences make it difficult to enroll in scheduled physical education classes. This course will provide an opportunity for the student to improve personal stamina and overall fitness in an aquatic surrounding. Class meets for 16 weeks. Fee \$10.

### **PHED 1040 Walking & Jogging**

**1 credit hour**

**24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

An independent study course designed for students whose schedules or preferences make it difficult to enroll in scheduled physical education classes. This course will introduce the student to the fundamental skill of walking and/or jogging. The intent is to improve a person's stamina and overall fitness. Class meets for 16 weeks. Fee \$10.

### **PHED 1080 Weight Training I**

**2 credit hours**

**48 Classroom Hours = 16 Lecture Hours + 32 Lab Hours**

A co-educational activity class with emphasis on activity. The class attempts to explain physiological training principles and a body's reaction to weight training. Students will participate in an aerobic/weight training circuit that will allow individuals to work beyond their present physical state. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

### **PHED 1090 Weight Training II**

**2 credit hours**

**48 Classroom Hours = 16 Lecture Hours + 32 Lab Hours**

A continuation of PHED 1080. Prerequisites: PHED 1080 or permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1120 Training & Conditioning I**

**1 credit hour**

**24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

This is course which is designed to expose the student to several programs for aiding the individual to become physically fit and to move efficiently in daily life. The instructor provides counseling and guidance in the selection of activities for immediate and future needs. The instructor helps in planning the student's own individual exercise programs. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1130 Training & Conditioning II**

**1 credit hour**

**24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

This course is a continuation of PHED 1120. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1140 Aerobics I**

**1 credit hour**

**24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

A co-educational course which is designed to provide a high-energy workout. The class combines music with aerobic moves to provide a varied workout which enhances the cardiovascular system as well as developing general body strength. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1150 Aerobics II**

**1 credit hour**

**24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

A continuation of PHED 1140. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1180 Fitness for Living – Outdoor**

**1 credit hour**

**24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

A co-educational course which is designed to offer the student a variety of outdoor activities. The course is a study of exercise programs and their general effect on body condition. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1220 Bowling**

**1 credit hour**

**24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

A co-educational course designed to instruct the beginning student in the fundamental techniques of bowling. Students will practice the skills after learning the mechanics of the sport. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1240 Golf**

**1 credit hour**

**24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

A co-educational course designed to introduce the student to the sport of golf. Emphasis will be placed on teaching fundamental etiquette, skill techniques, rules and history of the leisure sport of golf. Students will participate in the activity of golf individually and within a group. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1260 Beginning Yoga**

**1 credit hour**

**24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

A co-educational course designed to promote balance and strength for the physical body/mind. The class combination of breathing, stretching, and positive affirmations relaxes the body/mind while creating strength and tone for total body wellness. Note: This course may not transfer toward general education or degree requirements at some four-year colleges.

**PHED 1270 Intermediate Yoga****1 credit hour****24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

An intermediate co-educational course built on Beginning Yoga techniques designed to promote balance and strength for the physical body/mind. The class combination of breathing, stretching and positive affirmations relaxes the body/mind while creating strength and tone for total body wellness. Note: This course may not transfer toward general education or degree requirements at some four-year colleges.

**PHED 1280 Weight Training III****2 credit hours****45 Classroom Hours = 15 Lecture Hours + 32 Lab Hours**

A continuation of PHED 1090. Prerequisites: PHED 1090 or permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHED 1290 Weight Training IV****2 credit hours****45 Classroom Hours = 15 Lecture Hours + 30 Lab Hours**

A continuation of PHED 1280. Prerequisites: PHED 1280 or permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHED 1320 Racquetball****1 credit hour****24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

A co-educational course designed to instruct the beginning student in the fundamental techniques of racquetball. Basic strokes and shots will be emphasized and game strategy to implement the basics. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHED 1340 Tennis I****1 credit hour****24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

A co-educational course designed to instruct the beginning tennis player in the fundamentals of the various skills of the game of tennis. The class will stress skills and techniques in proper play of recreational tennis. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHED 1350 Tennis II****1 credit hour****24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

A continuation of PHED 1340. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHED 1450 Fitness Physiology****3 credit hours**  **45 Classroom Hours = 45 Lecture Hours**

Fitness Physiology will introduce the student to the human body's response to exercise. Field testing for strength, endurance, flexibility, body composition, and exercise prescription for an apparently healthy population will be examined in depth. Exercise prescription for specific disease states will be introduced. BIOS 2250 is strongly recommended or permission of instructor.

**PHED 1480 Athletic Training Practicum I****1 credit hour****45 Classroom Hours = 45 Practicum Hours**

Practicum I will allow the student to apply attained knowledge to evaluation, assessment, and prescription to a healthy population. The student will spend time working with injured athletes in an athletic training room setting. Prerequisites: PHED 1450 and PHED 1960 or permission of the instructor.

**PHED 1490 Practicum II****1 credit hour****45 Classroom Hours = 45 Practicum Hours**

Practicum II will allow the student to apply attained knowledge to evaluation, assessment, and prescription to an unhealthy population. The student will spend time working in both cardiac and pulmonary rehabilitation. Prerequisite: PHED 1480 or permission of instructor.

**PHED 1500 Men's Intercollegiate Basketball I****1 credit hour****30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate basketball. Freshmen register for PHED 1500 first semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHED 1510 Men's Intercollegiate Basketball II****1 credit hour****30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate basketball. Freshmen register for PHED 1510 second semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHED 1520 Women's Intercollegiate Basketball I****1 credit hour****30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate basketball. Freshmen register for PHED 1520 first semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHED 1530 Women's Intercollegiate Basketball II****1 credit hour****30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate basketball. Freshmen register for PHED 1530 second semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHED 1540 Intercollegiate Golf****1 credit hour****30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate golf. Freshmen register for PHED 1540 first semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHED 1550 Intercollegiate Golf II****1 credit hour****30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate golf. Freshmen register for PHED 1550 second semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHED 1560 Intercollegiate Volleyball****1 credit hour****30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate volleyball. Freshmen register for PHED 1560; sophomores register for PHED 1570. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHED 1570 Intercollegiate Volleyball II****1 credit hour****30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate volleyball. Freshmen register for PHED 1560; sophomores register for PHED 1570. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

# COURSE DESCRIPTIONS

## **PHED 1580 Men's Intercollegiate Basketball III**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate basketball. Sophomores register for PHED 1580 first semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1590 Men's Intercollegiate Basketball IV**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate basketball. Sophomores register for PHED 1590 second semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1600 Sports Officiating**

**2 credit hours**

**48 Classroom Hours = 16 Lecture Hours + 30 Lab Hours**

Course designed to provide individuals with the rules, skills, mechanics, and experience of officiating at the junior and senior high school level. Football, basketball and volleyball receive main emphasis. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1610 Women's Intercollegiate Basketball III**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate basketball. Sophomores register for PHED 1610 first semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1620 Women's Intercollegiate Basketball IV**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate basketball. Sophomores register for PHED 1620 second semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1630 Intercollegiate Golf III**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate golf. Sophomores register for PHED 1630 first semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1640 Intercollegiate Golf IV**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate golf. Sophomores register for PHED 1640 second semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1650 Intercollegiate Softball I**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate softball. Freshmen register for PHED 1650 first semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1660 Intercollegiate Softball II**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate softball. Freshmen register for PHED 1660 second semester. Prerequisite: Permission of instructor.

Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1670 Intercollegiate Softball III**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate softball. Sophomores register for PHED 1670 first semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1680 Intercollegiate Softball IV**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate softball. Sophomores register for PHED 1680 second semester. Prerequisite: Permission of instructor. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1700 Intercollegiate Baseball I**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate baseball. Freshmen register for PHED 1700 first semester. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1710 Intercollegiate Baseball II**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate baseball. Freshmen register for PHED 1710 second semester. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1720 Intercollegiate Baseball III**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate baseball. Sophomores register for PHED 1720 first semester. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1730 Intercollegiate Baseball IV**

**1 credit hour**

**150 Classroom Hours = 30 Lab Hours**

Credit for participation in intercollegiate baseball. Sophomores register for PHED 1730 second semester. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1750 Introduction to Physical Education**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Course designed as an introductory course for students interested in careers in health, physical education, athletic training or coaching. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1760 Intercollegiate Volleyball III**

**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate volleyball. Prerequisite: PHED 1560 and PHED 1570. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

## **PHED 1770 Intercollegiate Volleyball IV**


**1 credit hour**

**30 Classroom Hours = 30 Lecture Hours**

Credit for participation in intercollegiate volleyball. Prerequisite: PHED 1560, 1570, and 1760. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHED 1800 Introduction to Recreation****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Course is specifically designed to study the principles, history and philosophy of recreation. The student is offered an opportunity to develop concepts concerning recreation, the social economic movements, and the types of areas and facilities used in recreation. Note: This course may not transfer toward general education or degree requirements at some four-year colleges.

**PHED 1810 Drugs & Sports****2 credit hours** **30 Classroom Hours = 30 Lecture Hours**

Course designed as an introduction to the knowledge of the roles that drugs play in modern day sport. The class will cover performance enhancing drugs, as well as the effects of prescription drugs, narcotics, over the counter drugs, alcohol, tobacco, and all other nutritional supplements used to enhance an athlete's performance. The class will cover the science of each classification of drug, all social and ethical issues that arise with the topic of drugs and sports, and cover the testing agencies, methods, and reporting of drug use in sports.

**PHED 1850 Introduction to Coaching****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

An introduction to the knowledge, requirements and responsibilities for coaching. Includes sport philosophy, sport sciences, sport medicine, and sport management. Fulfills requirements of ACEP Leader Level I. Note: This course may not transfer toward general education or degree requirements at some four-year colleges.

**PHED 1960 Prevention & Care of Athletic Injuries****4 credit hours**  **75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

Instruction in theory and practice of conditioning, taping, and rehabilitation of common sports injuries. An anatomical review and evaluation techniques for common injuries to the ankle, knee, shoulder, wrist, and hand as well as hip, thigh, head, neck, face, ear, eye, nose, and dental injuries. Universal precautions for blood borne pathogens and disposal of contaminated materials. Emergency procedures for sports injuries will be covered.

**PHED 1970 Athletic Training Practicum II****2 credit hours****72 Classroom Hours = 2 Lecture Hours + 70 Practicum Hours**

Athletic Training Practicum II will allow the student to apply attained knowledge of general injury evaluation process and broaden knowledge of medical record keeping software, advanced taping and wrapping, and beginning physical modalities. Prerequisite: PHED 1480 and 1960 or permission of instructor.

**PHED 1980 Athletic Training Practicum III****3 credit hours****116 Classroom Hours = 3 Lecture Hours + 113 Practicum Hours**

Athletic Training Practicum III will allow the student to apply attained knowledge evaluation of Concussion and begin injury evaluation process- Upper Extremity intensive and Tutor Taping processes for AT Practicum students. Prerequisite: PHED 1970.

**PHED 1990 Athletic Training Practicum IV****4 credit hours****215 Classroom Hours = 3 Lecture Hours + 212 Practicum Hours**

Athletic Training Practicum IV will allow the student to broaden knowledge of Scheduling events and staff schedules and Injury Evaluation Process- Lower Extremity Intensive. Prerequisite: PHED 1980.

**PHED 2020 Training & Conditioning III****1 credit hour****24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**

Continuation of PHED 1130. This is a course which is designed to expose the student to several programs for aiding the individual to become

physically fit and to move efficiently in daily life. The instructor provides counseling and guidance in the selection of activities for immediate and future needs. The instructor helps in planning the student's own individual exercise programs. Note: This course may not transfer toward general education or degree requirements at some four-year colleges.

**PHED 2030 Training & Conditioning IV****1 credit hour****24 Classroom Hours = 8 Lecture Hours + 16 Lab Hours**


Continuation of PHED 2020. This is a course which is designed to expose the student to several programs for aiding the individual to become physically fit and to move efficiently in daily life. The instructor provides counseling and guidance in the selection of activities for immediate and future needs. The instructor helps in planning the student's own individual exercise programs. Note: This course may not transfer toward general education or degree requirements at some four-year colleges.

**PHED 2150 Certification Preparation****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Certification Preparation will be taken the semester prior to taking the American College of Sports Medicine's Health and Fitness Instructor or Personal Trainer Certification examination(s). The class will be designed to evaluate the student's knowledge, skills, and abilities needed for successful completion of one or both of these certifications. Prerequisites: PHED 1450 and HLTH 1500 or permission of the instructor.

**PHED 2400 Activities for Elementary Physical Education****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

A course designed to teach techniques of teaching perceptual-motor activities, fundamental movement skills, sport skills, low-organized and lead-up games, and self-testing for elementary children. Note: This course may not transfer toward general education or degree requirements at some four-year colleges. Fee \$10.

**PHYSICS AND PHYSICAL SCIENCE****PHYS 1020 Astronomy****3 credit hours** **45 Classroom Hours = 45 Lecture Hours**

An elementary course designed for non-science majors. Topics include the nature and motions of the Earth, Moon, planets, Sun, stars, galaxies, as well as other deep sky objects. A historical overview of manned and unmanned space flights is included.

**PHYS 1100 Physical Science****4 credit hours** **75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

A survey course in physical science with emphasis on scientific processes and problem solving. Areas of study will include selected topics in physics, chemistry, astronomy, geology, and meteorology. A scheduled laboratory will supplement classroom activities. Note: A background in high school algebra or MATH 1010 is desirable. Fee \$15.

**PHYS 1101 Physical Science Lab** 

Lab for Physical Science. Corequisite: PHYS 1100.

**PHYS 1150 Descriptive Physics****4 credit hours****75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

This is a survey of physics at a conceptual (non-mathematical) level. The course covers motion, fluids, heat, sound, electricity, magnetism, and light. Emphasis will be placed on using concepts to analyze physical problems.

**PHYS 1151 Descriptive Physics Lab**

Lab for Descriptive Physics. Corequisite: PHYS 1150.



# COURSE DESCRIPTIONS

## **PHYS 1300 Introduction to Meteorology**

**4 credit hours**

**75 Classroom Hours = 45 Lecture Hours + 30 Lab Hours**

The basic principles of meteorology will be covered including radiation, temperature, moisture, atmospheric stability, pressure and winds, clouds and precipitation processes, air masses, fronts, and severe weather.

## **PHYS 1301 Introduction to Meteorology Lab**

Lab for Introduction to Meteorology. Corequisite: PHYS 1300.

## **PHYS 1410 General Physics I**

**5 credit hours**

**90 Classroom Hours = 60 Lecture Hours + 30 Lab Hours**

The first semester of a comprehensive course in physics. Mechanics, heat and wave motion. Prerequisites: MATH 1150 and 1250 or permission of instructor. Fee \$15.

## **PHYS 1411 General Physics I Lab**

Lab for General Physics I. Corequisite: PHYS 1410.

## **PHYS 1420 General Physics II**

**5 credit hours** 🔄

**90 Classroom Hours = 60 Lecture Hours + 30 Lab Hours**

A continuation of PHYS 1410. Topics of study include sound, electricity and magnetism, optics, and modern physics. Prerequisite: PHYS 1410 or permission of instructor. Fee \$15.

## **PHYS 1421 General Physics II Lab**

Lab for General Physics I. Corequisite: PHYS 1420.

## **PHYS 2410 General Physics Calculus Supplement I**

**1 credit hour** 🔄

**15 Classroom Hours = 15 Lecture Hours**

This course, together with materials from PHYS 1410, is equivalent to the traditional first semester course in calculus-based physics. Derivations and problems which involve the use of the calculus or the more intense application of algebra and trigonometry than is customary in PHYS 1410 constitutes the subject matter of this course. The topics covered correspond to those in a first semester calculus-based physics course. Prerequisites: PHYS 1410 with at least a grade of C and MATH 1600. Corequisites: PHYS 1410 and MAT 1600.

## **PHYS 2420 General Physics Calculus Supplement II**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

This course, together with materials from PHYS 1420, is equivalent to the traditional second semester course in calculus-based physics. Derivations and problems which involve the use of the calculus or the more intense application algebra and trigonometry than is customary in PHYS 1420 constitute the subject matter of this course. The topics covered correspond to those in a second semester calculus-based physics course. Prerequisite: MATH 1600. Corequisite: PHYS 1420 with at least a grade of C.

## **POLITICAL SCIENCE**

### **POLS 1000 American Government & Politics**

**3 credit hours** 📖

**45 Classroom Hours = 45 Lecture Hours**

A study of the functioning of the political system through an analysis and application of its underlying theories.

### **POLS 1600 International Relations**

**3 credit hours** 📖

**45 Classroom Hours = 45 Lecture Hours**

An introductory survey of the actors, institutions, processes, and theories of international relation including a study of contemporary global issues.

### **POLS 1700 Comparative Politics**

**3 credit hours** 📖

**45 Classroom Hours = 45 Lecture Hours**

This course will examine the structures and functions of governments around the world. The course will focus on the major institutions of government, the role of constitutions in other countries and the similarities and differences in the approach and role of government.

## **POLS 2200 State & Local Politics**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course will examine state and local governments according to the duties, processes, and methods of local governing. The course will include studies of governors, state legislatures, judiciaries, county and city governments, and local boards.

## **PSYCHOLOGY**

### **PSYC 1810 Introduction to Psychology**

**3 credit hours** 🔄 📖

**45 Classroom Hours = 45 Lecture Hours**

An introduction to the science of psychology including the application of critical thinking to the study of learning theory, memory, personality, growth and development, biological and neurological aspects, abnormal behavior, therapies, intelligence, motivation, emotion, sensation, perception, and theoretical perspectives.

### **PSYC 2060 Lifespan Development**

**3 credit hours** 🔄 📖

**45 Classroom Hours = 45 Lecture Hours**

Lifespan Development provides an overview of human development across the lifespan. The course will include an examination of the theories and issues related to human development in the light of traditional studies as well as recent research. Focus will be given to biosocial development, cognitive development, and psychosocial development from conception to late adulthood, including death. Prerequisite: PSYC 1810 or equivalent, or permission of instructor.

### **PSYC 2500 Research Methods in Psychology**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

An overview of the scientific method of inquiry, methods of data collection, descriptive statistics, graphing, research design, inferential statistics, and the interpretation and evaluation of research methods. It will instruct the student on methodologies necessary in psychological research and focus upon special dealing with artifacts, bias, interpretation of experimental results, and the appropriateness of research design to various problems. The course includes an introduction to the usage of computers for science research.

### **PSYC 2700 Positive Psychology**

**3 credit hours** 🔄 📖

**45 Classroom Hours = 45 Lecture Hours**

The primary basis for this course is to learn more about "positive" aspects of behavior such as subjective well-being, resilience, self-acceptance, goal development, self efficacy, and purpose and meaning in life. This class discusses the healthy personality structure and its impact on lifestyle, feelings, and thinking in terms of acceptance and enjoyment. Prerequisite: None, but a course in Introduction to Psychology is recommended.

### **PSYC 2800 Abnormal Psychology**

**3 credit hours** 🔄 📖

**45 Classroom Hours = 45 Lecture Hours**

This class provides an overview of the variety of emotional and behavioral problems that create distress for many people throughout the world. Special attention is given to the etiology, characteristics, and treatment of a variety of psychological disorders. The disorders are considered in light of their basis in "normal" behavior, as well as their various commonalities and differences. Prerequisite: PSYC 1810 or equivalent, or permission of instructor.

## **REAL ESTATE**

### **REES 1705 Real Estate Principles & Practices**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Character of land, real estate markets, ownership interests, legal instruments, contracts, closing transfers, financing, brokerage, management, appraising, development and ownership. (Replaces REES 1710.)

**REES 1715 Real Estate Finance****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

This course offers an overview of numerous methods of financing different types of real estate. Subjects covered include funding sources, primary and secondary markets, analysis of mortgage risks, FHA, VA, application – underwriting-closing process, influences of government agencies and regulations, and other current real estate finance topics. The student will develop a broad base upon which to develop an understanding of the current real estate market and how it affects all aspects of the economy and our lives.

**REES 1725 Real Estate Law****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

A study of estates in land, deeds, leases, mortgages, easements, zoning ordinances, covenants, trespass, nuisance, trespassers, licensees, invitees, real estate brokers, and descendant's estates.

**REES 1740 Real Estate Appraisal****3 credit hours****48 Classroom Hours = 48 Lecture Hours**

A study of valuation theories as applied to land, residential, commercial, and leasehold real estate. The course includes depreciation, capitalization, and three approaches to value.

**REES 1750 Real Estate Investments****3 credit hours****48 Classroom Hours = 48 Lecture Hours**

A study of the feasibility and the analysis of long-term investment characteristics of condominiums, apartments, housing complexes, office buildings, shopping centers, industrial properties, and subdivisions.

**REES 1760 Real Estate Management****3 credit hours****48 Classroom Hours = 48 Lecture Hours**

Managing residential, cooperative, office, commercial, shopping and special purpose properties, merchandising space, tenant selection and relations, and maintenance.

**REES 1765 Real Estate Sales & Brokerage****2 credit hours****30 Classroom Hours = 30 Lecture Hours**

This course introduces the student to the operational functions of the real estate agency. Topics included are office location and layout, sales management and training, listings, inventory, advertising, sales and promotions. (Replaces REES 1770.)

**SAFETY TRAINING****SFTX 1005 Safety****1 credit hour****15 Classroom Hours = 15 Lecture Hours**

A General Safety procedures and practices course with an introduction to OSHA.

**SFTX 1750 Forklift Training****0.5 credit hour****10 Classroom Hours = 8 Lecture Hours + 2 Lab Hours**

This program fulfills the training required under OSHA Regulations. To include state-of-the-art, comprehensive training for fork-lift truck operators on the safe operation of fork-lift trucks.

**SMALL ENGINE MECHANICS****SENG 1710 Small Engine Maintenance****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Small engine design and operation, maintenance, tune-up, and troubleshooting.

**SENG 1720 Small Engine Repair****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Tear down, overhaul and tune-up of engines for small portable tools such as chain saws and small equipment, including lawn mowers, garden tractors, and rototillers.

**SENG 1730 Motorcycle & ATV Maintenance****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Motorcycle engine design and operation, overall maintenance, tune-up, and troubleshooting.

**SENG 1740 Motorcycle, ATV & Snowmobile****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Tear down, overhaul and tune-up of engines for motorcycles, all terrain vehicles, and snowmobiles.

**SOCIOLOGY****SOCI 1000 Human Relations: People Skills in the Work Place****3 credit hours** 📺 📖**45 Classroom Hours = 45 Lecture Hours**

This course focuses on soft-skills training. Thirteen areas for skill improvement in human relations (people-skills) are studied. These major universal training needs are shared by most managerial, business, professional, technical and sales personnel. The training needs include understanding individual differences, interpersonal communication, teamwork skills, problem solving, cross-cultural relations, effective leadership, motivating self and others, helping others develop, positive political skills, personal productivity, stress management, customer service skills and enhancing ethical behavior. This is a practical working course that provides students with service learning experiences.

**SOCI 1010 Introduction to Sociology****3 credit hours** 📖**45 Classroom Hours = 45 Lecture Hours**

An analysis of society including the development of the social system, group formations and types of social organizations, and the basic elements affecting these classifications. [Offered as SOCI 1530: Introduction to Sociology prior to Fall 2016]

**SOCI 1130 Introduction to Social Work****3 credit hours** 📺 📖**45 Classroom Hours = 45 Lecture Hours**

A history of social work. Includes the development of the field through our English and early American heritage. Social work defined in relation to its functions, areas of interest, and goals in American society. [Offered as SOCI 1010: Introduction to Social Work prior to Fall 2016]

**SOCI 2010 Social Problems****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Analysis of the processes of disorganization in society with attention to some of the principle problem areas in contemporary society.

**SOCI 2120 Drugs, Society & Human Behavior****3 credit hours** 📖**45 Classroom Hours = 45 Lecture Hours**

A survey of licit and illicit drugs and their effects on animals and human physiology (particularly the nervous system). Psychological theories that account for drug usage and abuse and sociocultural relationships accounting for drug usage will also be explored, as well as co-dependent others that live with drug dependent individuals.

**SOCI 2150 Issues of Unity & Diversity****3 credit hours** 📖**45 Classroom Hours = 45 Lecture Hours**

The course covers diverse populations including Native Americans, Hispanic-Americans, African-Americans, Asian-Americans, and Euro-Americans. Important sociological lessons in social interaction, concepts

# COURSE DESCRIPTIONS

of race, social class, age, gender, sexual orientation, and sociology of minorities are included in the course. [Offered as SOCI 2500: Dealing with Diversity prior to Fall 2016]

## **SOCI 2250 Marriage & Family Relationships**

**3 credit hours** 📖

**45 Classroom Hours = 45 Lecture Hours**

Important traditional and contemporary aspects of male-female roles and relationships and the implications for modern day courtship and marriage. Emphasis on changing functions of the family and problems of adjustment of rapidly changing social values.

## **SPANISH**

### **SPAN 1010 Beginning Spanish I**

**5 credit hours** 📖

**75 Classroom Hours = 75 Lecture Hours**

Fundamentals of pronunciation, grammar structures, reading, writing, speaking and listening comprehension. Study of the Hispanic culture is incorporated throughout the course. The focus is on linguistic proficiency for communication.

### **SPAN 1020 Beginning Spanish II**

**5 credit hours** 📖

**75 Classroom Hours = 75 Lecture Hours**

Continuation of SPAN 1010. Pronunciation, grammar, reading, writing, speaking and listening skills are further developed. A continued study of the Hispanic culture. The focus is on linguistic proficiency for communication. Prerequisite: SPAN 1010 or two semesters of high school Spanish.

### **SPAN 2010 Intermediate Spanish I**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Continuation of SPAN 1020. Grammar, reading (including some literature), writing, speaking, listening comprehension and Hispanic culture. The focus is on linguistic proficiency for communication. Prerequisite: SPAN 1020 or four semesters of high school Spanish, or permission of instructor.

### **SPAN 2020 Intermediate Spanish II**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Continuation of SPAN 2010. Grammar, reading (including some literature), writing, speaking, listening comprehension and the Hispanic culture. The focus is on linguistic proficiency for communication. Prerequisite: SPAN 2010 or permission of instructor.

## **SPEECH**

### **SPCH 1010 Fundamentals of Speech Communication**

**3 credit hours** 🗣️

**45 Classroom Hours = 45 Lecture Hours**

An introductory course which focuses on communication skills including the communication process, interpersonal relationships, small group discussion, and public communication. A minimum of five formal speeches.

### **SPCH 1090 Fundamentals of Human Communication**

**3 credit hours** 🗣️ 📖

**45 Classroom Hours = 45 Lecture Hours**

The communication system of individuals and small group communication processes; students explore perception, semantics, listening, self-concept, non-verbal communication, relationships, conflict resolution, and cross-cultural communication as aspects of interpersonal relationships. Class exercises emphasize the personal experience of students to reinforce theories. Minimum of three formal speeches.

### **SPCH 1110 Public Speaking**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course will assist the student to master the skills required of speaking in today's workplace. This course will focus on the organization, preparation, research, and evidence needed for a presentation that is tailored to fit the audience. This course will enhance the student's listening skills which will assist them in everyday situations.

## **THEATER**

### **THEA 1010 Introduction to Theater**

**3 credit hours** 📖

**45 Classroom Hours = 45 Lecture Hours**

An introduction to the forms and functions of the dramatic arts within a historical perspective. Includes an introduction to basic theater skills as well as an introduction to a range of dramatic literature.

### **THEA 1140 Acting I**

**3 credit hours** 🗣️

**45 Classroom Hours = 45 Lecture Hours**

Stage movement, mime, body awareness, voice, script analysis, and rehearsal technique.

### **THEA 1200 Play Reading**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

This course focuses on the reading, discussion, and interpretation of works of drama. The course will provide a historical overview of dramatic works with a focused study of content and form of those works. Students will expand their knowledge of drama and authors, gain interpretation skills, and widen their understanding of genre.

### **THEA 1601 Theater Internship**

**1 credit hour**

**60 Classroom Hours = 60 Internship Hours**

Theater Internship places a student in a business/professional organization that emphasizes some aspect of theater and/or performance. The cooperating business retains the right to accept or deny student participation in this program.

### **THEA 1850 Play Production I**

**1 credit hour** 🗣️

**50 Classroom Hours = 50 Lab Hours**

Intensive application of principles of interpretive and technical theater practices. The class project each semester is a college play. Prerequisite: Permission of instructor.

### **THEA 1860 Play Production II**

**1 credit hour** 🗣️

**50 Classroom Hours = 50 Lab Hours**

Continuation of THEA 1850. Prerequisite: Permission of instructor.

### **THEA 1870 Play Production III**

**1 credit hour** 🗣️

**50 Classroom Hours = 50 Lab Hours**

Continuation of THEA 1860. Prerequisite: Permission of instructor.

### **THEA 1880 Play Production IV**

**1 credit hour** 🗣️

**50 Classroom Hours = 50 Lab Hours**

Continuation of THEA 1870. Prerequisite: Permission of instructor.

### **THEA 1890 Play Production V**

**1 credit hour** 🗣️

**50 Classroom Hours = 50 Lab Hours**

Continuation of THEA 1880. Prerequisite: Permission of instructor.

### **THEA 1900 Play Production VI**

**1 credit hour** 🗣️

**50 Classroom Hours = 50 Lab Hours**

Continuation of THEA 1890. Prerequisite: Permission of instructor.

### **THEA 2010 Introduction to Stagecraft**

**3 credit hours** 🗣️

**45 Classroom Hours = 45 Lecture Hours**

Basics of technical theater practice including scene design, drafting, construction, painting, and lighting of stage scenery and properties; emphasis on practice and terminology; safe use of hand tools and power equipment in translation from design to actual materials for open stage productions. Prerequisite: THEA 1010 or permission of instructor.

**THEA 2130 History of the Motion Picture****3 credit hours** 🌐**48 Classroom hours = 48 Lecture Hours**

History of the Motion Picture examines the invention and development of cinema. From the first audiences watching a motion picture in 1895, through the development of sound, color film, 3-D, and computer-generated images, and the history of motion pictures has been one of technical development along with the development of a social awareness and consciences in the subject matter. Race, gender, and ethnicity in films are investigated as part of this awareness. The emerging voices of African Americans, Hispanic Americans, Native Americans and women, point out similarities and differences in dealing with economic, cultural, social and personal issues. The course will focus on a global and national perspective of cultural diversity, in looking at the development of film as the recorder of cultural awareness in America, and in the world.

**THEA 2140 Acting II****3 credit hours** 🌐**45 Classroom Hours = 45 Lecture Hours**

A continuation of THEA 1140 Acting I. Work will focus on concentration, relaxation, sensory awareness, script analysis, movement, and improvisation. Work on character analysis will be done through in-class scenes. A final project will be required. Prerequisite: THEA 1140 or permission of instructor.

**THEA 2210 Fundamentals of Stage Management****3 credit hours** 🌐**45 Classroom Hours = 45 Lecture Hours**

An introduction to the functions of the theatrical stage manager. Includes an introduction to basic theater skills as well as an introduction to the forms the Stage Manager must use. Class exercises will focus on the various tasks of the Stage Manager.

**THEA 2230 Intro to Lighting****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

The study of the nature of light, its impact on a production, and the effect on an audience. This course will deal with the basic principles of light, electricity, lighting equipment, color, and design. Lecture and lab. Prerequisite: THEA 1010 and 2010 or permission of instructor. (Replaces THEA 2010.)

**THEA 2240 Acting III****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

A continuation of THEA 2140 Acting II. Students will learn Greek, Elizabethan, Naturalism, and Absurd acting style, as well as acting for the camera. A final project is required.

**THEA 2250 Script Analysis****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

An introduction to theatre research methods. This course is a study of various critical approaches to dramatic literature available to theatre artists with emphasis on critical analysis of structure, genre, theme, style, character, language, dramatic event, and point of view of the actor, director, critic, and audience.

**THEA 2340 Acting IV****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

A continuation of THEA 2140 Acting III. Students will receive advance training in period styles, script analysis, acting for the camera, and professional development. A final project is required.

**TRANSPORTATION****TRAN 1500 Professional Truck Driving****8 credit hours****166 Classroom Hours = 98 Lecture Hours + 68 Lab Hours**

The Professional Truck Driving program prepares students for a career in the over-the-road truck driving in both interstate and interstate commerce. This is an 8 week intensive truck driving course. Training includes driving on city streets and rural roads, two-lane and interstate highways.

**TRAN 1600 Heavy Equipment Operator Training****2 credit hours****40 Classroom Hours = 40 Lecture Hours**

This course is intended for beginner operators and individuals who wish to improve their knowledge on heavy construction hydraulic excavator, front end loader, and motor grader controls and their maintenance, inspection, safety, and operating procedures. This course is not an attempt to create an experienced operator who can safely operate heavy equipment.

**TRAN 1700 Fluid Power Systems****4 credit hours****120 Classroom Hours = 30 Lecture Hours + 90 Lab Hours**

Students will learn the fundamentals of installing, testing, designing and troubleshooting fluid power systems.

**UPHOLSTERY****UPHR 1610 Furniture Upholstering****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Materials, tools, and techniques used in furniture upholstery and frame construction. Fee \$35.

**UPHR 1620 Furniture Upholstering, Adv.****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Upholstery layout, sewing and placement. Fee \$35.

**UPHR 1630 Furniture Repair****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Furniture construction, repair and preparation for upholstery or refinishing. Fee \$35.

**UPHR 1640 Furniture Refinishing****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Refinishing techniques and use of stains, wood fillers, sealers, varnishes, lacquers and oil finishes. Fee \$35.

**UPHR 1650 Furniture Repair/Restoration****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Bracing, piece replacement and preparation for applying filler, stains and finishes. Fee \$35.

**UPHR 1660 Furniture Restyling and Upholstery****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Furniture design and structure and frame strengthening. Fee \$35.

**UPHR 1670 Couch Reconstruction and Upholstering****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Frame and spring repair, pad replacement, and recovering large projects. Fee \$35.

**UPHR 1680 Auto Seat Upholstering****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Recovering car seats and replacing floor carpet. Fee \$35.

# COURSE DESCRIPTIONS

## **UPHR 1690 Auto Interior Recovering**

**2 credit hours**

**45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Recovering inside door panels and replacing headliners and carpeting. Fee \$35.

## **UPHR 1710 Furniture Upholstering**

**3 credit hours**

**72 Classroom Hours = 35 Lecture Hours + 37 Lab Hours**

Materials, tools and techniques used in furniture upholstery and frame construction. Fee \$35.

## **UPHR 1720 Furniture Upholstering, Advanced**

**3 credit hours**

**72 Classroom Hours = 35 Lecture Hours + 37 Lab Hours**

Upholstery layout, sewing, and placement. Fee \$35.

## **UPHR 1730 Furniture Repair**

**3 credit hours**

**72 Classroom Hours = 35 Lecture Hours + 37 Lab Hours**

Furniture construction, repair and preparation for upholstery or refinishing. Fee \$35.

## **UPHR 1740 Furniture Refinishing**

**3 credit hours**

**72 Classroom Hours = 35 Lecture Hours + 37 Lab Hours**

Refinishing techniques and use of stains, wood fillers, sealers, varnishes, lacquers and oil finishes. Fee \$35.

## **UPHR 1750 Furniture Repair & Restoration**

**3 credit hours**

**72 Classroom Hours = 35 Lecture Hours + 37 Lab Hours**

Bracing, piece replacement and preparation for applying filler, stains and finishes. Fee \$35.

## **UPHR 1800 Beginning Antiques**

**0.5 credit hour**

**7.5 Classroom Hours = 7.5 Lecture Hours**

Family heirlooms, insurance, settling estates, care of antiques, appraisal and speculation.

## **UPHR 1810 Antiques & Collectibles**

**1 credit hour**

**23 Classroom Hours = 16 Lecture Hours + 7 Lab Hours**

Family heirlooms, insurance, settling estates, care of antiques, appraisal and speculation.

## **UPHR 1820 Antiques & Collectibles, Advanced**

**1 credit hour**

**23 Classroom Hours = 16 Lecture Hours + 7 Lab Hours**

Glass, pottery, stoneware, children's items, foreign collectibles, silhouettes, furniture and dinnerware.

## **UPHR 2710 Furniture Restyling & Upholstering**

**3 credit hours**

**72 Classroom Hours = 35 Lecture Hours + 37 Lab Hours**

Furniture design and structure and frame strengthening. Fee \$35.

## **UPHR 2720 Couch Reconstruction & Upholstering**

**3 credit hours**

**72 Classroom Hours = 35 Lecture Hours + 37 Lab Hours**

Frame and spring repair, pad replacement, and recovering large projects. Fee \$35.

## **UPHR 2730 Auto Seat Upholstering**

**3 credit hours**

**72 Classroom Hours = 35 Lecture Hours + 37 Lab Hours**

Recovering car seats and replacing floor carpet. Fee \$35.

## **UPHR 2740 Auto Interior Recovering**

**3 credit hours**

**72 Classroom Hours = 35 Lecture Hours + 37 Lab Hours**

Recovering inside door panels and replacing headliners and carpeting. Fee \$35.

## **WELDING TECHNOLOGY**

### **WELD 1005 Safety**

**1 credit hour**

**15 Classroom Hours = 15 Lecture Hours**

Dealing with safety with specifics on hazards in the workplace for welders.

### **WELD 1115 Arc/Gas Welding I**

**4 credit hours**

**180 Classroom Hours = 10 Lecture Hours + 170 Lab Hours**

In-position and out-of-position arc welding, oxyacetylene welding and cutting mild steel, selection of rods, fluxes, electrodes and materials, and safety. Prerequisite: WELD 1005. Fee \$25.

### **WELD 1125 Intro to TIG Welding**

**1 credit hour**

**45 Classroom Hours = 10 Lecture Hours + 35 Lab Hours**

Basic welding of aluminum using the TIG welding process. Fee \$25.

### **WELD 1135 Intro to MIG Welding**

**1 credit hour**

**45 Classroom Hours = 10 Lecture Hours + 35 Lab Hours**

Metallic Inert Gas welding set up, operation, and safety; basic joints and positions, semi-automatic welding of ferrous and difficult-to-weld metals. Prerequisite: WELD 1005.

### **WELD 1140 Metals & Metallurgy**

**3 credit hours**

**45 Classroom Hours = 45 Lecture Hours**

Manufacture and processing of ferrous and nonferrous metals; identification; physical and chemical properties; low, medium and high carbon steels; alloy steels; cast iron and stainless steel.

### **WELD 1145 Print Reading**

**2 credit hours**

**60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

Blueprint, schematic, and diagram reading for welders, basic drawing interpretation and welding symbols and their significance. Prerequisite: WELD 1005.

### **WELD 1220 Arc/Gas Welding II**

**3 credit hours**

**105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

Advanced Arc and Gas welding techniques. Prerequisite: WELD 1005 and WELD 1115.

### **WELD 1240 Intermediate MIG**

**3 credit hours**

**105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

An intermediate MIG welding course that prepares the student to do advanced techniques in wire and flux core welding in all positions. Prerequisite: WELD 1005, WELD 1135, and WELD 1145.

### **WELD 1245 Welding Prefabrication**

**2 credit hours**

**30 Classroom Hours = 30 Lecture Hours**

Designed to prepare the student for the required adjustments to the world of work with speed and quality work habits to the satisfaction of the employer or customer. Prerequisite: WELD 1005, WELD 1135, and WELD 1145.

### **WELD 1250 Intermediate TIG**

**3 credit hours**

**105 Classroom Hours = 15 Lecture Hours + 90 Lab Hours**

Advanced TIG welding techniques. Prerequisite: WELD 1005 and WELD 1125.

**WELD 1260 Applied Math for Welders****3 credit hours****45 Classroom Hours = 45 Lecture Hours**

Mathematics for welders, including fractions, decimals, and metric measurements. (Replaces MACH 1250). Prerequisite: WELD 1005.

**WELD 1710 Oxyacetylene Welding****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

All position oxyacetylene welding, brazing and cutting. Fee \$20.

**WELD 1720 Arc Welding****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

All position arc welding technique, equipment, materials and selection of electrodes. Fee \$20.

**WELD 1730 Arc & Oxyacetylene Welding****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Arc and gas welding technique, equipment, materials and selection of electrodes. Fee \$25.

**WELD 1740 Arc & Oxyacetylene Welding, Advanced****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Welding out of position and with different metals and electrodes. Prerequisite: WELD 1730.

**WELD 1750 TIG Welding (GTAW)****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Tungsten-Inert gas welding of steel, aluminum and stainless steel. Fee \$50.

**WELD 1760 MIG Welding (GMAW)****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Maintenance and production wirefeed welding using metallic-inert gas on ferrous and nonferrous metals in all positions. Fee \$20.

**WELD 1770 Certification Welding****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Preparation to obtain certification for welding in accordance with code qualification. Fee \$30.

**WELD 1780 Commercial Art Welding****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Art welding using all types of materials and equipment to weld art sculptures, figurines and ornamental projects.

**WELD 1790 Welding Review Refresher****2 credit hours****45 Classroom Hours = 23 Lecture Hours + 22 Lab Hours**

Welding review for new techniques and certification.

**WELD 1900 Internship - Valmont****1 credit hour****60 Classroom Hours = 60 Internship Hours**

Hands on experience working as an employee with local Valmont business and coordinated by Mid-Plains Welding Department.

**WELD 2310 Advanced TIG****4 credit hours****150 Classroom Hours = 15 Lecture Hours + 135 Lab Hours**

A course that will prepare the student to perform advanced TIG welding practice and procedures on carbon steel pipe and weld hard to weld metals such as aluminum, stainless steel, and cast irons. Prerequisite: Sophomore standing in welding.

**WELD 2320 Plate Pre-Qualification****2 credit hours****60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

A course that is a prerequisite to Qualification Welding; preparing the student for the weld certification course, preparing plates, proper alignment and tacking procedures, then completing the weld to meet the D1.1 code visual specifications. Prerequisite: Sophomore standing in welding.

**WELD 2330 Pipe Pre-Qualification****2 credit hours****60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

A course that is designed to allow a student time to prepare and practice for pipe qualification. Prerequisite: Sophomore standing in welding.

**WELD 2340 Codes & Standards****2 credit hours****60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

A course designed to teach the student about code book navigation, weld measuring tools, welding procedure specification and weld inspection. Prerequisite: Sophomore standing in welding.

**WELD 2350 Project Layout****2 credit hours****60 Classroom Hours = 15 Lecture Hours + 45 Lab Hours**

A course designed to teach use of measuring tools and layout tools for project estimation, for proper set up and alignment of welds. Prerequisite: Sophomore standing in welding.

**WELD 2410 Welding Qualification****5 credit hours****225 Classroom Hours = 10 Lecture Hours + 215 Lab hours**

A course for qualification welding and testing for certification welding.

**WELD 2420 Welding Internship****2 credit hours****120 Classroom Hours = 120 Internship Hours**

Hands on experience working as an employee with a local welding business and coordinated by Mid-Plains Welding Department.