# **Course Descriptions**

# **Key for Abbreviations:**

ACRT Auto Collision Repair Technology

ADCN Addiction Counselor

ALHT Allied Health
ANTH Anthropology
ARTS Studio Arts

AUDI Audio Engineering
AUTT Automotive Technology

**BIOL** Biology

**BLUE** Better Life Utilizing Education

**BMFR** Biomanufacturing

**BPMT** Building Engineering & Maintenance Technology

BUSN Business CHEM Chemistry

CIST Computer Information Systems
CONS Construction Technology

COSM Cosmetology
CRJS Criminal Justice

**CRTE** Computer Support Specialist

CULN Culinary

DIGI Digital Imaging Design

ECON Economics

**ECED** Early Childhood Education and Development

**EDUC** Education

**ELET** Electrical Technology

**EMTC** Emergency Medical Technician

ENGL English
ENGR Engineering

**ESOL** English as a Second Language

EXSC Exercise Science
FRSC Fire Science
GEOG Geography
HIST History
HONR Honors

**HUDV** Human Development

**HUMN** Humanities

HVAC Heating and RefrigerationHZMT Hazardous Material

JOUR Journalism

KSPN Kansas Practical Nursing

LANG Language Arts
MACH Machine Technology

MAPR Residential and Commercial Equipment Technology

MATH Mathematics

MEDA Medical Technology

MMVP Multimedia/Video Production

MTSC Mortuary Science

MUSC Music

NAIL Nail Technology

NASC Physical Science

**NETW** Networking Technology

NURS Nursing

**ONED** Online Education

PHIL Philosophy

**PHTR** Physical Therapy

**PMED** Paramedic

POSC Political Science

PRLG Paralegal
PSYC Psychology
READ Reading

RSCR Respiratory Care SOSC Social Science

**SPCH** Speech

**SPED** Special Education

**THTR** Theatre

WELD Welding Technology

## ACRT-0100 Technical Safety and Tools

#### 1 hour credit

Upon completion of this course the student is introduced to the collision repair occupation. Personal safety is emphasized by the student learning OSHA laws including the "Right to Know." Proper handling and disposal of wastes including those classified as hazardous are discussed. Tool identification and safety along with basic auto construction are areas also introduced.

# ACRT-0110 Cosmetic Auto Body

#### 2 hours credit

This is a continuing education class dealing with small collision and rust repair. Learn basic welding, safety and auto body techniques concerning dents, plastic fillers and rust repair, sanding techniques, and hands-on training.

# ACRT-0120 Non-Structural Analysis and Damage Repair 1

#### 4 hours credit

Upon completion of this course the student will be able to use basic metal working skills to repair damaged panels back to their original shape. Plastic repair procedures along with the replacement and adjustment of movable glass are also learned. The removal, replacement and adjustment of interior and exterior panels and welding are areas the student should master. *Prerequisite: ACRT0100 Cosmetic Auto Body* 

# ACRT-0140 Structural Analysis and

# Damage Repair 1

# 2 hours credit

Upon the completion of this course the student will be able to identify structural panels of the vehicle and learn special procedures for their replacement or repair including restoring corrosion protection. The replacement of stationary glass and applied welding is included in the course. *Prerequisite: ACRT0100 Cosmetic Auto Body* 

# ACRT-0160 Paint and Refinishing 1

# 3 hours credit

This course will give the student basic knowledge and skills in automotive refinishing. Basic procedures, safety and product knowledge are emphasized. Proper surface preparation along with introduction to refinishing equipment will be included. Paint code interpretation, tracking material costs and waste and application procedures are also part of this course. Complete vehicle detailing and solving paint defects is another area of instruction. *Prerequisite: ACRT0100 Cosmetic Auto Body* 

## ACRT-0175 Paintless Dent Repair

#### 2 hours credit

Hands-on-class covers specialized tools, techniques and strategies for identifying and repairing hail damage and other types of dents without the need for refinishing or repainting.

## ACRT-0180 Mechanical and Electrical Component

#### 3 hours credit

Upon completion of this course the student will have knowledge and skills to repair mechanical problems often related to collision damage. Diagnosing damaged suspension, cooling system, wheels and tires, brake components, and air conditioning along with the replacement or repair of these parts are addressed. *Prerequisite: ACRT0100 Cosmetic Auto Body* 

# ACRT-0181 Mechanical and Electrical Component 2

#### 3 hours credit

Upon completion of this course the student will have knowledge and skills to repair mechanical problems often related to collision damage. Diagnosing damaged suspension, cooling system, wheels and tires, brake components, and air conditioning along with the replacement or repair of these parts are addressed. *Prerequisites: ACRT0100 Cosmetic Auto Body, ACRT0180 Mechanical and Electrical Component* 

## ACRT-0220 Non-Structural Analysis and Damage Repair 2

#### 4 hours credit

Upon completion of this course the student will be able to use basic metal working skills to repair damaged panels back to their original shape. Plastic repair procedures along with the replacement and adjustment of movable glass are also learned. The removal, replacement and adjustment of interior and exterior panels and basic welding are areas the student should master. Live customer work will be introduced. *Prerequisites: ACRT0100 Cosmetic Auto Body, ACRT0120 Non-Structural Analysis and Damage Repair 1* 

# ACRT-0221 Non-Structural Analysis and Damage Repair 3

#### 4 hours credit

Upon completion of this course the student will be able to use metal working skills to repair damaged panels back to their original shape. Plastic repair procedures along with the replacement and adjustment of movable glass are also learned. The removal, replacement and adjustment of interior and exterior panels and welding are areas the student should master. Live customer work will be introduced. *Prerequisites: ACRT0100 Cosmetic Auto Body, ACRT0120 Non-Structural Analysis and Damage Repair 1, ACRT0220 Non-Structural Analysis and Damage Repair 2* 

# ACRT-0222 Non-Structural Analysis and Damage Repair 4

# 5 hours credit

Upon completion of this course the student will be able to use metal working skills to repair damaged panels back to their original shape. Plastic repair procedures along with the replacement and adjustment of movable glass are also learned. The removal, replacement and adjustment of interior and exterior panels and welding are areas the student should master. Live customer work will be introduced. *Prerequisites: ACRT0100 Cosmetic Auto Body, ACRT0120 Non-Structural Analysis and Damage Repair 1, ACRT0220 Non-Structural Analysis and Damage Repair 2, ACRT0221 Non-Structural Analysis and Damage Repair 3* 

# ACRT-0240 Structural Analysis and Damage Repair 2

# 2 hours credit

Upon the completion of this course the student will be able to identify structural panels of the vehicle and learn special procedures for their replacement or repair including restoring corrosion protection. The replacement of stationary glass and applied welding is included in the course. Live customer work will be introduced. *Prerequisites: ACRT0100 Cosmetic Auto Body, ACRT0140 Structural Analysis and Damage Repair 1* 

# ACRT-0241 Structural Analysis and Damage Repair 3

# 3 hours credit

Upon the completion of this course the student will be able to identify structural panels of the vehicle and learn special procedures

for their replacement or repair including restoring corrosion protection. The replacement of stationary glass and applied welding is included in the course. Live customer work will be introduced. *Prerequisites: ACRT0100 Cosmetic Auto Body, ACRT0140 Structural Analysis and Damage Repair 1, ACRT0240 Structural Analysis and Damage Repair 2* 

## ACRT-0242 Structural Analysis and Damage Repair 4

#### 3 hours credit

Upon the completion of this course the student will be able to identify structural panels of the vehicle and learn special procedures for their replacement or repair including restoring corrosion protection. The replacement of stationary glass and applied welding is included in the course. Live customer work will be introduced. *Prerequisites: ACRT0100 Cosmetic Auto Body, ACRT0140 Structural Analysis and Damage Repair 1, ACRT0240 Structural Analysis and Damage Repair 2, ACRT0241 Structural Analysis and Damage Repair 3* 

# ACRT-0260 Paint and Refinishing 2

#### 3 hours credit

This course will give the student basic knowledge and skills in automotive refinishing. Basic procedures, safety and product knowledge are emphasized. Proper surface preparation along with introduction to refinishing equipment will be included. Paint code interpretation, tracking material costs and waste and application procedures are also part of this course. Complete vehicle detailing and solving paint defects is another area of instruction. Live customer work will be introduced. *Prerequisites: ACRT0100 Cosmetic Auto Body, ACRT0160 Paint and Refinishing 1* 

# ACRT-0261 Paint and Refinishing 3

#### 3 hours credit

This course will give the student basic knowledge and skills in automotive refinishing. Basic procedures, safety and product knowledge are emphasized. Proper surface preparation along with introduction to refinishing equipment will be included. Paint code interpretation, tracking material costs and waste and application procedures are also part of this course. Complete vehicle detailing and solving paint defects is another area of instruction. Live customer work will be introduced. *Prerequisites: ACRT0100 Cosmetic Auto Body, ACRT0160 Paint and Refinishing 1* 

## ACRT-0262 Paint and Refinishing 4

#### 4 hours credit

This course will give the student basic knowledge and skills in automotive refinishing. Basic procedures, safety and product knowledge are emphasized. Proper surface preparation along with introduction to refinishing equipment will be included. Paint code interpretation, tracking material costs and waste and application procedures are also part of this course. Complete vehicle detailing and solving paint defects is another area of instruction. Live customer work will be introduced. *Prerequisites: ACRT0100 Cosmetic Auto Body, ACRT0160 Paint and Refinishing 1* 

# ACRT-0290 Estimating/Damage Analysis and Customer Service

#### 2 hour credit

An estimate, damage report, or appraisal calculates the cost of repairs of a collision damaged vehicle. This repair summary is used by the customer, insurance company, shop management, and the repair technician as an agreement with the customer or the insurance company, required parts needed list for the repairs, and as a guide for the repairs needed for the technician.

# ADCN-0101 Introduction to Addictions

# 3 hours credit

This course presents coverage of the nature of addiction and other substance use-related problems; models, theories, philosophies, principles, implications for medical and mental health conditions that co-exist with addiction, and evidence-based strategies of addiction prevention, treatment, relapse prevention, continuing care, and recovery; and the impact of addiction on the individual, family and society. Effects of chemical dependency on health, and communities based on a holistic, bio-psycho-social perspective.

## ADCN-0106 Individual Counseling Methods

#### 3 hours credit

The student is introduced to methods of individual counseling, with special focus on the chemically dependent client which includes

the study of culturally informed, ethical, evidence-based models and approaches to individual counseling; methods for establishing effective therapeutic relationships, developing realistic and achievable treatment goals, and assessing client substance use, functioning, motivation, and progress; and strategies for crisis prevention and intervention.

# ADCN-0204 Family Therapy

#### 3 hours credit

This course is designed to explore the impact of addiction on the family. This is a culturally informed study of family, social and community systems and the impact of addiction on the family and society. Students are exposed to current theories and skills regarding family counseling and advocacy.

## ADCN-0205 Ethics: Addiction Counseling

#### 3 hours credit

The purpose of this course is to familiarize the student with state and national professional codes of ethics, state and federal regulations regarding client rights, and the state and national processes for professional credentialing with special focus on the chemically dependent client. The student should expect to spend a minimum of 5-6 hours per week directly involved in the course content and asynchronous discussion. No on-ground meetings are required for this course.

# ADCN 0206 Problem and Compulsive Gambling

#### 4 credit hours

The course focus is on historical and cultural patterns of problem and compulsive gambling as an addictive process similar to yet uniquely different than use and abuse of alcohol and drugs. Current knowledge and attitudes toward compulsive gambling treatment and interventions and recognition and identification of the phases of gambling addiction will be covered. The content areas will prepare the counselors to screen, assess, diagnose and effectively treat problem and pathological gambling.

## ADCN-0209 Pharmacology: Addiction Counseling

#### 3 hours credit

The purpose of this three credit hours course is to provide an overview of the primary processes involved in addiction pharmacology, which shall include the study of the nature of psychoactive chemicals; the behavioral, psychological, physiological, and social effects of psychoactive substance use; symptoms of intoxication, withdrawal, and toxicity; toxicity screen options, limitations, and legal implications; and the use of pharmacotherapy for treatment of addiction.

#### ADCN-0210 Group Dynamics and Addictions I

#### 3 hours credit

This course is designed to introduce the student to theories and concepts of group dynamics by providing an exploration of the patterns and dynamics of group interactions. Various methods of group counseling, which shall include the study of culturally informed, ethical, evidence-based models and approaches to group counseling; group facilitation and counseling skills; and methods for establishing group goals and treatment outcomes, is emphasize during this course. An importance placed on the groups and exercises most often utilized in the treatment of addictions. The student will be able to have the opportunity to participate in a group as a group member and to act as group leader in order to practice leadership styles.

## ADCN-0221 Counseling and Services Coordination

#### 3 hours credit

This course will acquaint the student with the process of client/patient management primarily in the field of addiction counseling. The course will assist the student in how to demonstrate competency in a variety of treatment activities. This course will provide instruction for students seeking to be professional substance counselors, currently substance abuse counselors, or other people who have a sincere desire to become better acquainted with this area of addiction counseling practice. A variety of activities will be assigned to the student in how to learn and understand effective techniques to be used in addiction counseling practice, and how to apply this information towards professional certification or licensure when applicable.

Included in the instruction will be services coordination which includes referral and case management. These activities are used to connect substance-related disorder clients and their families with treatment services and other community resources. The navigation and coordination across multiple systems using case management and advocacy skills should assist the client in achieving established treatment and recovery goals.

#### ADCN-0250 Addiction Counseling Field Practicum I

#### 3 hours credit

Field assignments of 300 hours in approved agencies. Practicum II continues integrated didactic learning related to substance use disorder started in Practicum I. The students will experience face-to-face, direct counselling experience that includes intake and assessment, counseling, treatment planning, discharge planning documentation, and case management. Supervision of one hour for supervision for every 10 hours of practice provide a student the opportunity to apply knowledge from prerequisite courses. Students will learn about agency philosophy, funding, and gain initial exposure to the core functions of an addiction counselor while completing their own self-study.

All course work and clinical hours must be completed prior to one (1) year from time of initial enrollment or any incomplete (I) grades become a failing (F) grade and the student must reenroll in the course in order to eligible for a grade change.

Students may enroll concurrently in ADCN-0251.

# ADCN-0251 Addiction Counseling Field Practicum II

#### 3 hours credit

Field assignments of 300 hours in approved agencies. Practicum II continues integrated didactic learning related to substance use disorder started in Practicum I. The students will experience face-to-face, direct counselling experience that includes intake and assessment, counseling, treatment planning, discharge planning documentation, and case management. Supervision of one hour for supervision for every 10 hours of practice provide a student the opportunity to apply knowledge from prerequisite courses. Students will learn about agency philosophy, funding, and gain initial exposure to the core functions of an addiction counselor while completing their own self-study.

All course work and clinical hours must be completed prior to one (1) year from time of initial enrollment or any incomplete (I) grades become a failing (F) grade and the student must reenroll in the course in order to eligible for a grade change.

# ALHT-0104 Nursing Assistant

#### 5 hours credit

This course is an introduction to basic nursing care skills and concepts necessary to prepare the student to function as a nurse aide in a long term care facility. This course will also prepare the student to take the state nurse aide certification examination. Prerequisites: Must pass the COMPASS reading test with a score of 65 or above or show completion of READ-0091 or READ-0092. High school diploma or GED required.

## **ALHT-0105** Certified Nurse Aide Refresher Course

# 1 hour credit

This course is a review of the basic nursing skills and concepts necessary to update the student to function as a nurse aide in a long term facility. This course will help the student learn about the geriatric client and the type of care unique this population needs. The course will review the responsibilities and the role of the CNA.

#### ALHT-0106 Certified Medication Aide

#### 4 hours credit

This course is designed that through academic training the student will be able to pass medication under the supervision of a Licensed Registered Nurse or a Licensed Practical Nurse. While in training the certified medication aide student will pass medication under the supervision of the instructor, who is a Registered Nurse. The student will pass medication a long term facility. After training the student will take a state test. Upon successful completion of the state test the student will receive a certificate and be able to pass oral medication, instill ophthalmic drops, otic drops, insert suppositories, and apply topical medication. Kansas Department of Health Environment requires 75 hours for CMA. KCKCC requires 90 hours due to a college credit course. Certified medication aides must complete 10 hours of continuing education every two years, per Kansas Department Health Environment guidelines to continue passing medication. *Prerequisite: Must pass the COMPASS reading test with a score of 65 or above or show completion of READ-0091 or READ-0092. High school diploma or GED required. Must possess a current nursing assistant certificate.* 

## ALHT-0107 Certified Medication Aide Update

#### 1 hour credit

This course is an update for Certified Medication Aide's who have been issued a CMA certificate. The Certified Medication Aide has to update their certificate every 2 years. If CMA certificate lapse, the CMA has a three year grace period in which to take the continuing education course to reinstate the certificate. The course consist of a minimum of 10 hours of instruction on: new classes of medication and new medications, new use of medication, new methods of administering medication, alternative treatment such as herbs, acupuncture, interaction and traditional medications, safety and administration of medication and documentation. KCKCC and TEC center require 15 hours of instruction. Prerequisites: Current CMA certificate in the state of Kansas, apply to KCKCC or TEC center and take an assessment test.

#### ALHT-0108 Home Health Aide

#### 2 hours credit

This course, will provide persons with the fundamental knowledge of the aging process with emphasis on providing services essential to the physical, mental, and psychosocial well-being of the clients in the home setting. Meets state requirements for the Home Health Aide exam.

# ALHT-0109 Health Careers Today

#### 2 hours credit

This course provides the students with a look at the many opportunities for employment in the health care field. Students will learn about the different roles, education requirements, personal qualities and required credentialing for the different fields in health care. Students will do further research on one area of interest to them.

## ALHT-0110 Drugs and Dosages I

#### 1 hour credit

Drugs and Dosages I is an introductory course in pharmaceutical arithmetic that assists students in solving the mathematics of drugs and solutions encountered in the everyday routine of administering medications. Drug actions and interactions on the human body are discussed.

# ALHT-0111 Drugs and Dosages II

#### 1 hour credit

Drugs and Dosages II continues the study of the pharmaceutical arithmetic that assists students in solving the mathematics of drugs and solutions encountered in the everyday routine of administering medications. This course is designed for the student who has prior experience with and/or has taken the introductory course. The previous course concepts will be briefly reviewed. The emphasis will be on pediatric dosage and intravenous dosage calculations. *Prerequisites: ALHT-0110 or previous experience.* 

# ALHT-0114 Infant and Toddler First Aid and CPR

## 1 hour credit

This course is designed for the child care giver. First aid and safety in the preschool years will be emphasized. AHA (American Heart Association Healthcare Provider certification in CPR will also be taught. Students will receive AHA Pediatric First Aid certification upon completion of this course.

# ALHT-0116 General Pharmacology

## 3 hours credit

The General Pharmacology course provides students with a concise introduction to pharmacology. The mechanisms of action, sites of action, and side effects of drugs will be presented. Emphasis will be placed on toxic signs, adverse drug reactions, and any special management issues relevant to the various classes of drugs. *Prerequisite: Basic computer skills are necessary. Please review the On-Line Course Requirements*.

# ALHT-0120 Medical Terminology

# 1 hour credit

This course will study the use of prefixes, suffixes and root words to build a vocabulary for medical personnel. The student begins by identifying roots, suffixes and prefixes of medical terminology, and then progresses by studying related medical terms of the

body system (skin, skeleton, muscle, blood & lymph, cardiovascular, respiratory, digestive, and urinary systems). The student will explore how these terms relate to the general anatomy of the body. There are no on-ground meetings for this course.

# ALHT-0126 Medical Terminology

#### 2 hours credit

This course will study the use of prefixes, suffixes and root words to build a vocabulary for medical personnel. The student begins by identifying roots, suffixes and prefixes of medical terminology, and then progresses by studying related medical terms of the body system (skin, skeleton, muscle, blood & lymph, cardiovascular, respiratory, digestive, and urinary systems). The student will explore how these terms relate to the general anatomy of the body. There are no on-ground meetings for this course.

#### ALHT-0127 Medical Terminology

#### 3 hours credit

This course will study the use of prefixes, suffixes and root words to build a vocabulary for medical personnel. The student begins by identifying roots, suffixes and prefixes of medical terminology, and then progresses by studying related medical terms of the body system (skin, skeleton, muscle, blood & lymph, cardiovascular, respiratory, digestive, and urinary systems). The student will explore how these terms relate to the general anatomy of the body.

## ALHT-0160 Sleep Studies

#### 3 hours credit

This course explores physical and physiological topics related to sleep and sleep disorders in an introductory approach. Normal sleep, sleep disorders, sleep assessments, and sleep remedies are studied. The course is designed for students with an interest in sleep disorders or a sleep related career.

# ALHT-/RSCR-0286 Asthma Disease Management

#### 3 hours credit

This course teaches a stepwise approach to asthma disease management. It is designed for health care providers involved in any aspect of asthma prevention, diagnosis, treatment, education, or management. The course correlates to the National Asthma Education and Prevention Program.

# ALHT-0290 Cardio-Pulmonary Resuscitation

#### 1 hour credit

A certified course in cardiopulmonary resuscitation. This course will qualify the student to administer CPR in certain basic life support situation. It will also meet program requirements when CPR is part of the program curriculum. This BLS Healthcare Provider certification course approved by American Heart Association.

# ALHT - 0291 CPR-Recertification

## 1 hour credit

A certified course to renew their current American Heart Association for cardiopulmonary resuscitation. This course will qualify the student to administer CPR in certain basic life support situation. It will also meet program requirements when CPR is part of the program curriculum. This is a BLS Healthcare Provider certification course approved by American Heart Association.

#### ALHT-0294 Neonatal Resuscitation

## 3 hours credit

This course teaches a stepwise approach to neonatal resuscitation. It is designed for health care providers involved in any aspect of neonatal resuscitation. The course correlates to the neonatal resuscitation program (NRP) of the American Academy of Pediatrics and American Heart Association. *Prerequisite: Health Care Professional, or student involved in any aspect of neonatal resuscitation, or permission from the instructor.* 

# ANTH-0100 General Anthropology

# 3 hours credit

This course is designed to present the elements of man as a cultural being. This is accomplished by viewing human development through three approaches within Anthropology: man as a biological animal, i.e., early and modern physical structure; the

archaeology or material remains of civilizations; and man as the social organism, viewing the interdependence of social institutions. The emphasis in the course is on 1.) an appreciation of diversity, and 2.) the development of world cultures from earliest times through the global culture that we experience today. Modernization, Dependency and World Systems approaches are developed in an attempt to explain the relationships between cultures.

# ANTH-0101 Introduction to Cultural Anthropology

#### 3 hours credit

The study of cultural anthropology includes the exploration of the nature of cultural variation and universals. Cultures are compared in terms of their cultural patterns, languages, societal differentiation, and personality types. Application of basic anthropological concepts and research methods are emphasized while examining how humans constantly adapt to their social and physical environments. Attention is given to career opportunities within the field of cultural anthropology.

# ANTH-0102 Introduction to Physical Anthropology

#### 3 hours credit

This course introduces the student to basic concepts in physical anthropology. Anthropological theory, human genetics, vertebrate evolution, primate evolution and social behavior, and human evolution, behavior, variation and adaptation are surveyed through cross species examples and comparative analysis. Attention is given to career opportunities available to students within the field of biological anthropology.

# ANTH-0105 Archaeology

#### 3 hours credit

This course is designed to explore human cultural behavior through the anthropological discipline of archaeology. This goal is accomplished by studying the two primary methods of archaeological investigation: the archaeological gathering and analysis of material remains, i.e. artifacts and architecture, and ethnological/experimental archaeology relating social cultural behavior of known cultures to the probable behavior of 'dead' cultures. Elements of the methods, theories, and findings of archaeological and ethnological research are emphasized in the textual materials utilized for the course.

# **ANTH-0106** Native American Indians

## 3 hours credit

This course focuses on the material and ideological development of Native American cultures and the forces, both within and from without, that determined the course of their development. Emphasis will be placed on the effects of European Invasion on the development of these cultural groups and the transformation in law that mystified the displacement of Native Americans from their territorial homelands.

# ARTS-0101 Art Appreciation

# 3 hours credit

Art Appreciation is a general introduction to the visual arts, media, techniques, and history. The course is designed to create a deeper appreciation of the creative processes involved in the visual arts. Reviews two- and three-dimensional art forms, methods, and media; examines the visual elements and principles of design; and briefly surveys art styles from the prehistoric to the 20th Century. It is oriented to students who have not been exposed to the formal study of these disciplines. It is a beginning level class to familiarize students with the different types of art and to learn how to speak/write intelligently about art.

# ARTS-0102 Art History I

# 3 hours credit

This course is an introduction to World Art from the Prehistoric Period through the Late Medieval and Gothic. It will investigate the painting, sculpture, and architecture of the different periods and place an emphasis on the elements of style which identify them. There is no prerequisite for this course.

# ARTS -0103 Art History II

# 3 hours credit

This course is an introduction to World Art from the Renaissance through the Modern and Post-Modern periods. It will investigate the painting, sculpture, and architecture of the different periods and place an emphasis on the elements of style which identify them.

There is no prerequisite for this course.

#### ARTS -0111 Drawing I

#### 3 hours credit

This course is an introduction to drawing with an emphasis on the development of fundamental drawing skills, and increased power of observation.

# ARTS -0212 Drawing II

#### 3 hours credit

This course involves intermediate problems in drawing with an emphasis on the development of drawing skills, increased power of observation, and work from models, still-life, and landscape. *Prerequisite: ARTS -0111, Drawing I.* 

# ARTS-0213 Drawing III

#### 3 hours credit

This course involves intermediate problems in drawing with an emphasis on the development of drawing skills, increased power of observation, and work from models, still-life, and landscape. *Prerequisites: ARTS 0212, Drawing II.* 

#### ARTS -0121 Painting I

#### 3 hours credit

The course teaches the fundamentals of painting to beginning students. Students will explore the technical and expressive possibilities of painting media. The class will focus on the formal, conceptual, and technical problems in painting from observation.

#### ARTS -0222 Painting II

#### 3 hours credit

The course teaches the fundamentals of painting to intermediate students. Students will explore the technical and expressive possibilities of painting media. The class will focus on the formal, conceptual, and technical problems in painting from observation. *Prerequisite: ARTS -0121 Painting I.* 

## ARTS-0223 Painting III

#### 3 hours credit

The course teaches painting to advanced students. Students continue to explore the technical and expressive possibilities of painting media. The class will focus on the formal, conceptual, and technical problems in painting from observation. *Pre-requisites: ARTS* -0222 *Painting II*.

# ARTS-0140 Introduction to Photography

# 3 hours credit

This course is an introduction to the fundamental, technical, and aesthetic issues of black and white photography. This includes thorough instruction in 35mm camera operation, film and print processing; basic lighting concepts and composition. Assignments will demonstrate mastery of technical skills and individual creative expression. Activities include camera operation, picture taking, darkroom techniques and procedures, and photo printing. (Students must have access to a camera.)

# ARTS-0151 Sculpture I

## 3 hours credit

The course introduces students to an overview of the traditional sculptural techniques of carving, modeling, and constructing. Students will exemplify these techniques through the creation of relief sculpture, sculpture in the round, and mold-making. Students will create both nonrepresentational and representational sculptures.

# ARTS-0241 Intermediate Photography

## 3 credit hours

This course covers intermediate level technical and aesthetic issues of photography. This includes instruction in camera operation, image and print processing, and lighting concepts and composition beyond beginning levels. Students will demonstrate mastery of technical skills and individual creative expression. Activities include intermediate darkroom techniques, camera operation, picture taking, computer editing techniques and procedures, and photo printing. Students must have reliable access to an SLR

camera.

# ARTS-0252 Sculpture II

#### 3 hours credit

The course provides students with intermediate studio experience in the traditional sculptural techniques of carving, modeling, and constructing. Students will exemplify these techniques through the creation of relief sculpture, sculpture in the round, and mold-making. *Prerequisite:* ARTS -0151, Sculpture I.

# ARTS-0253 Sculpture III

# 3 hours credit

The course provides students with advanced studio work in the traditional sculptural techniques of carving, modeling, and constructing. Students will exemplify these techniques through the creation of relief sculpture, sculpture in the round, and mold-making. The students in this course may work in a variety of self-defined media to express a unique sculptural vision in close consultation with the Instructor. *Prerequisites: ARTS -0252, Sculpture II.* 

#### ARTS -0161 Ceramics I

#### 3 hours credit

Ceramics I is a one-semester study of creation of artworks in the medium of clay. The techniques of hand-building will be emphasized in this course with some basic introduction to wheel throwing. Topics covered will include; The development of the form and functions of utilitarian and sculptural projects, The design quality of the project form, surface treatment, various concepts of aesthetics in ceramics and the history of ceramics as an art form.

#### ARTS-0262 Ceramics II

## 3 hours credit

Ceramics II: Wheel-throwing is a one-semester study of the creation of artworks in the medium of clay. This course allows students who have successfully completed Ceramics I the opportunity to develop their skills in the ceramic arts. Topics covered include basic wheel-throwing, glaze making, kiln firing and creating ceramic sculptural forms. Each student will develop a portfolio of works created during the semester. *Prerequisite: ARTS -0161, Ceramics I.* 

#### ARTS-0263 Ceramics III

#### 3 hours credit

Ceramics III is a one-semester study in the production of ceramic artworks. This course allows students who have successfully completed Ceramics I: hand-building and Ceramics II: Wheel-throwing, the opportunity to further develop their skills creating ceramic artworks. Each student, with the approval of the instructor, will develop a concentration area or areas for advanced ceramic projects. The areas of concentration will be developed from research. Each student in this course will develop a portfolio of works by the end of the semester. Each student in this course will develop a portfolio of works by the end of the semester.

Prerequisite: ARTS-0116 and 0262, Ceramics II.

## AUDI-0101 Audio Engineering Music Skills

## 4 hours credit

Designed for audio engineering majors, this class gives students an understanding of concepts of pitch and time relevant to entering, editing, and interpreting performance data found in editing windows commonly found in Digital Audio Workstations. Skills to enable students to enter and interpret pitch over time data as used in popular music, such as melody, harmonic progressions, chord symbols, and tablature will be studied. These skills will enable to student to more effectively and efficiently use music production software, and more professionally communicate with musical talent in the recording studio or audio production environment. These skills and vocabulary will also enable the student to assume a more effective role as a producer.

# AUDI-0103 Audio Engineering Keyboard Skills

## 1 hour credit

Audio Engineering Keyboard Skills is designed for audio engineering majors to improve music sequencing and digital audio workstation music production skills by developing basic musical keyboard data entry skills, including real time and non-real time performance skills. It will improve the student's ability to enter melodies, chords, bass lines, and drum programming on the musical

keyboard. It will also enable students to communicate musically with talent and artists, and enable them to function better as a producer

#### AUDI-0108 Electronic Circuit Fundamentals

#### 3 hours credit

This beginning course in electronics technology is to give a clear concept of direct current, the relationship between voltage, current and resistance. Also to familiarize with laboratory instruments, circuit components and basic measuring techniques. In order to build a solid foundation for the entire program, an individual must have a clear concept of D.C. electricity. The student must recognize basic electronic components, instruments and circuit symbols. The student should be able to draw a schematic diagram of a circuit. Last but not least, the student should know how to use the instruments and make quantitative measurements of electronic units. This introductory course is designed to lead students to understand and retain in their minds the basic circuit fundamentals of electronics. *Prerequisite: Simple understanding of mathematics*.

# AUDI-0110 Music Technology I

#### 3 hours credit

This class covers the Apple computer, MIDI and digital audio workstation (DAW) MIDI sequencing software, music notation and publishing software. Students will learn the function and operation of the Mac OS and the technical equipment found in a MIDI production studio, produce sequenced music projects and musical scores using specific industry software.

# AUDI-0115 Circuit Analysis I

#### 3 hours credit

A detailed study of D.C. Circuits, which includes Kirchhoff's Law, Superposition Theorem, A detailed study of D.C. Circuits, which includes Kirchhoff's Law, Superposition Theorem, Theorem and Norton's Theorem. Explanation of RC time constants, capacitive circuits, inductive circuits, transformers and tuned circuits. Study of basic amplifiers and construction of power supplies circuits. To understand circuit analysis, it is necessary to understand various affecting factors such as voltages, current resistive, capacitive and inductive components. This course is designed to give maximum understanding in circuit analysis and circuit buildup. *Prerequisites: AUDI/ENGR-0108 Electronic Circuit Fundamentals*.

## AUDI-0130 Music Business

#### 3 hours credit

This course will introduce students to the history, procedures, practices, economics, and careers of the music industry. The focus will be on the development of business related knowledge necessary to effectively obtain or maintain a professional music career. Business techniques and legal concepts central to many aspects of the music business will be introduced. Students will be taught to recognize situations requiring the services of an entertainment attorney and will be familiarized with the concepts of contracts, royalties, agents, management, and various aspects of the recording industry.

## **AUDI-0150** Live Sound Reinforcement 1

#### 1 hour credit

This course will familiarize students with the equipment that forms a professional live sound system. Students will set up and operate this equipment at the front-of-house mixing position. Students will learn how to identify and correct technical and aural problems. Students will learn how to communicate and discuss system requirements and demands.

# **AUDI-0151** Live Sound Reinforcement 2

# 1 hour credit

This course will further familiarize students with the equipment that forms a professional live sound system, with a focus on dedicated monitor systems, wiring and soldering techniques, and sound reinforcement applications in the concert and theater setting. Students will set up and operate the equipment at the monitor mix position. Students will learn how to identify and correct technical and aural problems. Students will learn how to communicate and discuss system requirements and demands. *Prerequisite: AUDI-0150-Live Sound Reinforcement 1 with a grade of C or better.* 

# AUDI-0170 Lighting and Staging

#### 3 hours credit

This course examines theories and methods of stage lighting and stage construction for music and concert productions. Topics studied include stage lighting optics, instrument selection and application, color theory, circuiting and control systems, and basic design, circuiting and computerized control systems, special effects, and production design. Stages, staging systems, trusses, hanging and suspension systems, and rigging concepts relevant to event production will also be studied.

# AUDI-0201 Songwriting

#### 2 hours credit

Songwriting introduces students to knowledge and skills which will enable them to develop their skills in commercial songwriting, and write more effective songs. Concepts of form and structure, melody, harmony, lyrics, orchestration, instrumentation and arranging techniques will be studied. Students will analyze commercially successful songs. Students will write one original song in addition to exercises given throughout the semester relating to the topic being studied. *Prerequisites: MUSC 111 Music Theory I, or permission of instructor.* 

# AUDI-0205 Internship in Audio

#### 1 hour credit

An internship in an audio related field provides an opportunity for focused in-depth learning and practical experience of the professional audio industry to advanced students. The student is responsible for organizing the internship opportunity, which must be approved by the KCKCC's Audio Engineering Program Coordinator prior to enrollment in the class. The student must complete a minimum of 48 documented hours of internship. In addition to further developing technical and production student competencies this opportunity also provides for practical application of theories, techniques, and concepts discussed throughout the program. Students should further develop a sense of professionalism, reasoning and decision-making skills, resourcefulness, and independence. Students may also establish contacts within the industry that may lead to entry-level employment. *Prerequisites: AUDI 260 Advanced Recording I, AND permission of the instructor* 

# AUDI-0210 Music Technology 2

#### 3 hours credit

This course is an introduction to the advanced skills of music computing, expanding skills learned in AUDI 106, Music Applications for Computers, with emphasis on MIDI and audio equipment and set-up, and creative use of music production software (audio, sequencing, and DAW). Aspects of sound design will be introduced as creative tools for more mainstream application. In addition to the practical "hands-on" training, time will be spent analyzing successful sequencing techniques.

Prerequisite: Music Applications for Computer, AUDI-0110 with a grade of C or better.

## AUDI-0230 Multimedia Production

# 3 hours credit

Students will learn the skills necessary to produce multimedia promotional materials. Digital video cameras, camera techniques, specialist lighting and blue-screen video techniques will be studied. Students will film a video project that will be edited using industry specific non-linear digital video editing software, and dissemination format authoring software. Students will also use world-wide-web authoring software to create web-sites containing sound, graphics, and video files. *Prerequisite: Music Applications for Computers, AUDI-0110 with a grade of C or better.* 

# AUDI-0233 Music Video Projects

# 1 hour credit

The course is for students who wish to work on additional music video projects. The course will emphasize advanced digital video camera techniques, lighting, the use of digital special effects, lip-syncing, scrolling titles, and advanced computer software for non-linear digital video editing. Students will be expected to complete at least one music video project during the semester. *Prerequisite: AUDI-0230, Music & Multimedia.* 

# AUDI-0240 Sound Editing and Synthesis

# 3 hours credit

The theory and practical application of synthesis techniques will be studied. Students will understand the technical and theoretical

concepts of, and be able to create sounds on "classic" analog synthesizers, digital software synthesizers, and software samplers. Students will improve their music and DAW production skills. Refer to 'Special Class Fees' section for current class fee. *Prerequisite: Music Applications for Computers, AUDI-0110 with a grade of C or better.* 

# AUDI-0250 Audio Recording 1

#### 3 hours credit

This course is an introduction to the recording studio, equipment, and recording techniques. Emphasis is placed on demonstrating an understanding of specific equipment and techniques through the completion of a sequence of assignments, leading to a group "band" recording session. Microphones, analog and digital equipment and recording systems, computer software, sound manipulation, and mixing and production techniques will be studied. *Prerequisite: AUDI-0110 with a grade of C or better.* 

# AUDI-0255 Audio Engineering Critical Listening

#### 1 hour credit

This course will develop critical listening and audio analysis aural skills. Pink noise and musical examples of different sonic manipulations of frequency content and image/dynamic changes will be studied. Commercial mixes will be analyzed against different criteria throughout the class. Historical production aesthetics will be placed in context by analyzing different production, mixing and mastering styles and comparing them to the present day. *Prerequisite: AUDI-0250 with a grade of C or better* 

## AUDI-0258 Applied Audio or Media

#### 3 hours credit

This course will teach the student a variety of skills and techniques necessary when working in non-musical audio fields. Sound design and running sound for theater, dialog replacement and TV spot production, voice-overs, and long form audio projects, and DVD authoring are some of the topics that will be studied. *Prerequisite: AUDI-0250 with a grade of C or better*.

# AUDI-0260 Audio Recording 2

#### 3 hours credit

This course will build on the skills acquired in AUDI 250. Topics that will be studied include mixing techniques, microphone techniques, synchronization and console automation, auditory perception, studio acoustics and design considerations, location recording, and digital studio issues. An emphasis is placed on gaining skill at using industry specific hardware equipment. *Prerequisite: AUDI-0250 with a grade of C or better.* 

# AUDI-0270 Audio Recording 3

## 3 hours credit

This course will build on the skills acquired in AUDI 250 and AUDI 260. Topics that will be studied, using computer based DAW software include audio for broadcast, sound effect recording, Foley sound effect production and use, sound for picture, dialog replacement, and sound design. An emphasis will be placed on gaining skill at using industry specific computer based recording software. Refer to 'Special Class Fees' section for current class fee. *Prerequisite: AUDI-0260 with a grade of C or better*.

# AUDI-0280 Audio Engineering Portfolio 1

# 1 hour credit

This course will allow further exploration and development of the skills acquired in AUDI 260 and AUDI 270. The student will use industry specific computer based digital audio workstation systems (DAWs) and moving fader control surfaces to produce stereo and surround-sound projects. The professional workplace and how to adjust to it will be discussed and experientially practiced. The student will be required to produce a professional and well-presented portfolio of recorded work, which may include (but is not limited to); music mixes, dramatic productions, library of sound effects, library of ambiances, audio for picture projects.

# Prerequisite: AUDI-0270 with a grade of C or better. AUDI-0281 is a co-requisite requirement.

# AUDI-0281 Audio Engineering Portfolio 2

## 1 hour credit

This course will allow further exploration and development of the skills acquired in AUDI 260 and AUDI 270. The student will use industry specific computer based digital audio workstation systems (DAWs) and moving fader control surfaces to produce stereo and surround-sound projects. The professional workplace and how to adjust to it will be discussed and experientially

practiced. The student will be required to produce a professional and well-presented portfolio of recorded work, which may include (but is not limited to); music mixes, dramatic productions, library of sound effects, library of ambiances, audio for picture projects. *Prerequisite: AUDI-0270 with a grade of C or better. AUDI-0280 is a co-requisite requirement.* 

# AUDI-0264 Automated Mixing

#### 1 hour credit

This course introduces concepts, techniques and software for VCA automation of mixes produced on analog mixers, on board VCA dynamics processing, and recall of mixer settings and parameters. *Prerequisite: AUDI-0260, Advanced Recording I.* 

#### **AUTT-0131 Undercar Maintenance**

#### 2 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Maintenance and Light Repair (MLR) Program. These studies include elements from general engine repair service, cylinder head and valve train diagnosis and repair, lubrication and cooling system service, and heating and A/C system service. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, or approval by the instructor.* 

#### AUTT-0132 Underhood Maintenance

#### 3 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Maintenance and Light Repair (MLR) Program. These studies include elements from general engine repair service, cylinder head and valve train diagnosis and repair, lubrication and cooling system service, and heating and A/C system service. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, or approval by the instructor.* 

#### **AUTT-0142** Suspension and Steering I

## 3 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Maintenance and Light Repair (MLR) Program. Students will: document fundamental suspension systems concern, perform fundamental diagnostics of steering systems, perform fundamental repairs of suspension systems. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, or approval by the instructor.* 

#### AUTT-0152 Brakes I

## 3 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Maintenance and Light Repair (MLR) Program. Class content will include a thorough and detailed study of brake system theory and functional operation and principles of hydraulic systems as it applies to braking system operation. Practical applications of brake work including complete system service of disc and drum brake systems, parking brake systems, power assist devices and machining of brake disc and drum. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, or approval by the instructor.* 

# AUTT-0163 Electrical 1

# 3 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Maintenance and Light Repair (MLR) Program. Students will complete service work orders; describe the relationship between voltage, ohms and amperage; perform basic electrical circuit repairs; identify electrical system faults; identify basic wiring diagram symbols, components, and legend information; perform basic electrical circuit measurements using a DVOM; describe basic circuit characteristics of series, parallel and series parallel circuits through a variety of classroom and shop learning and assessment activities. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, or approval by the instructor.* 

#### AUTT-0164 Electrical 2

#### 2 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Maintenance and Light Repair (MLR) Program. Students will complete service work orders; describe the relationship between voltage, ohms and amperage; perform basic electrical circuit repairs; identify electrical system faults; identify basic wiring diagram symbols, components, and legend information; perform basic electrical circuit measurements using a DVOM; describe basic circuit characteristics of series, parallel and series parallel circuits through a variety of classroom and shop learning and assessment activities. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, AUTT0163, or approval by the instructor.* 

#### **AUTT-0182** Engine Performance 1

#### 3 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Maintenance and Light Repair (MLR) Students will: complete work order and check history; identify engine mechanical integrity; explore the fundamentals of fuel system theory; identify fuel system concerns; explore the fundamentals of ignition theory; identify ignition system concerns; identify induction system concerns; identify exhaust system concerns; identify engine mechanical integrity through a variety of learning and assessment activities. *Prerequisite: AUTT0103, or approval by the instructor.* 

## **AUTT-0213** Engine Repair 1

#### 2 credit hours

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Automobile Service Technology (AST) Program. In this course students will complete service work orders, remove and install engine components, service valve adjustments, and study lubrication and cooling system service. This course will emphasize strategies to remove and replace engine assemblies from automobiles. This course is the first of a two part engine repair program, with the second part offered as part of the Master Automotive Service Technology (MAST) program. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, or approval by the instructor.* 

# AUTT-0214 Engine Repair 2

#### 2 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Master Automobile Service Technician (MAST) Program. This course contains a collection of the advanced service procedures for engine repair with emphasis on cylinder head, valve train, engine block, and related component service. This course compliments Engine Repair 1 with continuing service techniques including engine assembly and

preparation for first starting. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, AUTT0213 or approval by the instructor.* 

#### **AUTT-0222** Transmission and Driveline 1

## 4 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Automobile Service Technology (AST) Program. This course is the part one of two of transmission and driveline service. These studies include elements from automatic transmission/transaxle, drive train diagnostics, manual transmission service, drive shaft and joint service, and differential case service. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, or approval by the instructor.* 

# **AUTT-0223** Transmission and Driveline 2

# 5 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Master Automobile Service Technician (MAST) Program. This course is a collection of the advanced service procedures for on and off vehicle repair of automatic transmissions, manual transmission, axle, differential, and some four wheel drive service. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, AUTT0222 or approval by the instructor.* 

#### **AUTT-0242** Automotive Chassis Systems

#### 5 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Automobile Service Technology (AST) Program. These studies include elements of training from steering, suspension, and brakes to continue on the training received in the Maintenance and Light Repair program. Additional training in advanced elements of chassis electronics is offered in the Master Automobile Service Technology (MAST) program. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103*, *AUTT0142*, *AUTT0152 or approval by the instructor*.

#### **AUTT-0263** Electrical and Electronics 3

#### 3 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Automobile Service Technology (AST) Program. This course is part three of electrical and electronics for automobiles. These elements include studies in battery, charging, starting, lighting, gauges, warning devices, wiper, air bag service and electronic modules such as the Body Control Module (BCM). All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, AUTT0163, and AUTT0164, or approval by the instructor.* 

## AUTT-0264 Advanced Electronics, Chassis, and HVAC Service

#### 2 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Master Automobile Service Technician (MAST) Program. This course is a collection of the advanced service procedures for chassis, electronics, and HVAC courses. These studies include elements of electronics diagnostics using advanced techniques including dash service for HVAC, Electronics testing for ABS, traction controls and electronic steering. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, completion of certificate A and B, or approval by the instructor.* 

# **AUTT-0272** Heating and Air Conditioning

#### 3 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Automotive Service Technology (AST) program. Students will study and perform service on heating and air conditioning systems using modern equipment and service procedures. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, or approval by the instructor.* 

# **AUTT-0284** Engine Performance 2

# 4 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Automobile Service Technology (AST) Program. These studies include engine diagnosis, computerized engine controls, ignition, fuel, intake, and exhaust systems. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, AUTT0182, AUTT0283, or approval by the instructor.* 

# **AUTT-0285** Engine Performance 3

# 2 hours credit

In this course students will study and perform tasks from the National Automotive Technicians Education Foundation's (NATEF) Master Automobile Service Technician (MAST) Program. Engine Performance 3 is a collection of advanced principles and diagnostic strategies to understand and resolve driveability and emission control issues. The subjects covered will include analyzing computerized data, fuel, air, exhaust and other strategies. All students will successfully complete each element of personal safety training before working in the Automotive Laboratory. *Prerequisite: AUTT0103, AUTT0182, AUTT0284, or approval by the instructor.* 

#### BIOL-0104 Introduction to Public Health

#### 3 hours credit

This is an introductory course in public health. It provides a background in many areas of public health with an emphasis on the health system and understanding and measuring health, disease and illness. Epidemiology, food safety and animal health will also be examined. Public health emergency preparedness, the public health workforce and public health administration will also be studied. Students will learn about public health nursing, public health education and the role of law and government in public health. Students will also examine environmental and occupational health. The different types of public health professional occupations and future challenges for public health will be examined.

## BIOL-0105 Introduction to Biotechnology

#### 2 hours credit

Introduction to Biotechnology is designed to give students an understanding of the foundational scientific principles and applications of the biotechnology. Students will focus on pharmaceutical, agricultural, medical, genomic and forensic applications of biotechnological methods and will deepen their understanding of biotechnology-related career fields in the process. Students will also explore the history of biotechnology, the regulatory methods used by industry, and the ethical issues raised by this application of science.

#### BIOL-0111 Biofeedback I

#### 1 hour credit

Designed to help students develop stress-coping skills, this course presents an introduction to biofeedback instruments, information on how to deal with stress, and personal experience training in tension reduction. Students focus on relaxation techniques, improving self-control and concentration, and overcoming test anxiety and poor memory retention. Grading in this course is on pass-no credit basis only.

#### BIOL-0112 Biofeedback II

#### 1 hour credit

A continuation of autogenic training on a variety of biofeedback instruments is offered in this course. Practice in progressive relaxation to develop deeper levels of relaxation and altered states of consciousness is given. Students receive information on the philosophy of biofeedback, muscle feedback training, brain rhythm training, biofeedback equipment, and basic biofeedback physiology. Grading in this course in on a pass-no credit basis only. *Prerequisite: Biofeedback I, BIOL-0111*.

# BIOL-0116 General Pharmacology

## 3 hours credit

The General Pharmacology course covers the mechanisms of action, sites of action, and side effects of drugs. Emphasis will be placed on toxic signs, symptoms of adverse drug reactions, and various classes of drugs. *Prerequisite: Basic computer skills are necessary. Please review the online course requirements.* 

#### BIOL-0119 Life and The Environment with Lab

## 5 hours credit

This course is an introduction to the structural organization and functional processes of living systems. The basic concepts of biology at the cellular, organ, system, and population levels are emphasized. Included are labs covering osmosis/diffusion and pulse rate. Environmental footprint, skeletal-muscular system, digestive system, respiratory system, stress management, and carbon calculator labs are covered as well.

Note: Students may not receive credit for both BIOL-0119 and BIOL-0121

## BIOL-0120 Medical Terminology

# 1 hour credit

This course will study the use of prefixes, suffixes and root words to build a vocabulary for medical personnel. The student begins by identifying roots, suffixes and prefixes of medical terminology, and then progresses by studying related medical terms of the body system (skin, skeleton, muscle, blood & lymph, cardiovascular, respiratory, digestive, & urinary systems). The students will explore how these terms relate to the general anatomy of the body. There are no on-ground meetings for this course.

# BIOL-0121 General Biology

#### 5 hours credit

General Biology introduces fundamental biological principles characteristic of all living things. Lecture and laboratory work will review the scientific method (experimental and observational science), levels of organization and emergent properties of life, molecular and cell biology, bioenergetics, reproduction, genetics, evolution and ecology. A prior course in Chemistry is recommended.

# BIOL-0123 The Living Body

#### 3 hours credit

In this course, emphasis is placed upon human anatomical and physiological systems, evolution, genetics and embryology, environmental effects on human growth and development, and recent developments in biological research. No laboratory is required. The Living Body is not open to students who have passed BIOL-0121.

# BIOL-0125 Human Biology

#### 4 hours credit

In this course, emphasis is placed upon human anatomical and physiological systems, evolution, genetics and embryology, environmental effects on human growth and development, and recent developments in biological research. In addition to lecture, this course requires completion of one, 2-hour laboratory each week. Human Biology is not open to students who have passed BIOL-0121.

# BIOL-0126 Contemporary Issues in Biology

#### 1 hour credit

This course is intended for all students interested in investigating critical issues in contemporary biological science. The course will be concerned with vital issues of our times. Students will have the opportunity to do independent research and to discuss solutions to many of the important problems of our day. They will learn the value of research in problem solving on a first-hand basis and the far reaching effect that Science can have on all of us.

#### BIOL-0131 Environmental Science

## 3 hours credit

Environmental Science is the study of the interrelationship of humans with the environment. Students will learn the basic rules that govern the natural world, the products and services provided by the environment and the effects humans have on their environment. The guiding principle for this course is sustainability which advocates environmental stewardship while promoting economic prosperity and social justice.

# BIOL-0132 Environmental Science Lab

# 2 hours credit

This course introduces the interrelationships within and between the Biotic and Abiotic. The student will get hands on experience collecting, analyzing and interpreting environmental data. *Prerequisite: BIOL-0131 should be taken concurrently* 

# BIOL-0135 Principles of Cell and Molecular Biology

#### 4 hours credit

This is an integrated lecture and laboratory course for biology majors and students planning to take additional courses in biology. This class introduces the fundamental biological principles characteristic of all living things. Since the cell is the basic unit of life, this course will focus on life at the cellular and molecular levels. Subjects covered include basic biochemistry, cell anatomy and physiology, bioenergetics, genetics and evolution. Emphasis will be placed on learning the process skills and equipment associated with being a biologist.

# BIOL-0141 Human Anatomy and Laboratory

#### 4 hours credit

In a systematic study of the gross anatomical organizations of the human body, students examine the interrelationships of the structure of the human body and the general structure and functions of tissues, organs, and organ systems by means of small mammal dissections, models, skeletons, charts, and audio visual materials. Six hours lecture/integrated lab are required each week.

This course is recommended for Life Science and Health Career majors only.

#### BIOL-0143 Human Anatomy and Physiology

#### 5 hours credit

This introductory course examines the structure and function of the organ systems of the body. Particular attention is paid to the role of the organ systems in maintaining homeostasis. Students examine structures by means of small dissections, models, skeletons, charts, and audiovisual materials. Physiological data is measured and collected. This course is not intended to satisfy requirements for anatomy and physiology for some allied health programs, especially pre-nursing and pre-physical therapy assistant.

#### BIOL-0145 Nutrition

#### 3 hours credit

Nutrition is a general biology course for building knowledge about nutrients in food. Students study how nutrients are used by the body and their relation to the new pyramid food groups and food labels. Proper nutrition for each stage of the human life cycle will be examined, as well as good nutrition in exercise, considerations of diet related health problems, and individual diet assessments.

# BIOL-0155 Environmental Geology

#### 3 hours credit

Environmental Geology is an introduction to our natural environment and the human interactions and everyday problems with our environment and global community from a geological perspective. Topics to be covered will include; Earth Materials and Structure, Human Population Growth, Environmental Hazards such as Floods and Earthquakes, Pollution of the Environment, Waste Disposal, Natural Resources, and Energy Sources and their exploitation.

# BIOL-0156 Environmental Geology Lab

#### 1 hour credit

This course introduces the interrelationships within and between geologic processes and the environment. The student will get hands on experience collecting, analyzing and interpreting data. *Prerequisite: BIOL-0155 should be taken concurrently.* 

# BIOL-0160 Kinesiology

#### 3 hours credit

Kinesiology provides a link between muscular origin and insertion and the mechanics of muscular action. Knowledge of the body mechanics and the body as a lever system assists students in the ability to analyze movement. This course will satisfy BIOL core requirements for graduation for OTA students only. *Prerequisites: Human Anatomy and Laboratory, BIOL-0141, Physiology, BIOL-0271/Physiology Laboratory, BIOL-0272, English Composition I, ENGL-0101.* 

# BIOL-0210 Introduction to Clinical Laboratory Sciences

## 2 hours credit

Students will be introduced to the profession of clinical laboratory science and the role of clinical laboratorians in the health care team. Introduction to the profession will include a discussion of the major areas of the clinical laboratory, education requirements to enter the profession and issues impacting the laboratory and health care as a whole. In the broader scope, students will be exposed to basic rules of medical terminology. Finally a systems approach will be utilized to introduce students to medical laboratory tests that aid in diagnosis and monitoring of body functions.

# BIOL-0225 Diversity of Organisms

## 5 hours credit

This course, for biology majors, is a whole-organism approach to the evolution and diversity of life. Emphasis is placed upon structure/function relationships, phylogenetics and the roles of organisms within their ecosystems. This course includes both lecture and laboratory components. *Prerequisite: BIOL0121, General Biology, or BIOL0135, Cell and Molecular Biology.* 

#### BIOL-0231 Animal Biology

#### 3 hours credit

The principles of animal biology and basic life processes are covered with special consideration given to the ecology, evolution,

and comparative physiology of the great groups of animals.

## BIOL-0232 Animal Biology Laboratory

#### 2 hours credit

Laboratory work emphasizing morphology, taxonomy, phylogeny, physiology, and evolution of the major animal groups with special consideration given to the phyla and classes of animals. Four laboratory hours each week are required.

## BIOL-0240 Introduction to Genetics

#### 4 hours credit

This course provides an introduction to basic genetic principles from classical Mendelian inheritance to genetic recombination. Emphasis will be placed on problem-solving. Topics include: inheritance, molecular genetics, regulation of genetic information, application of genetic technology and population genetics. The laboratory component supplies hands-on experience with relevant genetic techniques. *Prerequisites: BIOL-0121, General Biology and MATH-0105, College Algebra.* 

#### BIOL-0250 Climate Studies and Laboratory

#### 4 hours credit

Climate Studies and Laboratory is an undergraduate climatology course. It is intended to provide students with a comprehensive study of the principles of climatology while providing pedagogically appropriate investigations and applications using web-delivered climate data. *Prerequisites: Minimum scores of 72 on Compass Reading Exam and 45 on Compass Math Exam. Completion of BIOL-0131, Environmental Science is highly recommended.* 

## BIOL-0261 Microbiology

#### 3 hours credit

Microbiology is a basic inquiry into the significance of microbes in our environment. Students will investigate the chemical structure, and genetic flow of information within and between microbes. They will discover how disease is transmitted and developed, and how the immune response defends us. *Prerequisites: General Biology, BIOL-0121, General Chemistry, CHEM-0109, College Chemistry I and Lab, CHEM-0111, MTSC-0108, Mortuary Chemistry, or equivalent.* 

# BIOL-0262 Microbiology Laboratory

#### 2 hours credit

Using scientific procedures and diagnostic techniques, students

investigate and perform laboratory work dealing with pathogenic and non-pathogenic microbes. *Prerequisites: General Biology, BIOL-0121, General Chemistry, CHEM-0109, College Chemistry I and Lab, CHEM-0111, or equivalent.* 

# BIOL-0268 Human Sexuality

# 3 hours credit

This course presents accurate information about human sexuality to help students develop understanding of their own and other's sexual expression and values. Topics include anatomy and physiology, sexuality across the life cycle, social/cultural influences, fertility issues, sexually transmitted diseases including AIDS, variations in orientation and expression, values and ethics, and current social issues.

# BIOL-0271 Physiology

# 3 hours credit

Students apply the basic principles of biochemistry and physics to understand how the organ systems of the human body function and interact. *Prerequisites: General Chemistry, CHEM-0109, General Biology, BIOL-0121, or Human Anatomy & Physiology, BIOL-0143.* 

# BIOL-0272 Physiology Laboratory

# 1 hour credit

Using scientific procedures, students investigate and perform laboratory work dealing with basic physiological processes. Prerequisite: Concurrent enrollment in Physiology, BIOL-0271, or consent of the instructor.

# BIOL-0285 Introduction to Pathophysiology

#### 4 hours credit

Introduction to Pathophysiology consists of a review of pathophysiological mechanisms with an emphasis upon mechanical, nutritional, infectious, and neoplastic stressors. Stressor induced responses are discussed with emphasis upon inflammation, immunity, and the generalized stress response. Stressor-stress induced response mechanisms are applied to diseases of each of the body systems. *Prerequisites: Human Anatomy and Laboratory, BIOL-0141, Physiology, BIOL-0271, and Physiology Laboratory, BIOL-0272.* 

#### **BIOL-0291** Introduction to Bioinformatics

#### 6 hours credit

This course will provide an introduction to the field of bioinformatics. This will include a brief survey of genes and genomics, hands-on experiences with some simple DNA sequencing activities, and manipulation of data using currently available programs for computational analysis of nucleic acids and protein sequences. This course is very active and although skills will be taught in class, the student will need to be able to take skills acquired in class and finish projects on their own time. This is a competency-based course and will be graded as such. *Prerequisites: Familiarity with using the Internet.* 

# BLUE-0101 Freshman Seminar – Better Life Utilizing Education

#### 1 hour credit

This course will include topics designed to acquaint the student with the campus community, classroom expectations, counseling services, testing, and other experiences incidental to a successful adjustment to college life. Also covered are study skills, note taking, stress and fitness, and human relationships. Freshman Seminar: Bettering Life Utilizing Education is a required course for all freshmen except those who meet one of the six exemptions listed in the KCKCC catalog.

# BLUE-0102 Leadership Seminar – Better Life Utilizing Education

#### 1 hour credit

This course is designed to provide opportunity for students to earn credit for their campus, community, service learning, and civic engagement efforts. A focus on relationship development, leadership activities, and exposure to a variety of community, local, and national speakers will also be provided. This course will offer the latitude for topic, subject, project, and area of focus selection as determined pertinent and meaningful by the individual student in collaboration with his/her instructors/advisors. Students on financial aid can take this class two times.

#### BMFR-0100 Survey of Biomanufacturing

#### 3 hours credit

This survey course provides students with basic training on the field of biomanufacturing production. Students are introduced to an understanding of the career opportunities and basic technical skills required in high-demand, high-skill careers in biomanufacturing. This course will include an introduction to the local Life Science industry and related career opportunities and employment requirements; the basic math and technical skills required of an entry-level position; and basic knowledge of documentation, safety, and bioprocess requirements in a biomanufacturing facility. Upon completion of this course, the students will earn an OSHA-10 Safety card. *Prerequisites: Meet qualifying scores on COMPASS and WorkKeys (COMPASS Reading - 79) (COMPASS Math - 92) and WorkKeys Reading - 5 WorkKeys Math - 5 WorkKeys Locating Information- 4.* 

# BPMT-0101 OSHA 30

#### 1 hour credit

This course is an intensive and purposefully hands-on type, that will require the student to use many power, pneumatic, and hand tools. The student will be fully instructed on safety methods while using all tools. This course will also cover several hand tools that are required in most trades, and the professional methods used in today's field environment.

# BPMT-0102 Tool Safety, Power, Pneumatic, Hand

#### 2 hours credit

This course is an intensive and purposefully hands-on type, that will require the student to use many power, pneumatic, and hand tools. The student will be fully instructed on safety methods while using all tools. This course will also cover several hand tools that are required in most trades, and the professional methods used in today's field environment. *Prerequisite: OSHA 10* 

#### **BPMT-0104** Custodial Training

#### 1 hour credit

This is the basic course in Custodial Training. The course topics include: Environmental Sustainability. Every aspect of the custodial trade. Materials, tools, and special techniques needed to successfully complete custodial tasks, including room cleaning, equipment, scheduling, floor finishing, wet and dry mopping, lavatory, buffing, stripping waxing, tile cleaning. This course will provide the student with opportunities for practical hands-on applications. Students may earn a special certificate in floor care technician. *Prerequisite: OSHA 10 Recommended.* 

#### **BPMT-0108** Carpentry Basics

#### 3 hours credit

This course is the basic carpentry course. It is in alignment with NCCER and the Kansas Board of Regents. It is (in part) a component of the Core Curriculum for the KCKCC Construction Technology program and the KCKCC Building and Property Maintenance program. The course topics include: Environmental sustainability, Orientation to the Trade, Building Materials, Fasteners, and Adhesives, Hand and Power Tools, Reading Plans and Elevations, and Commercial Drawings. *Prerequisites: OSHA 10, Math Level 3 Recommended.* 

#### **BPMT-0112** Residential Electrical

#### 4 hours credit

This is the basic course in residential electrical and repair. The course topics include: Environmental sustainability, sources of electricity, meter reading, voltage, resistance, watts, current, home distribution systems, circuit breakers, and codes. It will also cover types of conductors, circuit loads, switches, outlets, boxes, fixtures, and wiring. Students will study surface mounted wiring, low voltage, door chimes, thermostats, telephones and burglar alarm systems. Safety will be emphasized. *Prerequisites: KBOR approved Core Curriculum. OSHA 10. Math Level 3 Recommended.* 

# **BPMT-0113** Windows, Doors & Stairs

#### 2 hours credit

This course is the windows, doors, & stairs course. It is in alignment with NCCER and the Kansas Board of Regents. It is (in part) a component of the Core Curriculum for the KCKCC Construction Technology program and the KCKCC Building and Property Maintenance program. The course topics include: Environmental sustainability, Hand and Power Tools, Windows and Exterior Doors, and Basic Stair Layout. *Prerequisites: OSHA 10. Math Level 3 Recommended.* 

# BPMT-0115 Residential Plumbing and Repair

## 4 hours credit

This is the basic course in residential plumbing and repair. The course topics include: Environmental sustainability, plumbing codes, waste piping, drain, waste and vent systems, toilet maintenance, garbage disposals, kitchen sinks, gas hot water tanks, electric hot water tanks, heat pump hot water tanks, gas iron pipe, corrugated stainless steel piping, commercial flush valves, compression fittings, pipe flare, soldering, PEX and press fittings, and sump pumps.

# **BPMT-0121** Remodel Painting

## 3 hours credit

This is the basic course in remodel paint repair. The course topics include: Environmental sustainability, surface prep, touch-up, rollers, pads, brushes, spray guns, and sponges will be covered. Paint types, uses, and limitations will be studied. Surface stain sealing, patching and textured paint will be covered. This course will offer instruction on paint problems and failure prevention. It will also cover estimating, masonry coating, mildew resistance and clean up. Painting aluminum and metal surfaces will be covered. *Prerequisites: KBOR approved Core Curriculum. OSHA 10. Math Level 3 Recommended.* 

# BPMT-0124 Landscaping

## 4 hours credit

This is the basic course in landscaping. The course topics include: Environmental sustainability, landscaping tools, equipment and supplies. It will cover landscaping planning, methods, and procedures. It will also cover tool sharpening, equipment maintenance, planting and spacing. The student will study tree shade effects, heights, water conservation, soil management, lawns, mowing, sprinkler systems, fertilizing, weed control, sod placement, reseeding and ground cover. Golf course maintenance is a part of the curriculum. Twenty hours of mowing on riding equipment is required. *Prerequisites: KBOR approved Core Curriculum. OSHA* 10. Math Level 3 Recommended.

#### BPMT-0130 Drywall

#### 3 hours credit

This is the basic course in drywall repair. The course topics include: Environmental sustainability, patching plaster walls, patching drywall, patching ceilings, and touch up painting. Students will learn to spray texture, hand apply texture, and repair commercial building wall coverings including patching scuff marks and tears. Special tool use will be covered. It will also cover paint matching.

## **BPMT-0133** Masonry Repair

#### 2 hours credit

This is the basic course in masonry repair. The course topics include: Environmental sustainability, concrete mix preparation, placing and finishing small jobs, edging, curing, repairing, computing volumes, and types of masonry mortars. It will also cover stone repair, bricklaying, fireplace repair and cleaning, and layout. Masonry cleaning will be covered, as will how to seal masonry and concrete. *Prerequisites: KBOR approved Core Curriculum. OSHA 10. Math Level 3 Recommended.* 

# BPMT-0136 Roof Coverings, and Gutters

#### 2 hours credit

This is the basic course in repairing roofs and gutters. The course topics include: Environmental sustainability, types of roofing, types of roofing repairs, leak locating, repair of asphalt shingles, wood shingles, flat roof repair, flashing repair and replacement. It will also cover guttering fabrication, installation and repair, including leak sealing, tools, ladders and materials. *Prerequisites: KBOR approved Core Curriculum. OSHA 10. Math Level 3 Recommended.* 

#### **BPMT-0138** Power Industrial Trucks and Aerial Lifts

#### 2 hours credit

This is the basic course in OSHA 29 CFR 1910.178, Power Industrial Trucks. The course topics include: Written and Hand-on operation of the Power Industrial Truck. The course requires the student to complete 6 driving courses under instructor evaluation. This course will provide the student with opportunities for practical hands-on applications. Students may earn a special license as a certified Power Industrial Truck Operator. *Prerequisite: OSHA 30.* 

#### **BPMT-0145** Residential Painting

## 2 hours credit

This is a technical course on interior and exterior painting. The student will be required to know the technical aspects of a professional paint job, along with the application of the technical aspects. Students will learn the professional methods of how to complete an interior or exterior paint job. The students will also require training in handling extension and step ladders, along with their OSHA 10, and ladder safety course. This course will require the student to complete extensive hands-on training, written assignments, estimates, and a final exam. *Prerequisite: BPMT 0101*.

#### BPMT-0180 Brazing/Soft Soldering

# 1 hour credit

This course teaches the proper methods of soft soldering and brazing similar and dissimilar metals used in the Plumbing and HVAC industry. Also taught, are the methods, procedures, and tools used to swage tubing properly for the interconnection of refrigerant components, within a sealed system. Silver and soft soldering will then be used, to assemble and seal up the tubing of the refrigeration system. The successful completion of a written test, on Oxygen/Acetylene torch kits and tanks, will be required to participate in the hands-on portion of this course.

# **BPMT-0201 HVAC Maintenance**

# 3 hours credit

This is a basic course which requires the student to be heavily involved in all instructional methods. This course requires the student to disconnect and install a new unit, remove all refrigerant and liquids, completely dismantle an existing unit, determine proper amperage and ohm readings, test for existing amperage and ohm readings, install proper electrical disconnect and wiring, size the wire and electrical fixtures properly, and have the ability to apply basic fundamental code requirements.

# BPMT-0221 Basic Household Appliance Repair and Maintenance

# 3 hours credit

This is a basic course that will require the student to complete basic repairs and perform standard maintenance on basic household appliances. Students will diagnose and service gas and electric hot water tanks, clothes dryers,

clothes washers, dishwashers, refrigerators, and garbage disposals.

# **BUSN-0100** Introduction to Accounting

#### 3 hours credit

Introduction to Accounting is designed to provide students with a thorough background of basic accounting concepts to prepare them for Accounting I BUSN-0101. Students originally enrolled in Accounting I who are having difficulty with the material may withdraw from Accounting I and enroll in Introduction to Accounting during the first two weeks of the semester with the consent of the instructor. *Prerequisite: None* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

## BUSN-0101 Accounting I

#### 3 hours credit

An introduction to the theory and practice of modern accounting for an individual proprietorship is emphasized in this course. The basic structure of accounting, the accounting cycle, notes, accruals, receivables, inventory, plant assets, accounting systems, controls, concepts, and principles are covered. A grade of C or better in Accounting I, BUSN-0101, is needed for advanced work in accounting. *Prerequisite: None Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.* 

#### BUSN-0102 Accounting II

# 3 hours credit

Accounting II examines accounting for partnerships and corporations and introduces the students to other accounting and managerial topics such as accounting for cash, payroll, statement of cash flows, and cost accounting. *Prerequisite: Completion of BUSN-0101, Accounting I, with a grade of "C" or better.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

#### **BUSN-0104** Small Business Management

#### 3 hours credit

Small Business Management presents a thoroughly contemporary treatment of the startup and management of small firms. Strong emphasis is placed on entrepreneurial opportunities and new-venture activities needed for the successful operation of small firms.

Emphasis will be on current issues affecting the start-up and operation of a small business. *Prerequisite:* <u>None Effective Spring</u> 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

#### **BUSN-0105** Personal Finance

#### 3 hours credit

Personal Finance is a survey course on personal financial planning. Topics covered include personal budgeting, investments, insurance, credit, housing, and retirement planning. *Prerequisite: None Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.* 

#### **BUSN-0108** Human Relations in Business

## 3 hours credit

Human Relations involves the way people interact with the social, organizational, and human elements they encounter in the work environment. Emphasis is placed on the role and foundation of first-line supervision and management factors found in most work environments that have profound effect on the working lives of individuals. *Prerequisite: None* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# BUSN-0110 Business Math

#### 3 hours credit

Fundamentals of math as they are related to the field of business are studied. Included is a review of arithmetical operations, profit cost selling, price relations, and simple and compound interest. *Prerequisite: Grade of "C" or higher in MATH 0097 Math* 

Essentials OR COMPASS Pre-Algebra score 46-100. <u>Effective Spring 2005</u>, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# **BUSN-0111** Microcomputer Business Software

#### 3 hours credit

Microcomputer Business Software explores the use of microcomputers in business. The four most common programs of spreadsheets, database management, presentation and word processing are used as models. *Prerequisites: Keyboarding and basic computer skills are required.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# BUSN-0113 Marketing

#### 3 hours credit

This course is designed to introduce students to the fundamentals of contemporary marketing. Students will learn how a marketing manager interacts with diverse areas of business; and they will learn basic marketing principles, including product strategy, promotion, pricing, and distribution, and their interrelationship. The student will view various internet addresses that are included in our text in proximity to relevant text discussions on the World Wide Web. *Prerequisite: None Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.* 

#### **BUSN-1151** Keyboarding

#### 1 hour credit

This introductory course teaches students to type by touch while improving speed and comfort level. Topics include home keys, space bar, keyboarding numbers and the alphabet. The goal is 20-28 wpm. with 60-100 percent accuracy.

Prerequisites: None

Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# BUSN-1152 Document Formatting I

# 1 hour credit

This course covers production of correspondence, reports, and simple tables. *Prerequisite: BUSN-1151 Keyboarding; or equivalent competency (28 wpm minimum with 5 errors maximum); or consent of instructor.* 

# BUSN-1153 Speedbuilding I

# 1 hour credit

Speedbuilding I is for students who want to attain speed and accuracy on straight-copy keying with a goal of 20-40 wpm. Prerequisite: BUSN-1151 Keyboarding; or equivalent competency (20 wpm minimum with 5 errors maximum); or consent of instructor.

## BUSN-1163 Speedbuilding II

# 1 hour credit

This course is for students who want to attain speed and accuracy on straight-copy keying with a goal of 30-50 wpm. *Prerequisite:* BUSN-1153 Speedbuilding 1; or equivalent competency (20 gross wpm minimum); or consent of instructor.

#### **BUSN-0124** Accounting Software Application

# 3 hours credit

This course provides hands-on experience in learning how automated accounting systems function. The microcomputer is used to record general ledger transactions, payroll, accounts receivable, accounts payable, and inventory management. *Prerequisite:*None. <u>Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.</u>

## **BUSN-0140** Essential Career Skills

#### 1 hour credit

This course provides a well-balanced introduction to personal finance, entrepreneurship, and employment skills. *Prerequisite:* None. <u>Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.</u>

# **BUSN-0150** Supervision Techniques

#### 3 hours credit

Supervision Techniques is an introductory course designed to prepare students to be effective supervisors. The course focuses on leadership and management principles with an emphasis on how supervisors work with people in inspire, empower, and develop them to become better and more effective in their workplace roles regardless of the type of organization or particular field.

Prerequisite: None. <u>Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.</u>

#### BUSN-0164 Income Tax Procedures

#### 3 hours credit

Income Tax Procedures is designed to provide an overview of our Federal income tax system. Students will learn about their rights and responsibilities as taxpayers. This course will emphasize both income tax theory and practical application of income tax laws for individuals and small businesses. *Prerequisite: None* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# BUSN-0166 Volunteer Income Tax Assistance (VITA) Tax Preparation

#### 2 hours credit

This course prepares the student for preparation of federal and Kansas income tax returns for individuals. Emphasis is placed on form preparation with the use of tax software. *Prerequisite:* <u>None Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.</u>

# BUSN-0167 Volunteer Income Tax Assistance (VITA) Tax Preparation Internship

#### 1 hour credit

This course incorporates the concept of service learning by providing an opportunity for the student to obtain practical experience in the preparation of federal and state income tax returns for individuals. Students will complete tax returns for persons who are elderly and/or economically disadvantaged. *Prerequisite: BUSN-0166, VITA Tax Preparation or consent of instructor*. Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

#### **BUSN-0168** Microcomputer Applications I (Spreadsheets)

#### 3 hours credit

Spreadsheet applications will cover the fundamental aspects of any popular software package. Typically those subjects that will be presented are: 1) spreadsheet uses in business, 2) commands dealing with spreadsheet construction and editing, 3) typical business applications and 4) numerous practical projects. *Prerequisites: CIST-0101, Computer Concepts and Applications or CIST-0111 Microcomputer Business Software.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# BUSN-0181 Is Business Ownership Right for Me? - The Entrepreneurial Mindset

#### 2 hours credit

This course provides the fundamental aspects of an entrepreneurial mindset and the opportunities it can provide. To do this, the course engages you through entrepreneurial thinking and immerses you in entrepreneurial experiences that will enable you to develop entrepreneurial skills. *Prerequisite: None.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# BUSN-0191 Microcomputer Applications I-II: (Advanced Word)

## 1 hour credit

Microsoft Word is a full-featured word processing program that is a component of the Microsoft Office package. Using a handson approach, students will become familiar with advanced applications using title pages, tables, charts, and watermarks; form
letters, mailing labels, and directories; and a professional newsletter. *Prerequisites: BUSN 1151 Basic Keyboarding or equivalent. Minimum typing speed of 35 words-per-minute. CIST 111 Microcomputer Business Software.*<u>Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.</u>

## **BUSN-0203** Managerial Accounting

#### 3 hours credit

This course covers the theory and practical application of modern managerial accounting techniques for manufacturing firms and other types of businesses. Topics will include tools that can be used by managers and others to determine how their businesses are performing and how this cost data may be used for decision making. The course is designed to satisfy both those students who desire a terminal course and those who need study preparatory to taking more advanced accounting courses. *Prerequisites: Completion of Accounting I (BUSN-0101), Accounting II (BUSN-0102) and Microcomputer Business Software (CIST-0111) with a grade of C or better in each.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

#### BUSN-0204 Business Law I

#### 3 hours credit

Business Law I acquaints students with the legal framework that regulates business activity in the United States. It includes a brief introduction to the history and philosophy of law and the American legal system as it relates to business activity. The course concentrates on the essential elements of legally enforceable contracts. The course also introduces students to the legal rules governing agency, partnerships, employment, and insurance. *Prerequisite: COMPASS reading score of 73-100 or completion of READ-0092 with a C or better*. Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# **BUSN-0205** Intermediate Accounting

#### 3 hours credit

Intermediate Accounting presents a review of the theory and application of accounting theory and an analysis of special problems which may arise requiring management decisions. Emphasis is placed on the preparation and analysis of financial reports. The course is designed to satisfy both those students who desire a terminal course and those who need study preparatory to taking more advanced accounting courses. *Prerequisites: Completion of Accounting I (BUSN-0101)*, *Accounting II (BUSN-0102)*, *Business Law I (BUSN-0204)* and Managerial Accounting (BUSN-0203) with a grade of "C" or better in each. Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

## BUSN-0206 Business Law II

## 3 hours credit

Business Law II further acquaints students with the legal framework that regulates business activity in the United States. This course introduces students to the legal rules governing sales, commercial paper, credit, and property (both real and personal). Prerequisites: COMPASS reading score of 73-100 or completion of READ-0092 with a C or better and Business Law I. Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# **BUSN-0209** Computerized Accounting

# 3 hours credit

This course provides hands-on experience in learning how automated accounting systems function. The microcomputer is used to record general ledger transactions, payroll, accounts receivable, accounts payable, and inventory management. *Prerequisite:*\*Accounting I with a "C" or better. Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

#### **BUSN-0210** Introduction to Business

#### 3 hours credit

The main goal of this introductory course is to communicate an understanding of a business world characterized by change, variety, and interaction. The course introduces students to the various functional areas of business. It can help students become familiar with current business practices and terms. *Prerequisite: None.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

#### **BUSN-0211** Business Communications

#### 3 hours credit

Business Communications emphasizes correct business procedures, English, and psychology as they are related to business letters, reports, and other forms of official communication. *Prerequisite: Completion of ENGL-0101 (Composition I) with a passing grade. Keyboarding skills are also recommended.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# **BUSN-0213** Introduction to Employment Law

#### 3 hours credit

Employment Law addresses the major issues and rules of employment law in the work place. The course focuses on employment law as it relates to management, industrial relations or human resources in the work place. *Prerequisite: None* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

#### **BUSN-0214** International Business Cultures

#### 3 hours credit

This course is designed to acknowledge the importance of the cultural dimension in the field of international business. By exploring the contribution that cultural anthropology makes to the business field, students will realize a more effective and humane method of conducting international business. Theoretical approaches surveyed in the course include: Cultural-General Approach: Making the Connections between Anthropological Theory (Generalizations) and International Business; Understanding Communication Patterns—Verbal and Nonverbal; Cultural Self-Awareness: Their Values and Ours; Culture-Specific Approach: Finding Relevant Cultural Information. *Prerequisite: Basic computer skills and Internet access/skills. Completion of Accounting I (BUSN-0101) and Accounting II (BUSN-0102) with a grade of "C" or better in each.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# BUSN-0216 E-Marketing

## 3 hours credit

This course explores how marketers use the Internet and social media to engage and listen to customers and how to use what they learn to improve the goods and services they offer. The course will focus on how the Internet and other technologies, including mobile devices, are integrated with traditional marketing principles to generate revenue while delivering customer value. Topics include e-marketing practices in the United States; global e-marketing; ethical and legal issues; e-marketing planning; e-marketing strategy; online management of the marketing mix; and customer relationship management. *Prerequisite: None.* <u>Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.</u>

# **BUSN-2201** Records Management

## 1 hour credit

Rules established by the Association of Records Managers and Administrators (ARMA) are used for alphabetic, geographic, subject, and numeric filing. *Prerequisite: None.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# BUSN-2202 Business English

#### 1 hour credit

Business vocabulary and language usage are studied in parts of speech, sentence structure, capitalization, number style, and punctuation usage. *Prerequisite: None.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# **BUSN-2203** Proofreading

#### 1 hour credit

Students develop proofreading skills through ability to spell; to use fundamentals of word division, capitalization, expressions of numbers, punctuation, and grammar; and to read for meaning. *Prerequisite: Basic computer skills, keyboarding, e-mail, Windows experience, and Internet access/skills are recommended. The student must be self-motivated and must have access to the World Wide Web.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# **BUSN-2251** Office Simulations

#### 3 hours credit

This course is designed to give the student a working knowledge of the administrative assistant's duties and responsibilities.

Prerequisites: BUSN1152 Document Formatting I, BUSN1153 Speedbuilding I or the equivalent (50 wpm), CIST0111 Microcomputer Business Software. <u>Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.</u>

## **BUSN-2252** Business Etiquette

#### 1 hour credit

Students develop appropriate business practices including telephone techniques and office ethics. Footnote: This course is offered during the spring semester only. *Prerequisite: Basic computer skills, keyboarding, e-mail, Windows experience, and internet access/skills are recommended. The student must be self-motivated and must have access to the World Wide Web.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

#### **BUSN-2253** Customer Service

## 2 hours credit

This course is designed to build and maintain critical skills necessary to be a dynamic and successful service professional. Students will gain insight on customer behavior and attitudes and will develop strategies to create positive customer relationships. *Prerequisites:* None. Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

## **BUSN-0249** Career Development

# 1 hour credit

This course explains the techniques used to successfully obtain a job. Areas covered include locating job openings; completing application forms; writing an application letter, resume, and follow-up letter; preparing for interviews; and interviewing. Prerequisite: None. Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# **BUSN-0250** Obtaining Employment

## 1 hour credit

This course explains the techniques used to successfully obtain a job. Areas covered include locating job openings, completing application forms; writing an application letter, resume, and follow-up letter; preparing for interviews; and interviewing. *Prerequisites: None* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

## BUSN-0259 Enactus

# 1 hour credit

The purpose of this course is to give students the tools to learn the free enterprise system in a real working situation. Enactus challenges students to take what they learn in the classroom and use the knowledge to better their communities. Through a collaborative effort between business and education, Enactus Teams improve the quality of life and the standard of living in the local community by teaching the principles of market economics, entrepreneurship, business ethics, and personal financial success via on-campus and off-campus educational outreach activities to K-12 and KCKCC students. Special emphasis is placed on

leadership development activities, and students have an opportunity to participate in regional and national business competitions. *Prerequisites: Basic computer skills and Internet access.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# **BUSN-0260** Principles of Advertising

#### 3 hours credit

An introductory course in advertising, this class provides theory as well as practical experience in various aspects of the advertising industry, including creative work (writing, illustration and layout), account service, research, and media planning. *Prerequisites: None* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# **BUSN-0262** Intro to Entrepreneurship

#### 3 hours credit

This course provides a thoughtful, practical guide to the process of successfully launching and growing an entrepreneurial firm. To do this, the course provides you with a thorough analysis of the entrepreneurial process. *Prerequisites: None* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

#### **BUSN-0263** Consumer Behavior

#### 3 hours credit

Consumer Behavior provides students an understanding of how consumer behavior influences buying behavior and marketing decision-making. Topics include needs, motivations, perceptions, and attitudes of consumers, as well as consumer decision-making, consumer trend analysis, marketing strategy, and consumer buying behaviors. *Prerequisite: None.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

## **BUSN-0264** Integrated Marketing Communications

# 3 hours credit

This course explores how companies can effectively communicate with customers and potential customers through the planning, designing, integrating, and management of marketing communications. The course focuses on the unification of advertising, sales promotions, direct marketing, publicity and public relations, personal selling, interactive/internet marketing, and social media into one clear message and voice. *Prerequisite: None.* <u>Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.</u>

# **BUSN-0266** Principles of Selling

# 3 hours credit

This course is a comprehensive introduction to the principles of selling and the role of the professional salesperson in the marketing process. It includes the characteristics and skills necessary for success in sales; techniques for identifying sales prospects and qualifying buyers; the importance of relationship building, product knowledge, and post-sales service in long-term, consultative-style selling; territory and sales management; and selling in the global marketplace. *Prerequisite: None. Effective Spring 2005*, *if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.* 

# **BUSN-0267** Supervision Skills

#### 2 hours credit

Supervision Skills prepares students to be effective supervisors. The course focuses on leadership and management principles with an emphasis on supervision. It informs students how to inspire, empower, and develop people to become better and more effective in workplace roles, regardless of the type of organization or particular field. *Prerequisite: None.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

#### **BUSN-0269** Services Marketing

#### 3 hours credit

The course will explore the dynamics of service and provide perspective on the unique challenges present in managing and delivering quality services. The focus will be on strategy and the application of marketing principles for coordinators of service firms. *Prerequisite: None.* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

## **BUSN-0280** Human Resource Management

#### 3 hours credit

Personnel Management considers the major activities in personnel or "Human Resources" management. Instruction includes the interdependence of such topics as federal and state laws, technological change, manpower planning and forecasting, job design and analysis, selection, training and development, motivation, wage and salary administration, performance appraisal, discipline, personnel records, research, and equal employment opportunity. *Prerequisites: None* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

#### BUSN-0285 Occupational Internship I

#### 3 hours credit each semester

The general purpose of the occupational internship is to bridge the gap between work and school by insuring workplace skills meet the needs of students' career goals and the needs of the employer. The course is offered in conjunction with the Business Administration/Mid-Management program to fulfill the requirement for on-the-job training. *Prerequisite: None* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

## **BUSN-0286** Principles of Management

#### 3 hours credit

The latest major approaches and techniques of management are presented. Consideration is given to the functions of management planning, organizing, staffing, leading, and controlling. Other areas of consideration are communication, motivation, dealing with change, decision making, quantitative tools, and production. *Prerequisites: None* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# **BUSN-0290** Motivational Dynamics

## 2 hours credit

The course is designed to build and maintain critical skills necessary to be a dynamic and productive employee, team member, or leader within any organization. Students will gain insight on the impact of interpersonal and communication skills on individuals they meet, work with, and/or supervise. They will learn and model positive behaviors and attitudes and develop strategies to create positive human relationships and further their personal and professional development. This course features assessing personal strengths and weaknesses; setting goals for personal and professional life; analyzing human relations problems; applying problemsolving strategies to human relations issues in the workplace; and, defining and comparing management styles. *Prerequisites: None* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# BUSN-0292 Current Topics in Supervision and Management

## 3 hours credit

This course is designed to give students the tools and techniques for planning a productive meeting, facilitating a focused meeting, developing active participation, and effectively implementing meeting decisions. Participants will have multiple opportunities to observe and practice the actual application of skills and techniques, receive immediate feedback, and evaluate meeting effectiveness. *Prerequisites: None* Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# **BUSN-0293** Business Dynamics

#### 2 hours credit

The course builds critical skills necessary to be a dynamic and productive employee, team member, or leader within any organization. Students will gain insights on the impact of interpersonal and communication skills on individuals they meet, work with, and/or supervise. They will learn and model positive behaviors and attitudes and develop strategies to create positive human relationships and further their personal and professional developments. This course features assessing personal strengths and weaknesses, setting goals for personal and professional life, analyzing human relations problems, applying problem-solving strategies to human relations issues in the workplace, and defining and comparing management styles. *Prerequisite: None. Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.* 

# BUSN-0294 Introduction to Entrepreneurship: FastTrac®

#### 3 hours credit

This course provides the foundational knowledge to successfully launch a business by providing the tools necessary to help emerging entrepreneurs to quickly assess and start new businesses. This course also helps existing business owners grow their businesses to the next level. Through the course, students will work on and complete a business plan on a new or existing business. Prerequisite: None. Effective Spring 2005, if you are a Business major, you must have a "C" or better in all business courses to meet the requirements of the business degree program.

# CHEM-0090 Basic Math for Chemistry

#### 2 hours credit

This course is designed for students who have had no high school chemistry, have performed poorly in a chemistry course in high school or college, or are returning to college after an absence of several years and need General Chemistry or College Chemistry. Fundamental topics of inorganic chemistry including scientific notation, chemical mathematics, metric system, the periodic table, gases, and solutions. *High school algebra or Elementary Algebra, MATH-0099 is strongly recommended.* 

# CHEM-0101 Introduction to Forensic Science and Laboratory

#### 5 hours credit

This course introduces the basic principles and relationships between the applications of chemistry to forensic science as they relate to the criminal investigative process. The course is designed to give students insight into the many areas of forensic science and how chemistry and other sciences play a role. Areas included are blood analysis, hair analysis, firearms and identification, fiber comparisons, paints, glass compositions, soil comparisons, and seminal fluid analysis. Upon completion of this course students should understand the potential value of forensic science and also the limitations. *Prerequisites: None: High School Algebra or Elementary Algebra, MATH-0099, strongly recommended.* 

# CHEM-0109 General Chemistry

#### 5 hours credit

Primarily for the liberal arts, allied health, and non-science majors, General Chemistry develops the principles of inorganic, organic, and biochemistry. Three lecture periods and two2-hour laboratory/discussion periods are required weekly. Students may not receive credit for both CHEM-0109 and CHEM-0111. This course may not be used as a prerequisite for CHEM-0112. *Prerequisites: Intermediate Algebra, MATH-0104 with a grade of "C" or better, or a COMPASS score of 46-100.* 

# CHEM-0111 College Chemistry I and Lab

## 5 hours credit

Primarily for biological or physical science majors, College Chemistry I and Lab provides an introduction to the fundamental concepts of chemistry. The laboratory supports the concepts through practical application and develops scientific techniques. *Prerequisites: College Algebra, MATH-0105, or a COMPASS score of 46-100.* 

# CHEM-0112 College Chemistry II and Lab

## 5 hours credit

College Chemistry II is a continuation of College Chemistry I. It is designed for the student who needs more than five hours of credit in chemistry or is going to take advanced chemistry courses or pre- professional programs such as pre-med and pre-dentistry. Normally, in Chemistry II, the topics covered are chemical thermodynamics, chemical kinetics, chemical equilibrium,

electrochemistry, nuclear chemistry, descriptive chemistry, introductory organic chemistry and other topics if time permits. *Prerequisite: College Chemistry I and Lab, CHEM-0111.* 

# CHEM-0201 Forensic Science Analytical Techniques

#### 3 hours credit

This course is designed for the student who will be a science major in the field of Forensic Science. It starts with an introduction to the role of the expert witness and emphasizes throughout proper procedures for the handling of evidence. It incorporates three major laboratory processes within the criminal investigative processing of evidence. The principle and laboratory techniques of FT-IR, GC/MS and Electrophoresis will be covered in relationship to Forensics. *Prerequisite: CHEM-0112, College Chemistry II and Lab or concurrent enrollment.* 

# CHEM-0202 Forensic Science Internship

#### 3 hours credit

This course is set up to award forensic science students three hours credit for "on-the-job" training. Students will be required to work a minimum of 144 clock hours, at the intern site, during the internship. The purpose of this type of course is two-fold: to give students practical experience in the field of forensic science, and to allow prospective employers to be aware of student's abilities. *Prerequisites: Introduction to Forensic Science CHEM-0101, and Forensic Science Analytical Techniques CHEM-0201 (or concurrent enrollment in this course).* 

# CHEM-0203 General Organic Chemistry

#### 5 hours credit

This course introduces and surveys the field of organic chemistry. Major types of aliphatic and aromatic compounds are surveyed as to naming, structure's preparations, and reactions. The laboratory portion emphasizes modern techniques of organic chemistry. Three lectures and four laboratory/discussion hours per week are required. *Prerequisite: General Chemistry, CHEM-0109 or College Chemistry I and Lab, CHEM-0111*.

# CHEM-0211 Organic Chemistry I

#### 3 hours credit

The course covers aliphatic and aromatic compounds with emphasis on organic reactions and reaction mechanisms, nomenclature, stereoisomerism, and spectroscopy. Three hours of lecture per week are required. Students should enroll in Organic Chemistry Laboratory, CHEM-0213 at the same time. *Prerequisites: College Chemistry II and Lab, CHEM-0112*.

# CHEM-0212 Organic Chemistry II

# 3 hours credit

A continuation of Organic Chemistry I, CHEM-0211 lectures cover the main functional groups not discussed in 0211: ethers, acids, esters, aldehydes ketones, and amines. *Prerequisite: Organic Chemistry I, CHEM-0211*.

# CHEM-0213 Organic Chemistry I Lab

## 2 hours credit

This first-semester laboratory deals with the fundamental techniques involved in organic laboratories such as distillation, crystallization, extraction, solubility, and various types of chromatography. Four laboratory hours per week are required. It is recommended that students enroll concurrently in Organic Chemistry, CHEM-0211. *Prerequisites: College Chemistry II and Lab, CHEM-0112.* 

# CHEM-0214 Organic Chemistry II Lab

# 2 hours credit

The emphasis of this continuation of Organic Chemistry I Lab, CHEM-0213 is on organic synthesis and identification. *Prerequisites: Organic Chemistry I, CHEM-0211 and Organic Chemistry I Lab, CHEM-0213*.

# CHEM-0250 Biochemistry

# 4 hours credit

The biochemistry course is an introduction to the structure and functional relationships of the major bio-molecules including:

proteins, lipids, carbohydrates, and nucleic acids. An overview of the major metabolic pathways and current techniques in molecular biology will also be provided. *Prerequisites: Organic Chemistry I, CHEM-0211 and Organic Chemistry I lab, CHEM-0213, or General Organic Chemistry, CHEM-0203.* 

#### CHEM-0251 Biochemistry Lab

#### 2 hours credit

The laboratory will consist of qualitative and quantitative biochemical experiments. Particular emphasis will be placed upon biochemistry laboratory techniques including: chromatography, spectroscopy, electrophoresis and computer modeling. Prerequisites: CHEM-0201, General Organic Chemistry OR CHEM-0211 and CHEM-0212 Organic Chemistry I and Organic Chemistry I lab.

#### CIST-0100 Introduction to the Internet

#### 3 hours credit

This course is designed for the student who has had little or no experience accessing the Internet. Students will learn the basic technology behind computer networking and explore a variety of the vast resources available on the Internet through hands-on activities.

# CIST-0101 Computer Concepts and Applications

#### 3 hours credit

Computer Concepts and Applications is designed to demonstrate to the student the various accomplishments, forms of work, and applications a computer can perform. The course includes experience using a variety of projects on the computer. The World Wide Web on the Internet will be explored and integrated into many segments of the course. Computer Concepts and Applications is an introductory computer course that emphasizes the concepts of computing and fundamental vocabulary for computers. No previous knowledge of computer is required.

#### CIST-0111 Microcomputer Business Software

## 3 hours credit

Microcomputer Business Software explores the use of microcomputers in business. The four most common programs of spreadsheets, database management, presentation and word processing are used as models. *Prerequisites: Keyboarding and basic computer skills are required.* 

# CIST-0117 Networking I

#### 3 hours credit

The students in this course will be introduced to LAN (local area networks), MAT (metropolitan area networks) and WAN (wide area networks). The students will be study network topologies, network protocols, network hardware, and network software. Students will also perform experiments and troubleshoot common network failures. *Prerequisites: CIST-0101 Computer Concepts and Applications and knowledge of OS recommended.* 

# CIST-0120 Programming Fundamentals

## 4 hours credit

This course is an introduction to computer programming and software development. The goals of this course are to introduce novice programmers to the systematic and explicit design of programs and to expose students with prior programming experience to design. A multi-purpose programming language is used, but the emphasis is on designing and constructing programs and not learning a specific programming language. Extensive hands on experiences are emphasized.

#### CIST-0125 Network Security

#### 4 hours credit

This course provides the skills necessary to apply and implement technical knowledge of security concepts in today's security environment. Students will gain a depth knowledge of systems security across multiple vendor products. Students will be given real world scenarios to reinforce the material covered in this course and they will learn how to apply the learned concepts to their daily operations. *Prerequisites: CIST-0117 Networking I.* 

# CIST-0132 Introduction to Data Warehousing

#### 3 hours credit

Introduction to Data Warehousing provides an overview of Data Warehousing technology. The course will explore the fundamental concepts of data warehousing; provide common data warehousing terminology and language, and provide practical approaches and requirements for designing, implementing and maintaining a data warehouse. *Prerequisites: CIST-0101, Computer Concepts and Applications* 

# CIST-0137 HTML Web Page Development

#### 3 hours credit

This course is designed to assist students in the fundamentals of creating documents to be viewed on the World Wide Web. The instruction in Hypertext Markup Language (HTML) in the creation of Web Pages as well as an introduction to HTML Editors is included as a foundation to the construction of interesting Web Sites. *Prerequisites: CIST-0101 Computer Concepts and Applications, OR CIST-0111 Microcomputer Business Software. It is strongly suggested that a student have a familiarity with Windows as well as a working knowledge of Internet navigation.* 

# CIST-0147 Computer Operating Systems: Windows 7

#### 4 hours credit

This class covers a microcomputer operating system used by personal and/or workstation computer. With new computer systems being introduced, this class will introduce students to the most current "version" and to a specific operating system. The specific operating system name will be provided in the class schedule after "CPU O/S=Win 7" and may vary in credit hours. Preparation MCP for Exam 70-680

## CIST-0148 Computer Operating System: Windows 8

#### 4 hours credit

This class covers Microsoft's Operating System (Windows 8) that is used by mobile and/or workstation computers. Students will be prepared for MCP Exam: 70-687

# CIST-0150 Web Graphics and Multimedia

#### 3 hours credit

Web Graphics and Multimedia provides graphic theory and hands-on exercises for web backgrounds, buttons, rollovers, GIFs, JPEGs, PNGs, animated GIFs, web safe color palettes, cluts, and swatches; alignment techniques; seamless tiles; transparent GIFs; web typography, vector animation; and other web imaging techniques for graphics and design. *Prerequisites: CIST-0137, HTML Web Page Development.* 

## CIST-0152 JavaScript

#### 3 hours credit

JavaScript examines client-side JavaScript programming techniques. Students learn how to seamlessly integrate JavaScript code with HTML and CSS to bring interactivity to web pages. Students will learn how to use the Document, Navigator, Window, Location and History Objects, set and read Cookies, create image rollovers, write functions, and validate forms. Students will learn to use JavaScript with Dynamic HTML. A basic introduction to AJAX will be included. *Prerequisites: CIST-0137, HTML Web Page Development.* 

# CIST-0154 Principles of Data Warehousing

## 4 hours credit

This course will provide the student with an understanding of the principles of data warehousing. Topics will include data model development, star schemas, snowflake schemas, and dimensional modeling. Metadata (formal descriptions of tables, columns, domains, and constraints will also be included. Students will have an understanding of what must be included in a data warehouse as well as ten mistakes to avoid. *Prerequisites: CIST-0101, Computer Concepts and Applications.* 

# CIST-0155 Cyber Forensics

# 4 hours credit

This course provides students with the fundamentals of computer, digital and cyber forensics associated with the methods used in the investigation of computer crimes. Students will gain the proper knowledge about investigating and illustrating evidence of

Cybercrimes including the process of collection, examination, analysis and presentation of the evidence. Topics included in this course (but not limited to) are applications of hardware and software to computer forensics, volume and file system analysis and computer forensics investigations. *Prerequisites: CIST-0117 Networking I.* 

## CIST-0158 Networking II

#### 4 hours credit

This course examines how routers relay data on Local Area Networks. It covers installation, configuration, and trouble-shooting of routers. The students will learn how to configure IP on different platforms and use simple networking tools for analysis. Students will have hands-on experience with a variety of network layouts in a lab environment equipped with multiple operating systems (Windows XP), Windows 2000, Cisco IOS and others). This class uses the Cisco Academy Material, CCNA semester 2. *Prerequisites: CIST-0117 Networking I.* 

# CIST-0161 System Manager (Windows 2003 Server)

#### 4 hours credit

Participants will learn how to manage the hardware and software of a Microsoft02003 Local Area Network, as well as how to set up users, directories and security. Login scripts and System Console, File Management, Sessions, Print Management and utilities will provide participants with the ability to efficiently implement the Microsoft Server Software. Student will demonstrate practical knowledge and will prepare for the Microsoft Certification Exam 70-290. *Prerequisites: CIST-0117, Networking I & CIST-0143, Computer Operating System: (Windows XP). CIST-0145 CPU Operating System: (VISTA).* 

# CIST-0166 Microcomputer Applications: (Spreadsheets)

#### 3 hours credit

Spreadsheet applications will cover the fundamental aspects of any popular software package. Typically those subjects that will be presented are: 1) spreadsheet uses in business, 2) commands dealing with spreadsheet construction and editing, 3) typical business applications and 4) numerous practical projects. *Prerequisites: CIST-0101, Computer Concepts and Applications or CIST-0111, Microcomputer Business Software.* 

# CIST-0168 Microcomputer Applications I (Assistive Technology)

#### 1 hour credit

This course explores assistive technology that can assist individuals with disabilities in fulfilling their educational and career goals. Students that take this course can either focus on their own assistive technology needs or obtain an overview of assistive technology that can be used in their own career field, i.e. occupational therapy or education. *Prerequisites: CIST-0101, Computer Concepts and Applications.* 

#### CIST-0170 Computer Systems Overview

## 3 hours credit

This course explores computers examining such topics as the history of computers, computer applications, computer design, program translation, hardware, theory of computation, artificial intelligence, and how computers fit into society. Students will complete lab assignments that are designed to enhance the topics covered in the course modules. *Prerequisites: CIST-0101, Computer Concepts and Applications.* 

## CIST-0178 Human Factors in Computer System

#### 3 hours credit

This course examines the application of human factors when designing and using information systems. Topics covered include history, development, and current state of human-computer interface development. Additional areas of study include psychology, engineering, and physiology and their influence on the development of ergonomics. *Prerequisites: CIST-0101, Computer Concepts and Applications or CIST-0111, Microcomputer Business Software.* 

# CIST-0180 Programming Algorithms

#### 3 hours credit

This course is an introduction to the elementary of computer programming. Java will be used by students to create java programs using Window Operating system. Students will demonstrate the basics and the fundamentals of computer programming by creating java programs. Extensive hands on experiences are emphasized. *Prerequisites: CIST-0120 Programming Fundamentals*.

#### CIST-0182 Desktop Publishing and Presentations

#### 3 hours credit

Desktop Publishing introduces the fundamentals of word and image production using a personal computer. The course covers 1) the elements of page composition,02) publication design, 3) text construction, 4) graphs, 5) typical hardware, and 6) business applications. *Prerequisites: CIST-0101, Computer Concepts and Applications or CIST-0111, Microcomputer Business Software.* 

# CIST-0184 Software and Hardware Concepts

#### 3 hours credit

Software and Hardware Concepts is a technical survey of computer systems. This course emphasizes the interrelationships of hardware architecture, system software, and applications software. Topics of discussion include computer architecture, processors and storage systems, implications for system software design, and the effects of hardware architecture and system software on the development of applications programs in a business environment. *Prerequisites: CIST-0101, Computer Concepts and Applications or CIST-0111, Microcomputer Business Software.* 

#### CIST-0189 Web Animation

#### 3 hours credit

This course is designed to give students an introduction to the Macromedia Flash program. Flash is not only used for animation on the web, but is becoming a valuable tool for designing interactive training. Students will learn to use Flash as an interactive tool for Web Design. The student will create by using the basic drawing tool and the importing of other graphic and multimedia material into a finished interactive web site. Students need to have basic computer skills.

# CIST-0190 Web Page Design (Adobe Suite)

## 4 hours credit

This course is designed to instruct the student in the proper approach to commercial web page/site design. Students will learn the basics of web page design and basic web page/site construction. Students will also be introduced to the use of cascading style sheets, DHTML, and XML/XHTML. Different web design tools will be explained. Some of these tools will be covered in detail in following courses. Web job opportunities and current issues will be discussed. *Prerequisites: CIST-0137, HTML Web Page Development.* 

# CIST-0202 Data Integration from Disparate Sources

#### 3 hours credit

This course will provide the student with an understanding of what disparate data is (data from different disciplines, with different requirements, different representations, different geographic regions, and in different formats), and the problems associated with integrating this data. *Prerequisites: CIST-0154, Principles of Data Warehousing.* 

## CIST-0204 Data Cleansing

#### 3 hours credit

This course will provide the student with an understanding of a critical dimension of data performance, data quality. The student will gain an understanding of how to cope with dirty data and the causes of it. *Prerequisites: CIST-0154*, *Principles of Data Warehousing*.

## CIST-0206 Selecting Data Warehousing Tools

#### 3 hours credit

This overview course will provide the student with an understanding of how important selecting the right data warehousing tool is. Topics discussed will include access, query, reporting, cleansing and analysis tools available for purchase from various software vendors. This course will further address the strengths and weaknesses of the various tools available. *Prerequisites: CIST-0154*,

## Principles of Data Warehousing.

#### CIST-0208 Data Marts and Query Tools

#### 3 hours credit

This overview course will provide the student with knowledge of data marts. Discussion will further include reporting tools such as Crystal Reports (Seagate) and analysis tools such as DSS Agent or SAS. *Prerequisites: CIST-0154, Principles of Data Warehousing.* 

#### CIST-0210 Data Mining

#### 4 hours credit

This course will provide the student with an overview of Data Mining. More specifically, students will be introduced to Data Mining techniques as applied to Marketing, Sales, and Customer support. Students will further be introduced to the relationship between Data Mining, On-line Analytical Processing (OLAP), and Relational On-line Analytical Processing as well as how Data Mining may be used to turn data into useful information. *Prerequisites: CIST-0154, Principles of Data Warehousing.* 

## CIST-0214 Computer Repair/Maintenance

#### 4 hours credit

This course is specially designed for troubleshooting, computer terminals, printers, modems, all kinds of disk drives and tape storage systems. Also, this course will include peripheral chips, their architecture and I/O bus structure. Students will also learn about control Rams for terminals, videos, disc drives and printers. *Prerequisites: CIST-0117, Networking I AND CIST-0143, Computer Operating System: (Windows XP). or CIST-0145 Computer Operating System: (VISTA)* 

## CIST-0216 Networking III

#### 4 hours credit

This course examines how routers relay data on Wide Area Networks. It covers advanced configuration, and trouble-shooting of routers. The students will learn how to configure network (LAN) switching, virtual LANs, LAN Design, interior gateway routing protocol (IGRP), access control lists (ACL), Novell IPX, and network management. Students will have hands-on experience with a variety of network layouts in a lab environment equipped with multiple operating systems (Windows 95/98), Windows NT, and others). The course is designed to provide students with classroom and laboratory experience in current and emerging networking technology that will empower them to enter employment and/or further education and training in the computer networking field. Students will design and document a hypothetical network. This class uses the Cisco Academy Material, CCNA semester 3. *Prerequisites: CIST-0158 Networking II* 

## CIST-0218 Advanced System Manager (Windows 2000 Infrastructure)

## 4 hours credit

This class covers the Microsoft 2003 Network Infrastructure used by server operating system. This class is designed to be a preparatory course for taking the Microsoft MCP exam 70-291. This certification exam measures your ability to install, manage, monitor, configure, and troubleshoot DNS, DHCP, Remote Access, Network Protocols, IP Routing, and WINS in a Windows 2003 network infrastructure. In addition, this provides the skills required to manage, monitor, and troubleshoot Network Address Translation and Certificate Services. *Prerequisite: CIST-0161, System Manager (Windows 2003 Server)*.

# CIST-0220 Service and Support

# 4 hours credit

This course covers the service and support of Microsoft 2003 Network Directory Services used by the server operating system. This class is designed to be a preparatory course for taking the Microsoft MCP exam 70-294. This class teaches skills needed to install, configure, and troubleshoot the Windows 2003 Active Directory components, DNS for Active Directory, and Active Directory security solutions. 'Special Class Fees' section for current class fee. *Prerequisite: CIST-0161, System Manager (Windows 2003 Server).* 

# CIST-0224 Advanced Desktop Publishing

#### 3 hours credit

Advanced Desktop Publishing introduces the advancement of work and image production using a personal computer. The course covers: 1) the elements of page composition, 2) publication design, 3) text construction, 4) typical hardware, and 6) business applications. *Prerequisite: CIST-0101, Computer Concepts and Applications or CIST-0111, Microcomputer Business Software.* 

#### CIST-0225 Information Assurance

#### 4 hours credit

This course will provide students with the required skills to implement and apply technical knowledge of security concepts. Students will gain a deep knowledge in systems access control, cryptography and systems security threads. The gained skills from this course are important for intrusion detection systems, physical access control and multi-factor and many other system security issues. Students will be given real world scenarios to reinforce the material covered in this course and they will learn how to apply the learned concepts to their daily operations. *Prerequisite: CIST-0125-Network Security* 

#### CIST-0226 SQL Server

#### 4 hours credit

This course will provide the student with knowledge of SQL Server Software and provide an overview of the application of a relational database. Topics will include platform requirements, distribution architecture and operating system considerations. Software installation and configuration of SQL will be also be performed. Instruction will further include considerations for database building, creating tables, using constraints, indexes and establishing triggers. Additionally, this course will cover security, backup and data restoration. Preparation for Microsoft Exam 70-028(MCSE elective. *Prerequisite: CIST-0161, System Manager (Windows 2003 Server).* 

#### CIST-0227 Advanced Visual Basic

#### 3 hours credit

This course will provide students with experience in real-world problem solving using event-driven programming techniques with the Microsoft® Visual Basic® programming language to manage information databases, graphics and other complex data formats as time allows. Students will also learn to employ the Microsoft® Windows® Applications Programming Interface (API) and third party function libraries to add sophisticated program capabilities not directly available from within Visual Basic®. Object oriented programming techniques and program code reusability will be emphasized. *Prerequisite: CIST-0180, Programming Algorithms*.

# CIST-0228 Computer Management Information Systems

## 3 hours credit

A study of the role information systems play in organizations. The course examines the influence information systems have on the objectives and structure of an organization. This course will focus on such topics as human aspects of computing, types of computer systems, and the general theory of systems. *Prerequisite: CIST-0101, Computer Concepts and Applications or CIST-0111, Microcomputer Business Software.* 

# CIST-0230 Advanced Web Page Design

# 3 hours credit

Advanced Web Page Design teaches advanced techniques in the construction and maintenance of a web page/site through application software. Students learn how to design and develop the goals, audience, functions, and content for the project. The creation of template pages speed HTML production and unify the site's design. Students will learn that in order to distinguish a site from its competition, designers must create unique experiences, using a variety of Web technologies. *Prerequisite: CIST-0137, HTML Web Page Development.* 

# CIST-0231 Introduction to Computer Based Information Systems (Honors)

## 3 hours credit

This course offers problem solving in Excel as well as giving transfer students a tailored background in a selection of fundamental computer topics which include: the CPU, data communications, networks, operating systems, programming concepts, relational

algebra, databases and computer security. Prerequisite: CIST-0137, HTML Web Page Development or CIST-0117, Networking I.

# CIST-0232 UNIX Scripting and Utilities

#### 3 hours credit

This course will instruct the student in the hands-on installation of a UNIX operation Systems. The basic commands needed to administrate and manage the UNIX OS using the command line structure will be covered as well. In addition to that, students will be able to describe computer system hardware, software and development, describe UNIX features and components, access UNIX and implement commands and create UNIX shell scripts. *Prerequisite: CIST-0117, Networking I.* 

## CIST-0236 Database Management (MS Access)

#### 3 hours credit

This course explores a "user" directed computer language. The software is used to perform tasks that once required hours of coding and logic development. Topics and projects include planning, building, modifying, maintaining, and using a database, sorting and indexing a file. Keyboarding skills are beneficial. *Prerequisites: CIST-0101 Computer Concepts and Applications or CIST-0111 Microcomputer Business Software*.

## CIST-0240 C++ Programming

#### 3 hours credit

The C++ programming language is a general purpose programming language featuring short statements, ease of writing and utilization of a wide variety of standard pre-written library functions and objects as well as installation (user) defined and cataloged functions and objects. It allows the programmer to secure functions and data through the use of objects. *Prerequisite: CIST-0180, Programming Algorithms.* 

## CIST-0242 JavaScript II

## 3 hours credit

JavaScript II continues with more advanced uses of JavaScript in Web Page Programming. Students will learn to use JavaScript with Dynamic HTML and use JavaScript with CSS Styles. Students will learn to set and read cookies and be introduced to security concerns with JavaScript. Server-side JavaScript Development with Netscape LiveWire and Microsoft Active Server Pages will be introduced. Students will receive an overview of connecting to databases with LiveWire and MS Active Server Pages. Finally, the use of JavaScript and Java in Web Development will be introduced. *Prerequisite: CIST-0152, JavaScript.* 

# CIST-0243 Swift Programming

#### 3 hours credit

This course will introduce students to iOS app development in Swift, a new programming language from Apple, and serves as the launching point into the iOS Developer. In this course, students will become familiar with the Xcode Integrated Development Environment as well as the programming structures and syntax used by Swift. Students will also learn to implement the elementary of programming using swift and will learn about programming concepts that are unique to Swift. Finally, students will demonstrate what they learned on a simple iOS app. *Prerequisite: CIST0101 and CIST 0180*.

## CIST-0244 IOS Mobile Applications Development

#### 3 hours credit

This course will introduce students to the tools and APIs required to build applications for the iPhone and iPad platform using the iOS SDK. User interface designs for mobile devices and unique user interactions using multi-touch technologies is introduced as well. Object-oriented design using model-view-controller paradigm, memory management, swift programming language and other topics include: object-oriented database API, animation, multi-threading and performance considerations are included in this course. This course will enable students to develop apps that incorporate many of the powerful features of swift programming language and Cocoa touch. *Prerequisites: CIST-0243 Swift Programming.* 

# CIST-0246 Special Problems in Data Warehousing

## 3 hours credit

This course will further enhance and hone the students' data warehousing skills. The students will complete a project based on the needs of the community at the time of the course offering. Students will mine, develop, and load data, to create a data warehouse

as a means of offering assistance to the community while at the same time gaining practical real world experience. *Prerequisites: CIST-0154, Principles of Data Warehousing.* 

# CIST-0248 Web Database Connectivity

#### 3 hours credit

Web Database Connectivity provides students with the knowledge to connect a Web Server to various databases, construct webbased forms to retrieve information dynamically from databases and store information from consumer's input. Students will also learn the fundamentals of secure websites for e-commerce. *Prerequisites: CIST-0137*, *HTML Web Page Development or CIST-0117*, *Networking I*.

## CIST-0250 Networking IV

#### 4 hours credit

This is the fourth of four semester courses designed to provide students with classroom and laboratory experience in current and emerging networking technology that will empower them to enter employment and/or further education and training in the computer networking field. Topics that will be covered include wide area networks (WAN), WAN design, point to point protocol (PPP), integrated services digital network (ISDN), frame relay, and advanced network management. Students will complete their design and documentation of a hypothetical network. This class uses the Cisco Academy Material, CCNA semester 4. *Prerequisites: CIST-0216 Networking III*.

# CIST-0252 Data Design and Implementation (MCSE SQL)

#### 4 hours credit

This course will prepare the student for work in a medium to enterprise computing environment that uses SQL Server, implementing relational databases in environments with the following characteristics:

Heterogeneous databases

SQL Server security integrated with Windows Authentication

Client/server configurations of 50 to 5,000 or more users

Web configurations that use Internet Information Services (IIS) or COM+

Databases as large as 2 TB

Multiple installations of SQL Server

Preparation for Microsoft Exam 70-029(MCSE elective). Pre-requisites: CIST-0226, SQL Server.

## CIST-0255 Legal Issues in Cybersecurity

#### 3 hours credit

This course provides students with knowledge of legal and policy related issues to Cybersecurity. It includes topics like the government and the private sector legal authorities and obligations of protecting computer systems and networks, legal, political economy and technology perspectives of Cybersecurity, federal laws, executive orders, regulations, and cyber intrusions related cases, and Cybersecurity international law and politics. The course also explains legislative and technology issues in Cybersecurity area and provides students with chances to discuss this dynamic area issues at the intersection of law, technology, and policy. *Prerequisite: CIST-0125, Network Security.* 

## CIST-0256 Object Oriented Programming using Java

#### 3 hours credit

This course is designed as a continuation of course CIST-0180. This course will include a brief review of the material covered in CIST-0180 and then proceed to address the more advanced features of the Java programming language. Programs and projects are designed to illustrate the use of classes, objects, Inheritance, Polymorphism and Composition. Java GUI elements will be examined in detail. The life cycle and use of applets (with graphics) will be reviewed along with screen management. Event driven processing, multithreading and exception handling will be demonstrated by class projects. *Prerequisite: CIST-0180, Programming Algorithms*.

## CIST-0257 Android Mobile Applications Development

#### 4 hours credit

In this course, students will learn how to write Android applications. Android Fundamentals blends theory and practice are introduced to the students to help them build android applications the right way. In this course, students will work, step-by-step, to build great Android applications, and learn best practices of mobile development in general and Android development in particular Android application programming is introduced by giving the students a solid foundation so they can imagine, design, create and deploy their own applications. This class will cover the major Android topics such as Views, Activities, Intents, Broadcast Receivers, and Content Providers. It will also cover Location-based services, Sensors and App Deployment.

## CIST-0262 C++, Programming Language II

#### 3 hours credit

This second semester of programming using C++ covers a review of control structures, functions, arrays with special focus on structured programming. In addition, an object-oriented approach is used for problem solving and programming using classes and objects. Simple examples are used to demonstrate Abstract Data Types, operators, templates, pointers, linked lists, stacks, queues, virtual functions, fried functions, recursion, and the efficient use of STL for sorting and searching. The language is independent of the software. The techniques used are applicable to the Visual C++ 6.0, visual C++.NET, Borland C++ and other C++ programming environments. Learning advanced programming structures gives the "edge" and appreciation of the "behind the scene" work that is involved in programming that uses GUI. *Prerequisites: CIST-0240, C++ Programming*.

#### CIST-0270 Web Server (NT & IIS)

#### 3 hours credit

Web Server will instruct the student with the tools required to install and manage the IIS Web Server site. Topics will include the setup of: TCP/IP, security and miscellaneous services. *Prerequisites: CIST-0117*, *Networking I*.

## CIST-0272 Server Side Programming Using PHP

#### 3 hours credit

CGI Perl teaches CGI scripting techniques using the CGI Perl module. Students learn how to create on-demand, server-based HTML; write and process fill-out forms; write responses to form submissions back to the client browser; store and process cookies; handle file uploads securely; create, read, and write to text databases; attach JavaScript and cascading style sheets to created-on-demand web documents; and to maintain state through multi-page forms. Students also explore CGI Perl's role in server push technology and continuous page updating (NPH). Students are not required to have previous Perl programming experience, although a thorough knowledge of HTML is necessary. *Prerequisites; CIST-0137, HTML Web Page Development.* 

# CIST-0280 Advanced Java Programming

## 3 hours credit

This course is designed as a continuation of course CIST-0256, Java. This course will include a brief review of the material covered in CIST-0256 and then proceed to address the more advanced features of the Java language. Programs and projects are designed to illustrate the use of inheritance and objects. The Abstract Windows Toolkit (AWT) will be examined in detail. The life cycle and use of applets (with graphics) will be reviewed along with screen management. Event driven processing, multithreading and exception handling will be demonstrated by class projects. File processing will be covered. *Prerequisites: CIST-0256, Java.* 

## CIST-0299 Industrial Internship (Computer)

## 3 hours credit

This course is designed with the help of the participating industries to provide students with industrial environment experience. This college supervised industrial internship (computers) will provide applied industrial practices, policies, processes and procedures. Students will be exposed to shop floor safety, customer relationship and documentation. This course will bridge the gap between industrial practices and college teaching. After completing this college supervised industrial internship, students will have better transition from college to industries. This course may also open new doors for employment opportunities. Prerequisites: CIST-0117, Networking I. Students should be enrolled in either 3rd or 4th Semester. Students should get advanced approval of internship project.

#### CIST-0332 Linux Server Administration

#### 3 hours credit

This course will instruct the student in the hands-on installation, configuring and maintaining a Linux server Operating system in a networked environment. The basic commands needed to administrate and manage the Linux server OS using the command line structure will be covered as well. Additionally, Students will learn to perform basic administrative tasks such as adding and managing users, creating and maintaining file systems, developing and implementing a security policy. Also, students will perform Linux network-related tasks.

#### CONS-0101 Safety Orientation

## 1 hour credit

This is the basic safety course. It is in alignment with NCCER and the Kansas Board of Regents. It is also a component of the Core Curriculum for the KCKCC Construction Technology program and the KCKCC Building and Property Maintenance Program. The course topics include: OSHA 10 certification, Environmental sustainability, Introduction to Safety Orientation, Hand and Power Tool Safety, Hazard Recognition - Evaluation and Control, Elevated Work and Fall Protection, Construction Health, Work Permit Systems, Personal Protective Equipment, Trenching Safety, Signs - Signals and Barricades, Materials Handling and Storage, Housekeeping, Emergency Response, Electrical Hazards, Specialty Work, and Fire Protection and Prevention. Hazard Communication, Work-Zone Safety, High-Voltage Hazards, Welding Safety, Steel Erection, Walking and Working Surfaces, Ladders and Scaffolding, Horizontal Directional Drilling Hazards, Heavy-Equipment, Crane, and Rigging Safety, Trenching Safety, Forklift Safety, Lockout/Tagout, Confined Spaces, and Concrete and Masonry. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

## CONS-0106 Introductory Craft Skills

#### 3 hours credit

This is an introduction to the construction trades. It is in alignment with NCCER and the Kansas Board of Regents. It is also a component (in part) of the Core Curriculum for the KCKCC Construction Technology program and the KCKCC Building and Property Maintenance program. The course topics include: Environmental sustainability, Basic Safety, Introduction to Construction Math, Introduction to Hand Tools, Introduction to Power Tools, Construction Drawings, Basic Rigging, Basic Communication Skills, Basic Employability Skills, and Introduction to Materials Handling. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

# CONS-0107 Masonry (Level 1)

## 2 hours credit

This is the basic masonry course. It is in alignment with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Introduction to Masonry, Masonry Tools and Equipment, Measurements, Drawings, and Specifications, Mortar, and Masonry Units and Installation Techniques. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

# CONS-0108 Carpentry Basics

## 4 hours credit

This course is the basic carpentry course. It is in alignment with NCCER and the Kansas Board of Regents. It is (in part) a component of the Core Curriculum for the KCKCC Construction Technology program and the KCKCC Building and Property Maintenance program. The course topics include: Environmental sustainability, Orientation to the Trade, Building Materials, Fasteners, and Adhesives, Hand and Power Tools, Reading Plans and Elevations, and Commercial Drawings. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

# CONS-0109 Floors, Walls & Ceiling Framing

# 4 hours credit

This course is the basic carpentry course. It is in alignment with NCCER and the Kansas Board of Regents. It is (in part) a component of the Core Curriculum for the KCKCC Construction Technology program and the KCKCC Building and Property Maintenance program. The course topics include: Environmental sustainability, Hand and Power Tools, Floor Systems, Wall and Ceiling Framing, Thermal and Moisture Protection, and Exterior Finishing. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

# CONS-0110 Concrete Finishing (Level 1)

#### 3 hours credit

This is the basic concrete finishing course. It is in alignment with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Introduction to Concrete Construction and Finishing, Safety Requirements, Properties of Concrete, Tools and Equipment, Preparing for Placement, Placing Concrete, Finishing, Part One, Curing and Protecting Concrete, and Introduction to Troubleshooting. *Prerequisites: KBOR approved Core Curriculum. OSHA* 10, Math Level 3 Recommended.

#### CONS-0111 Roof Framing

#### 3 hours credit

This course is the basic carpentry course. It is in alignment with NCCER and the Kansas Board of Regents. It is (in part) a component of the Core Curriculum for the KCKCC Construction Technology program and the KCKCC Building and Property Maintenance program. The course topics include: Environmental sustainability, Hand and Power Tools, Roof Framing, and Roofing Applications. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

## CONS-0112 Drywall Level 1-2

#### 3 hours credit

This is the course in Drywall. It is in alignment with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Orientation to the Trade, Construction Materials and Methods, Thermal and Moisture Protection, Drywall Installation, and Drywall Finishing. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

## CONS-0113 Windows, Doors, & Stairs

#### 3 hours credit

This course is the basic carpentry course. It is in alignment with NCCER and the Kansas Board of Regents. It is (in part) a component of the Core Curriculum for the KCKCC Construction Technology program and the KCKCC Building and Property Maintenance program. The course topics include: Environmental sustainability, Hand and Power Tools, Windows and Exterior Doors, and Basic Stair Layout. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

## CONS-0115 Electrical (Level 1)

## 3 hours credit

This is the basic electrical course. It is in alignment with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Fasteners and Anchors, Electrical Theory One, Electrical Theory Two, Electrical Test Equipment, Introduction to the National Electrical Code®, Boxes, and Fittings, Conductors, and Wiring: Residential. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

## CONS-0123 Insulating

#### 3 hours credit

This is the course in Insulating. It is in alignment with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Orientation, Trade Relations, Tools of the Trade, Material Handling, Storage, and Distribution, and installing Mineral Wool Insulation. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

# CONS-0136 Rigging Fundamentals

## 3 hours credit

This is the course in Rigging. It is aligned with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Basic Rigging, Rigging Equipment and Rigging Practices. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

# CONS-0140 Painting (Level 1)

# 3 hours credit

This is the basic course in Painting. It is aligned with NCCER (selected modules) and the Kansas Board of Regents. The course

topics include: Environmental sustainability, Careers in the Painting Trade, Safety, Ladders, Scaffolds, Lifts, and Fall Protection, Identifying Surface/Substrate Materials and Conditions, Protecting Adjacent Surfaces, Basic Surface Preparation, Sealants and Repair/Fillers, Introduction to Paints and Coatings and Brushing and Rolling Paints and Coatings. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

# CONS-0142 Plumbing (Level 1)

#### 3 hours credit

This is the basic plumbing course. It is in alignment with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Introduction to the Plumbing Profession, Plastic Pipe and Fittings, Copper Pipe and Fittings, Fixtures and Faucets, Introduction to Drain - Waste - and Vent (DWV) Systems, and Introduction to Water Distribution Systems. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

# CONS-0151 Scaffolding

#### 2 hours credit

This is the course in Scaffolding. It is in alignment with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Introduction to the Trade, Trade Safety, Trade Tools and Equipment, Trade Math, Stationary Scaffolds, Mobile Scaffolds and Suspension Scaffolds. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

# CONS-0155 Sprinkler Fitting (Level 1)

#### 2 hours credit

This is the basic course in Sprinkler Fitting. It is in alignment with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Orientation to the Trade, Introduction to Components and Systems, Steel Pipe, CPVC Pipe and Fittings, Copper Tube Systems and Underground Pipe. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

# CONS-0208 Carpentry (Level 2)

## 3 hours credit

This is the advanced course in Carpentry. It is aligned with NCCER and the Kansas Board of Regents. The course topics include: Environmental sustainability, Commercial Drawings, Roofing Applications, Thermal and Moisture Protection, Exterior Finishing, Cold-Formed Steel Framing, Drywall Installation, Drywall Finishing, Doors and Door Hardware, Suspended Ceilings, Window - Door - Floor and Ceiling Trim, Cabinet Installation, and Cabinet Fabrication. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

# CONS-0209 Masonry (Level 2)

## 2 hours credit

This is the advanced course in Masonry. It is aligned with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Residential Plans and Drawing Interpretation, Residential Masonry, Grout and Other Reinforcement, Metal Work in Masonry, and Advanced Laying Techniques. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Masonry 1.Math Level 3 Recommended* 

## CONS-0210 Concrete Finishing (Level 2)

## 3 hours credit

This is the basic concrete finishing course. It is in alignment with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Introduction to Concrete Construction and Finishing, Safety Requirements, Properties of Concrete, Tools and Equipment, Preparing for Placement, Placing Concrete, Finishing, Part One, Curing and Protecting Concrete, and Introduction to Troubleshooting. *Prerequisites: KBOR approved Core Curriculum. OSHA* 10, Math Level 3 Recommended.

# CONS-0215 Electrical (Level 2)

# 3 hours credit

This is the advanced course in Electrical. It is in alignment with NCCER (selected Modules) and the Kansas Board of Regents. The

course topics include: Environmental sustainability, Alternating Current, Motors: Theory and Application, and Electric Lighting. Prerequisites: KBOR approved Core Curriculum. OSHA 10, Electrical 1, Math Level 3 Recommended.

# CONS-0240 Painting (Level 2)

#### 3 hours credit

This is the advanced course in Painting. It is aligned with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Painting Failures and Remedies, Job Planning and Completion, Low-Pressure Water Cleaning, Coatings Two and Spray Painting (Conventional, Airless and HVLP). *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Painting 1, Math Level 3 Recommended.* 

#### CONS-0242 Plumbing (Level 2)

#### 3 hours credit

This is the advanced course in Plumbing. It is aligned with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Hangers - Supports - Structural Penetrations and Fire Stopping, Types of Valves, Installing and Testing Water Supply Piping, Installing Water Heaters. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Math Level 3 Recommended.* 

## CONS-0259 Sprinkler Fitting (Level 2)

#### 2 hours credit

This is the advanced course in Sprinkler Fitting. It is in alignment with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Hangers, Supports, Restraints, and Guides, General Purpose Valves, General Trade Math, Shop Drawings, Standard Spray Fire Sprinklers, Wet Pipe Fire Sprinkler Systems and Dry-Pipe Systems. *Prerequisites: KBOR approved Core Curriculum. OSHA 10, Sprinkler Fitting 1. Math Level 3 Recommended.* 

# COSM-0101 Scientific Concepts

#### 5 hours credit

This course provides classroom instruction in sanitation, hair and scalp, skin, nails for 115 hours as prescribed by the Kansas Board of Cosmetology. *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License.* 

# COSM-0105 Cosmetology Hair Care/Styling Services

#### 6 hours credit

This course provides both classroom and clinical instruction in Shampoos and rinses, scalp and hair care, facials and make-up, manicuring, pedicures and artificial nail enhancements. The course consists of 60 classroom hours and 115 clinical hours as prescribed by the Kansas Board of Cosmetology *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License.* 

# COSM-0106 Cosmetology Hair Care/Skin Care Services 6 hours credit

This course provides both classroom and clinical instruction in facials and make-up, artificial nail enhancements. The course consists of 60 classroom hours and 115 clinical hours as prescribed by the Kansas Board of Cosmetology. *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License.* 

## COSM-0107 Cosmetology Hair, Skin and Nail Care Services

#### 2 hours credit

This course provides both classroom and clinical instruction in artificial nail enhancements. The course consists of 15 classroom hours and 35 clinical hours as prescribed by the Kansas Board of Cosmetology. *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License.* 

#### COSM-0110 Chemical Services I

#### 4 hours credit

This course provides both classroom and clinical instruction in basic hair coloring, hair lightening, chemical waving, and chemical hair relaxing. The course consists of 45 classroom hours and 90 clinical hours as prescribed by the Kansas Board of Cosmetology. *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License.* 

## COSM-0111 Chemical Services II

#### 5 hours credit

This course provides both classroom and clinical instruction in basic hair coloring, hair lightening, chemical waving, and chemical hair relaxing. The course consists of 50 classroom hours and 110 clinical hours as prescribed by the Kansas Board of Cosmetology. *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License.* 

#### COSM-0112 Chemical Services III

#### 5 hours credit

This course provides both classroom and clinical instruction in basic hair coloring, hair lightening, chemical waving, and chemical hair. The course consists of 50 classroom hours and 105 clinical hours as prescribed by the Kansas Board of Cosmetology. *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License.* 

# COSM-0115 Hair Designing I

#### 5 hours credit

This course provides both classroom and clinical instruction in basic hair shaping, hair styling, and thermal techniques. The course consists of 50 classroom hours and 105 clinical hours as prescribed by the Kansas Board of Cosmetology. *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License.* 

#### COSM-0116 Hair Designing II

#### 5 hours credit

This course provides both classroom and clinical instruction in intermediate hair shaping, hair styling, and thermal techniques. The course consists of 50 classroom hours and 105 clinical hours as prescribed by the Kansas Board of Cosmetology. *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License.* 

# COSM-0117 Hair Designing III

#### 2 hours credit

This course provides both classroom and clinical instruction advanced hair shaping, hair styling, thermal techniques, and care and styling of hair pieces. The course consists of 15 classroom hours and 35 clinical hours as prescribed by the Kansas Board of Cosmetology. *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License.* 

# COSM-0120 Business Practices I

#### 1 hour credit

This course provides classroom instruction in management practices, salon development, insurance, client records and salesmanship. The course consists of 25 classroom hours as prescribed by the Kansas Board of Cosmetology. *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License.* 

## COSM-0121 Business Practices II

#### 2 hours credit

This course provides classroom instruction in management practices, salon development, insurance, client records and salesmanship. The course consists of 50 classroom hours as prescribed by the Kansas Board of Cosmetology. *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License.* 

# COSM-0125 Kansas State Law

# 2 hours credit

This course provides classroom instruction in the Kansas Board of Cosmetology General Laws, Rules and Regulations. The course consists of 50 classroom hours as prescribed by the Kansas Board of Cosmetology. *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License.* 

## CRJS-0101 Introduction to Criminal Justice

## 3 hours credit

This course provides an in-depth look at policy issues related to policing, courts, and corrections. It gives the student the opportunity to focus on difficult issues including the links between police, politics, law, corrections and the administration of Justice. This

course will review changes in law and police practices, preparation for prosecution, the court system, and finally the link between prisons and probation.

#### CRJS-0102 Introduction to Corrections

#### 3 hours credit

This course will focus on the origins, processes, organization, and contemporary trends of corrections in America. It examines the total spectrum of management, control and treatment of juvenile and adult offenders. Students will examine programs, practices, institutions and philosophies in order to see corrections as a part of the criminal justice system.

#### CRJS-0103 Police Patrol Procedure

#### 3 hours credit

This course is designed to acquaint the student with appropriate procedures for successful police patrol. Emphasis will be on current rules, regulations, general orders and standard operating procedures that would apply to police departments operating in the state of Kansas. Special attention will be given to hostage and terrorist situations. *Note: Only police recruits are eligible to take this course.* 

# CRJS-0104 Interpersonal Communications and Crisis Situations

#### 3 hours credit

This course will deal with verbal and non-verbal communication from the point of both sender and receiver. Much of the focus for this course will be on the skills necessary to defuse and arbitrate civil disturbances in such a fashion that enforcement action is not necessary (when possible and practical). Special attention will be paid to the problem areas of family crisis, stress, rape crisis, the hearing impaired and abuse of alcohol. *Note: Only police recruits are eligible to take this course.* 

# CRJS-0105 Vehicle Stops and Special Tactical Situations

#### 3 hours credit

Vehicle Stops and Special Tactical Situations deals with positive tactics police officers may employ on the street to effectively use their own firearms to defeat those of assailants. This course is devoted exclusively to understanding and mastering techniques that work for survival in real life situations. *Note: Only police recruits are eligible to take this course.* 

#### CRJS-0106 Defensive Tactics for Police

#### 3 hours credit

This course helps students to recognize common hazards facing the police officer and to learn the skills necessary to deal with these hazards. *Footnote: Only police recruits are eligible to take this course.* 

# CRJS-0107 Firearms Training and Safety

## 3 hours credit

The Firearms Training and Safety course is designed to present the student with the principles and fundamentals of the basic operation of the Glock 17 & 19, 9 mm Semi-automatic pistol as well as the Remington 870 pump shotgun. Special attention will be given to safety liabilities as well as cleaning and care. *Note:* Only police recruits are eligible to take this course.

# CRJS-0112 Organization and Administration of Criminal Justice Police Agencies

#### 3 hours credit

Students examine the principles, functions, and activities of police organization and administration, including planning and research, public relations, personnel and training, inspection and control, and policy formulation. *Footnote: This course is offered online and in the classroom.* 

# CRJS-0114 Techniques of Corrections

# 3 hours credit

This overview of institutional corrections and the theory of penology exposes students to methods of probation and parole, services available to the offender after leaving an institution, correctional reform, and the relationship between institutional and field techniques. *Prerequisite: Introduction to Corrections, CRJS-0102, or approval of instructor.* 

#### CRJS-0115 Probation and Parole

#### 3 hours credit

Students are taught the history and development of probation and parole and will examine issues in rehabilitation, legal aspects of parole and probation, supervision theory and techniques, and the relationship of probation and parole to other parts of the criminal justice system. *Prerequisite: Introduction to Corrections, CRJS-0102*.

## CRJS-0116 Juvenile Delinquency and Justice

#### 3 hours credit

This course examines the historical precedents of philosophical reasons for treating juveniles differently from adults. It also reviews empirical evidence about child development that can illuminate the reasons for their special status within the system. It will study the major theories that have been proposed as explanations of delinquent behavior. The course will also provide a detailed overview of the juvenile justice system, from its beginnings to the current state of the institution.

## CRJS-0117 Professional Responsibility in Criminal Justice

#### 3 hours credit

Explores the major components involved in the study of ethics, particularly as it applies to the field of Criminal Justice. Focus is placed on the code of conduct and ethics of the criminal justice profession and the standards held to in their professional role. Focus of the course is to produce professionals who are critical thinkers, and have the skills necessary to pursue sound ethics in their day to day decisions and activities.

## CRJS-0118 Law Enforcement Operations and Procedures

#### 3 hours credit

This course examines the role of police in society and the application of law concepts to policing scenarios. Students identify, discuss, and assess critical police practices and processes to include deployment, arrest procedures, search strategies and other operational considerations.

# CRJS-0119 Organization and Administration of Criminal Justice (Corrections) Agencies

#### 3 hours credit

This course acquaints the student with the conduct of practical modern administration theory, supervisory, management and principles and application within the unique operating structure of the corrections organizations.

## CRJS-0120 Cultural and Religious Diversity in Offender Populations

#### 3 hours credit

This course provides interaction and guidelines for dealing with cultural, religious and ethnic differences in potentially-volatile offender-settings. Students will learn to employ interventions strategies amidst varied and diverse offender populations.

# CRJS-0201 Criminal Investigation

#### 3 hours credit

Scientific aspects of criminal investigation are emphasized, including recording the crime scene; collection, preservation, and examination of evidence; techniques of criminal investigation; and examination of the capabilities and limitations of the advanced police science laboratory. This course provides an introduction to Criminal Investigation procedures, including theory of an investigation, case preparation, specific techniques of selected offences, questioning witnesses and suspects, and problems in criminal investigation.

# CRJS-0202 Criminal Investigation II

# 3 hours credit

An introduction to criminal investigation procedures, the course includes theory of an investigation, case preparation, specific techniques for selected offenses, questioning of witnesses and suspects, and problems in criminal investigation. *Prerequisite: Criminal Investigation I, CRJS-0201 or consent of the instructor.* 

## CRJS-0203 Criminal Law

#### 3 hours credit

This course provides a comprehensive overview of the classification and components of crimes, with particular emphasis on common and Kansas criminal law. The student will be provided basic theories of substantive criminal law. The student will develop the ability to identify crimes and to ascertain lesser charges that may be appropriate. Emphasis will be place on using examples based on actual court cases. The nature, sources and typed of criminal law will be examined. Note: This course is generally only offered in the fall semester.

#### CRJS-0204 Criminal Procedure

#### 3 hours credit

This course acquaints the students with the principles, duties, and mechanics of criminal procedure in the areas of arrest, force, and search and seizure. The types, degrees, admissibility, competence, and weight of evidence and proof are studied, and the course specifically deals with rules of evidence and procedures to follow at the operational level. *Prerequisites: CRJS-0203 Criminal Law I, or consent of instructor.* 

#### CRJS-0205 Traffic Administration and Control

#### 3 hours credit

This course is designed to provide the history of traffic administration and traffic problems, the growth of the police traffic function, traffic studies, accident causation factors, accident investigation, and traffic enforcement. The course will give students an understanding of traffic administration and control. *Note: This course is generally offered only during the spring semester. This course is also offered online.* 

# CRJS-0206 Criminal Justice Interview and Report Writing

#### 3 hours credit

This course focuses on the unique types of writing required in a criminal justice career. Students are required to gather pertinent information and then record that information by writing a variety of report narratives representative of those prepared by individuals working in a profession within the criminal justice system. *Prerequisite: None.* 

# CRJS-0207 Understanding Terrorism & Homeland Security

#### 3 hours credit

The world has changed since September 11, 2001. We remain a Nation at risk from terrorist attacks and will remain so for the foreseeable future. At all Threat Conditions, the fire service must remain vigilant, prepared, and ready to deter terrorist attacks. This course presents threat conditions and how the fire service can reduce the risks from terrorist attacks. Preparedness measures are provided to assist agencies in the development and implementation of appropriate agency-specific preparedness measures.

# CRJS-0209 Community Corrections

#### 3 hours credit

This course will focus on all forms of community-based correctional facilities. The student will examine origins, organization and trends in current traditional corrections as well as focusing on non-traditional community corrections: electronic monitoring, house arrest, day-treatment, boot-camp and fines. The course will also cover the shift in legislative strategy from how to help the offender to how to protect the community.

# CRJS-0210 Legal Issues in Corrections

## 3 hours credit

This course will investigate the origin, development and classification of criminal law as it applies to the correctional officer. It will review the rules of evidence of particular importance at the operational level, procedures in use of force, and search and seizure law. Additionally, it will discuss the applied correctional law of prisoner rights, legal responsibilities and liabilities of correctional personnel at the local, state, and federal level including juvenile offenders, probation and parole, and female offenders.

# CRJS-0211 Confinement Operations

#### 3 hours credit

This course will provide an overview of the operation and management principles of the institutional setting. The course prepares the student to perform supervisory functions related to control of prisoners and contraband, segregation and accountability of prisoners, prisoner privileges and records and reports required at correctional facilities.

## CRJS-0220 Supervision Techniques in Law Enforcement

#### 3 hours credit

This course places emphasis on examining the leadership, management and supervision techniques used in police organizations. This will include the administration, functions and development of such items as policies, procedures, rules and regulations that govern the operation of the police. Further, emphasis will be on planning, problem solving, public intervention, training, inspection and control, and field supervision techniques for various divisions or departments.

#### CRJS-0221 Criminal Justice Practicum

#### 3 hours credit

Students are required to observe (on site) and work with a criminal justice agency. The Program Coordinator and the agency must mutually agree to the practicum. Arrangements must be made for this practicum in the semester prior to enrollment. *Prerequisite:* Completion of the first three semesters of the criminal justice program (45 credit hours), a C grade average or better, and approval of both the Program Coordinator and the agency in which the practicum will occur.

## CRJS-0222 Current Topics in Law Enforcement

#### 2 hours credit

Includes in-service training for law enforcement agencies, covers current police operations and the law. Emphasis placed on current topics such as officer survival, ethics, and effective communications.

## CRTE-0100 Comp TIA A+Essentials

#### 3 hours credit

Students will gain the knowledge required to assemble components based on customer requirements, install, configure and maintain devices for end users. This course also covers the basics of networking and security/forensics, proper and safe diagnosis, resolve and document common hardware issues while applying troubleshooting skills.

## CRTE-0101 COMP TIA A+ Practices

#### 3 hours credit

Students will gain the knowledge required to install, configure and maintain software for end users. This course will also cover the basics of networking and security/forensics, properly and safely diagnose, resolve and document common software issues while applying troubleshooting skills. Students will also gain appropriate customer support and soft skills; understand the basics of virtualization, desktop imaging, and deployment.

# CRTE-0102 Introduction to the Personal Computer, Safety and Tool Usage for PC Technicians

# 3 hours credit

Students will gain an understanding of what IT Industry Certifications are available. Students will be introduced to what a computer system is. Students will identify the names, purposes, and characteristics of cases and power supplies. Identify the names, purposes, and characteristics of internal components. Identify the names, purposes, and characteristics of ports and cables. Identify the names, purposes, and characteristics of output devices. Explain system resources and their purposes. Basic safety practices for the computer repair workplace including: hardware and software tools, and the disposal of hazardous materials and MSDS sheets. Learn safe use of Digital Multi-Meters and basic electricity. Students will be introduced to Surge Suppressors, UPS and SPS. *Prerequisite: Basic Computer Skills are required for enrollment.* 

# CRTE-0104 Computer Assembly and Troubleshooting for PC Technicians

## 3 hours credit

In this class we will learn how to properly open cases. Learn power supply installation, motherboard installation, attachment of devices to the motherboard. Install internal drives. Install drives in external bays. Install adapter cards. Connect all internal cabling.

Re-attachment of side panels and connect external cables to the computer, boot the computer for the first time. Learn Preventive maintenance as a regular and systematic inspection, cleaning, and replacement of worn parts, materials, and systems. Utilize Preventive maintenance as a means to prevent failure of parts, materials, and systems by ensuring that they are in good working order. Troubleshoot as a systematic approach to locating the cause of a fault in a computer system. How a good preventive maintenance program can help minimize failures. How Preventative maintenance and systematic troubleshooting can save an organization time and money. Students will be introduced to a systematic method of solving a problem. Students will learn to utilize flowcharts to help solve difficult problems. *Prerequisites: CRTE0102 Introduction to Personal Computing, Safety and Tool Usage for PC Technicians*.

# CRTE-0106 Advanced Operating Systems

#### 3 hours credit

Students will gain the knowledge required to assemble components based on customer requirements, install, configure and maintain devices for end users. This course also covers the basics of networking and security/forensics, proper and safe diagnosis, resolve and document common hardware issues while applying troubleshooting skills.

# CRTE-0108 Laptops and Mobile Devices

#### 3 hours credit

Upon completion of this course students will be able to identify and describe laptops and other portable devices. Identify and describe the components of a laptop. Compare and contrast desktop and laptop components. Explain how to configure laptops. Compare the different mobile phone standards. Identify common preventive maintenance techniques for laptops and portable devices. Describe how to troubleshoot laptops and portable devices. With the increase in demand for mobility, the popularity of laptops and portable devices will continue to grow. During the course of your career, you will be expected to know how to configure, repair, and maintain these devices. The knowledge you acquire about desktop computers will help you service laptops and portable devices. However, there are important differences between the two technologies. To facilitate mobility, laptops and portable devices use wireless technologies more than desktops. All laptops use batteries when they are disconnected from a power source. Docking stations are commonly used to connect a laptop to peripheral devices. As a computer technician, you will be required to configure, optimize, and troubleshoot these docking stations and accessories, as well as the laptop or portable device that they accompany. Many laptop components are proprietary, so some manufacturers require that you complete specialized certification training to perform laptop repairs. Servicing laptops can be very challenging. Mastering the skills necessary to work on laptops is important to your career advancement.

# **CRTE-0110** Printers and Peripherals

## 3 hours credit

This class will provide the student with essential information about printers and scanners. Students will learn how printers operate, what to consider when purchasing a printer, and how to connect printers to an individual computer or to a network. Students will also be expected to describe the types of printers currently available. Describe the installation and configuration process for printers. Describe the types of scanners currently available. Describe the installation and configuration process for scanners. Identify and apply common preventive maintenance techniques for printers and scanners and be able to effectively and efficiently troubleshoot printers and scanners. You will learn how to maintain, install, and repair these devices in both local and network configurations. This course discusses safety hazards, configuration procedures, preventive maintenance, and printer and scanner sharing. After completing this chapter, you will meet these objectives: Describe how to share a printer and a scanner on a network. Upgrade and configure printers and scanners. Describe printer and scanner preventive maintenance techniques. Troubleshoot printers and scanners.

## **CRTE-0112** Networking for PC Technicians

## 3 hours credit

This chapter will provide an overview of network principles, standards, and purposes. The following types of networks will be discussed in this class: Local Area Network (LAN), Wide Area Network (WAN), and Wireless LAN (WLAN) The different types of network topologies, protocols, and logical models as well as the hardware needed to create a network will also be discussed in this class. Configuration, troubleshooting, and preventive maintenance will be covered. You will also learn about network software, communication methods, and hardware relationships. This course focuses on advanced networking topics, including network design, network component upgrades, and e-mail server installations. Basic networking topics such as safety, network components,

and preventive maintenance are also discussed. To meet the expectations and needs of your customers and network users, you must be familiar with networking technologies. You must understand the basics of how a network is designed and why some components affect the flow of data on a network. Troubleshooting advanced network situations is also described in this course. After completing this chapter, you will meet these objectives. *Prerequisites: CRTE0110 Printers and scanners for PC technicians*.

## CRTE-0114 Security for PC Technicians

#### 3 hours credit

This class focuses on the technicians need to understand computer and network security. Failure to implement proper security procedures can have an impact on users, computers, and the general public. Private information, company secrets, financial data, computer equipment, and items of national security are placed at risk if proper security procedures are not followed. After completing this chapter, you will meet these objectives: Explain why security is important. Describe security threats. Identify security procedures. Identify common preventive maintenance techniques for security. Troubleshoot security. *Prerequisites: CRTE-0112 Networking for PC Technicians.* 

# CRTE-0115 Applied Networking I

#### 2 hours credit

As the course title states, the focus of this course is on learning the fundamentals of networking. In this course, you will learn both the practical and conceptual skills that build the foundation for understanding basic networking. Students will examine human versus network communication and see the parallels between them. Students will be introduced to the two major models used to plan and implement networks, OSI and TCP/IP. Students will gain an understanding of the "layered" approach to networks. Students will examine the OSI and TCP/IP layers in detail to understand their functions and services. Students will become familiar with the various network devices and network addressing schemes. Students will discover the types of media used to carry data across the network. By the end of this course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

# CRTE-0116 Advanced Topics and Customer Skills for PC Technicians

#### 3 hours credit

This class will discuss the students' potential career as a technician, your ability to determine if a component for a customer's computer should be upgraded or replaced. It is important that you develop advanced skills in installation procedures, troubleshooting techniques, and diagnostic methods for computers. This course discusses the importance of component compatibility across hardware and software. It also covers the need for adequate system resources to efficiently run the customer's hardware and software. After completing this course, you will meet these objectives: Give an overview of field, remote, and bench technician jobs. Explain safe lab procedures and tool use. Describe situations requiring replacement of computer components. Upgrade and configure personal computer components and peripherals. Identify and apply common preventive maintenance techniques for personal computer components. Troubleshoot computer components and peripherals. This class will discuss the relationship between communication skills and troubleshooting? As a computer technician, you will not only fix computers but will also interact with people. In fact, troubleshooting is as much about communicating with the customer as it is about knowing how to fix a computer. In this class, you will learn to use good communication skills as confidently as you use a screwdriver. *Prerequisites: CRTE-0114 Security for PC Technicians.* 

## CRTE-0117 Applied Networking II

#### 2 hours credit

The focus of this course is on learning the architecture, components, and operations of routers and switches in a small network. In this course, you will learn how to configure a router and a switch for basic functionality. Students will be able to describe enhanced switching technologies such as VLANs, VLAN Trunking Protocol (VTP), Rapid Spanning Tree Protocol (RSTP), Per VLAN Spanning Tree Protocol (PVSTP), and 802.1q. Students will be able to configure and troubleshoot basic operations of a small switched network. Students will be able to configure and verify static routing and default routing. Students will be able to configure and troubleshoot basic operations of routers in a small routed network. Students will configure and troubleshoot VLANs and inter-VLAN routing. Students will configure, monitor, and troubleshoot ACLs for IPv4 and Ipv6. Students will be able to configure, monitor, and troubleshoot ACLs for IPv4 and Ipv6. By the end of this course, you will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks

## CRTE-0200 Server Operating Systems and Virtualization

#### 3 hours credit

This class will introduce the student to the knowledge and skills required to build, maintain, troubleshoot and support server hardware and software technologies. The successful candidate will be able to identify environmental issues; understand and comply with disaster recovery and physical / software security procedures; be familiar with industry terminology and concepts; understand server roles / specializations and interaction within the overall computing environment.

#### CRTE-0201 Server Administration

#### 3 hours credit

This class will introduce the student to the knowledge and skills required to build, maintain, troubleshoot and support server hardware and software technologies. The successful candidate will be able to identify environmental issues; understand and comply with disaster recovery and physical / software security procedures; be familiar with industry terminology and concepts; understand server roles / specializations and interaction within the overall computing environment.

#### CRTE-0202 Linux Windows and Practical Server

## 3 hours credit

This class will introduce the student to the knowledge and skills required to build, maintain, troubleshoot and support server hardware and software technologies. The successful candidate will be able to identify environmental issues; understand and comply with disaster recovery and physical / software security procedures; be familiar with industry terminology and concepts; understand server roles / specializations and interaction within the overall computing environment. This class will rely heavily on reinforcing the concepts thru lab activities.

#### CRTE-0203 Computer Network Security

#### 3 hours credit

This course is an introduction to the basic concepts, of computer and network security. Students will learn the knowledge and skills required to identify risk and participate in risk mitigation activities, provide infrastructure, application, operational and information security, apply security controls to maintain confidentiality, integrity and availability, identify appropriate technologies and products, and operate with an awareness of applicable policies, laws and regulations.

# CRTE-0204 Operating System Fundamentals for Server+

## 2 hours credit

This course examines the components of the most popular networking operating systems in operation today, including Windows 2000 and Linux. In this module, desktop operating systems will be reviewed, including their components, limitations, and their relationship to network operating systems. This module provides an overview of PCs including the OS and computer networks. Microsoft Windows is detailed from the beginnings of MS-DOS to the latest Windows XP. The UNIX and Linux operating systems are also detailed from their origins to the current configurations. Most network applications, including the Internet, are built around a client/server relationship. The student will learn how this relationship works along with the components and configurations of the NOS. *Prerequisites: CRTE-0116 Advanced Topics and Customer Skills for PC Technicians*.

# CRTE-0205 Introduction to Networking for Server+

## 2 hours credit

This course starts with an overview of networking. The student will learn about the types of networks used today, including LAN, WAN, peer-to-peer, and client/server. The benefits of an open system as opposed to a proprietary system are discussed. The OSI model represents an open system. As covered in this chapter, the OSI reference model divides the functions of the network into seven layers that enable communication. The student will gain an understanding of protocol suites including specific protocols used in TCP/IP, IPX/SPX, and AppleTalk. This course will also explain LAN architecture, Ethernet, Token Ring, and FDDI. *Prerequisites: CRTE-0204 Operating Systems for Server+*.

# CRTE-0206 Physical Components of a Network for Server+

## 2 hours credit

In this course, the student will study the fundamentals of the network. The choices that are made when a computer network is designed determine how well the system works. This course discusses how the physical and logical topology combined with the network media and devices allow all the computers connected to the system to communicate with each other and the Internet.

Prerequisites: CRTE-0205 Introduction to Networking for Server+.

#### CRTE-0207 TCP/IP Networking for Server+

#### 2 hours credit

In this course the student will learn how the layers of the TCP/IP work together to communicate on a network, how addresses are assigned, and how a computer name is translated into an IP address and back again. Additionally, the functions performed by each of the major protocols that compose the TCP/IP protocol suite will be discussed. *Prerequisites: CRTE-0206 Physical Components of a Network for Server+*.

#### CRTE-0208 Overview of Network Services for Server+

#### 2 hours credit

This course provides an introduction to network operating systems (NOSs). The ability to access a remote system is also discussed. This allows a system administrator to efficiently maintain a network. A directory service provides system administrators with centralized of all users and resources across the entire network. The student will learn other NOS services that allow users to communicate, share files, and print. They will also learn how to access the Internet, an intranet, and an extranet. *Prerequisites: CRTE-0206 Physical Components of a Network for Server+*.

# CRTE-0209 Introduction to Network Operating Systems for Server+

#### 2 hours credit

A computer operating system (OS) is the software foundation on which the computer applications and services run. Similarly, a network operating system (NOS) enables communication between multiple devices and the sharing of resources across a network. A NOS is, generally, an operating system that runs on a network server, such as Linux, UNIX, or Microsoft Windows Server. This course covers the following network operating systems: Microsoft Windows NT 4.0 Microsoft Windows 2000/XP Microsoft Windows 2002/2003 Server Linux UNIX. *Prerequisites: CRTE-0208 Overview of Network Services for Server+*.

#### CRTE-0211 NOS Installation and Boot Process for Server+

# 2 hours credit

An IT professional is typically asked to perform software installations, including application software and operating systems. Installing an operating system (OS), especially a network operating system (NOS), can be one of the most complex installation tasks. This course is an overview of the NOS installation process, including how to plan for the installation and how to troubleshoot installation problems.

## CRTE-0212 Windows 2000 Professional for Server+

#### 2 hours credit

This course details the Windows 2000 operating system. There are four steps to the installation. Once it is verified that the system is compatible, Windows 2000 guides the administrator to the final step of logging on. The chapter also covers the management of user accounts and file systems in order to provide the administrator with the necessary information to share folders, files, and assign permissions. The student will also learn about Windows 2000 services that are configured to provide access to the web, e-mail, and other computers. *Prerequisites: CRTE-0211 NOS Installation and Boot Process for Server+*.

## CRTE-0214 Linux Installation Procedures for Server+

#### 2 hours credit

This course covers the installation and configuration of X server on a Linux system. Some distributions install and configure X automatically. However, this chapter covers how to customize or change any of the X server settings once the installation is complete. Once the operating system has been installed there are several post installation tasks and configurations that need to be done. *Prerequisites: CRTE-0212 Windows 2000 professional for server+*.

## CRTE-0215 Linux Administration for Server+

## 2 hours credit

This course details the Linux operating system. Linux is primarily intended to be a server based Network Operating System (NOS). The installation includes a few additional steps that are not found in Windows 2000. Once it is verified that the system is compatible, Linux guides the administrator to the final step of logging on. Managing user accounts and the file system are also covered in this

chapter in order to provide the administrator with the necessary information to share folders, files, and assign permissions. The student will also learn about Linux daemons that are configured to serve web content, provide e-mail service, and so on. *Prerequisites: CRTE-0214 Linux Installation for Server+*.

#### CRTE-0217 Advanced NOS Administration for Server+

#### 2 hours credit

This course will cover the types of backups that can be done. In addition, the student will learn how to map a drive in order to provide users with access to information stored on network servers. Monitoring the system is a required task that allows the administrator to keep track of resources, including disk management, CPU usage, and memory usage. This course also covers the key concepts of analyzing and optimizing the network. With this information, problem-solving guidelines can be implemented in the troubleshooting process. *Prerequisites: CRTE-0215 Linux Administration for Server+*.

## CRTE-0218 Installing and Maintaining Hardware in Linux for Server+

#### 2 hours credit

This course covers how to manually configure new hardware with the various hardware that is used on a Linux system. This course also covers special installations and tweaks that will need to be done when installing Linux on a laptop or mobile device. *Prerequisites: CRTE-0217 Advanced NOS Administration for Server+*.

# CRTE-0220 Troubleshooting the Operating System for Server+

#### 2 hours credit

This course analyzes how experienced system administrators rely on a proven and systematized methodology to solve system problems. How they must be able to recognize common error conditions and know their usual causes. How they must learn to evaluate symptoms in such a way as to isolate their probable origin. Then it is necessary to apply their experience in knowing what sorts of tests to run and avenues to explore in order to verify hypotheses regarding the problem, or to gather more data. They need to know what to do to fix the problem, or where to go to get assistance quickly, then follow through by doing it. They should document what they learn along the way to make it easier to attack any recurrences of the problem. Finally, they need to educate users in a way that will either prevent the problem from occurring again, or at least enable them to provide meaningful feedback if it does. *Prerequisites: CRTE-0218 Installing and Maintaining Hardware in Linux for Server+*.

# CRTE-0221 Network Security for Server+

#### 2 hours credit

This course will detail the importance of developing a security policy in order to guard against the internal and external threats to a network. The student will learn the security measures to implement. Patching and upgrading the Network Operating System (NOS) will ensure that the system is current. Additionally, the student will gain an understanding of firewalls and proxies. *Prerequisites: CRTE-0220 Troubleshooting the Operating System for Server+*.

#### CRTE-0223 Work Place Skills for PC Technicians

## 3 hours credit

This course is an introduction to work place skills. The course topics include: Resume writing, cover letters, applications, personal data sheets, portfolios, interviewing tactics, work place ethics and basic work place soft skills.

# CRTE-0224 Work Place Skills for Server+

## 2 hours credit

This course is an introduction to the basic concepts, personal qualities, habits, attitudes and social graces that make someone a good employee and a compatible co-worker.

# CULN-0100 Equipment and the Industry

## 1 hour credit

Students will learn about the food service industry including: history, current trends and important people. Also, we will cover equipment/utensils (use and care, safety, and the importance of kitchen design).

## CULN-0120 Cooking Methods

#### 2 hours credit

During this course students will learn to read and follow a recipe, convert recipes, learn how to properly use and care for knives, practice mise en place, and explore basic cooking methods including seasoning and flavoring dishes.

#### CULN-0130 Food Production I

#### 4 hours credit

This course will explore stock making; soups; sauces; salad and salad dressings; and breakfast preparation. Students will participate in labs while also focusing on prior concepts of safety and sanitation, mise en place and knife skills. *Prerequisites: ServSafe Certification, Cooking Methods*.

#### CULN-0140 Food Production II

#### 4 hours credit

We will be exploring red meats, game, poultry, game birds, fish and shellfish during this course. Composition, structure, inspection, grading, classification, handling and storage will be covered for each type of meat. Students will be exposed to various cooking methods for each type and pairing with sides will be discussed. Presentation and appropriate garnish for each meat will be covered and practiced. *Prerequisites: ServSafe, Cooking Methods, Food Production I.* 

#### CULN-0150 Food Production III

#### 4 hours credit

This course will expand on prior knowledge but also includes vegetable cookery, pasta and rice cookery, sandwich making, hors d'oeuvres, and food presentation. Students will be required to plan a 4 course menu and execute it appropriately using their prior knowledge from other courses. Also, students will explore International Cooking to apply all skills learned throughout the class.

# CULN-0160 International Cooking

#### 2 hours credit

Students will explore several different regions of World Cuisine, learning to apply basic cooking methods for each region including spices, meats and side dishes. *Prerequisites: CULN-0120 Cooking Methods, CULN-0205 ServSafe.* 

# CULN-0170 Menu Marketing and Planning

## 2 hours credit

Students will explore the various factors that impact menu creation; design and layout; how to price the items; and analyze the performance of items in a menu. This course is part of ManageFirst in which students may receive a certification in this area after passing the national test.

# CULN-0190 Hospitality and Restaurant

## Management

#### 3 hours credit

This course is part of a series of courses that students can obtain a certificate in after completing the material and passing the exam. We will focus on leadership roles including management; employee issues; communication; problem solving and other items important in management.

# CULN-0200 Inventory and Purchasing

## 2 hours credit

This class focuses on proper control of inventory and how to make purchases that are profitable to a food service establishment. This is a ManageFirst class which students may become certified in after successfully completing an exam.

## CULN-0205 ServSafe

## 1 hour credit

Students will be given an in-depth look at the food safety and sanitation. We will discuss the responsibility of a foodservice establishment in assuring their facilities are safe and sanitary for their employees and customers. Students are required to take and pass the National ServSafe test. After successfully passing the exam students will receive a certification and can participate in food

preparation labs.

#### CULN-0206 Beginning Baking

#### 3 hours credit

Students will explore the basic principles behind the science of baking; equipment; ingredients and their specific functions; and the various elements/techniques used to create baked goods. Students will produce a variety of baked products including yeast breads; quick breads; cookies; and pies. *Prerequisites: CULN-0205 ServSafe*.

### CULN-0207 Advanced Baking

#### 3 hours credit

Students will take a more in-depth look at Baking and Pastry used in the bakeshop. An introduction to pastry making is incorporated into a variety of products that will be prepared. Students will be preparing cakes and frosting; decorate cakes; creams; custards; sauces; fruit desserts; and other advanced products. *Prerequisites: CULN-0205 ServSafe, CULN-0206 Beginning Baking.* 

# CULN-0220 Culinary Capstone

### 3 hours credit

Students will apply all knowledge gained from previous Culinary Arts courses by creating, planning and executing a mock restaurant. Students will be managing other students in order to help them execute their restaurant concept. In turn, students will participate in other students mock restaurant experiences. In addition, students will be creating a portfolio using this experience to take with them for their future in the industry. *Prerequisites: Pass all courses in the Culinary Arts Program.* 

## CULN-0230 Culinary Arts Internship

#### 3 hours credit

Through an internship at a local company students will learn what it is like to work in the restaurant industry. Student must be working or interning at a job in the food service industry. *Prerequisites: Pass all required Culinary Arts classes*.

# DIGI-0115 Beginning Photoshop

#### 3 hours credit

This course is an introduction to Adobe Photoshop. It is oriented to students who have not been exposed to the formal study of this program. Students will learn the basic Photoshop work area and tools, including such concepts as selecting, layers, filters, painting, retouching, creating special effects. Students will work on various projects and may work with animation and preparing images for the web.

## DIGI-0116 Intermediate Photoshop

## 3 hours credit

Students will acquire a working knowledge of the tools and techniques of Adobe Photoshop, as they are applied to graphic design, multi-media and other studio art applications. It is intended to build on the Computer Art One (Beginning Photoshop) course. The course will cover: advanced operation of tools and palettes, file formats, preparing and optimizing images for the web with Adobe Image Ready, transferring files, masks, paths and channels, color adjustment for printing and prepress production, advanced filters, animation for the web and general tips. *Prerequisite: DIGI-0115, Beginning Photoshop.* 

## DIGI-0117 Advanced Photoshop

# 3 hours credit

Students will acquire an advanced knowledge of the tools and techniques of Adobe Photoshop, as they are applied to graphic design, multi-media and other studio art applications. The course will cover: operation of tools and palettes in advanced design projects. *Prerequisite: DIGI-0116, Intermediate Photoshop or its equivalent.* 

# DIGI-0131 Two Dimensional Design I

## 3 hours credit

A course for beginning art students and those interested in art fundamentals, Two-Dimensional Design I introduces basic elements, principles, and techniques or organization used by artists. Six hours of studio per week are required.

## DIGI-0132 Two Dimensional Design II

#### 3 hours credit

Two Dimensional Design II continues from Two Dimensional Design I. It requires the student to complete a series of designs based on the esthetics of various 20th century painting movements. *Prerequisites: DIGI 131 Two Dimensional Design I*.

## DIGI-0174 Beginning Illustrator

#### 3 hours credit

Students will acquire a working knowledge of the tools and techniques of Adobe Illustrator, as they are applied to graphic design, multi-media and other studio art applications. The course will cover: advanced operation of tools and palettes.

#### DIGI-0175 Advanced Illustrator

#### 3 hours credit

Students will acquire an advanced knowledge of the tools and techniques of Adobe Illustrator, as they are applied to graphic design, multi-media and other studio art applications. The course will cover: advanced operation of tools and palettes. *Prerequisite: DIGI-0174, Beginning Illustrator*.

# DIGI-0176 Graphic Design: Multi-Media

and Web I

#### 3 hours credit

Students will acquire an introductory knowledge of the design and development of multimedia interactive interfaces and production of graphic images for those interfaces. A variety of software programs will be utilized in the production of still images and animations including some video editing. *Prerequisite: DIGI-0115, Beginning Photoshop.* 

# DIGI-0177 Graphic Design: Multi-Media

and Web II

#### 3 hours credit

Students will acquire an advanced knowledge of the design and development of multimedia interactive interfaces and production of graphic images for those interfaces. A variety of software programs will be utilized in the production of still images and animations, including video editing. The production of interactive multimedia projects for student's professional portfolios will be emphasized. *Prerequisite: DIGI-0176, Graphic Design: Multi-Media and Web I.* 

# DIGI-0178 Graphic Design: Print Media I

## 3 hours credit

This course is an introduction of techniques and information for graphic design focusing on print media. This course stresses creative development with sections on the history of graphic design, the design process, text and typography, layout, advertising design and electronic prepress. *Prerequisites: DIGI-0115, Beginning Photoshop.* 

## DIGI-0179 Graphic Design: Print Media II

## 3 hours credit

This course is an advanced course covering a continuation of techniques and information for graphic design focusing on print media covered in the prerequisite DIGI -0178 Graphic Design: Print Media I. This course stresses creative development with sections on the history of graphic design, the design process, text and typography, layout, advertising design and electronic prepress. This course emphasizes the practical use of digital tools and processes in graphic design as well as color management for graphic design. *Prerequisites: DIGI-0115, Beginning Photoshop; DIGI-0174, Beginning Illustrator; DIGI-0180, Publication Design (Quark)*,

# DIGI-0178, Graphic Design: Print Media I.

# DIGI-0180 Publication Design (Adobe InDesign)

# 3 hours credit

Publication Design teaches the skills necessary for employment in the Design Industry or additional education. The class focuses on Adobe Indesign and the use of additional software in graphic design and page layout. The course covers digital typesetting, page composition, publication design as used in a professional environment, desktop publishing, the use of scanners, printers, digital drawing tablets, as well as files and images from a variety of programs which include Adobe applications and their proper use in

page layout in Indesign.

#### DIGI-0191 Internship: Digital Graphics

#### 3 hours credit

Students will work in an approved training situation under instructional supervision. The internship is designed to give the student the opportunity to use the skills learned in the digital graphics program. Student interns will be required to complete a minimum of 135 hours of on-the-job training. *Prerequisites: DIGI-0176, Graphic Design: Multimedia and Web I, DIGI-0178, Graphic Design: Print Media I.* 

# DIGI-0193 Digital Imaging Portfolio Production

#### 3 hours credit

This course will provide instruction in the production of a professional portfolio based on current industry trends which included an electronic and printed portfolio utilizing the skills acquired in Advanced Photoshop, Advanced Illustrator, Publication Design, Graphic Design: Multimedia & Web I and Graphic Design: Print Media I. In addition to portfolio production, the course will provide instruction for the proper design and format for an industry specific resume. Self-promotion, networking, job searches and interview skills will also be covered. *Prerequisites: DIGI0176, Graphic Design: Multimedia and Web I; DIGI1078, Graphic Design: Print Media I; DIGI0180, Publication Design; DIGI0174, Beginning Illustrator.* 

## ECED-0100 Introduction to Early Childhood

## 3 hours credit

Introduction to Early Childhood Education covers the foundations of the education profession, the diverse educational settings for young children, professionalism and planning developmentally appropriate programs for all children. Topics include historical foundations, program types, career options, professionalism and creating inclusive environments and curriculum responsive to the needs of all children and families. Upon completion, students should be able to design career plans and develop schedules, environments and activity plans appropriate for all children. The course requires a minimum of five observational visits to a variety of educational settings: infant/toddler, preschools, Early Head Start/Head Start program, Kindergarten,  $1^{st} - 3^{rd}$ , and special education classroom. Observation visits total ten hours.

## ECED-0110 Infant/Toddlers I

#### 3 hours credit

Infant/Toddler I begins the introduction of developmental theories and milestones of children aged 0 to 3 within the context of cultural, linguistic, and abilities diversity. Sensitivity to attachment and the importance of observation and communication skills to nurture positive family, caregiver, and child relationships through the roles of primary caregiving, transitions, and continuity of care will be highlighted as students learn to design responsive programs for infants and toddlers and their families. The course requires a minimum of 15 hours in primary settings with NAEYC accreditation, or licensed early childhood programs for family, group, center, Head Start, faith-based, pre-k or nursery school setting must be approved by coordinator.

# ECED-0111 Infant/Toddler II

## 3 hours credit

Infant, Toddler II is designed to teach students to apply theory, research and evidenced-based practices to infants and toddlers (prenatal-3 years). The focus of course is on the observation, care and support of young children (birth to 35months) who are typical developing, at risk, or experiencing developmental delay. Supervised participation in an assigned natural environment for infant/toddlers and on-campus seminars are required. Course requires 15 hour field experiences in programs serving children 0 to 36 months of age. Primary settings with NAEYC accreditation, or licensed early childhood programs for family, group, center, Early Head Start, faith-based, pre-k or public or private infant/toddler agency or setting must be approved by coordinator.

#### ECED-0112 Preschool Child I

#### 3 hours credit

Preschool Child I focus is on the development, implementation and assessment of appropriate environments and curricula for young children ages three through five. Emphasis is on understanding children's developmental stages and developing appropriate learning opportunities, interactions and environments in the following areas: emergent literacy, math, science, technology and social studies. Course requires 15 hours out of class experiences in programs serving children 0 to 5 years of age. Primary settings with NAEYC accreditation, or licensed early childhood programs for family, group, center, Head Start, faith-based, pre-k or nursery school setting must be approved by coordinator.

#### ECED-0113 Preschool Child II

#### 3 hours credit

Preschool Child II focuses on the development, implementation and assessment of appropriate environments and curricula for young children ages three through five. Students prepare to utilize developmentally appropriate practices in a context of family and culturally sensitive care. Emphasis is on understanding children's developmental stages and developing appropriate learning opportunities, interactions and environments in the following areas: dramatic play, art, music, fine and gross motor play. Course requires 15 hours. out of class experiences in programs serving children 3 to 5 years of age. Primary settings with NAEYC accreditation, or licensed early childhood programs for family, group, center, Head Start, faith -based, pre-k or nursery school setting must be approved by coordinator.

## ECED-0120 Portfolio Development in Early Childhood

#### 4 hours credit

The Portfolio Development in Early Childhood course examines the role of the early childhood professional in the workplace. Topics to be discussed include leadership, working in a team, and professional ethics. Additionally, students will learn about the legislative process in Kansas and explore their role in advocating for public policy to support children, families, and early care and education programs. Students will develop a resume and create a Professional Portfolio that can be used for interview purposes, a NAEYC Standards Portfolio or application to the Child Development Associate (CDA) credential. The Standards Portfolio will include competency statements with supportive artifacts for NAEYC Standards for Early Childhood Professional Preparation for Associate Degree Programs. *Prerequisite: Permission of Program Coordinator*.

# ECED-0140 Observation and Assessment in Early Childhood

#### 3 hours credit

The Observation and Assessment in Early Childhood course introduces methods of observing, documenting, and assessing children's learning from 0 to age 8 in the context of cultural and developmental variations. Students are introduced to learning standards and assessment tools for evaluating safe and healthy indoor and outdoor learning environments, adult-child interaction and child developmental skills. Students will create a professional report including formative and summative assessments, checklists, work samples, pictures, and interviews. The course requires five observational visits to a variety of early childhood settings Early childhood programs must be a licensed family, group, center, Head Start, faith-based, public or private pre-k—grade-3 settings. Observation visits total ten hours (two hours each). *Prerequisite: ECED0100 – Introduction to early Childhood Education.* 

## ECED-0143 Creative Activities for Young Children

#### 3 hours credit

The Creative Activities for Young Children course covers planning, creation and adaptation of developmentally supportive learning environments with attention to curriculum, interactions, teaching practices and learning materials. Emphasis is placed on creating and adapting integrated, meaningful, challenging and engaging developmentally supportive learning experiences in art, music, movement and dramatics for all children. Course requires 10 hours out of class experiences in programs serving children 0 to age 8. Primary settings with NAEYC accreditation, or licensed early childhood programs for family, group, center, Head Start, faith-based, pre-k or nursery school setting must be approved by coordinator.

## ECED-0150 Health, Safety and Nutrition in Early Childhood

## 3 hours credit

The Health, Safety and Nutrition for Young Children course presents the basic health, nutrition and safety management practices for young children within the context of cultural, linguistic and ability diversity. Targeted information on establishing and maintaining a physically and psychologically safe and healthy learning environment appropriate for the needs of young children emphasizing Universal Design for Learning are included.

# ECED-0170 Early Childhood Curriculum

## 3 hours credit

The Early Childhood Curriculum course explores the principals involved in planning, implementing and evaluating developmentally appropriate, evidence-based curriculum for young children. The analysis of a wide range of early childhood curriculum models is emphasized with emphasis on Universal Design for Learning. Fifteen hours of out of class observation in settings serving children 0 to age 8. Primary settings with NAEYC accreditation, or licensed early childhood programs for family, group, center, Head Start, faith based, public and private pre-k or nursery school setting must be approved by coordinator.

## ECED-0180 Developing Language and Literacy in Early Childhood

#### 3 hours credit

The Developing Language and Literacy course is designed to expand students' understanding of emergent language and literacy development and provides strategies for enhancing language/literacy experiences in an enriched environment. Topics include selection of diverse literature and interactive media, the integration of literacy concepts throughout the curriculum, appropriate observations / assessments and inclusive practices. Students will explore the early childhood language arts curriculum including speaking, listening, writing, and reading skills. Students will create plans and materials for use with children with linguistic, cultural and ability diversity. Prerequisites: ECED0100 level courses must be completed prior to ECED0200 level courses or completed in the concurrent semester.

# ECED-0199 Topics in Early Childhood

#### 3 hours credit

The Topics in Early Childhood course provides an elective course with an announcement of the specific topic at the time a special studies course is scheduled, along with any applicable enrollment requirements or prerequisites. An in-depth study of the attitudes and behaviors pertinent to early childhood and to the student's professional development. Emphasis is placed on using developmentally appropriate practices in planning and teaching; professional ethics; building collaborative relationships with colleagues and families; and being a reflective teacher. (A special studies course may be repeated as specific topic is offered.)

## ECED-0200 Early Childhood Program Planning & Administration

#### 3 hours credit

The Early Childhood Program Planning and Administration course combines the direct application of child development knowledge, state regulations and national standards to organization and administration of high quality early childhood programs; to collaborate with families, school districts and communities and to engage in strategic planning. Designed for current and future directors of child care/child development centers, Parents as Teachers, Part C Programs (Tiny-K), Early Head Start, Head Start programs and community-based pre-kindergarten and kindergarten programs. Course requires 5 hours of outside class experiences in programs serving children 0 to age 8. Primary settings with NAEYC accreditation, or licensed early childhood programs for family, group, center, Head Start, faith based, public and private pre-k or nursery school setting must be approved by coordinator. *Prerequisites: ECED0100 level courses must be completed prior to ECED0200 level courses or completed in the concurrent semester*.

# ECED-0210 Family, Community and Professional Partnerships

#### 3 hours credit

The Family, Community and Professional Partnerships course explores the role of families, communities, and culture in the development of children from 0 to age 8 in the context of cultural, language and ability diversity. Students focus on developing skills and identifying benefits for establishing, supporting, and maintaining respectful, collaborative relationships between diverse families, programs/schools, and community agencies/resources. *Prerequisites: ECED0100 level courses must be completed prior to ECED0200 level courses or completed in the concurrent semester.* 

## ECED-0220 Social, Emotional Development and Behavior

#### 3 hours credit

The Social Emotional Development and Behavior course involves the study of classroom management, motivation, building self-esteem, positive discipline strategies and social and emotional development in children. Emphasis is placed on managing the environments, rules and limits, problem behaviors appreciating oneself and others, preventing child abuse, promoting success with appropriate materials and activities, interacting through play and developing friendships with respect to cultural, linguistic and cultural diversity. *Prerequisites: ECED0100 level courses must be completed prior to ECED0200 level courses or completed in the concurrent semester.* 

# ECED-0250 Early Childhood Inclusion and Intervention

#### 3 hours credit

The Early Childhood Inclusion and Intervention course introduces students to disabling conditions in early childhood. Emphasis is on assessment, adaptations, modifications and participation in a special education and natural settings for young children age's birth to 8 including services provided to children and families within Part C and Part B of IDEA. Course requires ten hours out of class experiences in programs serving children 0 to 60 months of age. Primary settings with NAEYC accreditation, or licensed

early childhood programs for family, group, center, Head Start, Faith based, public and private pre-k or nursery school setting must be approved by coordinator. *Prerequisites: ECED0100 level courses must be completed prior to ECED0200 level courses or completed in the concurrent semester.* 

#### ECED-0260 Early Childhood Internship

#### 3 hours credit

In the Early Childhood Internship course, students apply, analyze, and synthesize their knowledge of children's development and learning within the context of cultural, linguistic, and ability diversity. This course is a supervised practicum with a minimum of 15 clock hours in seminar and 90 clock hours in a Clinical Site approved by the program coordinator (e.g. accredited agency or approved site). Up to 45 hours may be completed in the student's employment site with coordinator approval. Primary settings with NAEYC accreditation, or licensed early childhood programs for family, group, center, Head Start, faith based, public and private pre-k setting must be approved by the program coordinator. *Prerequisites: ECED0100 level courses must be completed prior to ECED0200 level courses or completed in the concurrent semester.* 

# ECED-0295 Survey of Exceptionalities

#### 3 hours credit

The Survey of Exceptionalities course provides an overview of the field of special education geared to those who are preparing to work with children and youths (birth to 21) with special needs in the context of cultural, language and ability diversity. The course provides fundamental information on the historical context of disability, laws and legal cases affecting the delivery of services to individuals with exceptionalities, and the principles of effective educational approaches for each exceptionality including early intervention and programs services for those identified as gifted and talented. IDEA categories of exceptionality presented include low incidence and high incidence disabilities (e.g. learning disabilities, behavior disorders, communication disorders, autism, traumatic brain injury, physical disabilities, sensory impairments, other health impairments, and multiple and severe disabilities).

# ECED-0296 Student Teaching B-Pre-K

#### 5 hours credit

The Student Teaching B-PreK course provides students the opportunity to demonstrate their knowledge of teaching young children in a context of cultural, linguistic, and ability diversity. The student teaching experience will occur in with children of age groups between birth to five in an inclusive setting. The course requires seminar attendance and 300 hours (20 hrs/wk) of field experiences in a primary settings with NAEYC accreditation, public funded or private pre-k or Head Start setting. Placement to be arranged in coordination and with permission of program coordinator. *Prerequisites: Completion of ECED and General Education requirements. GPA minimum 2.75.* 

## ECON-0201 Principles of Macroeconomics

## 3 hours credit

This course is designed to familiarize students with the basic concepts, methods and theories in the field of economics. As a social science, economics is concerned with scarcity of resources and all of the problems and concerns as a result. Beginning with an introduction to the field of economics, history of economic thought, economic theories and methodology, this course examines macro-structural issues such as Gross Domestic Product (GDP), unemployment, inflation, stagflation, Fiscal policy, Keynesian economics, Money and Banking, Monetary policy, Monetarism, economic growth and development, international trade and finance, and selected contemporary issues. *Prerequisite: None.* 

## ECON-0202 Principles of Microeconomics

#### 3 hours credit

This course is designed to familiarize students with the basic concepts, methods and theories in the field of economics. As a social science, economics is concerned with scarcity of resources (its central assumption) and all of the problems and concerns as a result. Beginning with an introduction to the field of economics, history of economic thought, economic theories and methodology, this course examines microeconomics topics such as consumer demand theory, utility analysis, production process, cost of production, market and market structures, competition and the notion of efficiency, wage determination, regulation, unionization, and selected contemporary issues. *Prerequisite: None.* 

#### ECON-0203 Introduction to Labor Studies

3 hours credit

This course is an integrated approach to the study of labor and economics and builds on the premise that the labor process, or work in general, can be better understood if it is grounded in the economic system within which it occurs. This course will thoroughly examine the American economic system together with specific issues and problems faced daily by American workers.

## ECON-0210 Principles of Community Economic Development

#### 3 hours credit

This course is a multidisciplinary and a multicultural approach to the study of community economic development. It examines the theoretical and the practical aspects of community economic development with particular emphasis is on the socio-economic and political indicators. Critical issues such as income, jobs, the environment, sustainability, taxation, political participation, entrepreneurship and community resource mapping among others are addressed. *Prerequisite: ECON-0201, Principles of Macroeconomics or ECON-0202, Principles of Microeconomics or consent of the instructor.* 

# ECON-0250 Introduction to the Political Economy of Globalization

#### 3 hours credit

This course is a multidisciplinary approach to the study of global political economy in general and GLOBALIZATION in particular. It is designed to introduce students to the basic concepts, theories and the history of contemporary globalization. To that end, competing theories and various historical epochs particularly the Post World War II era are discussed. Of particular interests are an examination of the impact of globalization on the nation-states' socio-economic and political structures, the nature and the scope of global capitalist class alliance, capital/labor relations, war and peace, global inequality, environmental issues, and human rights. Prerequisite: ECON-0201 Principles of Macroeconomics ECON-0202 Principles of Microeconomics, or SOSC-0107 Sociology, or GEOG-0101 Introduction to Cultural Geography, GEOG-0102 Introduction to Physical Geography, or INBU International Relations.

# **EDUC-0160** Introduction to Teaching: Career Awareness

## 3 hours credit

The goal of the course is increase awareness of self in relation to the roles of teachers and other K-12 teaching professionals. Career opportunities in education are considered, with an emphasis on what it means to be a professional teacher in today's high stakes environment of education. This course provides a well-rounded view of the teaching profession. Field experience is an important component of the course. It consists of twelve practical observation hours at school elementary, middle, and secondary levels. These practicum hours may also include interactions with practicing school professionals. Discussions in the course will attempt to connect the foundations of education to field experience.

# EDUC-0161 Studying Children and Adolescents in the Schools

## 3 hours credit

The course is an introduction to the psychological study of children and adolescents and their behavior in the school setting. Emphasis is placed on techniques of observing children and adolescents and methods to describe classroom engagement based on four domains of development: physical, cognitive, social and emotional. Twelve hours of observations in various classroom settings is required.

## **EDUC-0262** Education in a Multicultural Society

#### 3 hours credit

This class encourages an approach to teaching and learning that is based on cultural pluralism and an interdependent world. It promotes the concept of equal access and educational excellence among all children and youth. Students are introduced to the integration of multicultural perspectives into traditional curriculum and methods of instruction. The content of this class focuses on the social constructions of class, ethnicity, gender, and culture.

## ELET-0100 Safety (OSHA 30)

## 2 hours credit

This course is an introduction to various industrial safety and health considerations in the area of Electricity and its use. This course will cover basic safety rules and OSHA standards, identify the proper personal protective equipment needed for common industrial tasks and recognize the need for an ongoing safety program.

#### **ELET-0101** Electromechanical Systems

#### 3 hours credit

Upon successful completion of this course, the student should be able to identify electrical components and their relationships to the various repair and troubleshooting techniques. The materials in this course will prove useful to service technicians whose background in electricity is limited. The course includes material from basic electrical theory to troubleshooting complex electrical circuits. This course will provide practice in the application of electrical theory as well as in the interconnection of components of heating and cooling systems.

## **ELET-0104** Electrical Print Reading

#### 2 hours credit

This class will educate the student on: how to read and interpret blueprints, lay out a job from blueprints, calculate materials for a job from blueprints, draw electrical requirements a blueprint conforming to NEC, locate components on a wiring schematic, draw a schematic diagram, and learn work ethics.

# ELET-0105 Workplace Skills

#### 1 hour credit

Upon successful completion of this course, the student should be able to identify the job skills necessary to have a successful career in the field of his or her choosing. Topics include listening skills, oral communication, human relations, decision making/problem solving, how to work as a team, time and resource management, work ethics and career planning.

#### **ELET-0110** National Electric Code I

#### 4 hours credit

This is an introductory course on the use and interpretation of the current National Electrical Code. Students should develop a working knowledge of the code that will permit them to apply it to everyday applications. Upon successful completion of this course, the student should be able to use the code to design service entrances, feeders and branch circuits and discern between wiring methods used in difference occupancies. 4 hrs lecture /wk.

#### **ELET-0120** Electrical Math

## 3 hours credit

This course is the first of a two-semester sequence that will introduce the mathematical skills and concepts necessary in technical work. It will focus on the basics of algebra, geometry and trigonometry and their applications. Topics will include operations with polynomials, linear equations, systems of equations and right triangle trigonometry. *Prerequisites: Math Assessment Test.* 

#### ELET-0130 AC/DC Circuits I

## 4 hours credit

The purpose of the course is to provide the student an introduction to the basic principles of electricity including sources of direct (D.C.) and voltage. The student will learn Ohm's and Kirchhoff's Laws by working test and pictorial problems. They then will apply the knowledge in the laboratory. Software will also be utilized alongside learning the theories, and to back up the lab work. This is a foundation course of basic knowledge, skills, and aptitude preparing the student for more advanced electronics courses.

# ELET-0150 Residential Wiring I

#### 4 hours credit

This is an introductory course on residential wiring methods that includes practical application and hands-on experience in implementing the code requirements. Upon successful completion of this course, the student should acquire the necessary skills to wire a residence to meet the minimum requirements as set forth in the current National Electrical Code for residential occupancies. The student will be required to provide ANSI Z87 safety glasses and may be expected to provide other basic hand tools and/or equipment. *Prerequisites: ELET-0101 Electromechanical Systems or ELET-0110 National Electric Code I*.

# ELET-0151 Basic Residential Wiring II

## 4 hours credit

This course covers in more details electrical installation, operation, and maintenance for residential wiring. It will repeat some of the information in Residential Wiring I and focus on the National Electrical Code as well as wiring, equipment and etc.

Prerequisites: ELET-0150 Basic Residential Wiring I.

# ELET-0200 Commercial Wiring I

#### 4 hours credit

This course covers commercial wiring methods. Upon successful completion of this course, the student should be able to read commercial blueprints and apply the current National Electrical Code to commercial wiring systems. The student will gain working knowledge and hands-on experience with commercial wiring techniques. The student will be required to provide ANSI Z87 safety glasses and may be expected to provide other basic hand tools and/or equipment. *Prerequisites: ELET-0101 Electromechanical Systems*.

## **ELET-0203** Analog Circuits

#### 2 hours credit

This course presents the basic concepts of electrical, electronic and digital circuits, components and theory of operation.

#### **ELET-0206** Communication Fundamentals

#### 2 hours credit

This course is designed to provide specialized skills for installing and testing local area network cabling and wireless installation. Twisted-pair, coax and fiber cables will be introduced and contrasted based on their characteristics and applications. Laboratory exercises for terminating and testing network cables and installing wireless systems will accompany the lectures. Students will be trained how to use common wiring tools and testing instruments. Methods of documenting LAN systems will also be introduced.

#### ELET-0210 National Electric Code II

#### 4 hours credit

Upon successful completion of this course, the student should be able to use the current National Electrical Code to do calculations involving loads, lighting and circuit sizing. The course will cover typical load calculations used in both residential and commercial settings. The student should also be able to interpret and apply the National Electrical Code rules to special wiring systems including Hazardous Locations, Elevators, Remote-control circuits and Fire Alarm systems. *Prerequisites: ELET-0110 National Electric Code I.* 

## **ELET-0232** Electrical Circuits, Instruments, and Measurements

## 2 hours credit

This course introduces electrical symbols and their use in construction blueprints, electrical schematics, and diagrams. Topics include: Electrical Symbols, Component Identification, Print Reading, Scales and Measurement. *Prerequisites: ELET-0100 Electrical Safety, ELET-0101 Electromechanical Systems*.

# ELET-0240 HVAC Systems

## 2 hours credit

This is a beginning course in heating, ventilation and air conditioning technology that is appropriate for HVAC majors and other interested students. Upon successful completion of this course, the student should be able to identify the function of the basic components of an air-conditioning system. Topics will include heat laws, refrigerants, oils and refrigeration cycles of residential and light commercial systems. In the lab, students will design, assemble and operate a working refrigeration system. Competencies will include brazing, wiring, evacuating and charging a system. The student will be required to provide ANSI Z87 safety glasses and may be expected to provide other basic hand tools and/or equipment.

# **ELET-0245** Troubleshooting Techniques

# 2 hours credit

Students study all areas of electrical trouble shooting including evaluating customer complaints, observing system operations, formulating a plan, reading and interpreting schematics.

# **ELET-0250** Industrial Wiring

# 3 hours credit

This course will demonstrate the installation of wiring systems for a classified area. Demonstrate bending ability as applied to IMC,

GRC, and EMT conduit systems, to size feeders and branch circuits for multi-motor and single-motor systems and apply proper protective devices, and to learn work ethics.

## ELET-0253 Motor Controls

#### 3 hours credit

Students will have the opportunity to install manual and magnetic starters and contactors. The photoelectric and proximity controls and controls for agricultural and commercial equipment will be studied.

#### **ELET-0255** Programmable Controllers

#### 2 hours credit

This is an introductory course in programmable logic controllers. The course is designed for individuals without extensive electrical or controller backgrounds. Hardware aspects and programming aspects of controller operation are covered. The foundational controller logic symbols and controller logic operations necessary to interpret and write ladder logic programs are taught in this class. Students will enter, edit and test controller programs through assigned laboratory projects.

## ELET-0260 Digital Circuits

#### 2 hours credit

This is a beginning course in which students will study and practice the basic concepts of digital electronics. Topics will include digital number systems, logic gates, logic circuits, flip-flops, digital arithmetic, counters and registers.

#### **ELET-0265** Generators and Transformers

#### 2 hours credit

This is an advanced course on the use of generators, transformers and motors. Upon successful completion of this course, the student should be able to interpret and apply the rules of the current National Electrical Code to wiring systems composed of these electrical components. Also, the student will gain a working knowledge of the theory of these single-phase and 3-phase electrical components and their practical applications in everyday use in the electrical industry. *Prerequisites: ELET-0101 Electromechanical Systems*.

## ELET-0270 Automation Theory: Designing a Robot

#### 5 hours credit

This Robotics Technology course is designed for individuals wanting to know how automation and robots function in today's world. Ideas about automation are explored while looking at the movements that robots make and how they make them are explored. Past, present, and future designs of automation and robots are examined as these operations give rise to artificial intelligence. You as a student will build a robot from a robot kit. You will learn to develop your critical thinking skills in laboratory settings working on those skills as an individual and then develop those skills to become part of a team environment. Discovering a problem can advance an idea with a robotic device [design] that will [can] solve that problem which will become the emphasis of this team environment by building a prototype and testing it. You as a student will work on how to fix a "real world" problem; constantly researching and working on a better solution and testing and proving that theories do work.

## ELET-0280 Electrical Internship I

#### 2 hours credit

Upon successful completion of this course, the student should be able to apply classroom knowledge to an actual work situation. The internship will provide advanced students with on-the-job experience under the supervision of professionals in the industry. The work will be developed cooperatively with area employers, college staff and each student to provide a variety of actual job experiences directly related to the student's career goals. A minimum average of 15 hours per week on-the-job training is required. Students are expected to keep the instructor informed about progress and any job changes. *Prerequisites: Program Facilitator Approval.* 

## EMTC-0105 Emergency Medical Responder

## 5 hours credit

The EMTC-0105 course provides the opportunity to gain the knowledge and develop the skills necessary to administer basic life support care to ill or injured patients prior to advance medical personnel and EMS transport services. **This course is a pre-req to** 

EMTC-0128 and must be completed with a grade of "C" or better to enroll in EMTC – 0128 and to challenge the National Registry and Kansas certification exams. Certification is not required to gain entry into EMTC - 0128. Due to State of Kansas requirements discussed at the first class, attendance of the first class session is mandatory. *Prerequisite: COMPASS Reading score of 65+ or equivalent.* 

#### EMTC-0128 Emergency Medical Technician (EMT)

## 10 hours credit

The EMTC-0128 course provides the opportunity to gain the knowledge and develop the skills necessary to administer basic life support care to ill or injured patients, EMTC-0128 must be successfully completed with a grade of "C" or better to challenge the National Registry and Kansas certification exams and apply for certification as an EMT in the state of Kansas. A minimum of 12 clock hours of clinical and field work, in addition to scheduled class time, are required. This will be scheduled through your instructor. Due to State of Kansas requirements discussed at the first class, attendance of the first class session is mandatory. Prerequisite: COMPASS Reading score 65+ or equivalent, and successful completion of an approved Kansas Emergency Medical Responder Course or Human Anatomy and Physiology (BIOL-0143) or Director Approval.

## ENGL-0099 Pre-Composition

#### 3 hours credit

This course is designed to introduce students to college level writing and to prepare students for successful completion of Composition I and Composition II. Specifically this course focuses on principles of grammar, usage, sentence structure, and concepts of paragraph and essay writing. *Prerequisite: Appropriate assessment score as determined by the KCKCC Academic Resource Center Assessment Procedure.* 

## ENGL-0101 Composition I

#### 3 hours credit

Composition 101 is the first of two required composition courses. It is designed to help students achieve language proficiency and write paragraphs and essays which demonstrate unity, coherence, and levels of usage appropriate to the topic, purpose, and audience. *Prerequisite: COMPASS scores of 73 or better in reading & 45 or better in writing or completion of ENGL-0099 with a "C" or higher.* 

# ENGL-0102 Composition II

## 3 hours credit

Composition 102 is the second of two required composition courses. A continuation of ENGL-0101, Composition I, this course emphasizes research, bibliographic, and writing skills. Students write a minimum of four (4) graded documented essays in MLA format. *Prerequisite: Completion of Composition I, ENGL-0101, with a "C" or higher.* 

## **ENGL-0104** Introduction to Literature

## 3 hours credit

Introduction to Literature explores the literary elements of the short story, poem, novel, play, and essay. As students read and discuss representative works by well-known authors, they will form baseline knowledge regarding a writer's style and the distinctive features of different genres. Moreover, students will come to understand their own literary preferences while developing an appreciation for quality literature.

# **ENGL-0105** Early World Literature

# 3 hours credit

This introductory course to early world literature provides a general exposure to many western and non-western literary masterpieces composed from the ancient world through the Middle Ages and the Renaissance.

# **ENGL-0106** Modern World Literature

## 3 hours credit

This introductory course to modern world literature provides the student with a general exposure to the great literary masterpieces on all world continents from the Enlightenment period to the present. Students will develop a greater depth and breadth of literary awareness, as well as a greater appreciation of different cultures and their respective masterpieces.

#### **ENGL-0107** Children's Literature

#### 3 hours credit

Children's Literature is a course designed for students interested in bringing children and books together. It is especially for students with English or Education majors, for pre-school or elementary school teachers, for parents, for those working with children in day-care centers, for librarians, and for parents and grandparents. The course would also be beneficial for those exploring the field of writing and illustrating children's books. Students will identify children's needs and interests, learn the criteria for choosing books for children, and demonstrate the means by which children and books can be brought together. Students will read, examine, and critique a variety of children's literature selected by author, genre, and historical time period.

#### **ENGL-0108** Introduction to Poetry

#### 3 hours credit

This course covers a representative selection of classical and contemporary English and American verse, along with foreign-language poetry in translation. Students will have an opportunity to study poetry ranging from traditional styles to experimental forms. This course is a literature class, not a creative writing workshop.

#### ENGL-0109 Introduction to Fiction

#### 3 hours credit

Introduction to Fiction explores the short story and the novella and fosters an understanding of the essential vocabulary of literary criticism through class discussion and the writing of scholarly literary analysis.

#### ENGL-0131 The Movies

#### 3 hours credit

This course surveys the history of movies, with special emphasis on important films, directors, movements, and techniques. The students will become familiar with the rise of Hollywood and the studio system, several film genres and their evolution, and the chronological growth of film from the silents to the emergence of today's independent filmmakers both from the United States and on a global level. Films will be shown and discussed in class.

## **ENGL-0132** Science Fiction

#### 3 hours credit

This course investigates the formal, thematic, and stylistic characteristics of Science Fiction in a variety of formats such as the short story, the novel, and film. Students can expect a broad overview of the genre, including authors from the 19th and 20th centuries, and ending with any contemporary developments in Science Fiction, Fantasy, and/or related areas.

# **ENGL-0133** Women in Literature

## 3 hours credit

This is an introductory course to the representative literature of women authors beginning in the late seventeenth-century through the twentieth century. The literature will be explored from the historical, social, and literary perspectives while seeking to articulate gendered roles and identities. The course will address issues such as the social construction of gendered roles and identities; the perceptions of women's strengths and weaknesses; women's self-perception; and the varying ways in which women negotiate their positions as subordinate members in a society that privileges males. Different literary forms will be studied, including poetry and short stories. While the focus will be on common themes and perspectives, the course will also address differences in women's writing based on race, class, and ethnicity. The selections will include literature from the dominant culture, from minority cultures within the United States, as well as literature from international female authors.

# ENGL-0135 World Mythology

# 3 hours credit

This course introduces world myths that pervade cultures of both ancient and modern civilizations, enabling students to recognize and write about allusions to such myths found in art, architecture, and literature.

# ENGL-0136 Short Story

## 3 hours credit

This course examines one of the most popular literary genres: the short story. The popularity of the short story may arise from its conciseness in form, its focus on one major event, theme, or character. Stories include both nineteenth century classics and contemporary works. In addition to investigating the literary elements that form the short story genre, students may expect to study important schools of literary criticism and important movements within the history of the short genre.

#### **ENGL-0137** The Bible as Literature: Old Testament

#### 3 hours credit

This introductory course to the Bible as literature exposes students to the study of the Old Testament as literature. Selected readings from the Old Testament will be subjected to the scrutiny of literary and gendered analysis. The question of dates and authorship will be discussed. Students will learn about some of the different types of literature to be found in the Old Testament. Additionally, the materials will be analyzed in terms of imagery, symbolism, metaphor, theme, purpose, diction, voice, etc.

#### **ENGL-0140** Detective Fiction

#### 3 hours credit

Detective Fiction offers students a chronological overview of the genre. Several styles and authors will be covered, including the rise of the hard-boiled style of the 1930s and the 'noir' style of the 1950s, the rise of the 'cozy' mystery, and the evolution of the genre in the United States and globally. Various novels and short stories will be covered.

## **ENGL-0204** Creative Writing

#### 3 hours credit

Introduction to Creative Writing is open to all students regardless of skill level or prior experience with creative writing. With this in mind, ENGL-0204 is an introductory course designed to explore the art and craft of writing poems and short stories. In this course, we will read and discuss classic and contemporary examples of poems and short stories with the goal of understanding and increasing our awareness of the aesthetic choices writers face when composing poems and short stories. In addition, we will examine the formal and technical aspects of poetry and short stories. To this end, this course will employ a workshop format (common to upper-division creative writing courses) that will require students to submit original pieces of creative writing to the class for peer review.

## **ENGL-0206** Technical Writing

#### 3 hours credit

Designed for concise writing in the technical fields of computer science, engineering technology, electronics, drafting, construction management, and sciences, the course includes description tools and mechanisms, processes, analysis, editing, examination of literature in the major, and a field project. Technical management finds this course useful. *Prerequisites: Completion of ENGL-0101, Composition I, with a "C" or higher.* 

# **ENGL-0210** Early American Literature

## 3 hours credit

Early American Literature is a survey course which traces the origins of America's spiritual, political, and cultural growth from the Colonial Period to the Civil War. From the religious writings of authors such as Jonathan Edwards, Cotton Mather, and Anne Bradstreet, to the political writings of authors such as Thomas Paine, Benjamin Franklin, and the Federalist Papers; from the antislavery writings of authors such as Harriet Beecher Stowe, Frederick Douglass, and Henry David Thoreau, to the fiction of authors such as Hawthorne, Cooper, and Poe; students will come to understand the texts that serve as the foundation for much of what America has become today.

## **ENGL-0211** Modern American Literature

## 3 hours credit

Modern American Literature is a survey course which covers literature from the Civil War to the present. This course explores the birth of authentic American voices and themes. From local color writing and realism of the mid 1800's, to naturalistic writing in the early twentieth century, through imagism, surrealism, and minimalism; this is an exciting time in American Literature, producing nine Nobel Prize winners including Toni Morrison, John Steinbeck, Ernest Hemingway, William Faulkner, and Eugene O'Neil.

#### **ENGL-0212** Drama as Literature: Early to Modern

#### 3 hours credit

Drama as Literature is a course designed to allow students the opportunity to study plays as a literary form as distinguished from studying plays as performance. The course will begin with a survey of Classical Greek drama and finish by investigating the currents of the modern and contemporary stages. The goal of this course is to develop a heightened sensitivity to the vital elements of drama including plot, characterization, setting, dialogue, music, movement, and theme. Students will also examine various movements within dramatic history. Finally, students will apply critical methods of reading drama that will illuminate the intersection of class, race, gender, and power in the chosen plays.

#### **ENGL-0214** Afro-American Literature

#### 3 hours credit

This is a survey course of African American literature and culture examining the aesthetics of the African American literary tradition and exploring the African American experience through the analysis of music, poetry, fiction, nonfiction, and drama. The course content asks that we reconsider the sources of our knowledge of the past and to augment that knowledge through the voices of African Americans.

## **ENGL-0217** Early English Literature

#### 3 hours credit

Major British authors are studied within the context of their times and traditions. Through a variety of readings, including poetry, drama, and the essay, the class will explore the changing aesthetic, social, political, and ethical conventions of our literary heritage. Selected readings include English literature from Beowulf to the Neoclassical period. The survey may include works by Chaucer, Marlowe, Shakespeare, Milton, and others.

# **ENGL-0218** Modern English Literature

#### 3 hours credit

Major British authors are studied within the context of their times and traditions. Through a variety of readings, including poetry, drama, and the essay, the class will explore the changing aesthetic, social, political, and ethical conventions of our literary heritage. There will be selected readings in English literature beginning in the Romantic period with William Blake and concluding in the twentieth century. The survey may include works by Shelley, Keats, Tennyson, Yeats, Lawrence, Eliot, and others.

#### **ENGL-0220** American Indian Literature

#### 3 hours credit

This course surveys the literary traditions—from oral to contemporary literature—of tribes indigenous to the contiguous United States, fostering a familiarity with literary terms particular to understanding native literary elements, while examining American Indian influences on various periods of American literature through the discussion of and the writing of scholarly literary analysis.

## **ENGL-0221** Latino Literature and Cultures

#### 3 hours credit

The literatures and cultures from six representative regions in Latin America are explored. These regions include the Southern Cone (Argentina), the Andean Region (Peru), Central America (Guatemala and Nicaragua), the Caribbean (Colombia and Puerto Rico), Mexico, and Chicana literature in the United States. By reading short stories, two novels, and a testimonial, students will reflect on such issues as self-identity, recognition of otherness, race, class, gender, marginalization, and encroachment.

# **ENGR-0103** Descriptive Geometry

## 3 hours credit

Graphic solution of geometric problems in three dimensions, problems relate to points, lines and planes, the intersection and development of surface and forms and the practical applications of the principals involved. Emphasis is placed on developing the students' ability to read exactly, to think exactly, and to draw exactly.

# ENGR-0104 Applied Math I

# 5 hours credit

A survey of topics relevant to computer technicians that includes: number systems, logic, truth tables, Boolean algebra, base02 and

base 16 representation and circuit reduction. The course will emphasize problem solving techniques. *Prerequisite(s): above 46 or better on COMPASS or MATH-0099, Elementary Algebra & CIST-0101, Computer Concepts & Applications or Instructor Permission.* 

# ENGR-0105 Print Reading

#### 3 hours credit

Students will read, interpret and visualize drawings and prints from actual industries. This Course is designed to assist beginning and intermediate students to read and understand Industrial and Architectural prints.

## **ENGR-0106** Computer Aided Drafting

#### 3 hours credit

Computer-Aided Drafting introduces students to autocad concepts, processes, and systems as utilized in industry today. This course emphasizes commands and multi-color plotting, and methods that will help to make students productive and efficient in autocad. Students will be instructed in different methods by which commands may be utilized and objects constructs so as to increase proficiency in autocad. Students are instructed on new methods of producing engineering drawings with computers. Various output methods are employed including laser, inkjet.

#### **ENGR-0107** Construction Management

#### 4 hours credit

This course will provide the student with an overview of the construction process from excavation to final landscaping. Instruction will include calculating the cost of earthmoving, concrete preparation and finishing, and wood frame construction. Students will plan and schedule a construction project using the linear scheduling method, the bar chart method, and the critical path method.

#### **ENGR-0108** Electronic Circuit Fundamentals

#### 3 hours credit

This beginning course in electronics technology is to give a clear concept of direct current, the relationship between voltage, current and resistance. Also to familiarize with laboratory instruments, circuit components and basic measuring techniques. In order to build a solid foundation for the entire program, an individual must have a clear concept of D.C. electricity. The student must recognize basic electronic components, instruments and circuit symbols. The student should be able to draw a schematic diagram of a circuit. Last but not least, the student should know how to use the instruments and make quantitative measurements of electronic units. This introductory course is designed to lead students to understand and retain in their minds the basic circuit fundamentals of electronics. *Prerequisite: Simple understanding of mathematics*.

#### ENGR-0109 Semiconductor Electronics

#### 3 hours credit

Semiconductor Electronics is an introduction to semiconductor materials, the concept of junction and biasing, diodes, and transistors. Students use semiconductor components in circuits and construct circuits in laboratory experiments as well as recognize various semiconductor components and their characteristic data from the manufacturer's data books. *Prerequisite: Concurrent enrollment in ENGR-0108, Electronic Circuit Fundamentals recommended.* 

# **ENGR-0115** Circuit Analysis I

## 3 hours credit

A detailed study of D.C. Circuits, which includes Kirchhoff's Law, Superposition Theorem, A detailed study of D.C. Circuits, which includes Kirchhoff's Law, Superposition Theorem, Theorem and Norton's Theorem. There will be an explanation of RC time constants, capacitive circuits, inductive circuits, transformers and tuned circuits. Study of basic amplifiers and construction of power supplies circuits. To understand circuit analysis, it is necessary to understand various affecting factors such as voltages, current resistive, capacitive and inductive components. This course is designed to give maximum understanding in circuit analysis and circuit buildup. *Prerequisites: ENGR-0108 Electronic Circuit Fundamentals*.

# **ENGR-0140** Introduction to Global Positioning Systems

# 4 hours credit

This course will provide the student with knowledge of the Global Positioning System. The student will learn how to use

NAVSTAR GPS to locate precise positions on the globe; to plot a course and navigate using a handheld global positioning receiver. This course will show how civil drafting data may be collected on a GPS receiver and input into the computer to generate plot plans.

# ENGR-0151 Drafting Technology

#### 3 hours credit

This course is designed to provide fundamental knowledge of the principles of drafting as well as skill in the basic drafting construction methods. It covers such topics as orthographic projection, dimensioning, geometric construction, sketching, auxiliary views, sectioning, and charts and graphs.

# **ENGR-0152 3D Modeling Drafting with Inventor**

#### 4 hours credit

This course is designed to introduce students to 3D solid modeling using Autodesk inventor professional solid modeling drafting software. Students will become proficient in creating solid models of gears and other machine parts from which they will create multi-view drawings. Students will also be able to create assemblies and to put these assemblies to motion using Autodesk inventor professional software. The student will additionally gain knowledge of machine drafting and design, tolerancing, fits, fastening devices, gears, cams, welding drawings, assembly and working drawings as well as an understanding of drafting standards and industrial drafting practices.

# **ENGR-0154** Pictorial Drawing

#### 2 hours credit

Methods of pictorial representations and rendering are presented. There will be a study of axonometric, oblique and perspective projections. Pictorial drawing devices and methods of shading and rendering will also be presented.

#### **ENGR-0195** Fundamentals of ArcView GIS

## 4 hours credit

This course is designed to present the concepts upon which GIS technology is based, what it does, and how it works. ESRI ArcView Software will be used which will allow the student to become familiar with the most widely used GIS Software in the world. It will further allow students to visualize information in new ways revealing relationships, trends, and patterns that are not visible in other systems. The student will learn how to use ArcView Software to answer a variety of questions. *Prerequisite: ENGR-0131, Introduction to Geographic Information Systems.* 

# **ENGR-0196** GIS for Homeland Security

## 3 hours credit

In the wake of September 11, Hurricane Katrina, and Hurricane Ike, much attention has been focused on how to provide our communities and agencies with the most effective tools and solutions to prepare for, protect against, recover from, and respond to threats to our national security. GIS for Homeland Security will provide students with a hands-on, broad-based approach to learning GIS (Geographic Information System Technology) with emphasis in homeland security planning and operations. This course includes a series of exercises that will integrate the best practices of GIS and public safety in times of deliberate attacks and natural disasters. Students will utilize ESRI ArcView software to manipulate and analyze data and scenarios developed by the U.S. Department of Homeland Security. Students will apply geospatial analysis to enhance situational awareness, disseminate information, protect infrastructure and help communities recover from destructive and devastating events.

# ENGR-0204 Applied Calculus I

# 5 hours credit

This course is designed for Electronic students in particular, to teach them application of calculus in Electronics. Students will learn Limits, Graphic Differentiation, Derivatives, Maxima, Minima, Hyperbolic Function, Partial Derivatives, Integration, Maclaurin Series and Fourier series. Students will learn Fourier analysis and Laplace transform. They will perform laboratory experiments and do calculations using Laplace transforms.

Prerequisite: ENGR-0104, Applied Math I.

# **ENGR-0206** Advanced Computer Aided Drafting

#### 3 hours credit

This course is designed to advance the students' knowledge of CAD concepts, processes and systems. Students receive instruction on advanced methods of producing engineering drawings with computers. Subjects include architectural and engineering CAD template drawing, three dimensional drawing, database interchange, drawing digitization, CAD slide shows, and script file drawing. Advanced methods of drawing creation, management and storage will be utilized. Advanced output methods will include multicolor hardcopy and multipen plotting. *Prerequisite: ENGR-0106, Computer Aided Drafting.* 

## **ENGR-0211** Digital Electronics I

#### 4 hours credit

Detailed study of sequential logic circuits, counters, shift registers and clocks. Explain decoders, encoders, multiplexers, demultiplexers. There will be a study of code converters, memories and logic arrays. Explanation of digital test equipment and frequency counters. This course is a continuation of Digital Electronics, Part I. Upon completion of this course, the students will have a thorough understanding of computers and their operation. Students will be able to understand logic circuit, fault-finding and repair. Students will also have a firm understanding of memories used in digital computer systems and their capacities. Students, upon completion of this course, will be able to design and make any kind of digital displays, counters and registers. This course will lead to a good understanding of microprocessors. *Prerequisite(s): Completion of ENGR-0108, Electronic Circuit Fundamentals.* 

# ENGR-0216 CAD-MicroStation

#### 3 hours credit

Designed to introduce Computer-Aided Design (CAD) using MicroStation by BentleyTM, this course provides students with the opportunity to practice and develop proficiencies using software command syntax, CAD drawing strategies, cells libraries, and the input of numerical data.

## **ENGR-0225** Voice and Data Communication

# 4 hours credit

There will be a detailed study of voice and data communication network systems. A study of receivers, transmitters, station equipment and transmission media in telephone industries. Students will also learn about switching and networking, and will perform experiments in modulation, sampling, multiplexing and the telephone lines.

#### **ENGR-0251** Building Planning with REVIT

## 3 hours credit

This course is designed to introduce students to the concept of Building Information Modeling (BIM) and utilizes the Autodesk REVIT 3D Architectural software. This course will provide fundamental knowledge of such topics as sketching, architectural lettering styles, symbols and their interpretations. This course will aid students in becoming knowledgeable of building construction, building codes, building materials, dimensioning and section details. Emphasis will be placed on teaching students to become proficient in the use of REVIT software and in learning how buildings are constructed. They will be able to identify different parts of a building and building systems.

## **ENGR-0253** Structural Steel Drawing with REVIT

#### 3 hours credit

This course covers the practical and related information concerning the various types of structural steel, reinforced concrete, and curtain wall construction. A study is made of overall construction problems with emphasis on interpretations of technical drawings, erection plans, and detailed drawings.. *Prerequisite: ENGR-0106, Computer Aided Drafting*.

# ENGR-0257 CAD Systems

#### 3 hours credit

This course is designed for the person that will maintain daily operation of CAD systems. Information covered will be hardware selection, drawing naming and archiving techniques, keeping time records, file recovery techniques, using Windows to organize hard disk space, setting up CAD software for maximum performance, menu systems, symbol libraries, bill of material extraction, advanced CAD commands and an introduction to advanced Rendering. A continual shift from traditional drafting to computer

aided drafting has created a need for individuals to learn management of CAD systems. *Prerequisites: ENGR-0106, Computer Aided Drafting.* 

# **ENGR-0260** Advanced Machine Drafting

#### 4 hours credit

Students choose the field of specialization from the areas of architectural drawing, structural steel drawing, machine drafting, commercial building planning, or industrial illustration. They will follow the course outline designated for their area of specialization and proceed with advanced problems of that area performing both research and development using AUTOCAD<sup>TM</sup>.

## **ENGR-0262** Commercial Building Planning

#### 4 hours credit

This course is designed to provide knowledge of light commercial building through such topics as problems in planning a building, traffic flow, site conditions, building codes, general use categories, landscaping and miscellaneous problems. Drawings will be completed using AUTOCAD<sup>TM</sup> and architectural software. The student will design and draw plans for a light commercial building.

## **ENGR-0264** Industrial Illustration

#### 4 hours credit

Students choose an area of specialization from the areas of architectural, structural steel, machine drafting, or industrial illustration. Students will follow the course outline designed for their area of specialization and proceed with advanced problems in that area performing research and development.

## **ENGR-0266** Structural Steel Drafting

#### 4 hours credit

This course is a continuation of the Introduction to Structural Drawing, ENGR-0253. This course further develops the students' knowledge of prefabricated steel structures and advanced work in Computer-Aided Drafting (CAD).

# **ENGR-0268** Civil Drafting Technology

#### 4 hours credit

This course will provide the student with information in the area of civil drafting. It will provide instruction from surveying to construction, courthouse research to artistic interpretation. It will further include GIS (Geographic Information Systems) as applied to civil drafting and the basic components of mapping.

# ENGR-0281-0282 Drafting Field Project I - II

#### 3 hours credit each

These courses are set up to award drafting technology students three hours credit for "on-the-job" training. The purpose of this type of course is two-fold: to give students practical experience in the field of drafting, and to allow prospective employers to be aware of student's abilities.

# ESOL-0010 Introductory Listening and Speaking for English Learners

#### 3 hours credit

Introductory Listening and Speaking for English Learners is designed to assist non-native English speakers to improve their comprehension of frequently used words and phrases in oral contexts and will expand their ability to understand and respond appropriately to basic phrases and questions.

# ESOL-0011 Level 1 Listening and Speaking for English Learners

# 3 hours credit

Level 1 Listening and Speaking for English Learners is designed to assist non-native English speakers to improve their comprehension of English in connected oral discourse. Students will expand their oral expression skills and ability to participate in extended dialogue or discussion.

# ESOL-0012 Level 2 Listening and Speaking for English Learners

# 3 hours credit

Level 2 Listening and Speaking for English Learners is designed to increase the verbal skills and improve the conversational fluency of students who have previously studied English and have basic knowledge of grammar and vocabulary. Instructional activities include listening, speaking, and communicative exercises for pairs and small groups, as well as major individual presentation.

# ESOL-0013 Level 3 Academic Listening and Speaking

#### 4 hours credit

Level 3 Academic Listening and Speaking is designed for students who have previously studied English and have substantial knowledge of grammar and vocabulary, but need to further develop communicative abilities for both formal and informal settings. Activities include listening, speaking, and communicative exercises for pairs and small groups, as well as three major individual presentations.

# ESOL-0014 Level 4 Academic Listening and Speaking

#### 4 hours credit

Level 4 Academic Listening and Speaking is designed to introduce and develop the lecture note-taking, organization, communication, and pronunciation skills necessary for effective academic presentation and discussion. It provides practice in these skills to help bridge the gap between the study of English as a second language and the effective use of English in college classroom studies.

## ESOL-0015 Level 5 Academic Listening and Speaking

#### 4 hours credit

Level 5 Academic Listening and Speaking is designed to develop and improve the lecture note-taking, organization, communication, and pronunciation skills necessary for effective academic presentation and discussion. It provides intensive practice in these skills to help bridge the gap between the study of English as a second language and the effective use of English in college classroom studies.

## ESOL-0020 Introductory Writing and Grammar for English Learners

## 4 hours credit

Introductory Writing and Grammar for English Learners is designed to introduce students to English grammar and sentence structure at a basic level. Written structures, verb forms and tenses, and other word-level grammatical forms are presented with an emphasis on writing clear sentences and short, rudimentary paragraphs.

## ESOL-0021 Level 1 Writing and Grammar for English Learners

## 4 hours credit

Level 1 Writing and Grammar for English Learners is designed to increase the students' basic knowledge of English grammar and sentence structure and develop academic writing skills. Written structures, verb forms and tenses, and other word–level grammatical forms are presented with an emphasis on writing clear sentences and short paragraphs.

# ESOL-0022 Level 2 Writing and Grammar for English Learners

#### 4 hours credit

Level 2 Writing and Grammar for English Learners is designed to integrate the study of grammar and academic writing for students with intermediate English language skills. Increasingly complex written structures, verb forms and tenses, word-level forms, and sentence-level elements are presented with an emphasis on sentence structure and paragraph organization.

# ESOL-0023 Level 3 Writing for Academic Purposes

#### 3 hours credit

Level 3 Writing for Academic Purposes is designed to assist students increase the fluency and accuracy of their writing in English. Through a variety of assignments, the course focuses on refining student writing, developing more precise expression of ideas, writing paragraphs that are organized, coherent and logical, and introducing students to academic essay organization.

# ESOL-0024 Level 4 Writing for Academic Purposes

#### 3 hours credit

Level 4 Writing for Academic Purposes is designed to develop students' knowledge of English academic writing conventions and increase overall fluency and accuracy. Through a variety of assignments, the course focuses on refining and reinforcing the grammatical, structural, and rhetorical patterns of academic English. The course emphasizes both process and product.

## ESOL-0025 Level 5 Writing for Academic Purposes

#### 3 hours credit

Level 5 Writing for Academic Purposes is designed to provide further instruction and practice in academic writing. The course develops students' effective use of written English at the level required for full participation in college studies.

## ESOL-0030 Improving Pronunciation – A Class f or Non-Native English Speakers

#### 2 hours credit

Improving Pronunciation is designed for students whose native language is not English. Activities include listening, speaking, and communicative exercises to practice English sounds.

## ESOL-0033 Level 3 Focused Grammar

## 2 hours credit

Level 3 Focused Grammar is designed to present specific grammatical points which are often more difficult for a non-native English speaker to master. Instruction utilizes a variety of practice activities in listening, speaking, reading, and writing. The course will include a quick review of some basic and common elements of English grammar; however, the specific emphasis of instruction is on higher-level grammatical concepts.

# ESOL-0034 Level 4 Focused Grammar

#### 2 hours credit

Level 4 Focused Grammar is designed to present specific higher level grammar points which are often more difficult for a nonnative English speaker to master. Instruction is at the advanced level and utilizes a variety of practice activities in listening, speaking, reading, and writing. The course will include a quick review of some intermediate elements of English grammar; however, the specific emphasis of instruction is on advanced grammatical concepts.

## ESOL-0050 Introductory Reading for English Learners

## 3 hours credit

Introductory Reading for English Learners is designed to increase students' knowledge of structure, vocabulary, and idioms encountered in basic reading material. Students will improve their reading comprehension and develop reading strategies, dictionary skills, and study skills.

# ESOL-0051 Level 1 Reading for English Learners

#### 3 hours credit

Level 1 Reading for English Learners is designed to increase students' utilization of active reading strategies to develop their academic reading comprehension. The course also develops students' knowledge of vocabulary and their ability to utilize dictionaries and other reference materials.

#### ESOL-0052 Level 2 Reading for English Learners

#### 3 hours credit

Level 2 Reading for English Learners is designed to promote students' acquisition of higher level vocabulary and increase their academic reading comprehension and speed. Reading strategies are practiced fusing longer texts covering a variety of familiar, contemporary, and academic topics.

## ESOL-0053 Level 3 Reading for Academic Purposes

#### 3 hours credit

Level 3 Reading for Academic Purposes is designed to expand students' academic vocabulary, develop their comprehension of academic texts, and increase their reading speed. Reading strategies are practiced using complex texts covering a variety of contemporary and academic topics. More extensive reading of level appropriate books and stories is included to develop cultural knowledge and critical reading skills.

# ESOL-0054 Level 4 Reading for Academic Purposes

#### 3 hours credit

Level 4 Reading for Academic Purposes is designed to further develop students' ability to comprehend and interpret the academic content found in college-level texts. Advanced reading strategies are presented, and intensive reading on a variety of academic topics and non-adapted literature is required to assist the student to develop the reading fluency needed for full participation in college studies.

# ESOL-0055 Level 5 Reading for Academic Purposes

#### 3 hours credit

Level 5 Reading for Academic Purposes is designed to develop students' ability to comprehend and analyze college-level texts and literary works. Advanced reading strategies are presented, and intensive reading of academic articles and non-adapted short stories, poems, and novels will assist the student to develop the critical reading skills needed for full participation in college studies.

## ESOL-0080 TOEFL Preparation

#### 3 hours credit

TOEFL Preparation provides three (3) hours of contact time per week and gives students the skills, strategies, practice and confidence they need to increase their scores on all sections of the TOEFL. *Prerequisite: Permission of ESOL Coordinator*.

## ESOL-0081 English for Academic Purposes: Nursing

#### 3 hours credit

Students whose first language is not English can increase their opportunity for success in future nursing courses, especially Fundamentals of Nursing and clinicals. Special attention will be given to the improvement of oral communication, reading comprehension, and multicultural understanding. Prerequisites: ESOL 0014, Level 4 Academic Listening and Speaking or equivalent, ESOL 0024 Level 4 Writing for Academic Purposes or equivalent, ESOL 0034 Level 4 Focused Grammar or equivalent, and HUDV-0101, Strategies for Academic Excellence/Lifelong Learning.

## ESOL-0090 Introductory Vocabulary for English Learners

## 3 hours credit

Introductory Vocabulary for English Learners is designed to introduce the practical and academic English vocabulary required to improve reading comprehension, listening, speaking, and writing skills. New words are presented with a focus on form and correct usage in a variety of contexts.

#### ESOL-0091 Level 1 Vocabulary for English Learners

## 3 hours credit

Level 1 Vocabulary for English Learners is designed to develop and increase students' knowledge of practical and academic English vocabulary required to improve academic reading comprehension, listening, speaking, and writing skills. New words are presented with a focus on form and correct usage in a variety of contexts.

#### ESOL-0092 Level 2 Vocabulary for English Learners

#### 3 hours credit

Level 2 Vocabulary for English Learners is designed to develop and increase students' higher level knowledge of practical, social, and academic vocabulary to improve reading comprehension, listening, speaking and writing skills. New words are presented with a focus on form and correct usage in a variety of contexts. Vocabulary building skills are incorporated into class instruction.

## ESOL-0093 Level 3 Academic Vocabulary

#### 2 hours credit

Level 3 Academic Vocabulary is designed to increase the students' knowledge of academic vocabulary. Emphasis is on the acquisition and correct utilization of words and phrases encountered in college-level textbooks. Vocabulary learning strategies and techniques are presented, which include using correct context clues and reference works, recognizing word parts, and identifying derivational forms.

## ESOL-0094 Level 4 Academic Vocabulary

## 2 hours credit

Level 4 Academic Vocabulary is designed to increase students' knowledge of and ability to acquire and correctly utilize college-level words and phrases. Vocabulary learning strategies and techniques are presented, which include using context clues and reference works, recognizing word parts, and identifying derivational forms. New words are presented in the context of readings from selected academic content areas.

# ESOL-0095 Level 5 Academic Vocabulary

#### 2 hours credit

Level 5 Academic Vocabulary is designed to increase students' knowledge of college-level words and phrases and their ability to incorporate new words correctly into their speaking and writing. Vocabulary acquisition and retention strategies are directly presented and practiced. New words are selected from readings from a variety of academic content areas.

# EXSC-0101 Aerobics (Group Fitness)

#### 1 hour credit

A list of various types of aerobic classes will be available for students to participate in each semester. A list of aerobic classes and times is located within the KCKCC Wellness & Fitness Center website or at the front desk of the wellness center. The aerobic classes will include cardiovascular, resistance training, muscle toning, stability and flexibility. Aqua aerobic classes are not included within this group fitness. Prerequisite: Students MUST have a KCKCC student ID card to participate in Aerobic (Group Fitness) classes. Students must check in at the Wellness & Fitness Center prior to the start of the class. Students arriving more than 10 minutes late will not be permitted to attend class because they have missed the warm-up routine. For safety purposes, all students must participate in the entire class format including warm-up.

## EXSC-0101 Aerobics (Aqua)

#### 1 hour credit

Students will meet as a group with an aqua aerobics instructor two times per week. Students are not expected to have prior understanding of aqua aerobics. The course will take place in a swimming pool and will include cardiovascular and resistance training to aerobic music led by a certified aquatic instructor. There may be many levels of participation, and the instructor will cater the class so that everyone can enjoy the instruction at their own level. This is also a chance to form new friendships, and meet people with similar interests. *Prerequisites: Participants must be able to swim and have no fear of the water.* 

# EXSC-0108 Bowling

## 1 hour credit

Instruction in skills, history, and etiquette of bowling is provided. The individual gains practice in fundamental skills and techniques. Students will be responsible for their own bowling fees. KC Bowl charges a fee of \$2.00 per game (\$4.00 per week Fall, Spring, and \$6.00 Summer session).

# EXSC-0115 First Aid

#### 2 hours credit

The theory and practice of First Aid and safety are covered. The methods of administering first aid in case of accident or sudden illness; bandaging; resuscitation; and caring for wounds and injuries, CPR and AED training. First aid lab sessions are required for this course. Students can complete these lab sessions on ground at KCKCC Allied Health building during scheduled dates or complete the lab work under the supervision of a certified first aid instructor within your local area. Successful completion of this course results in certification by American Heart Association. *Prerequisite: Basic computer skills and regular Internet access/skills. Please review the On-Line Course Requirements.* 

## **EXSC-0116** Current Topics and Issues in Exercise Science

## 1 hour credit

This course examines significant and recent topics or development in the field of exercise science, wellness, health and fitness. It is also designed to integrate topics from a variety of disciplines and other health care providers in area which have common interest. Emphasis will be placed on current educational topics such as relaxation & stress management, weight management & nutrition, alternative medicine, new cardiovascular and strength exercise techniques, professional credentials, hypokinetic diseases, and fitness testing which have an immediate impact on the exercise science profession.

## EXSC-0120 Golf

#### 1 hour credit

There will be instruction in the etiquette, skills, rules, and terminology of golf. Practice in development of techniques and strategy in golf.

#### EXSC-0128-0131 Running Awareness

#### 1 hour credit

Running Awareness is designed to improve cardiovascular fitness. Topics include proper mechanics of running and training, why stretching is important, shoe wear, target zone of heart rate to achieve maximum benefit from running, proper warm up, and injury prevention and care.

# EXSC-0132 Beginning Swimming

#### 1 hour credit

This is an introductory course for students to acquire beginning swimming skills. Students will gain skills in buoyancy, support and propulsion, basic backstroke, kick and pull, breathing, glide, sidestroke, crawl stroke and breaststroke.

# EXSC-0133 Intermediate Swimming

#### 1 hour credit

This course is designed for students to review the crawl and breaststroke and improve them to competitive levels. In addition, students will learn the butterfly, backstroke and competitive turns. *Prerequisite: Completion of EXSC-0132, Beginning Swimming, or current Red Cross beginning swimming certification.* 

## EXSC-0134 Advanced Swimming and Lifesaving

#### 1 hour credit

This course is designed for students to improve all the basic swimming strokes, turns and dives. In addition, students learn how to guard, anticipating and preventing problems before they occur, and taking action to help those in danger when necessary.

Prerequisite: Completion of EXSC-0132, Beginning Swimming, and EXSC-0133, Intermediate Swimming, or Current Red Cross Beginning and Intermediate Swimming Certification.

## EXSC-0135 Tennis I

#### 1 hour credit

Tennis class is designed for two purposes: 1) to appreciate the game of tennis; 2) to learn proper techniques and improve the student's knowledge and skills.

# EXSC-0139 Walking for Fitness

# 1 hour credit

A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, learning experiences, and performances outside the classroom. Methodology will be selected to best meet student needs.

# EXSC-0143 Weight Training - Physical Conditioning

## 1 hour credit

This is a multi-level course designed to improve the participant's muscular strength and/or endurance and to provide instruction on how to safely perform numerous resistance training exercises and how to design your own resistance training plan.

# EXSC-0147 Employee Wellness

# 1 hour credit

Student/Staff ID required to check- in. Appropriate workout attire. Men over 40 and women over 50 are required to show physician's approval to exercise. Students with any major medical problems, including cardiovascular disease, hypertension, diabetes, obesity or pregnancy must show physician's approval. Physician's approval forms can be picked up at the fitness center prior to the fitness screening.

#### EXSC-0148 Wellness and Fitness Center I

#### 1 hour credit

"Wellness & Fitness Center" is a one credit hour graded exercise class. Participants exercise and attend seminars at the Wellness & Fitness Center for a minimum of 22 hours per semester. A minimum of 21-22 hours of exercise in the Wellness & Fitness Center to receive an A in this course. To earn a B the student must complete 17-20 hours. To earn a C the student must complete 13-16 hours. To earn a D the student must complete 10-12 hours. Students who earn less than 10 hours will receive an F grade. This course is designed specifically for the person who is interested in muscular flexibility. Students on financial aid can take this class two times.

#### EXSC-0149 Wellness and Fitness Center II

#### 1 hour credit

"Wellness & Fitness Center II" is a one credit hour graded exercise class. Participants exercise and attend seminars at the Wellness & Fitness Center for a minimum of 22 hours per semester. A minimum of 21-22 hours of exercise in the Wellness & Fitness Center to receive an A in this course. To earn a B the student must complete 17-20 hours. To earn a C the student must complete 13-16 hours. To earn a D the student must complete 10-12 hours. Students who earn less than 10 hours will receive an F grade. This course is designed specifically for the person who is interested in cardiorespiratory endurance. Students on financial aid can take this class two times.

## EXSC-0152-155 Personal Fitness

#### 2 hours credit

"Personal Fitness" is a two credit hour, graded exercise class. Participants exercise and attend seminars at the Wellness & Fitness Center for a minimum of 22.5 hours per semester. The student will be able to also complete The Wellness Workbook. Participants can also take advantage of the full fitness assessment, nutrition analysis, body fat testing, and personal training for an additional fee. Students on financial aid can take this class four times as EXSC-0152, EXSC-0153, EXSC-0154 and EXSC-0155.

## **EXSC-0157** Personal Trainer Exam Review Course

## 2 hours credit

This course is designed to provide theoretical knowledge and practical skills in preparation for the American Council on Exercise national certification exam in personal training. Topics include guidelines for instructing safe, effective, and purposeful exercise, essentials of the client-trainer relationship, conducting health and fitness assessments, and designing and implementing appropriate exercise programming. Upon completion of this course, students are eligible to sit for the ACE-CPT exam.

Prerequisite: Exercise Physiology, Anatomy & Physiology, & Exercise Testing and Prescription.

# **EXSC-0158** Group Fitness Instructor Exam Review Course

# 2 hours credit

The course is designed to provide theoretical knowledge and practical skills in preparation for American Council on Exercise national certification exam in group fitness instruction. Topics include guidelines for instructing safe, effective, and purposeful exercise, essentials of the instructor-participant relationship, the principles of motivation to encourage adherence in the group fitness setting, effective instructor-to-participant communication techniques, methods for enhancing group leadership, and the group fitness instructor's professional role. Upon completion of this course, students are eligible to sit for the ACE-GFI exam.

## EXSC-0159 Techniques of Volleyball

## 2 hours credit

This course will be a comprehensive overview of volleyball techniques. Topics studies will include the elements of the game of volleyball, running a practice, rules of the game, defensive and offensive drills and strategies, defensive and offensive skills, components of setting, passing and serving, compiling statistics, as well as being able to develop a year practice plan.

# EXSC-0180 Techniques of Baseball

## 3 hours credit

This course will be a comprehensive overview of baseball techniques. Topics studied will include the elements of base running, defensive skills, hitting mechanics and philosophy, components of a sound pitching delivery, compiling statistics, as well as being

able to develop a year around conditioning program.

## EXSC-0181 Techniques of Basketball

#### 2 hours credit

This course will be a comprehensive overview of basketball techniques. Topics studied will include the elements of rebounding, man to man defensive skills, shooting mechanics and 3-point shooting philosophy, different types of zone defenses and offenses, different types of full court presses, ball handling skills, passing skills, setting screens, defending screens, outlet passing, and free throw shooting.

## EXSC-0182 Techniques of Soccer

#### 2 hours credit

This course will teach all the fundamental techniques required to play soccer.

# **EXSC-0183** Techniques of Soccer (Soccer Tactics)

#### 2 hours credit

This course will teach students how to apply good soccer techniques effectively. Topics will involve decision making, how, where, and when to use a particular technique. Students will be developing a tactical awareness and understanding of the game of soccer, including positional play and offensive and defensive principles of soccer. *Prerequisite: Students need to have mastered the basic techniques of soccer. Ideally, students will be players on the college soccer team.* 

# **EXSC-0184** Techniques of Soccer (Soccer Fitness)

#### 2 hours credit

This course will condition students for playing soccer. The course is designed to meet the specific conditioning needs of the soccer player. Soccer is a high intensity, high speed and a very skill dominant game. The training in this course reflects that, as well as addressing all the fundamentals in terms of movement.

# **EXSC-0186** Techniques in Strength Training (Athletics)

## 2 hours credit

Techniques of Strength Training, is designed to improve overall fitness. This is a sport specific course. Topics include proper mechanics of lifting and training, why stretching is important, target zone of heart rate to achieve maximum benefit from running, proper warm up, weight room safety, and injury prevention and care.

## EXSC-0186-10 Techniques in Strength Training

# 2 hours credit (Exercise Science Majors)

Techniques of Strength Training, is designed for the exercise science major who desires to learn how to teach strength training. Emphasis is not on working out, but on the academics of strength and conditioning.

# **EXSC-0187** Techniques in Strength Training (Athletes)

## 2 hours credit

Techniques of Strength Training, is designed to improve overall fitness. This is a sport specific course. Topics include proper mechanics of lifting and training, why stretching is important, target zone of heart rate to achieve maximum benefit from running, proper warm up, weight room safety, and injury prevention and care.

# **EXSC-0188** Techniques in Strength Training (Athletics)

## 2 hours credit

Techniques of Strength Training, is designed to improve overall fitness. This is a sport specific course. Topics include proper mechanics of lifting and training, why stretching is important, target zone of heart rate to achieve maximum benefit from running, proper warm up, weight room safety, and injury prevention and care.

# **EXSC-0189** Techniques in Strength Training (Athletics)

# 2 hours credit

Techniques of Strength Training, is designed to improve overall fitness. This is a sport specific course. Topics include proper

mechanics of lifting and training, why stretching is important, target zone of heart rate to achieve maximum benefit from running, proper warm up, weight room safety, and injury prevention and care.

# EXSC-0190 Camping and Outdoor Education

#### 3 hours credit

This is an introduction to the history and philosophy of camping. Involves training in leadership and camp counseling. Included will be an introduction to a variety of outdoor educational programs and activities, survival, wilderness camping, camping for special populations and beginning camping skills. There are no on ground meetings for this course.

## EXSC-0197 Techniques of Softball

#### 3 hours credit

This course will be a comprehensive overview of softball techniques. Topics studied will include the elements of base running, defensive skills, hitting mechanics and philosophy, components of a sound pitching delivery, compiling statistics, as well as being able to develop year around conditioning program.

# **EXSC-0200** Group Exercise Teaching Methods

#### 2 hours credit

Group exercise teaching methods is designed to prepare Exercise Science majors to organize, lead, and evaluate their participants in various types of health/fitness activities. Topics include class lesson plan development, proper body mechanics and techniques, FIT principle, target rate heart, rate of perceive exertion, safety/injury prevention, choreography, and a variety of fitness activities.

#### EXSC-0201 Introduction to Exercise Science

#### 3 hours credit

This course is to introduce the scientific discipline of Exercise Science. Students will be exploring the areas of exercise science, exercise physiology, preventive and rehabilitation of sports-related injuries, biomechanics, sport psychology, motor learning, nutrition, and health benefits of exercise.

# EXSC-0203 Foundations in Coaching

#### 3 hours credit

This course will be a comprehensive overview in the foundations of coaching. This course will be an introductory level for those students who are interested in pursuing a career in coaching.

## EXSC-0204 Sport and Exercise Psychology

## 3 hours credit

This course will cover various psychological principles associated with sport. Discussions will consist of which psychological variables can hinder athletic performance as well as which variables can enhance performance. Class content will also illustrate numerous psychological techniques which can enhance sport performance.

# EXSC-0205 Personal School Community Health

# 3 hours credit

Scientific and well-balanced information concerning personal, school, family, and community health is presented. The emphasis is on the application of fundamental principles of health for traditional and non-traditional students. Nutrition, stress, exercise, AIDS, cancer, smoking, drugs, aging and the environment are key issues.

# EXSC-0206 Lifetime Fitness

# 3 hours credit

This course is designed to expose students to the dimensions of wellness, with an emphasis on the benefits of physical fitness. Risk factors for heart disease and cancer, as well as a variety of personal health issues are covered. Students are required to exercise in the KCKCC Wellness & Fitness Center or some other fitness center in their area to improve their physical wellness. On ground meetings for this course are not required. *Prerequisite: Basic computer skills and regular Internet access/skills. Please review the Online Course Requirements*.

## **EXSC-0209** Physical Education for the Elementary Teacher

#### 3 hours credit

This course is designed to prepare students to teach physical education to children grades K-6. It will use a developmental approach and stress exploratory methods of teaching young children a variety of games, dance, gymnastics, and health-related fitness activities.

# EXSC-0210 Sports Officiating

#### 2 hours credit

The rules of football, basketball, baseball, soccer, track, volleyball and swimming will be taught. This course is designed for those interested in officiating and/or coaching.

## **EXSC-0211** Care and Prevention of Athletic Injuries

#### 3 hours credit

The Care and Prevention of Athletic Injuries course is designed to give students the knowledge to recognize and treat injuries as they occur in athletics or recreational activities. This course is designed for any person interested in the health professional field, as an athletic trainer, coach, or those involved in recreational activities, to help recognize and care for injuries or potential injuries they may encounter.

## EXSC-0212 Exercise Physiology

#### 3 hours credit

This course is a survey of scientific principles, methodologies, and research as applied to exercise and physical fitness. The emphasis is on physiological responses and adaptation to exercise. Basic elements of exercise physiology, kinesiology, and motor learning are addressed. *Prerequisite: BIOL-0141*, *Human Anatomy and Laboratory*, *BIOL-0271/0272*, *Physiology and Physiology Laboratory*.

## **EXSC-0213** Exercise Testing and Prescription

## 3 hours credit

This course is a survey of the practical aspects of the physical fitness industry. The topics covered include health appraisal, exercise testing and prescription for patients ranging from apparently healthy to those with known disease. *Prerequisites: BIOL-0121, General Biology or BIOL-0143, Human Anatomy and Physiology.* 

# EXSC/ Introduction to Sports

BUSN-0215 Management

## 3 hours credit

This course is an introduction to the basic fundamental knowledge and skill sets of the sports manager, as well as providing information on sport industry segments. By learning about the different segments of the sport industry students will gain insights as to the possibilities of a career in sports management.

# EXSC-0250 Practicum in Athletic Training I

# 3 hours credit

Practicum in Athletic Training is a class designed to give the student opportunity to develop skills that a certified athletic trainer may use on a daily basis. This class is designed to give the opportunity to develop such skills through laboratory experiences, athletic training room and game observations, lectures and demonstrations.

## EXSC-0251 Practicum in Wellness & Fitness

# 3 hours credit

This is one of the required courses in the Personal Training Certificate and should be done during the final semester. It brings an active learning experience which enables the student to gain practical experience in the area of administration, planning and leadership, and providing services in the wellness & fitness field, under the supervision of a qualified wellness specialist. The practicum augments academic experiences by helping to bridge the gap between academics and a professional future. This will take place on-site at the Wellness & Fitness Center at Kansas City Kansas Community College. The practicum consists of 3 hours per week for 16 weeks. Students will be assigned and trained to perform Wellness/Fitness related duties that will be evaluated by

the assigned supervisor. *Prerequisites: BIOL-0143*, *Human Anatomy and Physiology*, *EXSC-0115*, *First Aid*, *EXSC-0290*, *Cardio-Pulmonary Resuscitation*.

# EXSC-0270 Adaptive Physical Education

#### 3 hours credit

This course is to prepare students majoring in physical education, recreation, sport management, special education, exercise science, and related disciplines. The student is acquainted with history and overview of adaptive physical education and sports, the organization and management of programs and an overview of various types of disabilities. Students will also learn about individual education programming, measurement and appraisal, behavior management, perceptual-motor development, and assistive devices.

# FRSC-0100 Firefighter I

#### 3 hours credit

This course meets all requirements for Firefighter I certification. Students will be provided the opportunity to take the third party certification test. This course is based on NFPA 1001: *Standard for Fire Fighter Professional Qualifications* and may lead to IFSAC and Pro Board certifications. The course is designed for the person who seeks the knowledge and skills to function as an integral member of a firefighting team under direct or general supervision in hazardous conditions. The Fire Fighter I course consists of a combination of classroom study, drill field practice, and training evolutions that will prepare the fire fighter to perform most fire ground functions under the supervision of an officer or experienced fire fighter. Successful completion of all written exams, practical exercises and a passing score on the state certification exam is required for certification. Co-Requisite: Hazardous Materials Awareness & Operations: HZMT-0120.

## FRSC-0101 Fundamentals of Fire Prevention

#### 3 hours credit

This course has a number of basic concepts are covered in this course. The organization and function of the fire prevention organization; surveying and mapping procedures; recognition of fire hazards, engineering a solution to the hazard; enforcement of the solution; and public relations as affected by fire prevention included.

# FRSC-0107 Legal Considerations for Fire and Emergency Services

## 3 hours credit

This course will provide students with an understanding of legal issues that are intertwined with the fire service. Topics covered will include pivotal questions confronting today's fire service including legal liability, sovereign immunity, overtime laws, collective bargaining, OHSA compliance, worker's compensation, physical abilities testing, medical examinations, drug testing, discrimination, and sexual harassment

# FRSC-0111 Fire Fighting Tactics and Strategy

# 3 hours credit

Efficient and effective utilization of manpower, equipment and apparatus are studied in this course. Emphasis is placed on preplanning, fire ground organization problem solving related to fire ground decision making, and fire attack tactics and strategy.

# FRSC-0113 Building Construction for Fire Science

## 3 hours credit

An update of policies in the construction industry, this course includes a current review of local and state codes as they apply to fire protection. Students will learn the relationships of construction materials as it relates and fire damage to a building.

# FRSC-0115 Fire Arson Investigation

# 3 hours credit

An orientation and introduction to arson and incendiarism, laws of arson, fire cause and fire and police investigation, and a technical analysis of arson and fraud are covered. Stress is placed on the collection and preservation of evidence, photography, diagrams and notes, interviewing, and the detention of witnesses. Motor vehicle fires, records, reports, briefs and court procedures are also examined.

# FRSC-0117 Fire Protection Equipment Alarm Systems

#### 3 hours credit

A study is made of the function and operation of all types of portable and fixed extinguishers. Students examine the use and operation of alarm systems and the required standard of water supply and protection systems. Automatic sprinklers and special extinguishing systems, including the analysis of various automatic signaling and detection systems, are also studied.

## FRSC-0170 Introduction to Homeland Security and Weapons of Mass Destruction

#### 3 hours credit

The world has changed since September 11, 2001. We remain a Nation at risk from terrorist attacks and will remain so for the foreseeable future. At all Threat Conditions, the fire service must remain vigilant, prepared, and ready to deter terrorist attacks. This course presents threat conditions and how the fire service can reduce the risks from terrorist attacks. Preparedness measures are provided to assist agencies in the development and implementation of appropriate agency-specific preparedness measures.

#### FRSC-0201 Fire Administration I

#### 3 hours credit

Fire Administration explores organization principles with an emphasis on leadership in the fire community. Students examine the history, types, methods and principles of fire department organization. Emphasized are supervisory responsibilities and functions for the fire officer.

# FRSC-0202 Fire Hydraulics

#### 3 hours credit

Students examine water flow, measurement and water availability from distribution systems is included in this course. Maintenance and inspection procedures for various water protection systems are also studied.

## FRSC-0203 Fire Administration II

#### 3 hours credit

This course includes an exploration of organization principles with an emphasis on making decisions in the fire community. This is a study of the management theories, methods, and principles of fire department organization; both formal and informal, line and staff functions. Emphasis is placed on supervisory responsibilities and functions; Productivity, Budgets, Cost Analysis are also major areas of study.

# FRSC-0205 Fire Inspection

## 3 hours credit

An introduction to the objectives and techniques of fire prevention and inspection programs, the course examines building and electrical codes, fire prevention codes, zoning controls, and other fire protection standards; surveys the authority and responsibilities of municipal fire inspectors; and teaches basic blueprint reading, sketching and mapping.

# FRSC-0210 Building and Fire Codes

## 3 hours credit

Building and fire codes of city, state and federal governments including codes and guides promulgated by other national organizations will be taught. Emphasis on provisions of city administrative code, the multiple dwelling law and code, rezoning resolutions, and city fire prevention regulations are emphasized.

# FRSC-0211 Firefighter II

## 3 hours credit

This course is based on NFPA 1001: Standard for Fire Fighter Professional Qualifications and may lead to IFSAC and Pro Board certifications. The course is designed for the person who seeks the knowledge and skills to function as an integral member of a firefighting team under direct or general supervision in hazardous conditions. The Fire Fighter II course consists of a combination of classroom study, drill field practice, and training evolutions that will prepare the fire fighter to perform most fire ground functions under the supervision of an officer or experienced fire fighter. Successful completion of all written exams, practical exercises and a passing score on the state certification exam is required for certification.

Prerequisite: FRSC-0100.

## FRSC-0214 Current Topics and Technology in Fire Science

#### 1 hour credit

Significant and recent topics or developments in the fire service community are examined. The course is also designed to integrate other emergency services in areas which have common interest. Emphasis is placed on current educational topics which have an immediate impact on the fire services' and related organizations

# FRSC-0225 Arson Intelligence

## 3 hours credit

This is an introduction to the application of intelligence to the arson problem. Fire Service intelligence emphasizes the development of techniques for analysis and intelligence estimates or projections.

# FRSC-0230 Fire Service Instructional Methodology

#### 3 hours credit

This course deals with the basic operation of a fire training division with emphasis on the training officer. Students receive instruction in program development, instructional analysis, training records and construction of training aids.

# FRSC-0233 Industrial Fire Protection & Safety

#### 3 hours credit

This course is devoted to the instruction of industrial fire protection and safety. Fire brigade operations are examined in this course which meets most fire brigade training requirements.

## FRSC-0272 Historical Foundations of the Fire Service

#### 3 hours credit

Emphasis for this course is placed on the historical evolution of the fire service as it pertains to the equipment, organizational structures, terminology, customs and traditions. Students will be involved in looking at primary and secondary documents in developing an understanding of the fire service culture. Critical analysis and historical research will be advanced in the curriculum using local historical records and artifacts.

# **GEOG-0101** Introduction to Cultural Geography

## 3 hours credit

The course is a general introduction to the discipline of Geography and it is designed to familiarize students with the basic concepts, theories, traditions and techniques in geography. They will be utilized to study various regions of the world in terms of their cultural characteristics, cultural integration, ethnic/racial composition, natural and human resources, ecology, diffusion, development, population and environmental influences, conflict and war. Cultural diversity is a major theme with an emphasis upon the planet earth as an ecosystem with interdependence among humans as well as between humans and their environment.

# **GEOG-0102** Introduction to Physical Geography

## 3 hours credit

This course examines the fundamental physical processes that have shaped the Earth and its biosphere. The emphasis is on the determinants of landform processes, weather and climatic changes and their impact on human civilization.

# HIST-0103 Modern Asia

# 3 hours credit

The course is an introduction to China, Japan, and India. Emphasis is placed on important cultural, economic, political, and social developments during the post-World War Two era.

# HIST-0104 United States to 1877

## 3 hours credit

Major trends and events of American history through the Reconstruction period are examined. Emphasized are the social, intellectual, political, and economic problems of the Colonial, Revolutionary, early National period, Antebellum period, the Civil War and Reconstruction. Historical interpretations from the dominant professional colleges of thought on leading controversial

issues are examined and compared.

#### HIST-0105 United States Since 1877

#### 3 hours credit

Major trends and events of American history since Reconstruction are examined. Emphasized are the social, political, and economic developments of the twentieth century. Stressed are present problems and events in the light of their historical background. Historical interpretations from the dominant professional colleges of thought on leading controversial issues are examined and compared.

## HIST-0106 Black History

#### 3 hours credit

Black History surveys the historical, political, economic, and cultural role of African-Americans in the development of the world. African heritage, Latin-American slavery, origins and nature of North American slavery, black institutions and culture, race conflict and adjustment, black revolutionary movements, the concepts of racism, integration, separation, and black nationalism, and contemporary problems are examined.

# HIST-0107 Modern Europe

#### 3 hours credit

Students examine various changes and events in the history of Europe from 1870 until the early twenty-first century.

# HIST-0108 Religion in America

#### 3 hours credit

Designed to acquaint students with American religious history from the religious practices of the land's earliest occupants to the religions practiced by Americans today, Religion in America explores topics such as revivalism, fundamentalism, and millenary thinking, with a special emphasis on the growth of religious diversity.

# HIST-0109 The Bible as History

## 3 hours credit

This course is designed to acquaint the student with the social, political, economic, religious and intellectual events and institutions in the lives of the people of the Old and New Testaments, which have affected the lives and times of succeeding generations.

## HIST-0112 Modern Latin America

## 3 hours credit

Students are introduced to historical analysis within the context of the process of modernization in Latin America. Pre-modern structures, forms of social, economic, and political organization and cultural values interact and accommodate with modern structures over time to produce national identities. The countries include those that have had major reform movements in the 20th century. The course content will compare and contrast the way in which each of these countries modernized, or changed their social, economic, political, cultural, and demographic structures. For example, changes in education are analyzed in terms of how they affected political participation, economic growth, social mobility, and industrialization.

## HIST-0115 World Civilization I

## 3 hours credit

World Civilization I surveys significant developments in world history from the origins of culture to the pre-modern era. In addition, students learn to apply the historical method and concepts from culture studies, economics, geography, and political science to the study of the past. Honors students also devote a part of the semester applying historical literacy to contemporary issues.

# HIST-0116 World Civilization II

## 3 hours credit

Students examine changes and patterns in and among various societies from the early modern era to the twenty-first century. In addition, students learn history as a form of critical thinking by developing skills that explore historical contexts and evidence.

# HIST-0117 Readings in Western Civilization I

#### 1 hour credit

Students read, discuss, and write about ideas that shaped Western Civilization from its Middle Eastern origins to the changes of the early modern era. This course and World Civilization I satisfy the Western Civilization requirement at the University of Kansas.

## HIST-0118 Readings in Western Civilization II

#### 1 hour credit

Students read, discuss, and write about ideas that shaped Western Civilization from the Enlightenment to the twenty-first century. This course and World Civilization II satisfy the Western Civilization requirement at the University of Kansas.

## **HIST-0120** History and Culture of Wyandotte County

#### 3 hours credit

This course surveys the commercial, ethnic, and social development of Kansas City, Kansas and Wyandotte County. Emphases are placed on Native American cultures and the ethnic communities that contributed to the city's and county's history. The histories of towns in the county are also explored. The course is co-sponsored by the Wyandotte County Historical Society and Kansas City Kansas Community College.

## HIST-0122 History of Kansas

#### 3 hours credit

This course surveys the exploration, settlement, industrialization, and urbanization of the state of Kansas. Emphasis is placed on the cultural and ethnic history of the state. Students will gain and appreciation and understanding of Kansas's role in the history of the American nation.

## HIST-0204 Western Civilization I

#### 3 hours credit

Students read, think about, discuss, and write about original sources that provide insights into the development of Western Civilization from its Middle Eastern origins to the changes of the late Middle Ages.

## HIST-0205 Western Civilization II

## 3 hours credit

Students will read, discuss, and write about ideas that have influenced Western Civilization from the Enlightenment to the twenty-first century. This course satisfies the Western Civilization II requirement (HWC 115 and HWC 205) at the University of Kansas.

# HIST-0211 Contemporary Issues

## 3 hours credit

Students learn and apply skills that produce an understanding of a wide range of domestic and global issues.

## HONR-0101 Honors Tutorial I

## 1 hour credit

Honors Tutorial I is the first in a sequence of core courses required of Presidential Scholarship recipients and replaces their HUDV Learning Strategies requirement for graduation. This course is an opportunity for the student to acclimate to college life and the Honors Education Program. This course offers a cohort experience with the goal of creating a sense of community in which they practice self-directed, and collaborative learning, begin constructing an academic portfolio, and set academic and professional goals. *Prerequisite: Admission to the Honors Education Program and permission of the Director of Honors Education Program.* 

# **HONR-0102** Honors Tutorial II

# 1 hour credit

Honors Tutorial II offers an opportunity to refine scholarship skills. Current readings in critical thinking are the basis for discussions and analyses of patterns of thought. Practice sessions will add to the students' understanding of how to enhance personal critical thinking skills and methods of problem solving. *Prerequisite: Admission to Honors Education, HONR-0101 Honors Tutorial I, & Enrollment by the Director of Honors Education.* 

# **HONR-0201** Honors Tutorial III-Service Learning & Capstone

#### 1 hour credit

Honors Tutorial III is the fourth, and final, in a sequence of core courses for students seeking Honors Scholar distinction and is intended to emphasize self-directed and collaborative learning while students design and implement projects for an audience outside the classroom. This course serves as the capstone course for the Honors Education Program and will include Program post-assessments and fulfillment of the Portfolio component students began in Honors Tutorial I. Projects will focus on the concept of service to local, national or global communities as related to the current Phi Theta Kappa Honors Study Topic. *Prerequisite: Admission to the Honors Education Program and permission of the Director of Honors Education Program.* 

# HONR-0202 Phi Theta Kappa Leadership Development Studies

#### 3 hours credit

The Leadership Studies course provides an opportunity to explore classical and contemporary theories of leadership. Students will practice a scholarly examination of leadership theory, philosophies of leadership, and moral and ethical responsibilities related to leadership through experiential exercises, films and readings. *Prerequisite: Completion of Honors Seminar I.* 

# **HUDV-0263** American Sign Language I

#### 3 hours credit

Structured to give students a basic foundation in the language of signs, the course examines the history of signs, linguistic principles, finger spelling and manual alphabet, and a vocabulary of at least 364 signs.

# **HUDV-0264** American Sign Language II

#### 3 hours credit

Students increase the vocabulary acquired in the American Sign Language course. They improve their skills in expressive and receptive finger spelling, and increase their knowledge of the culture in the community that uses sign language. *Prerequisites:*\*American Sign Language I, HUDV-0263 or consent of the instructor\*

# **HUDV-0268** Human Sexuality

## 3 hours credit

This course presents accurate information about human sexuality to help students develop understanding of their own and other's sexual expression and values. Topics include anatomy and physiology, sexuality across the life cycle, social/cultural influences, fertility issues, sexually transmitted diseases including AIDS, variations in orientation and expression, values and ethics, and current social issues.

# **HUMN-0101** Arts and Culture of the Early World

#### 3 hours credit

This course seeks to enhance the student's understanding and appreciation of world civilization and the humanities through an exploration of painting, sculpture, architecture, literature, philosophy, and music. Students will examine the major cultural achievements of both Eastern and Western civilizations within the context of relevant historical events from the Paleolithic period to the present day.

## **HUMN-0102** Arts and Culture of the Modern World

## 3 hours credit

This course will acquaint students with the arts and ideas of the world's major civilizations from the Renaissance to the modern age. The approach will be interdisciplinary, covering the artistic values embodied in painting, sculpture, architecture, literature, theater, music, and dance as they have emerged out of their historical contexts. In addition to providing the fundamental principles, methodologies, and theories used in the study of the humanities, the course aims to enhance students' understanding of the contemporary world.

## **HUMN-0150** Introduction to Women's Studies

# 3 hours credit

This introductory course provides initial exposure to the purpose and subject matter of Women's Studies. Specific areas of investigation may include the social construction of gender as pertaining to women, women's well-being, position of women within

patriarchal institutions, women's spirituality, and women's artistic expressions. This brief but intense exposure to different aspects of women's socialization, position, and role in society should help build a foundation for more specialized courses in the area of Women's Studies.

## **HUMN-0151** Men & Masculinities

#### 3 hours credit

Students will investigate their own lives in comparison to historically and locally dominant ideas of what it means to be a man or a woman. With this objective in mind we start by asking a simple question: What does it mean to be a man in the United States? To answer this question we will engage in a cultural survey (history, literature, music, film, etc.) of the prevailing definitions of American masculinity. We will consider how the meaning of "man" has changed through time, and look at the similarities and differences in the masculinities of men across ethnicity, race, class, age and sexuality. Against all this, we will attempt to identify and evaluate the conflicting definitions of masculinity in our time as well as imagine possible future developments.

# **HUMN-0152** Women in Religion

#### 3 hours credit

This course focuses on the depiction of females in mythology and religion. Students will be exposed to a variety of mythological and religious writings that span across continents and cover nearly 3,500 years of written materials. Through exposure to such a wide variety of primary sources, students should develop a greater depth and breadth of literary awareness, as well as a greater appreciation of the role of mythology and religion in shaping and perpetuating gender stereotypes and norms.

## **HUMN-0200** Foundations of Film and Theater

#### 3 hours credit

This interdisciplinary course explores and analyzes the rhetorical, critical, and functional aspects of film and theater as visual, performance, and literary genres. Students learn to read the basic signs, syntax, and structures of dramatic and cinematic language.

#### **HUMN-0207** Comparative World Religions

## 3 hours credit

This course examines the six dimensions of religion: experiential, mythic, ritual, doctrinal, ethical, and social. The focus is on the inter-relatedness among the six dimensions and how people live their lives in a religiously pluralistic society. The major world religions studied are Hinduism, Buddhism, Taoism, Confucianism, Judaism, Christianity, and Islam.

## HVAC-0100 Safety Orientation /OSHA 10

## 1 hour credit

This course will introduce students to the basic practices of identifying, reducing, eliminating and reporting hazards associated with their work. Upon successful completion of the course, participants will receive an OSHA 10-Hour Construction Outreach DOL course completion card. The OSHA Ten Hour Construction Outreach Training course has been reviewed and accepted by OSHA for online distribution.

## **HVAC-0102** Refrigeration Theory 2

#### 1 hour credit

This part of this course will cover basic safety, shop safety, equipment safety, tool safety, and electrical safety. *Prerequisites: General Safety. Math Level 3 Recommended.* 

# **HVAC-0103** Refrigeration System Components 1

## 2 hours credit

This course is an introduction to refrigeration and system components. This course will cover refrigerants, refrigeration process, pressure and temperature relationship, refrigeration components (evaporator, compressor, condenser, and refrigerant metering devices), pumping characteristics, and plotting the refrigerant cycle. *Prerequisites: HVAC-0101 Refrigeration Theory (Introduction Safety and Tools) 1.* 

# **HVAC-0104** Refrigeration System Components 2

## 2 hours credit

This course is an introduction to refrigeration and system components. This course will cover refrigerants, refrigeration process, pressure and temperature relationship, refrigeration components (evaporator, compressor, condenser, and refrigerant metering devices), pumping characteristics, and potting the refrigerant cycle.

# **HVAC-0105** Electrical Theory 1

#### 2 hours credit

This course will introduce students to basic electricity and electrical components. The course will start with the movement of electrons, conductors, insulators, direct and alternating current and electrical units of measurement. *Prerequisites: HVAC-0101 Refrigeration Theory (Introduction Safety and Tools) 1.* 

# HVAC-0106 Electrical Theory (Electrical & Components) 2

#### 2 hours credit

This course will cover electrical circuits, Ohm's Law, series and parallel circuits and electrical power. The course will also cover automatic controls and components, troubleshooting basic controls, and electronic and programmable controls. *Prerequisites: General Safety Math Level Recommended.* 

# **HVAC-0107** Basic Sheet Metal

#### 2 hours credit

This course will introduce students to basic methods of sheet metal fabrication. This course will include basic sheet metal bending, cutting, special tools, all types of screws, rivet assembly, and blue print reading. Students will learn the safe and proper methods of sheet metal work. *Prerequisites: HVAC-0101 Refrigeration Theory (Introduction Safety and Tools) 1.* 

## HVAC-0108 Basic Sheet Metal Layout/Fabrication

#### 2 hours credit

This course will continue to look at fabrication techniques, special tools, layout fundamentals, and blue print reading. *Prerequisites:HVAC-0107 Basic Sheet Metal.* 

## **HVAC-0115 HVAC Fundamentals**

## 4 hours credit

This course will cover the history of refrigeration and air condition, also an introduction to tools and safety procedures. This will include tubing identification, cutting procedures for copper tubing, tub bending, soldering, brazing, swaged joints, threading steel pipe and proper procedures for plastic pipe.

## **HVAC-0120** Heating System Fundamentals

# 3 hours credit

This course will cover the fundamentals of gas residential heating and indoor air quality. Each system will be studied and discuss as to efficiency, relative purchase cost, installation cost, operating cost, and troubleshooting problems.

# **HVAC-0125** Electrical Fundamentals

#### 4 hours credit

This course will introduce students to wiring system diagrams and proper and safe wiring techniques. It is important to understand system diagrams when diagnosing and repairing heating and cooling problems. This course will also cover wire types, wiring all weather systems, special tools and all wiring system diagrams.

## HVAC-0130 Workplace Skills

## 1 hour credit

This course will cover the importance of good customer relations. This will include personal hygiene, communication skills, courtesy, conflict resolution, salesmanship, and quality of work.

## **HVAC-0203** Heat Pump Systems

#### 3 hours credit

(GREEN TECHNOLOGY) This course will cover the fundamentals of heat pump systems. This will include reverse-cycle refrigeration, four-way valves, ground source heat pumps, water source heat pumps, air source heat pumps, refrigerant line

identification, types of metering devices, and liquid-line accessories. Installation and troubleshooting will also be covered. *Prerequisites: HVAC-0101 Refrigeration Theory (Introduction Safety and Tools) 1.* 

# HVAC-0204 System Servicing and Troubleshooting

#### 2 hours credit

This course will cover the fundamentals of system servicing and troubleshooting. This will include air conditioning, all weather systems, centrifugal fan, complex circuits, controls, electric motors, four-way valves, gas furnaces, humidifiers, ice makers, output voltage transformers, pilot safety switches, refrigeration systems, and thermocouples. *Prerequisites: General Safety. Math Level 3 Recommended.* 

# **HVAC-0215** Heating and Refrigeration Internship

#### 3 hours credit

This course is designed to give students an opportunity to work in an HVAC related position. Upon successful completion of this course, the student should be able to apply classroom knowledge to an actual work situation. The internship will provide advanced students with on-the-job experience under the supervision of professionals in the industry. The work will be developed cooperatively with area employers, college staff and each student to provide a variety of actual job experiences directly related to the student's career goals. A minimum average of 15 hours per week on-the-job training is required. Students are expected to keep the instructor informed about progress and any job changes. *Prerequisites: Successful completion of two-thirds of course work and recommendation of instructor*.

## HVAC-0220 EPA 608

#### 1 hour credit

This course will help to prepare you to take the Environmental Protection Agency (EPA) Section 608 certification. The test will be given after 3 days of study and review. This is a must have class if you want to work around refrigerants. The certification is good for a life time.

# HVAC-0221 R-410A Safety Certification (Green Technology)

## 1 hour credit

This course is written on the belief that the solution to transition to environmentally safer refrigerants and oils, while keeping the public and technicians out of harms' way, is education and training. This certification program was written to assist in the training and certification of HVACR technicians for proper safety, handling and application of R-410A refrigerant.

# **HVAC-0225** Heating (Electric)

# 2 hours credit

This course will cover the fundamentals of residential electrical heating and indoor air quality (IAQ). Each system will be studied and discuss as to efficiency, relative purchase cost, operation cost, and troubleshooting problems. *Prerequisites: HVAC 0101 Refrigeration Theory (Introduction Safety and Tools) 1.* 

# HVAC-0226 Cooling 1

# 3 hours credit

This course will cover the fundamentals of residential cooling. This will include comfort and psychometrics, residential refrigeration applied to air conditioning, and air distribution and balance. *Prerequisites: General Safety. Math Level 3 Recommended.* 

# HVAC-0227 Cooling 2

## 3 hours credit

This course will cover the fundamentals of residential cooling. This will include installation, controls, typical operating conditions, and troubleshooting. Different types of systems will be discussed and evaluated. *Prerequisites: HVAC-0101 Refrigeration Theory (Introduction Safety and Tools) 1.* 

# HVAC-0228 Refrigeration 1

#### 3 hours credit

This course will introduce students to domestic refrigerators. The course will begin with a brief description of the refrigeration process and proceed with various types of evaporators and evaporator defrosts. *Prerequisites: HVAC-0101 Refrigeration Theory (Introduction Safety and Tools) 1.* 

## HVAC-0229 Refrigeration 2

#### 3 hours credit

This course will introduce students to domestic and commercial refrigeration. The course will discuss compressors, condensers, and metering devices. Wiring and controls, defrost cycle, sweat prevention heaters, fan motors, and ice makers will also be covered. *Prerequisites: HVAC-0101 Refrigeration Theory (Introduction Safety and Tools) 1.* 

# **HVAC-0230** Special Projects 1

#### 2 hours credit

This course gives students hands on experience in working with customers on outside projects under the supervision of an instructor. Prerequisites: HVAC-0101 Refrigeration Theory (Introduction Safety and Tools) 1, HVAC-0226 Cooling 1, HVAC-0228 Refrigeration 1, HVAC-0225 Heating (Electric), HVAC-0224 Heating (Gas), HVAC-0232 Electrical Controls (Motors) 2, HVAC-0102 Refrigeration Theory 2, HVAC-0106 Electrical Theory (Electrical & Components) 2, HVAC-0203 Heat Pump Systems, HVAC-0204 System Servicing and Troubleshooting, HVAC-0103 Refrigeration System Components 1, HVAC-0105 Electrical Theory.

# HVAC-0231 Special Projects 2

#### 3 hours credit

This course gives students hands on experience in working with customers on outside projects under the supervision of an instructor. Students who do not choose or are not qualified for an internship will take this course. *Prerequisites: HVAC-0101 Refrigeration Theory (Introduction Safety and Tools) 1, HVAC-0226 Cooling 1, HVAC-0228 Refrigeration 1, HVAC-0225 Heating (Electric), HVAC-0224 Heating (Gas), HVAC-0232 Electrical Controls (Motors) 2, HVAC-0106 Electrical Theory (Electrical & Components) 2, HVAC-0203 Heat Pump Systems, HVAC-0204 System Servicing and Troubleshooting.* 

# **HVAC-0232** Electrical Controls (Motors) 1

## 1 hour credit

This course will give students a basic understanding of electric motors. The course will cover starting and running components, motor speeds, power supplies, single and split-phase motors. *Prerequisites: HVAC-0101 Refrigeration Theory (Introduction Safety and Tools) 1.* 

# **HVAC-0233** Electrical Controls (Motors) 2

## 2 hours credit

This course will give students an understanding of electric motors. The course will cover centrifugal switches, shaded-pole motors, three-phase motors, single-phase hermetic motors, two speed motors, and variable speed motors. The course will also cover application of motors, motor controls, and troubleshooting electric motors. *Prerequisites: HVAC-0101 Refrigeration Theory (Introduction Safety and Tools) 1.* 

# **HVAC-0235 Heating (Other) Geothermal (Green Technology)**

## 1 hour credit

This course will cover the Geothermal heat pumps which are refrigeration machines. Geothermal heat pumps use the earth, or water in the earth, for their heat source and heat sink. Energy is transferred daily to and from the earth by the sun's radiation, rain, and wind. Each year, more than 6000 times the amount of energy currently used by humans is striking the earth from the sun. This is the study of how we can use this energy. *Prerequisites: HVAC-0101 Refrigeration Theory (Introduction Safety and Tools) 1, HVAC-0203 Heat Pump Systems*.

## **HVAC-0260** How to Start Your Own Home-Based Business

#### 1 hour credit

This course covers the skills to operate a personal business, including qualifications, ethics, budgeting, fee structuring, cash flow and fee collection, staff and administrative issues, insurance and liability, recordkeeping, marketing and developing new leads.

# **HZMT-0100** Theory of Environmental Laws

# 3 hours credit

The purpose of this course is to provide a historical overview of the occupational, consumer and environmental health and safety issues. The student will be introduced to past and present government regulations which helped shape the worker, consumer, and environmental protection programs in the United States. Emphasis will be placed on identifying applicable OSHA regulations, interpreting them, and recommending compliance strategies.

# **HZMT-0115** Hazardous Materials Map & Terrain Analysis

#### 2 hours credit

With hazardous materials stored, transported, used and produced throughout the country, it has become increasingly necessary to rely on maps to supply information to Haz-Mat elements, and to help resolve problems caused by emergencies in remote areas of the United States. Equipment, personnel and materials must be transported and phased into a Haz-Mat operation at the proper time and place. Maps are a tool that is used to perform these tasks. The second part of the course deals with the skills required to analyze the local terrain and make sound command decisions. Topics are covered which improve the ability to determine local terrain conditions and potential problems when dealing or planning for a chemical release or spill.

# HZMT-0120 Hazardous Materials Awareness and Operations

#### 3 hours credit

The purpose of this course is to develop an emergency response contingency plan to deal with hazardous material or chemical emergencies in compliance with regulations in order to protect human health and the environment as well as to minimize an **organization's risks. This will also allow them to implement the various portions of the plan as required.** 

# HZMT-0125 Industrial Health & Safety

## 3 hours credit

Emphasis is placed on where hazardous materials are used and generated in various types of industrial processes. Understanding the constraints of product lines is discussed. Special attention is paid to potential acute and chronic hazard exposures from various industrial processes. Also, emphasis is placed on how to achieve greater safety and efficiency and to eliminate costly accidents.

# **HZMT-0150** Air Monitoring Techniques

# 2 hours credit

Emphasis will be on introduction of concepts, terminology, techniques, potential applications and mechanics of specific hardware in air monitoring.

# **HZMT-0215** Hazardous Materials Technician

#### 5 hours credit

After completing the course the student will have met the sections required for a Hazardous Materials Technician in NFPA® 472, *Standard on Professional Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents* (2013 edition). Students who successfully complete a certification process will be certified as a Hazardous Materials Technician.

Learning objectives are identified on a chapter-by-chapter basis and can be found in detail in the text required for the course (explained in detail in <u>Text</u> section).

#### **HZMT-0285** Hazardous Materials Industrial Processes

## 3 hours credit

This industrial process course will familiarize the student with five common categories of industrial process facilities. Using the techniques developed in this course, the student will learn how to familiarize him or herself with a variety of industrial processes

from a hazardous materials focal point.

## **HZMT-0290** Recycling and Resource Conservation

#### 3 hours credit

This is a course designed to address the methods that can be used in the recycling of paper, plastics, glass metals, and other items which can be used in some other process. Other topics that are covered are energy conservation, fertilizers and pesticides, water pollution, safe foods, lawn care, and safe products and services.

# JOUR-0174 Principles of Photo and Photojournalism

#### 3 hours credit

This course is designed to familiarize you with basic camera mechanics and techniques. Though the emphasis of the course is on photojournalism and the use of photography as a storytelling device, you will receive instruction in skills that have a variety of applications. Instruction will be supplemented by discussion of the laws governing photojournalism, as well as journalism ethics. You will also learn basic darkroom techniques and digital photo editing.

# JOUR-0175 Introduction to Mass Communications

## 3 hours credit

This course is a general survey of the various media of mass communication and their roles in American society.

# JOUR-0176 Reporting I

## 3 hours credit

This course is designed to introduce you to the different types of writing found in most print, on-line and broadcast media. Styles covered include news stories, community reporting, editorials, columns, sports and other beat assignments. You may also have the opportunity to get your writing published in the college newspaper.

#### JOUR-0178 Principles of Mass Media Advertising

# 3 hours credit

An introductory course in advertising, this class provides theory as well as practical experience in various aspects of the advertising industry, including creative work (writing, illustration and layout), account service, research, and media planning.

# JOUR-0179 Survey of Television and Television Production

## 3 hours credit

This course examines areas of broadcast communications. Television, because of its prominence, is emphasized, as are other developing media.

# JOUR-0180 Modern Newspaper Design

## 2 hours credit

Modern Newspaper Design introduces the fundamentals of publication design using a personal computer. The course covers: 1) the elements of page composition, 2) publication design, 3) digital typesetting, 4) typical desktop publishing 5) hardware and software, and 6) journalism applications.

## JOUR-0277 Production Processes I

# 2 hours credit

Students are involved in actual processes of publishing a newspaper. Students may become involved in specialized areas including reporting, editing, photography, layout, commentary and business management.

# JOUR-0278 Production Processes II

# 2 hours credit

Students are involved in actual processes of publishing a newspaper. Students may become involved in specialized areas including reporting, editing, photography, layout, commentary and business management. In Production Processes II you will develop new skills or refine skills already developed in previous classes.

# KSPN-0102 KSPN Foundations of Nursing

#### 4 hours credit

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

# KSPN-0104 KSPN Foundations of Nursing Clinical

#### 2 hours credit

This course explores the art of science of nursing in this clinical course. Emphasis is placed on the nursing process, cultural and spiritual awareness, communication, data collection, performance of basic nursing skills, and documentation. Principles of safe medication administration are introduced.

# KSPN-0106 KSPN Medical Surgical Nursing I

#### 4 hours credit

This course focuses on the effect of disorders of selected systems throughout the lifespan and applies the nursing process in meeting basic needs. Health promotion and maintenance, rehabilitation and continuity of care are emphasized. The role of the practical nurse is incorporated throughout.

## KSPN-0108 KSPN Medical Surgical Nursing I - Clinical

#### 2 hours credit

Simulated and actual care situations of selected systems throughout the lifespan, utilizing acute and long-term care setting. An emphasis is placed on critical thinking and clinical decision-making skills.

# KSPN-0110 KSPN Pharmacology

#### 3 hours credit

This course introduces the principles of pharmacology, drug classifications, and the effects of selected medications on the human body as well as the administration of medications. The nursing process is used as the framework for ensuring safe and effective nursing care for clients across the lifespan.

# KSPN-0120 KSPN Medical Surgical Nursing II

## 4 hours credit

This course focuses on the effect of disorders of selected systems throughout the lifespan using the nursing process in meeting basic needs. Prevention, rehabilitation and continuity of care are emphasized. The role of the practical nurse is incorporated throughout.

# KSPN-0122 KSPN Medical Surgical Nursing II - Clinical

## 3 hours credit

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

# KSPN-0124 KSPN Maternal Child Nursing

# 2 hours credit

This course focuses on pre- and post-natal maternal nursing care, as well as, the care of children from infancy to adolescence. Emphasis is given to normal reproduction and frequently occurring biological, cultural, spiritual and psychosocial needs of the childbearing and child-rearing family.

# KSPN-0126 KSPN Maternal Child Nursing - Clinical

## 1 hour credit

This clinical course applies concepts from Maternal Child. Emphasis is placed on the nursing process and meeting the basic needs of the maternal child client.

# KSPN-0128 KSPN Gerontology Nursing

#### 2 hours credit

This course is designed to explore issues related to the aging adult using the nursing process as the organizing framework. Also discussed are the impact of ageism, alterations in physiological and psychosocial functioning, and the role of the practical nurse in caring for older adult clients.

## KSPN-0130 KSPN Mental Health Nursing

#### 2 hours credit

This course explores basic concepts and trends in mental health nursing. Therapeutic modalities and client behavior management are discussed. Emphasis is placed on using the nursing process and meeting the basic human needs of the mental health client.

## LANG-0101 French I

#### 5 hours credit

Students acquire basic skills at a reasonable level of proficiency. The course is integrated with cultural aspects which form the basis of objectives for all language study. Primary emphasis is on the four essential skills: listening, speaking, reading, and writing within which the components of grammar and culture are included.

#### LANG-0102 French II

#### 5 hours credit

This course is a continuation of French I - LANG-0101. Students acquire basic skills at a reasonable level of proficiency. The course is integrated with cultural aspects which form the basis of objectives for all language study. Primary emphasis is on the four essential skills: listening, speaking, reading, and writing. *Prerequisite: French I, LANG-0101 or consent of the instructor.* 

## LANG-0121 German I

#### 5 hours credit

This course is an introductory course designed for college students and other adults. Students are provided a sound basis for learning German as it is spoken and written today. Practice is provided in all four skill areas: listening, speaking, reading and writing. The course is designed to spark the interests of students in German history and culture.

## LANG-0122 German II

#### 5 hours credit

This course is a continuation of German I, with increased attention given to structure, fluency in reading, writing, and oral work. Ideals and realities of German culture are examined for comparative insight. *Prerequisite: German I or consent of the instructor*.

# LANG-0138 Basic Spanish

# 3 hours credit

Spanish I is the first semester of Spanish for students with little or no previous instruction in Spanish. This course enables students to attain a basic competency in all language skills: speaking, listening, reading, writing, and culture.

# LANG-0141 Spanish I

## 5 hours credit

Spanish I is the first semester of Spanish for students with little or no previous instruction in Spanish. This course enables students to attain a basic competency in all language skills: speaking, listening, reading, writing, and culture.

# LANG-0142 Spanish II

# 5 hours credit

The Spanish II curriculum emphasizes the combination of conversation, reading, writing, grammar and culture. *Prerequisite: LANG 141, Spanish I.* 

# LANG-0143 Spanish I (for Teachers)

# 5 hours credit

Spanish I is the first semester of Spanish for students with little or no previous instruction in Spanish. This course enables students to

attain a basic competency in all language skills: speaking, listening, reading, writing, and culture with special emphasis on oral communication. Furthermore, this course is a comprehensive language course design to provide functional Spanish language skills for school personnel who have contact with Spanish speaking students, parents, and visitors. In addition, it includes a cross-cultural component with emphasis on family issues, Hispanic etiquette, literacy, and cultural issues.

## LANG-0150 Command Spanish® for Nurses

#### 3 hours credit

This course prepares non-Spanish-speaking future nurses to provide essential basic medical care to Spanish-speaking patients. In addition, exposed students to trans-cultural information related to their future career and the Hispanic culture. This course will prepare students to obtain essential patient information, vital signs, in addition to perform routing nursing procedures. Emphasis is placed on enhancing the cultural understanding and the quality of patient care. This course does not meet the foreign language requirements.

## LANG-0151 Spanish for School Administrators, Teachers, Paraprofessionals, and Support Staff

#### 3 hours credit

Spanish for School Administrators, Teachers (0-12), and Support Staff is a comprehensive language course design to provide functional Spanish language skills for school personnel who have contact with Spanish speaking students, parents, and visitors. It also includes extensive training for non-Spanish speaking classroom teachers who have Spanish speaking children or young adults in their classroom. In addition, it includes a cross-cultural component with emphasis on family issues, Hispanic etiquette, literacy, cultural expectations, and the Latin American educational system. No prior knowledge of Spanish is necessary.

# LANG-0152 Spanish for Child Care Facility Personnel

#### 2 hours credit

This is a comprehensive program designed to provide functional Spanish language skills for child care facility personnel who have contact with Spanish-speaking parents and children. The program utilizes phonetic encoding to address the most important commands, and phrases critical to child care facilities. This course will include a cross-cultural component with emphasis on family issues. No prior knowledge of Spanish is necessary.

# LANG-0153 Spanish for Law Enforcement

# 3 hours credit

This course does not meet the foreign language requirements. Spanish for Law Enforcement is a comprehensive language course design to provide functional Spanish language skills for law enforcement personnel/officers who have contact with Spanish speaking individuals. In addition, it includes language training pertinent to the Miranda Warning and Waiver, alert words, vital phrases of law enforcement operations and procedures.

# LANG-0160 Conversational Arabic

# 3 hours credit

This course does not meet the foreign language requirements. Conversational Arabic is designed for students who want to acquire a speaking knowledge of the language with the focus on communication, comprehension, and cultural information about the Arabic-speaking world and its people. It is very helpful for those interested in traveling to an Arabic-speaking country, people who deal with the Arabic-speaking community or those who want to enrich themselves by learning a foreign language.

## LANG-0161 Arabic I

## 5 hours credit

Arabic I is the first semester of Arabic for students with little or no previous instruction in Arabic. This course enables students to attain a basic competency in all language skills: speaking, listening, reading, writing, and culture.

## LANG-0162 Arabic II

#### 5 hours credit

The Arabic II curriculum emphasizes the combination of conversation, reading, writing, grammar, and culture. *Prerequisite: LANG-0161, Arabic I.* 

## LANG-0203 French III

#### 3 hours credit

The study of grammar is reviewed and continued. Extensive conversational drills are included and some directed composition based on reading of French texts is required. *Prerequisite: French II, LANG-0102 or consent of the instructor.* 

## LANG-0204 French IV

## 3 hours credit

This course is a continuation of French III LANG-0203. Prerequisite: French III, LANG-0203 or consent of the instructor.

## LANG-0223 German III

#### 3 hours credit

Reading and discussion of selected works of modern German literature are emphasized, with grammatical analysis and practice. Computer-assisted instruction and telecourse materials are used. Historical and contemporary aspects of German culture and philosophy are discussed. *Prerequisite: German II, LANG-0122 or consent of the instructor.* 

## LANG-0224 German IV

## 3 hours credit

German IV examines readings of modern prose along with intensive practice in German composition and conversation. Computerized instructional techniques are utilized and a German language telecourse is used. Students discuss the promise and paradoxes of German Philosophy. *Prerequisite: German III, LANG-0223 or consent of the instructor.* 

## LANG-0243 Spanish III

#### 3 hours credit

Spanish III is the first half of a yearlong intermediate Spanish course. The objective of the course is to increase students' competence in all language skill areas (speaking, reading, writing, listening and culture). By the end of the semester, students who have applied themselves and studied seriously will be able to converse, to read and understand short stories and other publications, and to express themselves in writing, all in Spanish. *Prerequisite: Spanish II, LANG-0142*.

## LANG-0244 Spanish IV

## 3 hours credit

Spanish IV is the second half of a year-

long intermediate Spanish course. The objective of the course is to increase students' competence in all language skill areas (speaking, reading, writing, listening and culture). By the end of the semester, students who have applied themselves and studied seriously will be able to converse, to read and understand short stories and other publications, and to express themselves in writing, all in Spanish. *Prerequisite: Spanish III, LANG-0243*.

## MACH-0101 OSHA 10-30

## 3 hours credit

This course will locate and apply OSHA safety and health standards, policies and procedures. Introduce OSHA standards and regulations to supplemental and on-going safety and health programs, .Identify common violations of OSHA standards and propose abatement actions. .Describe appropriate abatement procedures for selected safety and health hazards. *Prerequisites:* Fundamentals of Mathematics w/ a grade of "C" or higher or appropriate score on the Math assessment test.

# MACH-0102 Workplace Ethics

## 2 hours credit

This course is an introduction to work place skills. The course topics include: Resume writing, cover letters, applications, personal data sheets, portfolios, interviewing tactics, work place ethics and basic work place soft skills.

# MACH-0103 Bench Work

# 1 hour credit

This course will introduce layout and bench work procedures that will provide the learner with the principles of locating, analyzing and performing techniques used for machining process to be performed, and the common tools that can be associated with the

procedures. It will also cover some repair procedures that may be needed, common to the industry. *Prerequisites: Quality Control and Inspection MACH0105, Fundamentals of Mathematics w/ a grade of "C" or higher or appropriate score on the Math assessment test.* 

# MACH-0104 Industry Print Reading

#### 3 hours credit

This course will give the learner the knowledge to be proficient in the understanding and interpretation to translate and communicate information from drawings that will be needed to inspect, assemble and produce parts. Special emphasis will be implemented on providing realistic print reading examples and problems based from engineering and manufacturing Fundamentals.

## MACH-0105 Quality Control and Inspection

#### 1 hour credit

This course will introduce Quality Control Procedures that will provide the learner with the principles of locating, analyzing and performing techniques used for precision measurement to be obtained, and the common tools that can be associated with the procedures. The course will also emphasize on the importance of interchangeability. *Prerequisites: Fundamentals of Mathematics w/a grade of "C" or higher or appropriate score on the Math assessment test.* 

#### MACH-0106 Metallurgy

#### 1 hour credit

Metallurgy Fundamentals is designed for those who desire to learn the basics of the behavior of metals and provide them with a broadened range of the industrial knowledge of the entire field of metals (metallurgy). The course content will provide the student learner the whys and how's of the selection of metals for their particular applications. It will also cover physical conditions that working or deforming may have on metals in relationship to being machined. *Prerequisites: Fundamentals of Mathematics w/ a grade of "C" or higher or appropriate score on the Math assessment test.* 

#### MACH-0107 Machine Tool Processes

## 1 hour credit

This course will introduce the learner with the hazards that may be found in an industrial type setting, and will emphasize how to make quality suggestive changes. It will also concentrate on tool selection for a particular job and allow the student to make sound decisions in estimating and machine cycle times. Group problem solving skills will be applied in this course to brain storm cost analysis and tool geometry. *Prerequisites: Fundamentals of mathematics w/a grade of "C" or higher or appropriate score on the math assessment test.* 

# MACH-0108 Machining Fundamentals I

## 3 hours credit

This course will introduce the learner with the skills to properly identify, set-up, and operate metal turning and milling equipment safely. This course will emphasize hands on approach as well as classroom activities to familiarize the student with the process to complete job task analysis. This course will also cover common mathematical formulas that will be implemented into the curriculum to achieve expected learner outcomes. *Prerequisites: MACH-0101, Safety, MACH-0103 Bench Work, MACH-0105 Quality Control and Inspection, MACH-0107 Machine Tool Processes, and fundamentals of Mathematics w/ a grade of "C" or higher or appropriate score on the Math assessment test.* 

# MACH-0109 Machining Fundamentals II

# 3 hours credit

This course will introduce the learner with the skills to properly identify, set-up, and operate metal turning and milling equipment safely. This course will emphasize hands on approach as well as classroom activities to familiarize the student with the process to complete job task analysis. This course will also cover common mathematical formulas that will be implemented into the curriculum to achieve expected learner outcomes. *Prerequisites: MACH-0101, Safety, MACH-0103 Bench Work, MACH-0105 Quality Control and Inspection, MACH-0107 Machine Tool Processes, MACH-0108 Machining Fundamentals II and Fundamentals of Mathematics w/a grade of "C" or higher or appropriate score on the Math assessment test.* 

# MACH-0110 CNC Operations I

#### 3 hours credit

This course will introduce the learner with operations and to properly identify, set-up, and operate Computer Numerical Controlled (CNC) metal turning, milling equipment safely. This course will emphasize hands on approach as well as classroom activities to familiarize the student with the process to complete job task analysis. This course will also cover common mathematical formulas that will be implemented into the curriculum to achieve expected learner outcomes. *Prerequisites: MACH-0103 Bench Work, MACH-0105 Quality Control and Inspection, MACH-0107 Machine Tool Processes, MACH-0108 Machining Fundamentals I ~IV MACH-0109 ~ MACH-0202 and Fundamentals of Mathematics w/a grade of "C" or higher or appropriate score on the Math assessment test.* 

## MACH-0111 Mathematics for Manufacturing

#### 3 hours credit

This course will introduce the learner to the step by step approach to mastering the mathematical skills needed by today's technicians. This course will enable the learner to relate basic math concepts and operations specific to today's industry. Prerequisites: Fundamentals of Mathematics w/a grade of "C" or higher or appropriate score on the Math assessment test.

# MACH-0201 Machining Fundamentals III

#### 3 hours credit

This course will introduce the learner with the advanced operations and to properly identify, set-up, and operate metal turning, milling equipment and safely. This course will emphasize hands on approach as well as classroom activities to familiarize the student with the process to complete job task analysis. Materials covered in this course will enhance the procedures learned in MACH-0108, MACH-0109. This course will also cover common mathematical formulas that will be implemented into the curriculum to achieve expected learner outcomes. *Prerequisites: MACH-0103 Bench Work, MACH-0105 Quality Control and Inspection, MACH-0107 Machine Tool Processes, MACH-0108 Machining Fundamentals I, MACH-0109 Machining Fundamentals II and Fundamentals of Mathematics w/a grade of "C" or higher or appropriate score on the Math assessment test.* 

# MACH-0202 Machining Fundamentals IV

## 3 hours credit

This course will introduce the learner with the advanced operations and to properly identify, set-up, and operate metal turning, milling equipment and Surface Grinders safely. This course will emphasize hands on approach as well as classroom activities to familiarize the student with the process to complete job task analysis. Materials covered in this course will enhance the procedures learned in MACH 0108, 0109, 0201. This course will also cover common mathematical formulas that will be implemented into the curriculum to achieve expected learner outcomes. *Prerequisites: MACH-0103 Bench Work, MACH-0105 Quality Control and Inspection, MACH-0107 Machine Tool Processes, MACH-0108 Machining Fundamentals I, MACH-0109 Machining Fundamentals II, MACH-0201 Machining Fundamentals III and Fundamentals of Mathematics w/a grade of "C" or higher or appropriate score on the Math assessment test.* 

# MACH-0203 CNC Operations II

# 6 hours credit

This course will introduce the learner with operations and to properly identify, set-up, and operate Computer Numerical Controlled (CNC) metal turning, milling equipment safely. This course will emphasize hands on approach as well as classroom activities to familiarize the student with the process to complete job task analysis. This course will also cover common mathematical formulas that will be implemented into the curriculum to achieve expected learner outcomes. *Prerequisites: MACH-0103 Bench Work, MACH-0105 Quality Control and Inspection, MACH-0107 Machine Tool Processes, MACH-0108 Machining Fundamentals I* ~IV, MACH-0109 ~ MACH-0202 and Fundamentals of Mathematics w/ a grade of "C" or higher or appropriate score on the Math assessment test.

## MACH-0204 CAD/CAM I

# 4 hours credit

The learner will be introduced to computer fundamentals by creating part files, and interpreting part starting procedures. Several software's will be introduced and taught (Master Cam, Gibbs, and Feature Cam) Students will make a choice of which or all will

be mastered. Prerequisites: Core curriculum Certificate A or documentation of NIMS, or successfully passing a machining credentialing testing method per instructor.

## MACH-0205 CAD/CAM II

#### 4 hours credit

The learner will be introduced to geometry creation by the use of icon driven methods to create lines, points and circles that will produce a drawing that can be used to create a part. This part creation will then be sent to our equipment to produce programs that CNC operators use to operate our equipment. Several software's will be introduced and taught (Master Cam, Gibbs, and Feature Cam) Students will make a choice of which or all will be mastered. *Prerequisites: MACH-0204 CAD/CAM I*.

#### MACH-0206 CAD/CAM III

#### 4 hours credit

The learner will be introduced to work coordinates and also work groups that are required to create a 3 dimensional drawing to produce multi axis machining operations. Three, 4, and 5 axis machining practices will be implemented. Several softwares will be introduced and taught (Master Cam, Gibbs, and Feature Cam) Students will make a choice of which or all will be mastered. *Prerequisites: MACH-0204 CAD/CAM I, MACH-0205 CAD/CAM II.* 

# MAPR-0100 Electrical Safety and Tools of the Trade

#### 2 hours credit

Study of safety measures required for major appliance technicians to recognize and avoid hazards of an electrical or mechanical nature.

## MAPR-0108 Basic Electricity

## 3 hours credit

Students will study Ohm's Law, series circuits, parallel circuits, series-parallel circuits, alternating current, inductance, capacitance, transformers, switching devices, and control circuit boards. The course teaches schematic and wiring diagram interpretation. The student will learn basic electrical theory and troubleshooting complex electrical circuits. This course will provide practice in application of electrical theory and diagnostic procedures, as well as the interconnection of components.

# MAPR-0112 Fundamentals of Refrigeration

#### 2 hours credit

List and identify the components of a refrigeration system, explain theory of refrigeration and the operation of all the compressor, evaporator, condenser, and metering device. Explain and understand the scientific principles heat transfer, enthalpy, sensible, and latent heat.

# MAPR-0140 Brazing/Swaging/Silver and Soft Soldering

## 3 hours credit

This course teaches the proper methods of brazing similar and dissimilar metals used in the refrigeration industry. Also taught, are the methods, procedures, and tools used to swage tubing properly for the interconnection of refrigerant components, within a sealed system. Silver and soft soldering will then be used, to assemble and seal up the tubing of the refrigeration system. The successful completion of MAPR – 0135 will be required to participate in the hands-on portion of this course.

# MAPR-0160 Workplace Skills/Customer Relations/Record Keeping

# 2 hours credit

Upon successful completion of this course, the student should be able to identify the job skills necessary to have a successful career in their chosen field. Topics include listening skills, oral communication, human relations, decision making/problem solving, how to work as a team, time and resource management, work ethics and career planning.

# MAPR-0210 Cooking Equipment Residential and Commercial

# 3 hours credit

Obtain an understanding of the process of heat transfer from the heat source through the food product and the importance of accurate heat control. This course will teach proper gas/electrical connecting, gas ignition systems, temperature/electrical controls,

disassembly, oven calibration, proper flame adjustment, self-clean functions and sealed surface burner service. Customer service, repair order write-up, service and parts manual usage, parts ordering and follow through will be discussed and practiced.

# MAPR-0215 Ventilation Hoods/Make-up Air Blowers Domestic/Commercial

#### 3 hours credit

Upon successful completion of this course, the student will be able to identify and explain operation, trace circuits, diagnose and repair several makes of ventilation hoods, snorkel vents, conditioned and non-conditioned make-up air systems. Student will identify, explain the operation, diagnose and repair various and different types of controls. Customer service, repair order write-up, service and parts manual usage, parts ordering and follow through will be discussed and practiced.

#### MAPR-0220 Dishwashers Domestic/Professional/Commercial

#### 3 hours credit

This course teaches the student to use safe and correct procedures, to disassemble, identify components, explain operation, diagnose, repair and reassemble several types of dishwashers, as well as to identify controls, explain their operation, and identify common repair problems with dishwashers. Customer service, repair order write-up, service and parts manual usage, parts ordering and follow through will be discussed and practiced.

#### MAPR-0222 Advanced Refrigeration

#### 4 hours credit

This course instructs the students to safely connect gauges for testing and servicing, to use safe, correct and legal procedures to service typical home and commercial refrigerated units, to use proper procedures to correctly analyze refrigeration problems, and to identify and explain the operation of different types of controls such as temperature and deicing. The course will teach the proper methods and procedures of refrigerant recovery, charging, and system vacuuming.

# MAPR-0230 Residential Refrigerators and Freezers

#### 3 hours credit

This course provides instruction in techniques used to disassemble and identify components, explain operation, trace circuits, diagnose and repair several makes of refrigerators, freezers, icemakers, dehumidifiers and window air conditioning units. By learning to trace circuits using wiring diagrams, and to identify, explain the operation, diagnose and repair various and different types of controls, students learn proficiency in this line of work. Customer service, repair order write-up, service and parts manual usage, parts ordering and follow through will be discussed and practiced.

## MAPR-0235 Commercial Refrigeration

## 3 hours credit

This course instructs students in techniques to disassemble and identify components, explain operation, trace circuits, diagnose and repair as needed several makes of commercial walk-ins, reach-in freezers/coolers. By learning to trace circuits using wiring diagrams and be able to identify, explain the operation, diagnose and repair various and different types of controls students learn proficiency in this line of work. Customer service, repair order write-up, service and parts manual usage, parts ordering and follow through will be discussed and practiced. This course will also teach proper load calculating for commercial walk-in design.

# MAPR-0240 Steam Ovens/Proofers/Deep Fryers Domestic/Commercial

## 3 hours credit

Students will learn the principals of steam generation for the purposes of cooking and raising bread dough. This course provides instruction in techniques used to disassemble and identify components, explain operation, trace circuits, diagnose and repair several makes of steam ovens, bread proofers, and commercial deep fryers. By learning to trace circuits using wiring diagrams and to be able to identify, explain the operation, diagnose and repair various and different types of temperature and electrical controls, students learn proficiency in this line of work. Customer service, repair order write-up, service and parts manual usage, parts ordering and follow through will be discussed and practiced.

# MAPR-0243 Microwave Ovens Domestic/ Commercial

# 3 hours credit

Disassemble and identify components, explain operation, trace circuits, diagnose and repair as needed several makes of microwave

ovens. Trace circuits using wiring diagrams and be able to identify, explain the operation, diagnose and repair various and different types of controls. Customer service, repair order write-up, service and parts manual usage, parts ordering and follow through will be discussed and practiced. This course will also teach proper microwave leak prevention and detection, as well as wattage testing.

# MAPR-0245 Top and Front Load Clothes Washers Domestic/Commercial

#### 3 hours credit

This course provides instruction in techniques used to ensure safe and correct procedures, to disassemble, identify components, explain operation, diagnose, repair and reassemble several types of clothes washers. By learning to identify controls, explain their operation, and identify common repair problems, students learn proficiency in this line of work. Customer service, repair order write-up, service and parts manual usage, parts ordering and follow through will be discussed and practiced.

# MAPR-0247 Gas and Electric Clothes Dryers/Stack Laundry Domestic/Commercial

#### 3 hours credit

This course provides instruction in techniques used to obtain an understanding of the process of removing moisture from the clothing, the dryer, and the structure where the unit is located. This course will teach proper gas/electrical connecting, gas ignition systems, temperature/electrical controls, disassembly, drive motor functions, air flow, venting and parts replacement. Customer service, repair order write-up, service and parts manual usage, parts ordering and follow through will be discussed and practiced.

## MAPR-0284 Special Projects

#### 3 hours credit

This course gives students hands on experience in working with customers on outside projects under the supervision of an instructor. *Prerequisites: Program Facilitator Approval.* 

# MAPR-0290 Internship I

#### 3 hours credit

Upon successful completion of this course, the student should be able to apply classroom knowledge to an actual work situation. The internship will provide advanced students with on-the-job experience under the supervision of professionals in the industry. The work will be developed cooperatively with area employers, college staff and each student to provide a variety of actual job experiences directly related to the student's career goals. A minimum average of 15 hours per week on-the-job training is required. Students are expected to keep the instructor informed about progress and any job changes. *Prerequisites: Program Facilitator Approval.* 

## MAPR-0291 Internship II

## 3 hours credit

Upon successful completion of this course, the student should be able to apply classroom knowledge to an actual work situation. The internship will provide advanced students with on-the-job experience under the supervision of professionals in the industry. The work will be developed cooperatively with area employers, college staff and each student to provide a variety of actual job experiences directly related to the student's career goals. A minimum average of 15 hours per week on-the-job training is required. Students are expected to keep the instructor informed about progress and any job changes. *Prerequisites: Program Facilitator Approval.* 

## MATH-0097 Math Essentials

#### 3 hours credit

Math Essentials emphasizes skill building in the operations of basic addition, subtraction, multiplication, and division as they relate to whole numbers, fractions, and decimals. These basic skills are then applied to the areas of ratio and proportion, percents, measurement, basic geometric concepts, and statistics. Algebra is introduced with the study of signed numbers, algebraic expressions, and basic equations. Students will be expected to use appropriate technology as one tool to achieve competency in Math Essentials. *Prerequisite(s):* Accuplacer score 1-40 if Reading Comprehension is equal or greater than 40.

## MATH-0099 Elementary Algebra

#### 3 hours credit

Elementary Algebra is an introductory algebra course for student who a solid foundation in arithmetic. Topics studied will include operations with signed numbers, linear equations and inequalities, problem solving, graphs of linear equations, operations with polynomials, factoring, quadratic equations, rational expressions, and radical expressions. Students will be expected to use appropriate technology as one tool to achieve competency in Elementary Algebra. *Prerequisite:* 

- 1) Grade of "C" or higher in MATH0097 Math Essentials OR
- 2) Accuplacer score of 41-70 if Reading Comprehension is equal or greater than 60.

# MATH-0104 Intermediate Algebra

#### 3 hours credit

Intermediate Algebra includes a brief review of Elementary Algebra, linear functions and graphs, rational expressions and equations, radical expressions and complex numbers, quadratic equations and graphs, and an introduction to logarithmic functions. Students will be expected to use appropriate technology as one tool to achieve competency in Intermediate Algebra. *Prerequisites:* 

1) Grade of "C" or higher in MATH0099 Elementary Algebra OR Accuplacer score of 71-99

# MATH-0105 College Algebra with Review

#### 5 hours credit

College Algebra includes a brief review of Intermediate Algebra; analysis and graphing of functions, including constant, linear, absolute value, square root, polynomial, rational, exponential and logarithmic functions and non-functions; and solving equations and inequalities, including polynomial equations, exponential equations, logarithmic equations, and systems of linear equations and inequalities. Students will be expected to use appropriate technology as one tool to achieve competency in College Algebra. A graphing calculator is required for this course. *Prerequisites: First Time Placement: See Mandatory Placement Guidelines. Grade of "C" or higher in MATH0104 Intermediate Algebra.* 

# MATH-0106 College Algebra

## 3 hours credit

College Algebra includes analysis and graphing of functions, including constant, linear, absolute value, square root, polynomial, rational, exponential and logarithmic functions and non-functions; and solving equations and inequalities, including polynomial equations, exponential equations, logarithmic equations, and systems of linear equations and inequalities. Students will be expected to use appropriate technology as one tool to achieve competency in College Algebra. A graphing calculator is required for this course. *Prerequisites: First Time Placement: See Mandatory Placement Guidelines. Grade of "C" or higher in MATH0104 Intermediate Algebra*.

## MATH-0107 Graphing Calculator I

## 1 hour credit

Graphing Calculator I is designed for students with limited or no background in the use of the TI-83 or 84 Plus graphing calculator. The purpose of this course is to provide basic instruction in the use of the graphing calculator that is required in MATH-0105 College Algebra and above. A graphing calculator is required for this course. *Prerequisite(s): Grade of "C" or higher in Math0099 Elementary Algebra.* 

# MATH-0108 Pre-Calculus

# 5 hours credit

Pre-Calculus includes the analysis and graphing of functions, including constant, linear, absolute value, square root, polynomial, rational, exponential and logarithmic functions, non-functions and trigonometric functions; solving equations and inequalities, including polynomial equations, exponential equations, logarithmic equations, trigonometric equations, systems of linear equations and inequalities; trigonometric and inverse trigonometric functions, radian and degree measure, identities, and applications to physical problems; conic sections; and sequences and series. A graphing calculator is required for this course. *Prerequisite: Grade of "C" or higher in MATH-0105 or MATH-0106 College Algebra*.

## MATH-0112 Trigonometry

# 2 hours credit

Trigonometry includes trigonometric and inverse trigonometric functions, radian and degree measure, graphing, identities, and applications to physical problems. Students will be expected to use appropriate technology as one tool to achieve competency in

Trigonometry. A graphing calculator is required for this course. *Prerequisite: First Time Placement: See Mandatory Placement Guidelines Grade of "C" or better in MATH0104 Intermediate Algebra.* 

#### MATH-0115 Statistics

#### 3 hours credit

Statistics includes the study of basic descriptive statistics, introduction to probability, random variables, special probability functions, random sampling and sampling theory, estimation of the mean, hypothesis tests, and linear regression. Students will be expected to use appropriate technology as one tool to achieve competency in Statistics. A graphing calculator is required for this course. *Prerequisite: First Time Placement: See Mandatory Placement Guidelines. Grade of "C" or higher in MATH0105 College Algebra or MATH0108 Pre-Calculus* 

## MATH-0120 Calculus I (Non-Engineering)

## 3 hours credit

Calculus I is designed for students in business, life science, or social science. Content includes the study of the derivative and antiderivative and their applications as applied to algebraic, exponential, and logarithmic functions. Students will be expected to use appropriate technology and one tool to achieve competency in Calculus I. A graphing calculator is required for this course. Prerequisites: Grade of First Time Placement: See Mandatory Placement Guidelines. Grade of "C" or better in MATH 105 College Algebra OR MATH0108 Pre-Calculus.

# MATH-0121 Calculus II (Non-Engineering)

## 3 hours credit

Calculus II is designed for students in business, life science, or social science. Content includes a review of Calculus I with an emphasis on applications involving elementary functions, functions of several variables, trigonometric functions, integration techniques, and differential equations. Students will be expected to use appropriate technology as one tool to achieve competency in Calculus II. A graphing calculator is required for this course. *Prerequisites: Grade of "C" or higher in MATH0108 Pre-Calculus or MATH-0112 Trigonometry and MATH-0120 Calculus I (Non-Engineering)*.

# MATH-0122 Calculus and Analytic Geometry I

## 5 hours credit

Calculus I is designed for students in mathematics, hard sciences, and engineering. Content includes limits and their properties, differentiation and its applications, integration, and calculus of exponential and logarithmic functions. Students will be expected to use appropriate technology as one tool to achieve competency in Calculus I. A graphing calculator is required for this course. *Prerequisites: Grade of "C" or higher in MATH-0105 College Algebra and MATH0112 Trigonometry or MATH-0108 Pre-Calculus.* 

# MATH-0123 Calculus and Analytic Geometry II

#### 5 hours credit

Calculus & Analytic Geometry II is designed for students in mathematics, hard sciences, and engineering. Content includes calculus of transcendental functions, differential equations, applications of integration, integration techniques, infinite series, conic sections, and parametric and polar equations. Students will be expected to use appropriate technology as one tool to achieve competency in Calculus and Analytic Geometry II. A graphing calculator is required for this course. *Prerequisite: Grade of "C" or higher in MATH0122 Calculus and Analytic Geometry II.* 

#### MATH-0208 History of Mathematics

#### 3 hours credit

This course is designed to acquaint students with the development and practices of mathematics in ancient, medieval, and modern times. This worldwide multicultural development will then be brought up to date with the students' exposure to current thought and philosophy in mathematics as well as the technology that has revolutionized our modern world. *Prerequisite: Grade of "C" or higher in MATH0105 College Algebra or Bachelor's or higher degree.* 

### MATH-0224 Calculus and Analytic Geometry III

#### 5 hours credit

Calculus & Analytic Geometry III is designed for students in mathematics, hard sciences, and engineering. Content includes analytic and solid geometry, vectors, multivariable calculus, multiple integrals, and applications of these topics. Students will be expected to use appropriate technology as one tool to achieve competency in Calculus and Analytic Geometry III. A graphing calculator is required for this course. Prerequisites: First Time Placement – see Mandatory Placement Guidelines. Grade of "C" or higher in MATH0123 Calculus and Analytic Geometry II. May be taken concurrently with MATH0227 Differential Equations.

## MATH-0227 Differential Equations

#### 3 hours credit

Differential Equations is designed for students in mathematics, hard sciences, and engineering. Content includes standard types of ordinary differential equations, (first, second, and higher order), systems of differential equations, and applications to geometry and physical science. Students will be expected to use appropriate technology as one tool to achieve competency in Differential Equations. A graphing calculator is required for this course. *Prerequisite: Grade of "C" or higher in MATH0123 Calculus and Analytic Geometry III. May be taken concurrently with MATH0224 Calculus and Analytic Geometry III.* 

## MEDA-0105 Medical Administrative Aspects

#### 4 hours credit

This course provides an introduction to the administrative skills needed for a medical office. Students learn how to maintain medical records (both paper and electronic), manage appointments, and perform routine office duties. This course focuses on the financial aspects of the medical office including accounts payable and accounts receivable. Students examine billing and collection procedures.

### MEDA-0115 Medical Professional Issues

### 2 hours credit

This course reviews the role and function of the Medical Assistant. This course focuses on professional conduct, medico-legal, scope of practice, standards for Medical Assistants, along with professional and personal therapeutic communication, time management and goal setting.

# MEDA-0130 Pharmacology Administration

## 2 hours credit

MEDA 0130 is an introductory course in pharmacology that provides the student with the basic knowledge of pharmacologic principles, history and legal requirements along with principles of administration. This course will also review basic mathematic principles involved in solving computations related to pharmacology administration.

### MEDA-0150 Emergency Preparedness

#### 1 hour credit

This course provides healthcare professionals with an orientation for their possible future roles in disaster response and the importance of staying within the scope of practice of the profession. Students will be prepared to meet the expectations of their employers, to volunteer effectively, and to be competent and safe responders.

### MEDA -0160 Human Body

## 3 hours credit

This course introduces the student to basic human anatomy and physiology. Body systems are reviewed for normal function and common pathology. Common diseases and treatments are explored along with age-related health issues.

# MEDA 0165 Patient Care

## 4 hours credit

This course includes basic clinical skills necessary for the Medical Assistant. Aseptic practice for the medical office will be defined, basic patient interaction such as interviewing, obtaining and recording vital signs, assisting with basic physical exams and testing will be studied.

#### MEDA 0175 Advanced Patient Care

#### 4 hours credit

This course focuses on expanding the knowledge and skills in Patient Care. More complex and independent procedures performed by the Medical Assistant will be explored. Addresses surgical procedures, physical therapy, principles of radiology, emergency procedures and pulmonary function testing, includes the performance of an electrocardiogram (EKG).

# MEDA 0180 Billing and Coding

#### 3 hours credit

This course introduces the student to the medical insurance system and related billing and coding. Students learn how to complete and submit electronic and paper insurance claim forms, perform referrals, and apply the correct procedure and diagnostic codes.

## MEDA 0185 Laboratory Diagnostics

#### 5 hours credit

The role and function of the professional in the clinical laboratory is introduced. Topics include safety in the laboratory, CLIA government regulations and quality assurance, and microscope procedures and concepts. Students perform procedures in the different departments of the laboratory including specimen collection and performance of CLIA 88 low and moderate complexity testing. Students demonstrate competency in the wide variety of specimen techniques used to collect, process, and test specimens.

# MEDA 0190 Pharmacology

#### 3 hours credit

This course introduces the Medical Assistant to pharmacological principles and applications. In this course the medical assistant will be introduced to pharmacologic actions, pharmacokinetics, drug classifications, indications, contraindications, adverse effects, safe administration process, legal issues related to pharmacology as well as the administration of medications across all age groups.

## MEDA 0195 Externship

### 4 hours credit

This course provides the opportunity to apply clinical, laboratory, and administrative skills in a supervised, unpaid, 160 hour externship in a medical facility. Emphasis is placed on enhancing competence in clinical and administrative skills necessary for comprehensive patient care and strengthening professional communications and interactions. Upon completion, students should be able to function as an entry-level health care professional. Requires current cardiopulmonary resuscitation (CPR) certification (health care provider level).

## MMVP-0110 Introduction to Multimedia

## 3 hours credit

The fundamentals of multimedia will be studied from definition to implementation process including the elements of multimedia, authoring programs, presentation programs, development and design, management and distribution as well as web based implementation and CD delivery of multimedia content.

## MMVP-0130 Introduction to Digital Imaging

## 3 hours credit

The student will identify key historical development in analog and digital photography as well as be exposed to various methods of image capture, transfer and storage. Elements and Principles of photography will be emphasized including composition, lighting and aesthetics. Digital manipulation through industry standard software such as PhotoShop will be reviewed as well as copyright and ownership as it pertains to digital imaging.

# MMVP-0140 Introduction to Video Production

## 3 hours credit

The fundamentals of video production will be studied including the production process, the production team the function and elements of the camera, proper mounting, balance and composition.

## MMVP-0150 Introduction to Animation

# 3 hours credit

The fundamentals of digital animation will be studied including key events in history, image creation, alternative input devices,

timing, character construction and animation, walk cycles, lip sync as well as story boards and staging. *Prerequisites: MMVP-0130 Introduction to Digital Imaging.* 

# MMVP-0160 Introduction to 3D Modeling

#### 4 hours credit

The fundamentals of digital 3D animation will be studied including modeling, endomorph creation, animating using key frame and graph editing and rendering for multiple output. Lighting and camera work and surfacing will be reviewed and practically employed in a project format.

#### MMVP-0166 Introduction to Web Animation

#### 3 hours credit

This course is designed to introduce the fundamentals of Adobe's Scaleable Vector Graphic Program to the student. Flash is pervasive in the multimedia and web design industries used for website design and construction to animation and video encoding. Students will create interactive animations using the drawing tools and importing of other material.

## MMVP-0170 Introduction to Game Design

#### 3 hours credit

The fundamentals of digital Game Design will be explored including conditional statements, Gaming concepts as well as the history and guidelines to creating interactive game media. Various genres and design styles will be employed and career opportunities and growth areas identified.

#### MMVP-0180 Audio for Video Production

#### 3 hours credit

The fundamentals of Audio for Digital Video Production will be studied including capture, formats and compression as well as non-linear, non-destructive editing with industry standard software, application of special effects and output. *Prerequisites: MMVP-0140 Introduction to Video Production* 

## MMVP-0190 Digital Video Production

#### 3 hours credit

The fundamentals of Digital Video Production will be studied including image capture, tape formats and compression as well as non-linear, non-destructive editing with industry standard software, application of special effects and output to tape and DVD. *Prerequisites: MMVP-0140 Introduction to Video Production* 

## MMVP-0201 Macintosh Digital Video Production

## 2 hours credit

The fundamentals of Digital Video Production on the Macintosh will be studied including image capture, non-linear, non-destructive editing with industry standard software, application of special effects and output to tape and DVD. *Prerequisites: MMVP-0190 Digital Video Production* 

## MTSC-0101 Orientation to Funeral Service

## 2 hours credit

This Funeral Service Area is a survey of the history of funeral service with emphasis on ethnic groups that have influenced contemporary funeral principles and practices as well as the progression of Associations and Education within funeral service.

# MTSC-0105 Mortuary Law

# 3 hours credit

The subject area guidelines for Mortuary Law are designed to introduce the student to sources of law; the legal status of the dead human body; the duty of burial, right to control funeral arrangements and final disposition and liability for funeral expenses; torts involving the dead human body and the funeral director; wills, estates and probate proceedings; cemeteries and issues related thereto; State and Federal laws and regulations pertaining to funeral service; and the legal aspects of being a licensed funeral director/mortician.

## MTSC-0108 Mortuary Chemistry

#### 3 hours credit

This course is a survey of the basic principles of chemistry as they relate to funeral service. Especially stressed are the chemical principles and precautions involved in sanitation, disinfection, public health, and embalming practice. The government regulation of chemicals currently used in funeral service is reviewed.

#### MTSC-0110 Restorative Art

#### 4 hours credit

The subject area guidelines for Restorative Art are designed to introduce the student to the techniques and importance of creating an acceptable physical appearance of the deceased for the benefit of the surviving family members.

## MTSC-0160 Mortuary Microbiology

#### 3 hours credit

This course encourages a survey of the basic principles of microbiology. It relates these principles to Funeral Service Education especially as they pertain to sanitation, disinfection, public health, and embalming practice. The development and use of personal, professional and community hygiene and sanitation are discussed.

### MTSC-0201 Pathology

#### 3 hours credit

The study of pathological disease conditions and how they affect various parts of the body, with particular emphasis on those conditions which relate to or affect the embalming or restorative art process.

## MTSC-0205 Embalming Theory

### 4 hours credit

This course involves the process of chemically treating the dead human body to reduce the presence and growth of microorganisms, to retard organic decomposition, and to restore an acceptable physical appearance. As embalming is the keystone of funeral service, its history, theory and practical applications will be discussed.

# MTSC-0210 Mortuary Management

## 3 hours credit

The curriculum guideline for Mortuary Management is designed to introduce the student to the basic principles of management. The curriculum is divided into two main sections. The first covers general management technique and theory. The second section examines specific areas of funeral service, and management guidelines for those areas.

# MTSC-0212 Funeral Service Merchandising

## 3 hours credit

This class is designed to introduce the funeral service student to the basic principles of merchandising as it applies to the funeral profession. The curriculum is divided into two main sections. The first covers construction and features of caskets, outer burial containers, and other funeral related products. The second section of the curriculum guidelines examines methods of pricing, display, presentation, and control of funeral merchandise.

## MTSC-0225 Funeral Service Counseling

## 3 hours credit

This subject area examines psychological concepts in the areas of grief, bereavement and mourning with particular emphasis on the roles of the funeral director in relation to these concepts as well as a facilitator of the funeral service, crisis intervener and after care counselor.

## MTSC-0240 Funeral Rites Practicum I

## 3 hours credit each semester

Students work in local funeral home under the direct supervision of a licensed funeral director. Combines (7-10 hours) per week in an approved funeral home, which involves training and experience in a funeral home setting.

## MTSC-0241 Embalming Practicum II

#### 3 hours credit each semester

Students work in a local approved funeral home under the direct supervision of a licensed embalmer. Develops practical embalming skills, combining work experience in funeral home. The student will participate in 10 funeral services activities during the semester.

### MUSC-0101 Music Appreciation

### 3 hours credit

A general education course, Music Appreciation may be used to satisfy part of the Humanities requirement in the General Education Core requirements. This course provides students with a basic introduction and background in music listening. The focus is on art music (the classical traditions of Western and non-Western music), covering all periods from medieval to modern. Students develop an understanding of the elements that create music, an ability to identify music by historical periods, and an acquaintance with a wide variety of music styles and forms.

#### MUSC-0102 Music Literature I

#### 3 hours credit

Music Literature I is intended for the music major who plans to transfer to a four-year institution. It is designed to introduce student to music literature through listening, discussion, and score study. Style periods covered include the Baroque through the Twentieth Century. *Prerequisite: MUSC-0112 Music Theory II or permission of instructor* 

### MUSC-0110 Music Fundamentals

#### 3 hours credit

Designed for two groups of students, Fundamentals of Music is for non-music majors interested in learning the basics of reading and playing music or for music majors lacking sufficient background to successfully complete Music Theory I. Course work covers fundamentals of music notation, piano keyboard knowledge, and writing basic notes, symbols, scales, chords, and intervals.

#### MUSC-0111 Music Theory I

## 4 hours credit

The purpose of this course is to provide the student with a thorough introduction to the elements of music, such as intervals, scales, and chords, as well as an introduction to diatonic harmony and part writing, and elements of musicianship including sightsinging, dictation, rhythm, and keyboard skills.

# MUSC-0112 Music Theory II

## 4 hours credit

The purpose of this course is to continue the studies begun in Music Theory I. This course will complete the study of diatonic harmony. Topics covered will include inversions and seventh chords, non-harmonic tones, and diatonic modulation, and elements of musicianship including sightsinging, dictation, rhythm, and keyboard skills. *Prerequisite: Music Theory I, MUSC-0111*.

## MUSC-0113-0118 Instrumental Ensemble

## 1 hour credit

The instrumental ensembles focus on small group performance. This class is open to brass and woodwind players, percussionists and string players. Ensembles will be divided up based on ability level. The ensembles rehearse 2 or 3 times per week and perform on campus and around the metropolitan area.

# MUSC-0119-0124 Concert Band

# 1 hour credit

Concert Band is open to any college student with prior experience in instrumental music organizations. All types of band literature are studied and rehearsed: concerts are performed. *Prerequisite: Instrumental Experience*.

# MUSC-0125-128 Jazz Band

## 1 hour credit

The jazz band is open to instrumentalists who play woodwind, brass, and percussion instruments. Traditional big band repertoire is studied and performed. This group performs several concerts per semester. *Prerequisite: Consent of the instructor.* 

#### MUSC-0131-0135 String Orchestra

#### 1 hour credit

String Orchestra is open to any student with string experience. All styles of string orchestra literature are studied and rehearsed. *Prerequisite: Violin, Viola, Cello, or Bass experience.* 

## MUSC-0137 Jazz Improvisation

#### 2 hours credit

This course is designed to provide the music student with basic fundamentals in improvisation. Jazz Improvisation class time is divided equally between theory and practical performance. The objective of the class is an ability to identify scales, chords, and perform fundamental improvisation.

### MUSC-0139-144 Choir

#### 1 hour credit

Choir is for any and all students enrolled at the College who desire to sing and participate in choral activities. Music studied and performed will include music from all style periods of music history. Ethnic and cultures other than Western Europe will also be included when appropriate. All members of choir are required to perform in public.

#### MUSC-0145-150 Vocal Ensemble

#### 1 hour credit

Members of this choir are selected by audition at the beginning of each semester. The choir performs vocal literature from all style periods including madrigals, jazz, or contemporary classical. *Prerequisites: Audition. Corequisite: enrollment in Choir, MUSC-0139-0144.* 

### MUSC-0151-154 Piano Class

#### 1 hour credit

Piano class is designed for music majors to develop basic piano proficiency skills, including scales, chords, harmonizing melodies, improvisation, sightreading, and developing basic piano repertoire. In each successive semester of enrollment in piano class (up to four semesters), students will work on more difficult levels of the elements of musicianship listed above. Students other than music majors may enroll if space is available.

## MUSC-0155-0156 Voice Class

## 1 hour credit

Voice class is for beginning voice students, non-voice music majors, and other college students who desire training in vocal production with emphasis on performance. Many types of solo literature are studied and performed. Two hours of class time per week are required.

# MUSC-0169-174 Applied Voice

## 1 hour credit

This course is for students who desire private, one-on-one instruction in voice. One credit hour indicates a one-half hour private lesson per week. Performance in the final recital is mandatory. *Refer to 'Special Class Fees' section for current class fee. Prerequisite: Permission of the instructor.* 

## MUSC-0175-180 Applied Piano

## 1 hour credit

This course is designed for students who desire private, one-on-one instruction in piano. One credit hour indicates a one-half hour private lesson per week. The course will enable students to gain increased proficiency in the performance of piano literature. Performance in the final recital is mandatory. *Refer to 'Special Class Fees' section for current class fee. Prerequisite: Permission of the instructor.* 

## MUSC-0181-184 Applied Strings

#### 1 hour credit

This course is for students who desire private, one-on-one instruction in violin, viola, guitar, or bass. One credit hour indicates a one-half hour private lesson per week. Performance in the final recital is mandatory. *Refer to 'Special Class Fees' section for current class fee. Prerequisite: Permission of instructor.* 

## MUSC-0185-190 Applied Woodwinds

#### 1 hour credit

This course is for students who desire private, one-on-one instruction in flute, oboe, bassoon, clarinet, or saxophone. One credit hour indicates a one-half hour private lesson per week. Performance in the final recital is mandatory. *Refer to 'Special Class Fees'* section for current class fee. *Prerequisite: Permission of instructor*.

## MUSC-0191-194 Applied Brass

#### 1 hour credit

This course is for students who desire private, one-on-one instruction in trumpet, French horn, trombone, or tuba. One credit hour indicates a one-half hour private lesson per week with one hour daily practice expected for each credit hour. Performance in the final recital is mandatory. *Refer to 'Special Class Fees' section for current class fee. Prerequisite: Permission of instructor.* 

## MUSC-0195 Applied Percussion

#### 1 hour credit

This course is for students who desire private, one-on-one instruction in drums or percussion. One credit hour indicates a one-half hour private lesson per week with one hour daily practice expected for each credit hour. Performance in the final recital is mandatory with the exception of the non-traditional student. Refer to 'Special Class Fees' section for current class fee. *Prerequisite: Permission of instructor.* 

## MUSC-0205 Internship in Audio

## 1 hour credit

An internship in an audio related field provides an opportunity for focused in-depth learning and practical experience of the professional audio industry to advanced students. The student is responsible for organizing the internship opportunity, which must be approved by the KCKCC's Audio Engineering Program Coordinator prior to enrollment in the class. The student must complete a minimum of 48 documented hours of internship. In addition to further developing technical and production student competencies this opportunity also provides for practical application of theories, techniques, and concepts discussed throughout the program. Students should further develop a sense of professionalism, reasoning and decision-making skills, resourcefulness, and independence. Students may also establish contacts within the industry that may lead to entry-level employment. *Prerequisite: MUSC-0260 Advanced Recording I, AND permission of the instructor.* 

## MUSC-0206-209 Music Composition

## 1 hour credit

Music Composition introduces students to the basic procedures and skills of composing music. Emphasis is placed on writing both acoustic and electronic music. Students also study scores and listen to a variety of classical music in order to help them understand the techniques that are typical of various compositional styles. A minimum of three original works, preferably written for a variety of media, is required. Students present a neat, handwritten or computer-generated copy of each work to the instructor for an end-of-semester evaluation. *Prerequisite: MUSC-0106, Music Applications for Computers, MUSC-0111, Music Theory I, or permission of instructor.* 

## MUSC-0213 Music Theory III

# 4 hours credit

The purpose of this course is to continue the studies begun in Music Theory I and II. This course will be concerned with the study of chromatic harmony. Topics covered will include secondary dominants, borrowed chords, Neapolitan chords, and augmented sixth chords, and elements of musicianship including sightsinging, dictation, rhythm, and keyboard skills. *Prerequisites: Music Theory II, MUSC-0112*.

### MUSC-0214 Music Theory IV

#### 4 hours credit

The purpose of this course is to continue the studies begun in Music Theory I, II and III. This course will complete the study of chromatic harmony and include a complete study of twentieth-century theoretical techniques. Topics covered will include enharmonic modulation, Impressionism, modes, scales, twelve tone techniques, and quartal harmony, and other twentieth century materials, plus elements of musicianship including sightsinging, dictation, rhythm, and keyboard skills. *Prerequisite: Music Theory III, MUSC-0213*.

#### MUSC-0220-225 Chamber Ensemble

#### 1 hour credit each semester

Members of this choir are selected by audition at the beginning of each semester. The choir performs vocal literature from al style periods including jazz or classical repertoire, depending on the course section number. *Prerequisites: Audition or consent of the instructor.* 

# NAIL-0101 Scientific Concepts

#### 3 hours credit

This course will provide the student with a practical knowledge of public sanitation and an understanding of the general concepts of chemistry, the chemical composition of professional nail products, chemical safety and OSHA regulations applicable in the professional beauty industry. The student will be provided with an understanding of basic anatomy, physiology and histology of the human body. This course will also provide the student with a working knowledge of the structure, composition, growth, regeneration, irregularities, and diseases of the natural nail and the structure, functions, growth, regeneration and disorders of the skin as well as an understanding of the muscles, nerves and blood, their structure and function. *Prerequisites: Meet requirements to apply for Kansas Board of Cosmetology Apprentice License.* 

## NAIL-0105 Manicuring Skills

#### 3 hours credit

This course will provide the student with an understanding of the purpose and effect of manicures and pedicures as well as a working knowledge of the equipment, implements, supplies and products used in the performance of professional manicures and pedicures. The student will also be instructed in the proper preparation and procedures involved in performing basic manicures, reconditioning treatments, repair techniques, hand and arm massage, foot and leg massage and application of polish. The student will perform a minimum of 25 manicures and 10 pedicures. *Prerequisites: NAIL-0101 Scientific Concepts.* 

## NAIL-0110 Artificial Nails

## 5 hours credit

This course will provide the student with the abilities and skills required by every successful nail technician. This course offers sound lessons in exceptional client service in addition to hands-on step-by-step procedures that are essential for any nail technician looking to perform with confidence and capability. *Prerequisites: NAIL-0101 Scientific Concepts and NAIL-0105 Manicuring Skills.* 

## NAIL-0115 Business Practices

# 3 hours credit

A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs. *Prerequisites: NAIL-0101 Scientific Concepts, NAIL-0105 Manicuring Skills, NAIL-0110 Artificial Nails*.

# NAIL-0120 Kansas State Law Nail Technology

## 1 hour credit

This course provides classroom instruction in the Kansas Board of Cosmetology General Laws, Rules and Regulations. The course consists of 20 classroom hours as prescribed by the Kansas Board of Cosmetology. *Prerequisites: Meet requirements for Kansas Board of Cosmetology Apprentice License*.

### NAIL-0250 Obtaining Employment

#### 1 hour credit

This course explains the techniques used to successfully obtain a job. Areas covered include locating job openings; completing applications forms; writing an application letter, resume, and follow-up letter; preparing for interviews; and interviewing.

## NASC-0101 Introduction to Physical Science

### 3 hours credit

The course covers all areas of physical sciences including physics and astronomy, chemistry, and earth science. This is a concept based course. This course is designed to acquaint the student with the scientist's approach to the world. It is not recommended for science majors. No laboratory is required. *Prerequisite: None. Good algebra skills are helpful.* 

## NASC-0103 General Physical Science

#### 5 hours credit

This is an introductory course in the areas of the physical sciences that includes physics and astronomy, chemistry, and earth science. This course is designed to acquaint the student with the scientist's approach to the world. This course includes the laboratory portion of the physical science. *Prerequisite: None. Good algebra skills are helpful.* 

## NASC-0107 Introduction to Astronomy

#### 3 hours credit

A survey of astronomy, the topics included in this course are the moon, planets, the sun, stellar birth and death, galaxies and their evolution, and the evolution of our universe. Emphasis is descriptive rather than mathematical. *Prerequisite: None. Good algebra skills are helpful.* 

# NASC-0108 Introduction to Astronomy Lab

#### 1 hour credit

This laboratory introduces the variety of techniques used by astronomers to learn information about the planets, stars, and galaxies. This course counts as a lab science when taken concurrently or after NASC-0107 Introduction to Astronomy. *Prerequisite: None. Good algebra skills strongly recommended.* 

## NASC-0130 Introductory Physics

## 3 hours credit

This is a concept based course rather than mathematical emphasis. This course covers almost all areas of physics including mechanics, heat, fluids, oscillations, waves, sound, thermodynamic, electricity and magnetism, light and optics, and nuclear physics. This course can be useful for elementary level teachers and for students of non-science majors. Schedule: three hours of lectures per week. *Prerequisite: College Algebra, MATH-0105 is recommended.* 

# NASC-0131 Introductory Physics Laboratory

## 1 hour credit

A laboratory related to Introductory Physics (NASC-0130). Around 12-15 introductory laboratory experiments are done during semester. Schedule: Two hours of lab work per week. *Prerequisite: College Algebra, MATH-0105 is recommended.* 

## NASC-0175 Introduction to Meteorology

# 4 hours credit

This course provides students with a comprehensive study of the principles of meteorology while simultaneously providing classroom and laboratory applications focused on current weather situations. It provides real experiences demonstrating the value of computers and electronic access to time-sensitive data and information. The structure and composition of the atmosphere, the general circulation pattern over the Northern Hemisphere and how it arises, winds in relation to pressure patterns, and weather maps and their analyses are among the topics covered. *Prerequisite: College Algebra, MATH-0105 is recommended.* 

## NASC-0186 Physical Geology and Lab

# 4 hours credit

This course provides students with a comprehensive study of the principles of geology while simultaneously providing classroom

and laboratory applications. The course is a study of the structural and dynamic features of the Earth. Rock-forming minerals, rocks and their decay are studied. A short history of the Earth is included. *Prerequisite: College Algebra, MATH-0105 is recommended.* 

## NASC-0231 General Physics I and Lab

#### 5 hours credit

The course covers mechanics, heat, fluids, oscillations, waves, sound and thermodynamics. The course requires conceptual understanding and problem solving using the tools of algebra and trigonometry. Schedule: five hours of lectures and two hours of lab work per week. The course is currently being offered during fall semester only. *Prerequisites: College Algebra, MATH-0105 is required; Trigonometry, MATH-0112 is strongly recommended.* 

## NASC-0232 General Physics II with Lab

#### 5 hours credit

This course is the continuation of General Physics I with Lab, which covers electricity & magnetism, light & optics, atomic and nuclear physics. Schedule: five hours of lectures and two hours of lab work per week. The course is currently being offered during spring semester only. *Prerequisite: General Physics I with Lab, NASC-0231*.

## NASC-0245 Engineering Physics I

#### 5 hours credit

The course covers mechanics, heat, fluids, oscillations, waves, sound and thermodynamics. The course requires conceptual understanding and problem solving using the tools of algebra, trigonometry, and calculus. The course is for students of Science and Engineering. Schedule: five hours of lectures and two hours of lab work per week. The course is currently being offered during fall semester only. *Prerequisites: Completion of Calculus and Analytic Geometry I, MATH-0122 and concurrent enrollment in or completion of Calculus and Analytic Geometry II, MATH-0123*.

#### NASC-0246 Engineering Physics II

## 5 hours credit

This course is the continuation of Engineering Physics I with Lab, which covers electricity & magnetism, electromagnetic waves, & optics. Schedule: five hours of lectures and two hours of lab work per week. This course is currently being offered during spring semester only. *Prerequisites: Engineering Physics I, NASC-0245, and Calculus and Analytic Geometry II, MATH-0123.* 

## NASC-0248 Statics

## 3 hours credit

The course covers force vectors, equilibrium of particles, equilibrium of rigid bodies in two and three dimensions, trusses, friction, centroids and moments of inertia. Schedule: 3 hours of lectures per week. The course is currently being offered spring semester only. *Prerequisites: Engineering Physics I, NASC-0245 and Calculus and Analytic Geometry II, MATH-0123.* 

## NASC-0249 Dynamics

## 3 hours credit

The course covers kinematics and kinetics of particles, work and kinetic energy, impulse and momentum, rigid body dynamics, relative motion, and moving coordinate system. Schedule: 3 hours of lectures per week. The course is currently being offered spring semester only. *Prerequisites: Engineering Physics I, NASC-0245 and Calculus and Analytic Geometry II, MATH-0123*.

## NASC-0250 Climate Studies and Laboratory

## 4 hours credit

Climate Studies and Laboratory is an undergraduate climatology course. It is intended to provide students with a comprehensive study of the principles of climatology while providing pedagogically appropriate investigations and applications using web-delivered climate data. *Prerequisites: Minimum scores of 72 on Compass Reading Exam and 45 on Compass Math Exam. Completion of BIOL-0131, Environmental Science is highly recommended.* 

### **NETW-0140** Home and Small Business Networking

#### 8 hours credit

Networking for Home and Small Businesses is a course that is designed to introduce students to the basic concepts of setting up a personal computer system, including the operating system, interface cards, and peripheral devices. Students will also learn to plan and install a home or small business network and connect it to the Internet and be able to verify and troubleshoot network and Internet connectivity. Students will learn about sharing resources such as files and printers among multiple computers and recognize and mitigate security threats to a home network. Students will be able to configure and verify common Internet applications and configure basic IP services through a GUI.

### NETW-0142 Voice and Data Cabling

#### 7 hours credit

This course is an introduction to the basic concepts, theories, and research findings in the evolving field of psychology. By learning to think psychologically, students gain insight into themselves and the dynamics of human thinking, behavior, and emotions. *Prerequisites: NETW-0140 Home and Small Business Networking.* 

### NETW-0144 Small-to-Medium Business or ISP

#### 8 hours credit

The Working at a Small-to-Medium Business or ISP course is designed to introduce students to the structure of the Internet and how Internet communications occur between hosts. Students will install, configure, and troubleshoot Cisco IOS® devices for Internet and server connectivity as well as, plan a basic wired infrastructure to support network traffic. Students will be able to implement basic WAN connectivity using Telco services and demonstrate proper disaster recovery procedures and perform server backups. Students will learn how to monitor network performance and isolate failures and troubleshoot problems using organized, layered procedures. Students will also be able to describe the OSI model and the process of encapsulation and how it relates to the different aspects of sending data across a network. *Prerequisites: NETW-0140 Home and Small Business Networking.* 

## **NETW-0146** Routing and Switching in the Enterprise

# 8 hours credit

Routing and Switching in the Enterprise is designed to introduce students to networking from a larger business standpoint. Students will learn how to implement a LAN for an approved network design and configure a switch with VLANs and inter-switch communication. Students will also implement access lists to permit or deny specified traffic. Students will learn how to implement WAN links and configure routing protocols on Cisco devices. Students will also perform LAN, WAN, and VLAN troubleshooting using a structured methodology and the OSI model. *Prerequisites: NETW-0144 Small-to-medium Business or ISP.* 

## NETW-0148 Designing and Supporting Computer Networks

## 8 hours credit

Designing and Supporting Computer Networks is a course designed to introduce students to concepts many technicians are required to perform. Students will learn to gather customer requirements and design a simple Internetwork using Cisco technology. Students will be required to design an IP addressing scheme to meet LAN requirements and create an equipment list to meet LAN design requirements. Students will learn how to create and present a proposal to a customer and install and configure a prototype Internetwork. Students will be taught how to obtain and upgrade Cisco IOS Software in Cisco devices and perform password recovery on Cisco devices. *Prerequisites: NETW-0146 Routing and Switching in the Enterprise.* 

# NETW-0150 Workplace Skills

## 1 hour credit

This course will include all necessary skills to acquire and keep a job. These important Job Skills will be covered in the course as well as practiced by the students in discussion, role playing and assisting the school computer support technicians. Students will attend seminars given by our Jobs Placement Coordinator. Participation in SkillsUSA is encouraged.

# NUPN-0132 Leadership for the Practical Nurse

## 2 hours credit

This course introduces students to the topic of Leadership and Management within the discipline of nursing. Leading and managing are two essential expectations of all nurses. To lead and to manage successfully, nurses must possess not only knowledge and

skills, but also a caring and compassionate attitude. The topics to be explored include strategies in planning, goal setting and marketing, problem solving and decision making, managing time, leading and organizing groups of people, team building, care delivery systems and learning how to utilize empowerment in nursing.

## NUPN-0134 Theory Application through Assessment and Simulation

### 3 hours credit

The course will allow the student to enhance their basic assessment skills in providing care for clients of all ages and cultures. The basic techniques of inspection, palpation, and auscultation will be used to assess each body system. The student will also gain experience in history taking and documentation while developing a caring attitude.

## **NURS-0131** Caring Interventions

#### 3 hours credit

This course provides a basis of specialized concepts and competencies, which form the foundation for the student's future nursing practice. Emphasis is on the concepts of communication, caring, comfort, safety, nursing process and mobility. The skills lab environment will provide opportunities for the practice and mastery of nursing care skills. Students will interact with faculty and peers as they learn communication skills and techniques that are essential to nursing practice.

## NURS-0132 Foundation Concepts

#### 4 hours credit

This course is a continuation of the basis of specialized concepts and competencies, which will become the foundation for the student's future nursing practice. Emphasis is placed on skin integrity, elimination, and sensory perception. Didactic and clinical experiences will integrate concepts of professionalism and awareness of diverse cultures and values. Students will interact with faculty, peers, and clients and the health care team as they apply communication and nursing skills learned in the previous course. Students will apply the nursing process to teaching clients about lifestyle choices that promote wellness. Teaching-learning activities include an introduction to community service.

## NURS-0133 Homeostatic Concepts

## 4 hours credit

Emphasis is placed on the concepts of fluid/electrolytes, acid/base, metabolism, and gas exchange. The course content expands on concepts necessary to provide a safe caring environment for adult clients in whom psychosocial and physiologic integrity is compromised. Course experiences will incorporate the nursing process and clinical judgment while caring for patients in diverse settings. Communication and documentation skills will be utilized with the inter-professional health care team. Didactic and clinical experiences will integrate teaching and learning activities that enhance self-care, health promotion and maintenance. Upon completion, students will be able to provide safe nursing care incorporating the concepts identified in this course.

## NURS-0134 Protective Concepts

## 4 hours credit

Emphasis is placed on the concepts of tissue integrity, digestion disorders, infection/inflammation, and immunity. The course content expands on concepts necessary to provide a safe caring environment for adult clients in whom psychosocial and physiologic integrity is compromised. Course experiences will incorporate the nursing process and clinical judgment while caring for patients in diverse settings. Communication and documentation skills will be utilized with the inter-professional health care team. Didactic and clinical experiences will integrate teaching and learning activities that enhance self-care, health promotion and maintenance. Upon completion, students will be able to provide safe nursing care incorporating the concepts identified in this course.

## NURS-0135 Pathophysiology for Nurses

#### 3 hours credit

This Pathophysiology course is designed to enhance the understanding and application of disease processes in healthcare settings. Students are taught alterations in physiological functions of the human body and general concepts of disease processes, including the etiology, pathogenesis, clinical manifestations, and treatments. Altered physiological functions are described at a cellular, organ, and systemic level. The pathophysiology concepts and disease processes affecting cardiopulmonary, hematological, endocrine, immune, musculoskeletal, renal, nervous, and gastrointestinal systems are presented. *Prerequisites: NURS--0132* 

### NURS-0146 Transition Concepts for LPN, Paramedic, RRT to RN

#### 2 hours credit

This course is designed to familiarize the student applying for advanced standing with the Kansas City Kansas Community College nursing program. Emphasis in this course is on transitioning to the role of the RN: the nursing process, conceptual framework of the nursing program, ADN competencies, standards of practice, and clinical judgment. The course will also provide an introduction to inter-professional collaboration and organization of nursing care and the use of EMR in the acute care setting. The legal and ethical ramifications affecting the role transition to RN are explored. This course also reflects concepts which the faculty has identified as being distinctive to the registered nurse program, including cultural diversity and evidence-based practice. The course will require skill validation. The student is expected to come with basic concepts of therapeutic communication, dosage calculations, growth and development, and basic nursing skills.

## NURS-0193 Health Assessment for Nurses

### 3 hours credit

This course is a requirement to be taken prior to or concurrent with first level nursing courses. The course will allow the student to enhance their physical assessment skills in providing care for clients of all ages and cultures. The basic techniques of inspection, palpation, percussion, and auscultation will be used to assess each body system. The student will also gain experience in history taking and documentation while developing a caring attitude. *Prerequisites: None–Enrolled or completed Physiology* 

# NURS-0207 Philosophical Foundations in Health Care Ethics

#### 3 hours credit

After a brief survey of some standard ethical theories, this course will examine some of the more difficult issues in contemporary physical and mental Health Care Ethics: Ethical Principles (respect for autonomy, nonmaleficence, beneficence, justice); Beginning of Life (reproductive technologies, disposal of unused zygotes, surrogacy, abortion, stem cell research, cloning); End of Life (futile treatment, active and passive euthanasia, physician-assisted suicide); and Genetics (the eugenics movement, testing for genetic disorders, embryonic and neonatal testing). This course will also address issues of informed consent, paternalism, confidentiality, medical research, randomized clinical trials, disadvantaged populations and the distribution of health care resources. *Prerequisites: None* 

## NURS-0208 Pharmacology in Nursing

## 3 hours credit

The Pharmacology in Nursing course provides students with a concise introduction to common classifications of medications. The mechanisms of action, sites of action, and side effects of drugs will be presented. Emphasis will be placed on toxic signs, adverse drug reactions, and any special nursing management issues relevant to the various classes of drugs. *Prerequisites: NURS--0134* 

# NURS-0209 Preparation for the RN-NCLEX®

#### 1 hour credit

This course will focus on the steps and materials needed by the student to successfully pass the RN-NCLEX®. The student will study the purpose and structure of the RN-NCLEX®, including computerized adaptive testing with multiple choice and alternate-item format questions. As part of the assessment, the student will utilize the ATI Comprehensive predictor to assess their personal strengths and weaknesses to develop an organized, personalized approach to examination preparation. *Prerequisites: NURS-0224* 

# NURS-0251 Lifespan Family and Community Health

#### 6 hours credit

This course is designed to allow the student to apply concepts in a variety of settings focusing on vulnerable populations experiencing challenges related to health/illness, nutrition, development, reproduction, sexuality, thermoregulation, mood, psychosis, cognition, family dynamics, and grief and loss. The course presents a collaborative approach preparing students to care for individuals, families, and communities across the lifespan. The clinical portion will provide opportunities to expand the student's knowledge in maternal-child, mental health/illness, family, and community health nursing.

### NURS-0254 Complex Health Concepts

#### 4 hours credit

Complex Health Concepts include Intracranial Regulation, Perfusion, Cellular Regulation, and Clinical Decision Making. The student will engage in exploration that further increases their body of knowledge. The focus will be inclusive of Integrated Processes and Clinical Inquiry which provides the gateway to dynamic forward thinking, increasingly complex knowledge, skills and client care activities reflecting evidence-based practice in nursing. In this course accumulated nursing knowledge and skills will be elaborated upon to integrate concepts for adult clients whose psychosocial and physiologic integrity are compromised.

## NURS-0255 Management Concepts

#### 4 hours credit

Emphasis is placed on the concepts of leadership/management, health care quality, emergency preparedness, evidenced based practice and informatics while working with the multidisciplinary health care team. This course will further develop the student's clinical judgment skills in the care of culturally diverse clients. In this course accumulated nursing knowledge and skills will be demonstrated to provide a safe, effective and caring environment for adults with complex needs. This course will also focus on assisting the student in the transition from the student role to the role of the professional nurse.

## ONED-0110 Microcomputer Applications I (Online Teaching)

## 4 hours credit

This course is designed to assist in developing classes for delivery via the World Wide Web. This is an introductory course. The provided. A variety of articles will be assigned for reading and discussion. Sites on the World Wide Web will be visited to demonstrate the variety of course design options. *Prerequisite: Requires consent of instructor*.

#### PHIL-0103 Introduction to Philosophy

#### 3 hours credit

Designed to introduce students to the contributions made by major thinkers on central questions concerning humanity and the multicultural human condition, this philosophy course focuses on the nature of human experience, knowledge, and social existence. Applications of significant philosophical ideas to contemporary human issues are stressed.

# PHIL-0105 Logic

## 3 hours credit

Logic is studied in order to develop standards of critical thinking in any area of knowledge that employs inference and argument. Wherever conclusions are supposed to be supported by evidence, logic attempts to distinguish correct from incorrect forms of reasoning. Logic provides guidance for the examination of controversial issues confronting thoughtful people in the late 20th (early 21st) century.

## PHIL-0107 Business Ethics

# 3 hours credit

Business Ethics is designed to help students understand the rules of conduct in the current American business world. Emphasis is directed to the inseparability of business and society and the importance of seeing business in the larger context of the values of that society.

## PHIL-0200 Philosophy of Religion

#### 3 hours credit

This course will offer a philosophical analysis of the nature and function of religion and its relation to culture. The methodology employed is that of logical and linguistic analysis. That is, this course will focus on analyzing arguments in order to determine their validity and, if possible, soundness (truth). This course will focus on the importance of understanding religious language (i.e., definitions of 'God' the impact of religious terms, etc.). This course will emphasize the relationship between belief and action (ethical, social, and political action), the legitimacy (rationality) of religious belief(s), and whether or not religious beliefs are consistent with prescribed actions. This course will also focus on the consequences, or impact, of actions prescribed by religious beliefs on society.

An examination will be made of the basis of religion, and special attention will be given to the problems of religion and reality,

religion and science, religion and morality, faith and reason, and the character and significance of religion in the present. Attention will also be given to various conceptions of God in different cultures and religious traditions, traditional arguments for the existence of God, the nature of God and the problem of evil, and free will. *Prerequisite: PHIL-0103, Introduction to Philosophy or PHIL-0105, Logic.* 

#### PHIL-0206 Ethics

#### 3 hours credit

This branch of philosophy is primarily concerned with the values and principles which underlie human acts and purposes. Multicultural philosophical contributions to solving ethical problems are examined for critical understanding. Ethics focuses on evaluating theories about what constitutes the good life.

## PHIL-0207 Philosophical Foundations in Health Care Ethics

#### 3 hours credit

After a brief survey of some standard ethical theories, this course will examine some of the more difficult issues in contemporary physical and mental Health Care Ethics: Ethical Principles (respect for autonomy, nonmaleficence, beneficence, justice); Beginning of Life (reproductive technologies, disposal of unused zygotes, surrogacy, abortion, stem cell research, cloning); End of Life (futile treatment, active and passive euthanasia, physician-assisted suicide); and Genetics (the eugenics movement, testing for genetic disorders, embryonic and neonatal testing). This course will also address issues of informed consent, paternalism, confidentiality, medical research, randomized clinical trials, disadvantaged populations and the distribution of health care resources.

# PHTR-0160 Musculoskeletal: Lower Extremity

#### 5 hours credit

This course provides a link between the principles of biomechanics, musculoskeletal anatomy and neuromuscular physiology in its application to movement analysis for the lower extremity (LE). This course also covers the role of the physical therapist assistant in the management of common musculoskeletal disorders of the lower extremity. The student will learn the theoretical foundation for various assessments and intervention strategies.

## PHTR-0165 Clinical Skills I

## 2 hours credit

This course is designed to prepare the student with basic skills needed to be successful in a clinical setting. Topics covered will include medical terminology, documentation, patient privacy, and culture and diversity. Laboratory instruction will include safe treatment preparation, patient positioning, vital sign monitoring and functional mobility skills (bed mobility, transfers, and gait training, etc).

# PHTR-0170 Fundamentals of Treatment Procedures

## 5 hours credit

This course will provide students an overview of the healing process and the physiology and use of physical agents, including thermal agents, ultrasound and electrical stimulation. In addition, exercise physiology and basic therapeutic exercises will be taught.

## PHTR-0180 Clinical Skills II

## 2 hours credit

This course is designed to continue instruction in the basic skills needed to be successful in the clinical setting. Topics covered will include health care systems, reimbursement, the health care team, the statues, rules and regulations governing the PTA in the state of Kansas, and discharge planning. In addition, the student will review and expand on safe treatment preparation, patient positioning, vital sign monitoring and functional mobility skills (bed mobility, transfers, and gait training, etc).

## PHTR-0195 Clinical Skills III

## 3 hours credit

This course is a two (2) week full-time clinical affiliation at an approved health care facility, providing the student the opportunity to integrate previously learned didactic material in a clinical setting. Supervision during the clinical affiliation will be performed by the clinical instructor assigned to the student by the health care facility. In addition, the student will complete online assignments

on reflective practice, inter/intradisciplinary communication, exercise progression and patient communication. The student will learn patient advocacy, patient psychology, risk management, accountability and administration in a classroom setting.

## PHTR-0220 Pathophysiology for Rehabilitation

#### 5 hours credit

This course is designed to prepare the physical therapist assistant student to work with patients presenting with diagnoses commonly seen in the rehabilitation setting. Topics will include an understanding of pathology and medical intervention for a variety of body systems as well as the tests and measures and proper interventions utilized by the physical therapist assistant. Additionally, the student will complete multiple case studies related to data collection and treatment of the complex patient.

# PHTR-0230 Musculoskeletal: Spine and Special Topics

#### 5 hours credit

This course provides a link between the principles of biomechanics, musculoskeletal anatomy and neuromuscular physiology and their application to movement analysis for the head and trunk. This course covers the role of the physical therapist assistant in treating patients who have common musculoskeletal disorders of the head and trunk, amputations or chronic pain. The student will learn the theoretical foundation for intervention strategies, as well as components of assessment and will be introduced to the topics of aquatics, disability law, occupational health, and injury prevention.

### PHTR-0240 Clinical Skills IV

#### 6 hours credit

Clinical Skills IV and V each consist of a seven (7) week, full time clinical affiliation at an approved health care facility. Students will be provided with the environment to facilitate didactic and clinical skills and further develop skills in physical therapy care/treatment. Supervision during the clinical affiliation will be performed by the clinical instructor assigned to the student by the health care facility. In addition, the student will complete the clinical modules related to applying for employment and advocating for the profession.

## PHTR-0245 Clinical Skills V

## 6 hours credit

Clinical Skills V consists of a seven (7) week, full time clinical affiliation at an approved health care facility. Students will be provided with the environment to facilitate didactic and clinical skills and further develop skills in physical therapy care/treatment. Supervision during the clinical affiliation will be performed by the clinical instructor assigned to the student by the health care facility. Additionally, the student will complete online clinical modules related to life-long learning, specialization, active participation in the profession, and community service.

## PHTR-0250 Musculoskeletal: Upper Extremity

## 5 hours credit

This course provides a link between the principles of biomechanics, musculoskeletal and neuromuscular anatomy/physiology and their application to movement analysis for the upper extremity. This course also covers the role of the physical therapist assistant in the management of common musculoskeletal disorders of the upper extremity, including the theoretical foundation for assessments and intervention strategies. Students will also learn the pathophysiology of and therapeutic interventions for various types of arthritis as well as pharmacology related to the musculoskeletal system.

### PHTR-0275 Neuromuscular Rehabilitation

#### 5 hours credit

This course covers neuroanatomy, neurological dysfunction, neurological treatment theories, pediatrics and geriatrics. The student will learn entry-level knowledge and skills necessary to assess the status of and treat pediatric patients, geriatric patients, and patients with various neurological disorders.

## PHTR-0299 NPTAE Comprehensive Review

### 2 hours credit

In this discussion-orientated class, the emphasis is placed on an organized approach to examination preparation. It will provide the student the opportunity to complete a computer-based practice examination and streamline the credentialing examination

preparation process by focusing the student's attention on the entry-level examination matrix. This course will help the student identify areas of strength and those in which s/he is not demonstrating entry-level knowledge.

#### POSC-0101 Introduction to Political Science

#### 3 hours credit

Containing a wealth of factual, historical, and theoretical materials, this course is designed to acquaint the students with a variety of political systems and their components. To help the students to fully comprehend the subject matter, the course will adopt a conceptual framework which, tracking the origin and development of different political traditions in the West (i.e., liberal democratic, socialist, and social democratic traditions). 1) Will allow us to categorize the existing political system in terms of these traditions, and 2) a "cross-sectional" approach which will show the similarities and differences among the political systems grouped within each tradition in terms of ideology, mode of representation, types of government, party system, etc.

# POSC-0102 International Relations/Foreign Policy

### 3 hours credit

Various theories of international relations are examined, with stress given to the national interest approach. The history of a few nations' foreign policy objectives is also emphasized. Three levels of analysis (system, state, and individual) of international relations are utilized throughout the course.

#### POSC-0111 American Government

#### 3 hours credit

This is a study of the historical backgrounds, governing principles, institutions, domestic and foreign policy goals of the National Government of the United States.

## POSC-0112 State and Local Government

#### 3 hours credit

This course is a survey of general structure and principles underlying the state and local governments in the United States. Special emphasis is given to the rejuvenation to state and local government in the past two decades. Students are made aware that Americans are relying for solution of domestic problems on state and community leadership. The role of government in state political economies and the influence of political ideology and political leaders are pointed out as very significant factors in every state and communities progress.

## POSC-0201 Political Science Internship

#### 3 hours credit

The course is an opportunity for students to gain governmental experience. The course will be flexible enough to provide an educational experience to the student and to satisfy the needs of the governmental agency. It provides the history/political science major an opportunity for experience in the political arena. This political experience may be at the local, state or national level, serving as an intern in city government, state offices in Kansas City, Kansas or the Kansas City Office of a Kansas congressperson or senator.

## POSC-0245 Introduction to Public Administration

#### 3 hours credit

This is the introductory course for the major in the Public Affairs program leading to an Associates in Arts Degree. The student will be introduced to the various theories of public management/administration; organizational development; policy development, implementation and evaluation; personnel management; budgeting and fiscal administration. *Prerequisites: POSC-0111 American Government or POSC-0112 State and Local Government or Consent of Instructor.* 

## PMED-0227 Paramedic Concepts I

## 8 hours credit

The didactic content of this course is designed to serve as a general framework for the implementation of the objectives of the paramedic curriculum. PMED0227 is the foundational course of the paramedic program. Introduction into paramedicine, EMS systems, roles and responsibilities of the Paramedic, safety and wellness, EMS research, Public Health and medical/legal aspects will be discussed from a legal, practical, and philosophical point of view. Didactic and practical components of anatomy,

pathophysiology, pharmacology, life span considerations, patient assessment and diagnostic equipment, IV and medication administration, airway management and ventilation, communications and documentation, introduction to EKGs and patient simulation will be addressed. *Prerequisite: Human Anatomy and Physiology (BIOL-0143), or Human Anatomy and Laboratory (BIOL-0141) along with Physiology (BIOL-0271); Math 0104 Intermediate Algebra or Higher, Kansas state certification as an EMT and acceptance into the Kansas City Kansas Community College Paramedic Program.* 

## PMED-0228 Paramedic Concepts II

#### 8 hours credit

The didactic content of this course is designed to serve as a general framework for the implementation of the objectives of the paramedic curriculum. PMED -0228 introduces the paramedic student to the various medical emergencies encountered. Anatomy and physiology, pathophysiology, pharmacology, assessment based management for Pulmonology, Cardiology, Neurology, Endocrinology, Allergies and Anaphylaxis, Gastroenterology, Urology and Nephrology, Toxicology and Substance Abuse, Hematology, Environmental Emergencies, Infectious Diseases, Psychiatric and Behavioral Emergencies. Assessment and care of Geriatric patients from abuse and assault, challenged patients and chronic care patient will be addressed. Students will also expand knowledge, use and interpretation of ECGs, 12-Lead, ETCO2 and other monitoring/diagnostic equipment into their care plan. Students will participate in multiple patient simulations of various medical emergency scenarios. *Prerequisite: Completed PMED 0227 with a grade "C" of higher.* 

### PMED-0229 Paramedic Concepts III

#### 4 hours credit

The didactic content of this course will cover kinematics of trauma, pathophysiology of trauma, trauma systems, assessing and management hemorrhage and shock, soft tissue trauma, head, facial and neck trauma, spinal trauma, thoracic trauma, abdominal trauma, musculoskeletal trauma, burns, blunt and penetrating trauma, and blast injuries. The student will utilize and build upon previous semesters' content in assessing and managing the trauma patient during scenario-based sim/lab. *Prerequisite:*Completed PMED 0260 with a grade "C" of higher; Co-requisite PMED-0245.

## PMED-0230 Paramedic Concepts IV

## 4 hours credit

This course is designed to reinforce the content objectives of the paramedic curriculum, skills learned and the student's hospital clinical experience to further develop the student's critical thinking and ability to manage various patients and serve as a team leader. Further, the student will also use this course time to prepare for their National Registry practical and written certification exams. Prerequisite: Successful completion of PMED0229 and PMED-0245 with a grade of "C" or higher; Co-Requisite PMED 0256.

## PMED-0245 Paramedic Hospital Clinical Practice

# 5 hours credit

This course provides the student an opportunity to apply didactic content and lab practice to the clinical environment. Activities are directed so that students gain familiarity with initiating and continuing care for injured and ill patients in a variety of adult-child acute care settings. Emphasis is placed on professional clinical practice guidelines for basic Paramedic procedures. Students will practice safe operation of equipment, and appropriate technology selection for desired therapeutic effects. Clinical areas to be included are Behavioral Health, Burn Unit, Cardiac Cath Lab, Dialysis, Emergency Department, Intensive Care, Labor & Delivery, Respiratory Therapy, Surgery and Pediatrics. *Prerequisite: Successful completion of PMED0260 with a grade of "C" or higher; Co-Requisite PMED0229*.

## PMED-0256 Field Internship

#### 10 hours credit

This course is the capstone of the program and provides the student an opportunity to apply didactic and lab practice content to the field environment. Activities are directed so that students gain familiarity with initiating and continuing care for injured and ill patients in a variety of field settings. Emphasis is placed on professional clinical practice guidelines for basic Paramedic procedures. Students will demonstrate critical thinking, team leadership, safe operation of equipment, and appropriate technology selection for desired therapeutic effects under the direct supervision of a Paramedic preceptor. *Prerequisite: Successful completion of PMED-0229 and PMED0245 with a grade of "C" or higher; Co-Requisite PMED 0230.* 

## PMED-0260 Paramedic Concepts- Medical Emergencies

#### 4 hours credit

In this course the student will build upon the two previous semester content to identify, assess, and manage illnesses and injuries involving various patient conditions and settings through didactic and scenario-based sim/lab. During this course, students will cover neonatology and pediatric emergencies. Students will also take the American Heart Association Advanced Cardiac Life Support Provider Course and American Heart Association Pediatric Advanced Life Support Provider Course. Successful affirmation as a provider in this class is a requirement for completing the course. Although this class covers the entire lifespan, special attention will be given to the geriatric and pediatric populations. *Prerequisite: Completed PMED 0228 with a grade "C" of higher.* 

### PRLG-0121 Introduction to Law

#### 3 hours credit

This introductory study of the legal system covers the nature and functions of law and the operation and structure of state and federal court systems and administrative agencies. This course surveys the major areas of substantive law. Appropriate for students with a general interest in the law.

### PRLG-0131 Legal Research I

## 3 hours credit

This is a practical approach to legal research problems. Projects familiarize students with legal publications and how to use them in solving legal problems.

### PRLG-0132 Litigation I

#### 3 hours credit

This course explores civil litigation and practical aspects involved in the trial of a civil lawsuit. Specific topics include civil procedure and trial preparation. *Prerequisites: Introduction to Law, PRLG-0121, and Legal Research I, PRLG-0131.* 

#### PRLG-0152 Real Estate Law

#### 3 hours credit

Real property and common types of real estate transactions will be examined. Students will study the preparation of deeds, contracts, leases, deeds of trust, and mortgages. *Prerequisites: Introduction to Law, PRLG-0121 and Legal Research I, PRLG-0131 or coordinator approval.* 

## PRLG-0162 Family Law

#### 3 hours credit

Specific topics covered include: adoption, guardianship, child custody and support, divorce, and separation. *Prerequisites: Introduction to Law, PRLG-0121 and Legal Research I, PRLG-0131, and PRLG-0132, Litigation I or coordinator approval.* 

## PRLG-0205 Legal Writing

## 3 hours credit

Legal Writing has been designed to enhance legal and factual research skills and to introduce the preparation of documents commonly used in law office operations and in routine communications with clients, witnesses and other professional personnel. Emphasis will be on the preparation of a legal memorandum or brief and other legal related documents. *Prerequisites: Introduction to Law, PRLG-0121 and Legal Research I, PRLG-0131, and PRLG-0132, Litigation I.* 

## PRLG-0207 Criminal Law for the Paralegal

## 3 hours credit

This course will explore the field of criminal law from the viewpoint of a representative. Theories of representation for the state/prosecution as well as for the defendant will be studied. Students will have the opportunity to apply the theory through model criminal cases. *Prerequisites: Introduction to Law, PRLG-0121 and Legal Research I, PRLG-0131, and PRLG-0132, Litigation I.* 

## PRLG-0212 Business Organizations

#### 3 hours credit

Business entities - such as corporations, partnerships, and sole proprietorships - will be Corporations, partnerships, and sole proprietorships will be examined. The role of the lawyer and the legal assistant in forming these entities will be discussed along with the legal concepts applicable to each type of organization and the preparation of related documents. *Prerequisites: Introduction to Law, PRLG-0121 and Legal Research I, PRLG-0131, and PRLG-0132, Litigation I.* 

## PRLG-0231 Legal Research II

#### 3 hours credit

A continuation of the first level of legal research. Projects will include in-depth practical application of research methods and an introduction to computerized legal research software: *Prerequisite: Legal Research I, PRLG-0131*.

#### PRLG-0232 Litigation II

#### 3 hours credit

In this continuation of Litigation I, emphasis will be on the trial and appellate stages of civil litigation. Students will study an actual case through discussion of all the steps involved before, during, and after trial. *Prerequisites: Introduction to Law, PRLG-0121 and Legal Research I, PRLG-0131, and PRLG-0132, Litigation I.* 

## PRLG-0241 Wills, Trusts and Probate Administration

### 3 hours credit

Included in this study of the administration of estates are techniques for fact gathering, use of trusts, will drafting, and probate procedures. This course is also appropriate for individuals with a general interest in wills and trusts. *Prerequisites: Introduction to Law, PRLG-0121 and Legal Research I, PRLG-0131, and PRLG-0132, Litigation I.* 

#### PRLG-0270 Insurance Law

#### 3 hours credit

This course is designed to acquaint students with insurance law theory in the areas of contracts, property and casualty, life, accident, and health insurance. *Prerequisites: Introduction to Law, PRLG-0121 and Legal Research I, PRLG-0131, and PRLG-0132, Litigation I.* 

## PRLG-0271 Seminar: Legal Interviewing and Investigation

## 2 hours credit

In this course, students will implement skills acquired in prerequisite courses and will study in-depth legal ethics. Emphasis is on client contact. *Prerequisite: PRLG-0121, Introduction to Law, PRLG-0231, Legal Research II, and PRLG-0232, Litigation II.* 

## PRLG-0275 Paralegal Internship I

## 1 hour credit

Students will work in an approved training situation under instructional supervision. This internship is designed to give students the opportunity to apply the skills they acquired in the paralegal specialty courses. *Prerequisite: PRLG-0121, Introduction to Law, PRLG-0231, Legal Research II, and PRLG-0232, Litigation II and PRLG-0271, Seminar: Legal Interviewing and Investigation.* 

# PRLG-0276 Paralegal Internship II

## 1 hour credit

Students continue the practical experience required in Paralegal Internship I. Prerequisite: Paralegal Internship I, PRLG-0275.

# PSYC-0101 Psychology

## 3 hours credit

This course is an introduction to the basic concepts, theories, and research findings in the evolving field of psychology. By learning to think psychologically, students gain insight into themselves and the dynamics of human thinking, behavior, and emotions. *Prerequisite: Must have a minimum score of 73 on the COMPASS Reading exam.* 

## PSYC-0112 Psychology of Personal Adjustment

#### 3 hours credit

This course is designed to accomplish two purposes:

- (a) To explore characteristics of a healthy personality and aid students in gaining insight that will foster their own personal growth, and
- (b) To explore the characteristics of healthy relationships and foster growth in these areas.

## PSYC-0115 The Grieving Process

### 3 hours credit

Students examine the psychological and ethical issues inherent in grief in order to understand the complex responses that result from a significant loss. This interdisciplinary course draws material from psychology, psychiatry, sociology, anthropology, medicine, religion, and philosophy.

## PSYC-0202 Child Development

#### 3 hours credit

This course is an overview of the psychological study of child development, from conception through adolescence. Students will focus on the physical, cognitive and emotional/social areas of child development. Students will also gain some increased understanding of how these factors continue to impact us personally as adults. And increased understanding of how adults can support the children in their lives. *Prerequisite: PSYC-0101, Psychology.* 

# PSYC-0203 Human Development

#### 3 hours credit

This course is an overview of the psychological study of human development. Students will focus on the physical, cognitive and social/personality areas of human development. The periods of infancy, childhood, adolescence, adulthood, and death are studied. *Prerequisite: Psychology, PSYC-0101*.

## PSYC-0204 Personality

## 3 hours credit

An examination of the main tenets, research methods and findings, and applications of major psychological theories of personality, the course provides information on how those theories are constructed, tested, and evaluated. *Prerequisite: Psychology, PSYC-0101*.

## PSYC-0205 Statistics in Social Science Research

#### 3 hours credit

This course introduces the use of statistical principles and techniques as they relate to analysis and interpretation of psychological data. A wide range of statistical methods are used to analyze data informing the student of how to apply the proper statistical methods to data examples. Descriptive and inferential statistical methods with parametric and nonparametric statistical tools are studied. The course emphasis is to become more knowledgeable of behavioral research through understanding of statistical methods used both in research and in everyday life. *Prerequisite: Psychology, PSYC-0101, MATH 105 or higher or 100 on Accuplacer Reading exam.* 

## PSYC-0206 Research Methods in Psychology

#### 3 hours credit

Psychology is the scientific study of behavior and mental processes. This course focuses on the essentials of scientific reasoning, basic research methods and conventions in the science of psychology. Students will demonstrate an understanding of how to consume and utilize peer reviewed studies, both verbally and in written form. Students will be required to evaluate claims made by popular media and basic scientific literature. An overarching goal of this course will be the acquisition of the necessary intellectual tools needed to distinguish between psychological science, pseudoscience, and non-scientific knowledge. Permeating this course will be the ethical responsibilities and codes of conduct relevant to psychological research.

Prerequisite: Psychology, PSYC-0101.

## PSYC-0214 Social Psychology

#### 3 hours credit

The interaction of the individual with the social and cultural environment is the focus of this course. A variety of topics, such as attitude formation, the influence of the group on the individual, and the like, are considered in relation to such continuing social problems as prejudice, aggression, social deviance, and conformity. This course provides an introduction to major concepts, theories, and research findings in social psychology. *Prerequisite: Psychology, PSYC-0101*.

## PSYC-0280 Biofeedback and Management Skills

#### 3 hours credit

This course seeks to inform teachers, education majors, and helping professionals on how to use Biofeedback concepts and skills to lower stress in the work place and increase the learning climate.

## PSYC-0296 Special Problems in Child Development

#### 1-3 hours credit

This course will provide the student with the experience of observing and participation in the education of emotionally disturbed, mildly retarded, or learning disabled children. Students gain practical experience working with disturbed children through volunteer work at an approved school or institution. Students earn one hour of credit for each020 hours of work completed. *Prerequisites: PSYC-0101, Psychology, and PSYC-0202, Child Development and consent of instructor.* 

## PSYC-0297 Abnormal Psychology

#### 3 hours credit

The course provides a description of abnormal behavior patterns, causes of abnormal behavior, and the treatment of such behavior. Abnormal behavior and psychopathology will be explored in order to develop the students' ability to think critically about the field of abnormal psychology. *Prerequisites: PSYC-0101, Psychology.* 

#### **READ-0091** Introduction to College Reading Skills

## 3 hours credit

Introduction to College Reading Skills is designed to provide students with opportunities to improve understanding of a variety of academic texts and develop reading comprehension strategies. This course focuses on vocabulary development, main idea/supporting detail recognition, and summarizing skills. This is the first class in a sequence of two reading classes. Completion of the course with a grade of "C" or better is required before enrolling in READ-0092. **PREREQUISITE:** Assessment score of 40-59 on the Accuplacer test.

**NOTE:** This course may be offered in a variety of formats, all of which require the use of instructional technology. Accelerated sections meet for 8 weeks. Blended learning sections require computer/internet access outside of class.

## **READ-0092** College Reading Strategies

## 3 hours credit

College Reading Strategies is designed for students to develop advanced general reading skills. Students will learn college-level reading strategies with an emphasis on higher levels of academic reading skills. Students will continue vocabulary development and employ strategies for reading and comprehending a variety of academic texts. This course focuses on inference, analytical reasoning, and critical thinking skills. Online sections require the completion of READ-0091 with a grade of "C" or better or an assessment score of 69 on the Accuplacer test.

#### RSCR-0129 Clinic Practice I

#### 3 hours credit

Students make clinical rounds with Respiratory Care Practitioners (RCP). Activities are directed so that students gain familiarity with initiating respiratory therapy in a variety of adult-child acute care and rehabilitation settings. Emphasis is placed on professional clinical practice guidelines for basic therapies. Students will practice safe operation of equipment, and appropriate technology selection for desired therapeutic effects. *Prerequisite: Respiratory Therapy Program Student*.

# RSCR-0160 Sleep Studies

#### 3 hours credit

This course explores physical and physiological topics related to sleep and sleep disorders in an introductory approach. Normal

sleep, sleep disorders, sleep assessments, and sleep remedies are studied. The course is preparatory for respiratory therapy students, and health care providers who will screen, test, treat, and support clients with sleep disorders. The course is designed for students with an interest in sleep disorders or a sleep related career.

## RSCR-0220 Introduction to Respiratory Care

#### 3 hours credit

This course introduces the student to topics related to the role of an advanced level Respiratory Care Practitioner (RCP). This lecture oriented class covers health care organizations and structures, health care communications, medical ethics, medical-legal documentation, medical terms and symbols. Individuals in this class investigate Respiratory Therapy career options and learn the areas of specialization within Respiratory Care. In addition, students learn the introductory methods of reviewing professional literature, evaluating patient records, compiling patient results, and appraising other members of the health care team of patient status. *Prerequisite(s): Admission to the Respiratory Therapy RRT Program, or permission of the instructor.* 

## RSCR-0224 Therapeutic Interventions I

#### 3 hours credit

Topically, the class includes Gas Physics, Oxygen Therapy, Microbiology applications and Pulmonary Hygiene. Students identify clinical applications of technical data, and review physiology effects of Respiratory Therapy. Students focus on therapeutic indications, contraindications, and hazards in this lecture/lab course. *Prerequisite: Acceptance into the Respiratory Therapy program.* 

# RSCR-0225 Cardiopulmonary Care & Diagnostics I

#### 4 hours credit

In this applications oriented class, students put lecture content and lab competencies to use on clinical rounds. Students become familiar with cardiopulmonary diseases and diagnostic symptoms. Bedside testing, patient monitoring, and pharmacologic interventions are key components of this course. *Prerequisite: Admission to the Respiratory Therapy RRT program.* 

## RSCR-0229 Therapist Clinical Practice I

## 3 hours credit

Students make clinical rounds with Respiratory Care Practitioners (RCP) and physicians. Activities are directed so that students gain familiarity with initiating respiratory therapy in a variety of adult-child acute care and rehabilitation settings. Emphasis is placed on professional clinical practice guidelines for basic therapies. Students will practice safe operation of equipment, and appropriate technology selection for desired therapeutic effects. *Prerequisite: Admission to the Respiratory Therapy program.* 

#### RSCR-0239 Clinic Practice II

## 4 hours credit

In this clinically focused class, students apply techniques for performing positive pressure breathing, pulmonary hygiene, airway maintenance, and collection of clinical data. Additionally, students require skills for initiating respiratory care in emergent situations. *Prerequisites: Respiratory Therapy program student.* 

# RSCR-0240 Therapeutic Devices

## 2 hours credit

Students become familiar with medical devices used in caring for patients with cardiopulmonary problems. This course requires an understanding of physics to mechanically regulate pressures, gas flow, compliance, resistance elasticity, and conductance. Students learn safe operation of equipment, and equipment troubleshooting, in the treatment of adults, pediatrics and neonates. *Prerequisite: Respiratory Therapy program sequence.* 

# RSCR-0244 Therapeutic Interventions II

## 3 hours credit

Students learn to identify signs and symptoms of respiratory distress and to respond with appropriate technical intervention. Theory and application of physical inspection, airway care, positive pressure breathing, and pulmonary hygiene are covered in this lecture/lab class. *Prerequisite: Respiratory Therapy program sequence.* 

## RSCR-0245 Cardiopulmonary Care & Diagnostics II

#### 4 hours credit

This a foundational course beyond the introductory level in Respiratory Therapy clinical information gathering, clinical data analysis, clinical data interpretation, recognition of disease signs and symptoms, and development of therapeutic care plans for cardiopulmonary abnormalities and illnesses. Content from introductory courses in the Respiratory Therapy program sequence is applied, expanded, added to, and extended to clinical scenarios, questions, discussions, and research in this class. Arterial blood gases, pulmonary function tests, electrocardiograms, complete blood counts, electrolytes, radiographs, therapeutic plans and disease management are key content areas of the course. *Prerequisite: Respiratory Therapy program sequence*.

## RSCR-0249 Therapist-Clinic Practice II

#### 4 hours credit

This clinic/lab class is designed to develop clinical proficiencies in performing adult, child, and infant cardiopulmonary care. Emphasis is on student learning and participation in critical care monitoring, cardiopulmonary laboratory techniques, airway management, and positive pressure ventilation. Students make rounds with respiratory care practitioners and physicians to develop critical thinking skills related to physical assessment and care plans. *Prerequisite: Respiratory Therapy program sequence*.

#### RSCR-0270 Technical Case Studies

#### 1 hour credit

The student reviews and presents cardiopulmonary integrating data covering respiratory care technology, applications of medical devices, and patient response to technical intervention. Emphasis is on the student's affective ability to collect data, reference literature, evaluate as well as use equipment, and explain clinical significance of the information compiled.

## RSCR-0274 Technical Intervention III

### 2 hours credit

This is a comprehensive Respiratory Therapy course beyond the introductory and foundational level. Content from previous classes in the Respiratory Therapy program sequence is applied, expanded, added to, and extended to scenarios, questions, discussions, and simulations in this class. Key content areas of the course are mechanical ventilation principles, effects, and modes, initiating mechanical ventilation, as well as monitoring and caring for patients receiving mechanical ventilation. *Prerequisite: Respiratory Therapy program sequence.* 

#### RSCR-0275 Technical Intervention IV

## 1 hour credit

This is a comprehensive Respiratory Therapy course beyond the introductory and foundational level. Content from previous classes in the Respiratory Therapy program sequence is applied, expanded, added to, and extended to scenarios, questions, discussions, and simulations in this class. Key content areas of the course are; the NBRC Therapist Multiple Choice Exam Detailed Content Outline, critical care, mechanical ventilation, and disease management. *Prerequisite: Respiratory Therapy program sequence.* 

#### RSCR-0279 Clinic Practice III

## 4 hours credit

Students perform rounds with physicians and therapists in critical care settings. In this applications-oriented class/clinic, students become familiar with mechanical ventilation and other respiratory care responsibilities in life threatening situations. Adult and child applications are covered. *Prerequisite: Respiratory Therapy program sequence.* 

# RSCR-0284 Clinic Practice IV

## 4 hours credit

In this therapeutic intervention course the emphasis is advanced cardiopulmonary procedures in the critical care setting. Students learn management of life support systems, including mechanical ventilation, advanced cardiac life support, and difficult airway management. Students establish and develop their clinical competencies on rotations with physicians and therapists. Clinical areas included are: surgery, post anesthesia care unit, intensive care, emergency room, and long-term ventilator weaning unit. *Prerequisite: Respiratory Therapy program sequence.* 

## RSCR-0285 Cardiopulmonary Care & Diagnostics III

#### 4 hours credit

This is a comprehensive Respiratory Therapy course. Content from previous classes in the Respiratory Therapy program sequence is applied, expanded, added to, and extended to scenarios, questions, discussions, and simulations in this class. The NBRC Therapist Multiple Choice Exam Detailed Content Outline, critical care, mechanical ventilation, and advanced cardiovascular life support are key content areas of the course. *Prerequisite: Respiratory Therapy program sequence*.

## RSCR-0286 Asthma Disease Management

#### 3 hours credit

This course teaches a stepwise approach to asthma disease management. It is designed for health care providers involved in any aspect of asthma prevention, diagnosis, treatment, education, or management. The course correlates to the National Asthma Education and Prevention Program.

### RSCR-0290 Perinatal Pediatrics

#### 2 hours credit

Students learn about cardiopulmonary conditions unique to infants and children. Clinical emphasis is on treating airway emergencies and cardiopulmonary life support system. This class covers neonatal and child anatomy, physiology, assessment, diagnosis and treatment. *Prerequisite: Respiratory Therapy program sequence.* 

#### RSCR-0294 Neonatal Resuscitation

### 3 hours credit

This course teaches a stepwise approach to neonatal resuscitation. It is designed for health care providers involved in any aspect of neonatal resuscitation. The course correlates to the neonatal resuscitation program (NRP) of the American Academy of Pediatrics and American Heart Association. *Prerequisite: Health Care Professional, or student involved in any aspect of neonatal resuscitation, or permission of the instructor.* 

## RSCR-0297 CRT Comprehensive Review Studies

#### 3 hours credit

This respiratory therapy comprehensive review course is intended to assist the student in preparing for the National Board of Respiratory Care (NBRC) Entry-Level Examination. The student must be a maximum of 6 months from completing or has completed a Committee of Accreditation for Respiratory Care (CoArc) accredited program, or is an eligible candidate for the NBRC entry level exam.

In this discussion orientated class the emphasis is placed on presenting an organization approach to examination preparation. It will provide the student the opportunity to complete a computer-based practiced examination and streamline the credentialing examination preparation process by focusing the student's attention on the entry-level examination matrix. This course will help the student identify the entry level content areas that require remediation. Students will have the opportunity to perform skill sets in the RT lab to help enhance learning concepts. Each student is required to successfully pass a mock Entry level CRT exam to complete this course.

# RSCR-0299 Final Project Seminar

# 1 hour credit

The student develops a case study presentation integrating data collection, patient assessment, therapeutic intervention, and diagnostic components. Emphasis is on the student's affective ability to perform clinical research and explain applications to other health care providers. *Prerequisite: Respiratory Therapy program sequence.* 

## SOSC-0103 Introduction to Social Science

## 3 hours credit

This course is intended to introduce students to the disciplines and methodologies of Social Sciences. Disciplines such as psychology, sociology, political science, geography, economics, anthropology and history comprise the core methodologies concerned with human social life.

# SOSC-0107 Sociology

#### 3 hours credit

This course is a general introduction to the field of sociology. It includes both a study of the theoretical aspects, as well as the actual behavior pattern of human groups and associations. Emphasis is placed on scientific evidence to illustrate and illuminate sociological theories and principles.

## SOSC-0108 Sociology of The Family

#### 3 hours credit

This course promotes understanding of the diverse forms of family through their structural relationships with the larger society. Family study as such is a special area within Sociology and hence a prerequisite course in introductory sociology is helpful but not absolutely necessary for students. The course focuses on the changing nature of families. Although other orientations outside sociology claim that family flux signals problems 'within' the family, sociologists see families as forms of social organization that exist within larger social systems. This social structure and the distribution of resources within it, creates much diversity among families. Individual family experiences and social 'myths' about families often obscure and mystify this structural reality Hence it is the purpose of this course to penetrate these myths and provide the student with the fundamental social science concepts necessary to illuminate real family relations and forms.

## SOSC-0109 Diversity Studies

#### 3 hours credit

This course is an examination of the patterns and causes of prejudice and discrimination. It surveys the history and current status of groups in American society that have been subjected to discrimination based on race ethnicity, sex or religion. *Prerequisite:* SOSC-0107, Sociology or approval of instructor.

# SOSC-0134 Criminology

#### 3 hours credit

This course is a general introduction to the field of criminology and the sociological perspectives and theories concerning the causes of crime and how society attempts to deal with crime. This course presents an overview of criminological research methods in each category of crime and the laws governing each category.

# SOSC-0207 Urban Sociology

## 3 hours credit

Although humans have only been living in cities for approximately 5,500 years out of our total history, city living has become the norm. In relation to our own society, urbanism has become the American way of life. For the majority of people in America, life will be spent in an urban area. Those rural living environments which remain today are tied to urban areas, culturally, politically and economically. Thus, regardless of where one lives or what occupation one follows the city must be taken into account. Development of the modern city and its functions are emphasized. The influence of urban life on personality, social programs, and social interaction are studied. *Prerequisite: Sociology, SOSC-0107 or consent of the instructor.* 

## SOSC-0209 Social Problems

## 3 hours credit

Attention is given to both the theoretical and the practical aspects of such social problems as poverty, unemployment, racism, crime, the aged, youth, and education. *Prerequisite: Sociology, SOSC-0107 or consent of the instructor.* 

## SOSC-0210 Introduction to Social Work

## 3 hours credit

This course is designed to provide an introduction to the nature of Social Work as a helping profession within the larger arena of the social service system. As such, it serves three major purposes:

As one of the required introductory courses for students planning to obtain the Bachelor of Social Work degree, it provides the fundamental knowledge about and beginning socialization to the social work profession.

It serves as a career-testing course for those who are considering Social Work as a profession.

It provides information for students who would like to know more about Social Work and its activities.

### SOSC-0211 Field Project in Social Work

#### 1-3 hours credit

This course is a continuation of Introduction to Social Work, SOSC-0210 and Introduction to Social Welfare, SOSC-0212. This course is available in 1, 2, or 3 credit hour versions. This course provides 30 to 90 hours of actual contact with the profession of Social Work through projects with agencies in the community and provides opportunities for students to observe Social Workers in the field. This course is an exposure course and is not a field practicum. Generally the minimum required credit hours for this course are two. The course may be taken for up to three credit hours in various combinations. Students are urged to check with their prospective college or university for exact requirements. *Prerequisite: SOSC-0210, Introduction to Social Work or SOSC-0212, Introduction to Social Welfare may be taken concurrently. The student should have a basic knowledge of APA writing format.* 

### SOSC-0212 Introduction to Social Welfare

#### 3 hours credit

This course examines the history of Social Welfare, the structure of Social Service Agencies, and the problems of welfare in an industrialized society. *Prerequisite: None. Enrollment is open. Students should have a basic understanding of APA writing style.* 

#### SOSC-0215 Introduction to Human Service

#### 3 hours credit

This course examines the history of Human Service, the structure of Human Service Agencies, and the problems of welfare in an industrialized society. *Prerequisite: None. Enrollment is open. Students should have a basic understanding of APA writing style.* 

# SOSC-0216 Field Project in Human Service

#### 3 hours credit

This course is a continuation of SOSC-0215, Introduction to Introduction to Human Services. This course is available in 1, 2, or 3 credit hour versions. This course provides 30 to 90 hours of actual contact with the Human Services profession through projects with agencies in the community. This course is an exposure course and is not a field practicum. Generally the minimum required credit hours for this course are two. The course may be taken for up to three credit hours in various combinations. Students are urged to check with their prospective college or university for exact requirements. *Prerequisite: Introduction to Human Services, SOSC-0215, may be taken concurrently. The student should have a basic knowledge of American Psychological Association (APA) writing format.* 

# SOSC-0250 Introduction to the Political Economy of Globalization

## 3 hours credit

This course is a multidisciplinary approach to the study of global political economy in general and GLOBALIZATION in particular. It is designed to introduce students to the basic concepts, theories and the history of contemporary globalization. To that end, competing theories and various historical epochs particularly the Post World War II era are discussed. Of particular interests are an examination of the impact of globalization on the nation-states' socio-economic and political structures, the nature and the scope of global capitalist class alliance, capital/labor relations, war and peace, global inequality, environmental issues, and human rights. *Prerequisite: ECON-0201 Principles of Macroeconomics or ECON-0202 Principles of Microeconomics or SOSC-0107 Sociology, or GEOG-0 Geography, or POSC-0102 International Relations/Foreign Policy*.

# SOSC-0285 Directed Independent Study (Advanced Sociology)

# 3 hours credit

This course is designed to enable the interested student to conduct independent research under the supervision of a faculty member on a topic of sociological relevance. *Prerequisite: SOSC-0107, Sociology, consent of the instructor, and consent of the Honors Education Director.* 

## SPCH-0151 Public Speaking

#### 3 hours credit

This is a basic speech course dealing with the oral communication process through the study of public speaking. Students will learn to select topics, analyze their audience, organize and gather support for a speech, improve delivery skills and reduce communication apprehension, listen for information and evaluation purposes, and distinguish between different types of speeches. Each student will develop and deliver a minimum of four speeches during the course.

### SPCH-0160 Debate

### 2 hours credit

This course introduces students to the principles of basic argumentation as well as methods of competition in collegiate debate tournaments. Research of a current major national or international controversy, is used as the model for examining the fundamentals of reasoning and evidence. Students are expected to participate in intercollegiate debate competition.

#### SPCH-0161 Discussion and Debate

#### 2 hours credit

This course expands the study of the principles of basic argumentation and discussion. Students are introduced to higher levels of research techniques including online data bases such as Lexis/Nexis. Research of a current major national or international controversy, is used as the model for gathering the research. Students are expected to participate in intercollegiate debate competition. *Prerequisites: Debate, SPCH-0160 or permission of instructor.* 

### SPCH-0162 Advanced Debate

#### 2 hours credit

This course provides students with more experience in traditional argumentation and more argumentation theory, examining contributions by Toulmin, Mill, Burke, and other theorists. Students learn to develop and defend kritiks and alternate proposals as means of analyzing arguments. Students are expected to participate in intercollegiate debate competition. *Prerequisite: Discussion & Debate, SPCH-0161 or permission of instructor.* 

# SPCH-0163 Advanced Discussion and Debate

#### 2 hours credit

This course provides students with more experience in debating and using group techniques for resolving conflicts and exerting public influence. Students are taught more advanced theories of conversation, implication, and audience reasoning. This course expands the study of the principles of basic argumentation and discussion. Students are expected to participate in intercollegiate debate competition.

# SPCH 0201 Interpersonal Communication

## 3 hours credit

This is a basic speech course dealing with the oral communication process through the study of interpersonal communication. Interpersonal communication is the study of communication that takes place between two or more persons in day-to day life. This course will help you understand what works and what doesn't in your communication with friends, families, and coworkers. Areas of study include: perception, verbal and nonverbal messages, listening, relationship development, relationship, maintenance, repair, and/or dissolution, and the differences in these things between cultures.

## SPCH-0222 Voice and Diction

# 3 hours credit

This is a course in which students explore, expand, and refine the properties of the human speaking voice, with the assumption that the student is a prospective professional in a field in which control, flexibility, and understanding of the voice are essential skills. Students are instructed in a series of voice and diction exercises and techniques to free the voice and improve projection, resonance, and articulation. The course additionally covers the sounds of the International Phonetic Alphabet employed in American English and standard stage speech.

# SPCH-0283 Oral Interpretation of Literature

#### 3 hours credit

The student will develop techniques for effective spoken performance of literature. Using poetry, fiction and nonfiction, students will create literary interpretations and then master both the verbal and nonverbal methods necessary for effective spoken expression of those interpretations. This course includes topics such as selecting literacy works for performance, interpretation of literary works, audience analysis and performance. Skills acquired in this course will be essential to actors, broadcast journalists, educators and other public speakers.

## SPED0221 Behavior and Classroom Management for Paraeducators

#### 3 hours credit

This course is designed to provide the paraprofessional with practical knowledge of positive behavior management strategies. Emphasized is the use of nonaversive intervention to teach replacement skills and to support behavior change. Data collection, analysis, and monitoring student progress are included. Within the classroom or community setting, paraprofessionals assist various support personnel. Also addressed are strategies for including communication and self-care, community, recreation, and vocational skills, along with the role to assist the support personnel.

# SPED0251 Inclusive Education for Paraprofessionals

#### 3 hours credit

The purpose of this inclusive course is to inform and prepare paraprofessionals for working in settings with students with disabilities. This curriculum will provide assistance to meet the present needs and priorities of the paraprofessional in the area of including students with disabilities into general education classrooms.

## **THTR-0101** Theatre Appreciation

#### 3 hours credit

Theatre Appreciation is a survey of theatre, including basic elements and principles of production, styles, and/or historical perspectives of theatre, dramatic literature, and criticism.

# THTR-0105 Introduction to Acting

## 3 hours credit

This is an introduction to the theory and practice of acting, including improvisation, storytelling, puppetry, and script and program development in drama.

# THTR-0110 Improvisation

## 1 hour credit

Students experience an introduction to the art of performing without a script. Various creative forms of impromptu acting are explored throughout the semester to enhance student creativity and confidence performing before an audience.

# THTR-0112 Dance History

## 3 hours credit

This course is an overview of the history of dance from earliest societies to present. Dance as an art form and as a reflection of historical events, cultural factors, and controversies will be examined. An evolution of various forms of dance will be observed through readings, research, and video recordings.

# THTR-0115 Acting I

## 3 hours credit

Fundamental techniques and terminology of acting through physical and vocal expression are learned. Emphasis is placed on characterization as developed through improvisation, vocal exercises, intention exercises, and awareness of body acting centers.

# THTR-0120 Vocal Production for the Stage

## 3 hours credit

This is a course in which students explore, expand, and refine the properties of the human speaking voice, with the assumption that the student is a prospective professional in a field in which control, flexibility, and understanding of the voice are essential skills.

Students are instructed in a series of voice and diction exercises and techniques to free the voice and improve projection, resonance, and articulation. The course additionally covers the sounds of the International Phonetic Alphabet employed in American English and standard stage speech.

## THTR-0122 Introduction to Dance

#### 1 hour credit

An introduction to the fundamentals of dance technique, including but not limited to ballet, modern, and jazz dance. Students will learn the basic principles of technical dance vocabulary and sequences with an emphasis on placement, weight, and control, while developing flexibility, strength, musicality, and basic performance skills.

## **THTR-0125** Introduction to Tap Dance

#### 1 hour credit

This is an introduction to tap dance techniques emphasizing fundamentals of body placement, vocabulary, and styles in tap. Students will develop dance combinations to enhance technical skills, memory, and performance qualities.

## THTR-0126 Tap Dance II

### 1 hour credit

An intermediate level of instruction in tap dance techniques emphasizing advanced body placement, vocabulary, and styles in tap. Students will develop advanced dance combinations to enhance technical skills, memory, and performance qualities. *Prerequisite: THTR-0125 Introduction to Tap Dance or permission of Instructor.* 

## THTR-0130 Stage Movement I

#### 3 hours credit

This course is an introduction to the theory and practice of modern stage movement and performance skills at the beginning level.

## THTR-0131 Stage Movement II

## 3 hours credit

This course includes the theory and practice of modern stage

movement at the advanced beginning level and the development of movement quality and performance skills. *Prerequisite: THTR-0130 Stage Movement I or permission of the instructor.* 

## **THTR-0133** Introduction to Ballroom Dancing

## 1 hour credit

This course is an introduction to basic ballroom/social dancing including ballroom, Latin, country, and swing dances. Basic dance positions will be introduced, as well as etiquette, history, characteristics, lead/follow technique, terminology, amalgamations, and styles.

#### THTR-0140 Ballet

## 1 hour credit

This progressive ballet system is designed to produce muscular strength, flexibility, and a working knowledge of anatomy, plus the aesthetic satisfaction of expressing yourself through a classical art form. This course is offered to students of all ages and experience, both beginners as well as those who have had some training.

## THTR-0145 Jazz Dance

## 1 hour credit

This course is an introduction to the concepts and motor skills involved with jazz dance. Basic body position will be introduced, as well as basic terminology, jazz history, various jazz styles and the basic techniques involved, isolations, combinations, choreography and musical/rhythmic influences. *Prerequisite: No Text Required.* 

## THTR-0148 Modern Dance I

# 1 hour credit

An introduction to the theory and practice of modern dance movement for the stage and performance skills at the beginning level.

## THTR-0150 Stagecraft

#### 3 hours credit

Course emphasis is placed upon the procedures of technical theatre production in a laboratory/demonstration atmosphere. Topics include the design and construction of scenery, lighting, costuming, and properties.

## THTR-0151 Technical Theatre Practicum

#### 1 hour credit

This course is designed to give college credit to the technical production crews of college theatre productions.

#### **THTR-0155** Dance Practicum

#### 1 hour credit

This course is designed to give college credit to members of the college dance ensemble to technically prepare students to perform at various events, including college dance productions and community outreach events. Admittance to the dance ensemble is by audition only. Participants must commit to rehearsals, performances, fundraisers, outreach projects, and group events. Students must also be enrolled in a dance technique class. *Prerequisite: Enrollment in a dance technique class*.

# THTR-0160 Stage Lighting I

#### 3 hours credit

This course examines basic theories and methods of stage lighting for all production types. Emphasis on technical/theoretical facts, artistic/design concept development, and "teamwork" structure of theatre. This course also examines stage lighting optics, instrument selection and application, color theory, circuiting and control systems, and basic design.

## THTR-0170 Stage Make Up

#### 2 hours credit

This course is an introduction to the basic techniques and philosophies concerning the effective application of theatrical makeup. The objective of the course is to give the student a practical, working knowledge of the principles of highlighting, shadowing, and contouring the human face with makeup in a laboratory environment. Explorations into the basic techniques involved in working with crepe hair, and various three-dimensional processes shall also be undertaken as time permits.

# THTR-0175 Acting Practicum

#### 1 hour credit

This course is designed to give college credit to the cast of college theatre productions using the fundamental techniques and terminology of acting through physical and vocal expression in a practical production/laboratory setting. Emphasis is placed on characterization as developed through the rehearsal process from audition to final performance utilizing improvisation, vocal exercises, intention exercises, and awareness of body acting centers.

# THTR-0185 Stage Management

## 3 hours credit

The course is designed to enable students to understand and apply the fundamental methods, techniques and responsibilities of the Stage Manager in Theatrical Production, from pre-production to auditions and from the first rehearsal through closing night and strike.

# THTR-0210 Improvisation

# 1 hour credit

Students experience advanced training in the art of performing without a script. Various creative forms of impromptu acting are explored throughout the semester to enhance student creativity and confidence performing before an audience. *Prerequisite: THTR-0115 Acting I or permission of instructor.* 

# THTR-0215 Acting II: (Play Production)

## 3 hours credit

Scene work, vocal exercise, and selected stage movement techniques are the focus of this course. Progressive exercises are designed and applied to the principles of characterization. *Prerequisite: THTR-0115*, *Acting I*.

### THTR-0216 Acting III

#### 3 hours credit

This course includes study of theory and practice in advanced acting techniques employed in film and video presentations. *Prerequisite: THTR-0215, Acting II or permission of instructor.* 

#### THTR-0220 Costume Production

#### 3 hours credit

Costume Production is an introduction to the processes and the techniques employed in the creation of costumes for theatrical performances and film. The focus of the class is the processes involved in building costumes, not costume design. Topics will include construction techniques, materials, fabrics, sewing, equipment, patterning, and cutting.

### THTR-0222 Voice and Diction

#### 3 hours credit

This is a course in which students explore, expand, and refine the properties of the human speaking voice, with the assumption that the student is a prospective professional in a field in which control, flexibility, and understanding of the voice are essential skills. Students are instructed in a series of voice and diction exercises and techniques to free the voice and improve projection, resonance, and articulation. The course additionally covers the sounds of the International Phonetic Alphabet employed in American English and standard stage speech.

# THTR-0255 Stagecraft II

#### 3 hours credit

This course is a continuation of Stagecraft I, with an emphasis on more advanced construction techniques and problems. Students will serve in supervisory capacities on productions. Practical work outside of class is required on productions. This is a project-oriented course that allows a student to devote extended time to exploration in a particular area of interest utilizing skills gained in Stagecraft I. Specific projects are designed by the students and approved by the instructor. *Prerequisite: THTR-0150*, *Stagecraft I*.

# THTR-0260 Stage Lighting II

## 3 hours credit

This course examines advanced theories and methods of stage lighting for all production types. An in-depth study of technical/theoretical facts, the artistic/design concept development, and the "teamwork" structure of theatre. Advanced work in stage lighting optics, instrument selection and application, color theory, circuiting and computerized control systems, special effects, and production design. *Prerequisite: THTR-0160, Stage Lighting I.* 

# THTR-0265 Scene Painting

## 3 hours credit

This course is an exploration and application of the techniques and materials used in creating character in the various elements of set design—walls, floors, furniture, beaches, rocks, trees, etc. Methods to include set preparation, coating, mixing, palette preparation, spraying, transfer, texturing, finishing, and wallpapering are studied. *Prerequisite: THTR-0255, Stagecraft II.* 

## VTSP-0102 Victim Services

## 3 hours credit

Victim Services is an overview of community services dealing with victims, including social welfare services, crisis centers, medical services, criminal justice, and others. The course focuses on the role of a victim service agency as a new subsystem, with special emphasis on services.

# WELD-0100 Welding Safety/OSHA 10 or 30

## 2 hours credit

Through a variety of classroom and/or lab learning and assessment activities, students in this course will: explain job/site safety and precautions for job/site hazards; determine the uses of personal protective equipment (PPE); identify the safety equipment and procedures related to safe work practices and environment; identify fire prevention and protection techniques; and explore Hazardous Communications (HazCom) including Material Safety Data Sheets (MSDS).

## WELD-0105 Welding Blueprints

#### 3 hours credit

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: identify basic lines, views and abbreviations used in blueprints; interpret basic 3D sketches using orthographic projection and blueprints; solve applicable mathematical equations; use basic measuring tools; interpret scale ratios on a blueprint; identify basic welding joints and structural shapes; interpret a bill of materials; and identify standard AWS weld symbols.

## WELD-0110 Cutting Processes

#### 3 hours credit

Through classroom and/or shop/lab learning and assessment activities, students in this course will: distinguish several types of mechanical and thermal cutting equipment and processes used in the welding trade; demonstrate the safe and correct set up, operation and shut down of the Oxy-fuel (OFC) workstation; demonstrate the safe and correct set up, operation and shut down of the Plasma Arc (PAC) workstation; demonstrate the safe and correct set up, operation and shut down of the Carbon Arc Cutting with Air (CAC-A) workstations; demonstrate safe and proper operation of several types of mechanical cutting equipment; and inspect quality and tolerance of cuts according to industry standards. *Prerequisite: WELD-0100 Welding Safety.* 

### WELD-0120 SMAW I

#### 3 hours credit

Through classroom and/or lab/shop learning and assessment activities, students in this course will: describe the Shielded Metal Arc Welding process (SMAW); demonstrate the safe and correct set up of the SMAW workstation; associate SMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the flat position; build pads of weld beads with selected electrodes in the horizontal position; perform basic SMAW welds on selected weld joints; and perform visual inspection of welds. *Prerequisite: WELD- 0100 Welding Safety.* 

#### WELD-0130 GMAW I

#### 3 hours credit

Through classroom and/or shop/lab learning and assessment activities, students in this course will: explain gas metal arc welding process (GMAW); demonstrate the safe and correct set up of the GMAW workstation.; correlate GMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the flat position; build pads of weld beads with selected electrodes in the horizontal position; produce basic GMAW welds on selected weld joints; and conduct visual inspection of GMAW welds. *Prerequisite: WELD-0100 Welding Safety.* 

## WELD-0140 GTAW I

## 3 hours credit

Through classroom and/or lab/shop learning and assessment activities, students in this course will: explain the gas tungsten arc welding process (GTAW); demonstrate the safe and correct set up of the GTAW workstation; relate GTAW electrode and filler metal classifications with base metals and joint criteria; build proper electrode and filler metal selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes and filler material in the vertical position; build pads of weld beads with selected electrodes and filler material in the overhead position; perform basic GTAW welds on selected weld joints; and perform visual inspection of GTAW welds. *Prerequisite: WELD-0100 Welding Safety*.

# WELD-0201 Oxy-fuel Welding

## 1 hour credit

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn to set up, operate, and shut down OFW equipment, and learn to perform basic welds with the OFW and TB processes. *Prerequisite: WELD-0100 Welding Safety.* 

## WELD-0202 Intermediate Welding Techniques

# 1 hour credit

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: develop skills

in areas that have been difficult to them. If students have no trouble areas they will use this class to explore the basics of advanced classes they may have an interest in to help decide on welding electives. *Prerequisite: WELD-0100 Welding Safety.* 

## WELD-0220 SMAW II

#### 4 hours credit

Through classroom and/or lab/shop learning and assessment activities, students in this course will: describe the Shielded Metal Arc Welding process (SMAW); demonstrate the safe and correct set up of the SMAW workstation; associate SMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the Vertical position; build pads of weld beads with selected electrodes in the Over Head position; perform basic SMAW welds on selected weld joints; and perform visual inspection of welds.

# Prerequisite: WELD-0120 SMAW I.

### WELD-0230 GMAW II

#### 4 hours credit

Through classroom and/or shop/lab learning and assessment activities, students in this course will: explain gas metal arc welding process (GMAW); demonstrate the safe and correct set up of the GMAW workstation.; correlate GMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes in the vertical position; build pads of weld beads with selected electrodes in the overhead position; produce basic GMAW welds on selected weld joints; and conduct visual inspection of GMAW welds. *Prerequisite: WELD-0130 GMAW I.* 

#### WELD-0240 GTAW II

#### 4 hours credit

Through classroom and/or lab/shop learning and assessment activities, students in this course will: explain the gas tungsten arc welding process (GTAW); demonstrate the safe and correct set up of the GTAW workstation; relate GTAW electrode and filler metal classifications with base metals and joint criteria; build proper electrode and filler metal selection and use based on metal types and thicknesses; build pads of weld beads with selected electrodes and filler material in the flat position; build pads of weld beads with selected electrodes and filler material in the horizontal position; perform basic GTAW welds on selected weld joints; and perform visual inspection of GTAW welds. *Prerequisite: WELD-0140 GTAW I.* 

# WELD-0255 Aluminum Welding

#### 4 hours credit

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn metal preparation, GMAW, GTAW, safety and metallurgy as they apply to aluminum welding. *Prerequisite: WELD-0100 Welding Safety*.

## WELD-0260 Stainless Steel Welding

## 4 hours credit

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will learn metal preparation, GMAW, GTAW, safety and metallurgy as they apply to Stainless Steel welding. *Prerequisite: WELD-0100 Welding Safety*.

## WELD-0265 Fabrication Welding

## 4 hours credit

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn to weld as in a shop setting. This includes project planning, layout, tacking, welding, and dealing with distortion of weldments. Students will end the class with a project that they may take home. Students will be required to supply materials for project. *Prerequisite: WELD-0100 Welding Safety.* 

# WELD-0270 Automated Welding and Cutting

## 4 hours credit

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn set up and operation of various automated welding and cutting procedures including programming, weld settings, troubleshooting, and

maintenance of equipment. Prerequisite: WELD-0100 Welding Safety

# WELD-0275 Pipe Welding

## 4 hours credit

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: Set up, weld and test weld coupons in various pipe positions and materials. *Prerequisite: WELD-0100 Welding Safety*.

# WELD-0280 Welding Codes and Advanced Inspection

## 4 hours credit

Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn destructive and non-destructive testing methods, how to interpret them to code, and how to use a code to set up welding procedures and qualification tests. *Prerequisite: WELD-0100 Welding Safety*.

# WELD-0285 Internship

## 4 hours credit

Through an internship at a local company students will learn what it is like to work in a manufacturing plant or welding related field. Student must be working at a welding or welding related job. *Prerequisite: BUSN-0250 Obtaining Employment.*