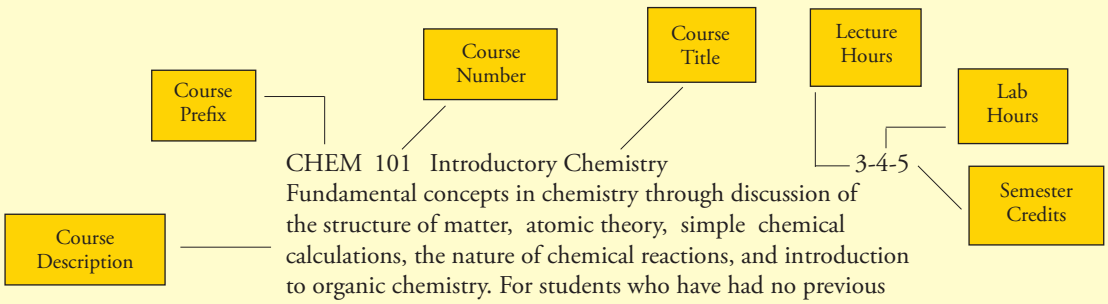
COURSE DESCRIPTION GUIDE

How To Read A Course Description



Course Numbering

Below 100	Courses numbered below 100 are developmental, general studies or refresher courses.
100-199	Courses numbered 100-199 are first-year or freshman-level courses.
200-299	Courses numbered 200-299 are second-year or sophomore-level courses.

Semester Credits

Each course description reflects the number of semester credits that will be earned upon successful completion of the course. In addition, the description reflects the number of hours per week spent on lecture/lab activities.

Requisite

In order to ensure that students are adequately prepared for courses, some courses require completion of foundation courses or demonstrated skill levels prior to enrollment. These requisites are listed at the end of each course description if applicable.

Type

Following courses that have been approved as part of the Illinois Articulation Initiative is a common code used by all participating colleges and universities across the state. This code reflects the area of the *Illinois General Education Core Curriculum* to which the course applies. The following are general coding descriptions:

IAI Code

IAI C – Communications
IAI F – Fine Arts
IAI H – Humanities
IAI L – Life Science
IAI M – Mathematics
IAI P – Physical Science
IAI S – Social Behavioral Sciences

In addition, the following codes are used to identify course types:

P	Developmental courses that are designed to prepare students for college-level courses
T	Transfer courses that are generally accepted as major, minor, or elective credit by four-year collegiate institutions
C	Career oriented courses that are intended for AAS degrees or occupational certificates

Course Prefixes

Accounting ..... ACCT
Administration of Justice ..... AOJ
Aeroronautical Information Systems ..... AVG
Aerospace Studies – Air Force ROTC ..... AS
Agriculture ..... AGRI
See also *Agriculture Business Administration*
Agronomy
Anthropology ..... ANTH
Art ..... ART
Astronomy ..... ATY
Automated Manufacturing Systems – *See Electrical/Electronics Technology*
Aviation Maintenance Technology ..... AVMT
Aviation Pilot Training/Aviation Management ..... AVIA
Avionics ..... AVE
Biology ..... BIOL
Brewing Science Operations ..... BRW
Bricklayer Apprentice ..... BLA
Business ..... BUS
See also *Accounting*
Economics
Esports Management
Management
Marketing
Cannabis ..... CAN
Chemistry ..... CHEM
Child Care Services – *See Early Childhood Education*
Chinese ..... CHIN
Cisco Networking Academy ..... CISC
Communications ..... COMM
Community Health Worker ..... CHW
Computer Aided Design ..... CAD
Computer Information Systems ..... CIS
Computer Hardware Technology – *See Microcomputer Hardware Repair under Electrical/Electronics Technology*
Construction Carpentry ..... CCA
Construction Cement Mason ..... CMA
Construction Ironworker ..... IWA
Construction Management ..... CMT
Construction Painting & Decorating ..... PDA
Construction Sheetmetal ..... SMA
Culinary Arts and Food Management ..... CUL
Cybersecurity – *See Cisco or Networking*
Diagnostic Medical Sonography ..... DMS
Early Childhood Education ..... ECE
Earth Science ..... ES
Economics ..... ECON
Education ..... ED
Emergency Medical Services (Paramedic/EMT) ..... EMS
Engineering ..... ENGR
English ..... ENG
eSports Management ..... ESM
Film ..... FILM
Fire Science ..... FS
French ..... FREN
General Technology ..... GT
Geography ..... GEOG
Geospacial & Aeronautical Information Systems ..... GIS
German ..... GERM
Graphic Communications ..... CIS
Health & Exercise Science ..... HES
Health Information Technology ..... HIT
Health Related Occupations ..... HRO
Heating, Ventilation, Air Conditioning, and Refrigeration ..... HVAR
History ..... HIST
Homeland Security ..... HS
Horticulture ..... HORT
Hospitality/Food Service Management – *See Culinary Arts and Food Management*
Human Services Technology ..... HMS
Humanities ..... HUM
Independent Study ..... IND
Industrial Electrical Wireman ..... IEW
Industrial Electricity ..... EET
Industrial Mechanics ..... IML
Industrial Pipefilling ..... IDP
Journalism - *see Mass Communication*
Labor ..... LABR
Literature ..... LIT
Management ..... MGMT
Marketing ..... MKT
Mass Communication ..... MCOM
Massage Therapy ..... MT
Mathematics ..... MATH
Medical Assistant ..... MA
Medical Laboratory Technology ..... MLT
Medical Surgical Technology ..... MST
Microcomputer Hardware Repair – *See Electrical/Electronics Technology*
Military Science – Army ROTC ..... MSC
Music ..... MUS
Networking ..... CISC, NETW
Nursing Education ..... NE
Orientation ..... ORIE
Pharmacy Technicial ..... PHAR
Office Administration & Technology ..... OAT
Paralegal ..... PARL
Philosophy ..... PHIL
Physical Therapist Assistant ..... PTA
Physics ..... PHYS
Plumbing ..... PLBR
Political Science ..... POLS
Practical Nursing ..... PN
Precision Machining Technology ..... PMT
Psychology ..... PSYC
Radiologic Technology ..... RT
Respiratory Care ..... RC
Russian ..... RUSS
Sign Language Studies: Interpreter ..... SLS
Sociology ..... SOC
Spanish ..... SPAN
Theatre ..... THEA
Warehousing ..... WRH
Web Development - *see Computer Information Systems*
Welding Technology ..... WLDT

Accounting

ACCT 105 Basic Accounting Procedures 3-0-3
This course will introduce students to the fundamentals of accounting; emphasizing the accounting cycle and financial statements. Financial accounting topics relating to merchandisers, inventory valuation, accounts receivable, internal control, bank reconciliation, petty cash, and current liabilities, including payroll, will also be discussed. Students will explore the benefits and use of budgets, and some limited budget preparation will be included. Excel spreadsheet use and application will be incorporated into the instruction. This course is designed for those students who have never had formal accounting instruction or those who need a refresher. It is required in several AAS degrees but does not carry elective credit for the AA and AS transfer degrees.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C, Type:

ACCT 106 Introduction to QuickBooks 3-0-3
This course is a review of the implementation of basic accounting concepts via a computerized accounting system. Topics include: opening a company file; customer and vendor maintenance; recording and paying bills; recording sales and collections; payroll setup and processing; end-of-period adjustments; and financial statement preparation. This course is designed for those students who have a basic knowledge of accounting concepts. The course is required in the AAS Business Management-Accounting option and the AAS Office Administration and Technology-Accounting Office Specialist Option, but does NOT carry elective credit for either AA or AS degrees. NOTE: ACCT 105, ACCT 110, or Accounting experience strongly encouraged
Semester(s) Offered: ALL
Requisite: ACCT 105 or ACCT 110 in the last five years or department approval.
Type: C

ACCT 110 Financial Accounting 4-0-4
This course introduces students to accounting as an information system that produces summary financial statements, primarily for users external to a business or other enterprise. Accounting terminology and concepts along with the analysis, recording, reporting, and interpretation of financial information are examined. Emphasis will be placed on accounting for current and long-term assets, current and long-term liabilities and stockholders' equity, as well as the preparation, interpretation, and analyses of financial statements. NOTE: ACCT 105 is encouraged
Semester(s) Offered: ALL
Requisite: Completion of MATH 93 with a "C" or better; or completion of ALEKS math skills assessment; or academic advisor/department chair approval.
Type: T, Type: , IAI-BUS 903

ACCT 111 Managerial Accounting 4-0-4
This course introduces students to the use of financial and managerial accounting information in making decisions and performing other managerial duties. Cost accumulation, allocation, analysis, control, and performance measurement are examined. Cost-volume-profit analysis, capital budgeting, incremental analysis, and financial statements topics are also explored.
Semester(s) Offered: ALL
Requisite: ACCT 110 completed in the last five years with a grade of "C" or better.
Type: T, Type: , IAI-BUS 904

ACCT 206 Individual/Business Income Tax 3-0-3
This course introduces students to federal income taxes as they relate to individuals, businesses, and other entities. Students will study income tax concepts, such as filing status, gross income, ordinary gains and losses, capital gains and losses, exemptions, deductions and expenses, business and rental properties, payroll and estimated tax, tax credits and special taxes, depreciation, partnerships, corporations, trusts, and estates. Filling out tax forms in their entirety for individuals and different types of business entities will be covered as well. In addition, students will learn how to find answers to tax questions when unique situations occur.
Semester(s) Offered: FALL
Requisite: ACCT 110 completed in the last five years with a grade of "C" or better.
Type: C

ACCT 210 Cost Accounting 3-0-3
The flow of costs involved in the two main cost systems: job order and process. Standard costing and variance analysis of direct materials, direct labor and factory overhead are covered in depth. Also included are cost-volume-profit analysis, budgeting, direct costing, contribution margin, relevant costs, joint and by-products costing, and spoilage.
Semester(s) Offered: FALL
Requisite: ACCT 111 completed in the last five years with a grade of "C" or better.
Type: T

ACCT 211 Intermediate Accounting I 3-0-3
This course builds on the theories and concepts covered in Financial Accounting. Financial Statements are emphasized and the valuation of cash, receivables, inventory, long-lived assets, intangible assets, and liabilities are explored in more detail.
Semester(s) Offered: SPRING
Requisite: ACCT 110 completed in the last five years with a grade of "C" or better.
Type: T

ACCT 212 Certified Bookkeeper Review 3-0-3
The course covers the following topics: adjusting entries; payroll; depreciation; inventory; and accounting error correction. Students who successfully complete this course may sit for the Certified Bookkeeper Review exam (optional; offered through the American Institute of Professional Bookkeepers).
Semester(s) Offered: SPRING
Requisite: ACCT 211 completed in the last five years with a grade of "C" or better.
Type: C

ACCT 215 Accounting for Small Businesses 3-0-3
This course emphasizes recordkeeping for a small business. Payroll and sales tax reporting are introduced and income tax reporting will be reviewed. The benefits and use of budgets, cash flow management, financial statement analysis, and internal control are examined.
Semester(s) Offered: SPRING
Requisite: ACCT 206 completed in the last five years with a grade of "C" or better.
Type: C

ACCT 269 Accounting AAS Internship 0-15-3
This course is a supervised work-experience program requiring an average of 15 hours per week in an accounting focused position. If the student is already employed in an accounting position, the job may qualify for the internship but is subject to approval by the instructor. The instructor and the college's internship coordinator also provide assistance to students in finding an appropriate internship position.
Semester(s) Offered: ALL
Requisite: Sophomore standing; ACCT 110, ACCT 111 completed in the last five years with a grade of "C" or better; minimum GPA of 3.0 in ACCT coursework.. Department consent
Type: C

Administration of Justice

AOJ 100 Intro to Administration of Justice 3-0-3
The study of the criminal justice system and its major components. The criminal justice process is described. Includes history, philosophy and current practice in the administration of justice in a democratic society.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-CRJ 901

AOJ 102 Public Safety Telecommunications 5-0-5
Students will receive instruction in all phases of public safety communications. Students who successfully complete this course will be able to perform the duties of a dispatcher for police, fire, emergency medical services, hospital, civil defense, or ambulance service units.
Semester(s) Offered: SPRING
Requisite: Department consent
Type: C

AOJ 103 Introduction to Corrections 3-0-3
Organization, management and operation of correctional institutions and their role in the criminal-justice system.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T, IAI-CRJ 911

AOJ 104 Police Officer Proficiencies 2-8-4.5
High liability areas are created in Law Enforcement when an officer must stop and/or control resistive behavior along with rendering aid to sick or injured citizens. This course is designed to address four high civil liability areas in Law Enforcement. These civil liability areas are Firearms Training, Medical Response, Law Enforcement Driving, and Arrest Tactics.
Semester(s) Offered: ALL
Requisite: Department consent: Admissions to the Police Academy
Type: C

AOJ 105 Police Administration 3-0-3
Principles of organization and management as applied to law enforcement agencies and introduction to concepts of organizational behavior.
Semester(s) Offered: FALL
Requisite: None.
Type: C

AOJ 106 Correctional Administration 3-0-3
This course examines a myriad of issues affecting Correctional Administration and management. The course includes a review of the evolution of Management Theory and contemporary Correctional Administrative Practices. The course also includes an in-depth review of the organizational process, including policy development and budgeting, as well as the impact of the courts, media, and the community on the correctional organization.
Semester(s) Offered: FALL
Requisite: None.
Type: C

AOJ 107 Physical Fitness Skills 0-2-1
This course is two-fold: (1) to develop an awareness in peace officer recruit the need for physical fitness, dynamics of personal health, and demonstrate the aphysical fitness can be accomplished without undue exertion or discomfort, and (2) to develop increased fitness through participation in a stuructured excercise program.
Semester(s) Offered: ALL
Requisite: Department consent: Admissions to the Police Academy
Type: C

AOJ 110 Issues in Private Security Variable up to (3)-(6)-(3)
A comprehensive overview of the unique goals, objectives and management responsibilities in private security operations. Specific security functions are delineated. Extant research findings and recommendations are used to support critical thinking exercises for students. Includes case studies. Course will focus on the needs of security managers who must budget for asset protection and the criminal justice professional with public/private interface functions.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

AOJ 111 Correctional Supervision 3-0-3
The study of the principles and practice of supervision and management techniques in the American correctional system. Definitions and levels of supervision are presented; emphasis is placed on practical applications of methods of supervision. Profiles of successful correctional supervision scenarios are presented for study.
Semester(s) Offered: SPRING
Requisite: None.
Type: C

AOJ 120 Foundations of Law Enforcement 3-0-3
Foundations of Law Enforcement will explore historical development, current operation, and future trends of criminal justice. Emphasis will be place on contemporary problems in the definition of the law, strategies of policing, judicial systems, sentencing strategies, correctional practices, and emerging forms of justice.
Semester(s) Offered: ALL
Requisite: Department consent: Admissions to the Police Academy
Type: C

AOJ 144 Security Officer Certification 2-0-2
This course is approved by the Illinois Department of Professional Regulation for armed security guard certification. Career orientation is accomplished. Basic criminal law, law of arrest, search and seizure, and the legal use of force are covered. Students who successfully complete the course and meet all requirements are certified to work as an unarmed security guard in the State of Illinois.
Semester(s) Offered: ALL
Requisite: None.
Type: C

AOJ 145 Introduction to Firearms 1-0-1
Introduction to the law, liability and use of handguns, and to the skills required in their care, handling and safety. Course includes both classroom and firing-range activities. Course may be taken by anyone who is at least 18 years old to learn how to legally and effectively use firearms. May also be used as an elective for certain degree programs. Note: Students must have have valid firearm owner's identification (FOID) card.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

AOJ 150 Police Officer Patrol Function 3-0-3
This course is designed to introduce the law enforcement officer to the various patrol functions performed by law enforcement officers. The patrol tasks are drug enforcement, crimes in progress, crime prevention, fundamentals of report writing, information sources, patrol procedure, police communications, vehicle stops and occupant control.
Semester(s) Offered: ALL
Requisite: Department consent: Admissions to the Police Academy
Type: C

AOJ 151 Policing: Methods and Ethics 3-0-3
This course is an examination of the history, current status, and/or trends in police field operations. A critical review of the extant research on police effectiveness, deployment of personnel, and delivery of services is accomplished. Police integrity standards and hard choice issues concerning police discretion, legality, and morality in police methods are delineated.
Semester(s) Offered: FALL
Requisite: None.
Type: C

AOJ 152 Police Function & Human Behav 2.5-2-3.5
This course is designed to introduce the patrol officer to the various types of behavior the officer might encounter. A critical review of why victims, witnesses, and suspects act the way they do, how the officer communicates with people, and how perception and observation affects a person's conduct. Integrity standards and issues concerning discretion, legality, and morality in police methods are considered.
Semester(s) Offered: ALL
Requisite: Department consent: Admissions to the Police Academy
Type: C

AOJ 153 Juvenile Delinquency 3-0-3
Analysis of juvenile delinquency as a social problem. Factors related to delinquency causation are considered. Includes delinquency prevention methods. The Juvenile Court System is described in operational terms.
Semester(s) Offered: SPRING
Requisite: None.
Type: T, IAI-CRJ 914

AOJ 154 Juvenile Officer Certification 2-0-2
This course is designed to meet the training certification requirements to become a Juvenile Officer in the State of Illinois. Peace officers, recruits and interns are prepared with the knowledge and skills to manage problems unique to the juvenile population. Participants will take a detailed look at the updated Juvenile Court Act and its implication in the field. Juvenile gangs, substance abuse, alternative to detention, abuse, neglect, missing children, exploitation, criminal sexual assault, and more will be covered.
Department Permission: Must be a recruit/intern in SWIC Police Academy or certified Police Officer with Illinois Training and Standards Board.
Semester(s) Offered: ALL
Requisite: None.
Type: C

AOJ 155 Community Policing 3-0-3
Interpersonal, intrapersonal, and life-management skills related to criminal justice work are delineated. Experiential activities are used to develop skills in human communication, conflict resolution, effective behavior, and in the appreciation of cultural diversity. Problem oriented policing strategies are delineated.
Semester(s) Offered: SPRING
Requisite: None.
Type: C

AOJ 156 Issues in Criminal Justice Variable up to (3)-(6)-(3)
Offers an in-depth study of problems facing workers in the criminal justice system. Contemporary issues will determine the course content during any particular offering.
Semester(s) Offered: ALL
Requisite: None.
Type: C

AOJ 160 Criminology 3-0-3
A course designed to appeal to law-enforcement officers, pre-law enforcement students, educators, civic leaders and concerned citizens who wish to gain new insights into the body of knowledge which regards delinquency and crime as social phenomena. The sociology of law, the conditions under which criminal laws develop, causes of crime and delinquency, and the control of crime and delinquency are examined within the framework of the criminal justice system and a democratic society.
Semester(s) Offered: ALL
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-CRJ 912

AOJ 162 Intro to County Corrections 4-0-4
This unit will provide the student with an overview of the role of the sheriff and county corrections in the criminal justice system. An overview of criminal offenses commonly committed in county correctional facilities will be presented. Common activities such as booking, processing and documentation, classifications, medical services, safety and security, fingerprinting, transportation and emergency procedures will be presented and discussed.
Semester(s) Offered: ALL
Requisite: Department consent: Permission from the Illinois Law Enforcement Training and Standards Board
Type: C

AOJ 164 Correctional Proficiencies 2-5-5
High liability areas are created in Law Enforcement when an officer must stop and/or control resistive behavior along with rendering aid to sick or injured citizens. This course is designed to address the high civil liability areas in corrections. These civil liability areas are Firearms Training, Medical Response, and Arrest Tactics. This unit involves instruction in the Board's 40-hour Mandatory Firearms Training Course for law enforcement officers.
Semester(s) Offered: ALL
Requisite: Department consent: Permission from the Illinois Law Enforcement Training and Standards Board
Type: C

AOJ 166 Correctional Investigations 4-0-4
Foundation of Law Enforcement will explore historical development, current operation, and future trends of criminal justice. Emphasis will be placed on the contemporary problems in the definition of law, the enforcement of law, strategies of policing, judicial systems, sentencing strategies, correctional practices, and emerging forms of justice.
Semester(s) Offered: ALL
Requisite: Department consent: Permission from the Illinois Law Enforcement Training and Standards Board
Type: C

AOJ 168 Correctional Sys Communication 3-0-3
This unit will provide the student with an overview of the role of the sheriff and county corrections in the criminal justice system. An overview of human behavior and the corrections function in dealing with a diverse population. Common activities such as report writing to document incidents while dealing with people during a crisis, mental health and suicide prevention, dealing with gangs, cultural responsiveness and gender responsiveness in the criminal justice system.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

AOJ 172 Intro to Court Security 3-0-3
This unit will provide the student with an overview of the role of the sheriff and county corrections in the criminal justice system. An overview of criminal and elements of offenses commonly committed in county correctional facilities will be presented. Common activities such as booking, processing and documentation, classifications, medical services, safety and security, fingerprinting, transportation and emergency procedures will be presented and discussed.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

AOJ 173 Court Security Officer Proficiencies 2-4.5-4
High liability areas are created in Law Enforcement when an officer must stop and /or control resistive behavior along with rendering aid to sick or injured citizens. This course is designed to address the high civil liability areas in court room interactions. These civil liability areas are Firearms Training, Medical Response, and Arrest Tactics. This unit involves instruction in the Board's 40-hour Mandatory Firearms Training Course for law enforcement officers.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

AOJ 174 Court Security Investigation and Functions 3-0-3
Foundation of law enforcement will explore historical development, current operation, and future trends of criminal justice in the court room environment. Emphasis will be placed on the contemporary problems in the court room setting such as definition of law, the enforcement of law, strategies of policing, judicial systems, sentencing strategies, correctional practices, and emerging forms of justice.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

AOJ 175 Court Security Communications 2-0-2
This unit will provide the student with an overview of the role of the court security officer in the criminal justice system. An overview of human behavior and the court room function in dealing with a diverse population. Common activities such as report writing to document incidents while dealing with people during a crisis, mental health and suicide prevention, dealing with gangs, cultural responsiveness and gender responsiveness in the criminal justice system.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

AOJ 201 Law For Patrol Officers 4-0-4
This course is designed to introduce the law enforcement officer to the Federal, State and Case laws affecting a citizen's guarantees under the fourth, fifth and sixth constitutional amendments. Emphasis will be placed on the officer's understanding of the elements of criminal, juvenile and traffic laws.
Semester(s) Offered: ALL
Requisite: Department consent: Admissions to the Police Academy
Type: C

AOJ 202 Police Civil Liability 3-0-3
An analysis of the law and trends in the highly controversial area of police-civil liability; police officers and private security personnel are liable for various forms of tortuous conduct ranging from intentional wrongs to negligence in the course of their activities. Court decisions are examined in all relevant areas of concern. The overall course objective is to develop strategies to reduce litigation and limit unfavorable judgments in both the public and private sectors.
Semester(s) Offered: FALL
Requisite: ENG 102 with a grade of "C" or better.
Type: C

AOJ 203 Criminal Law &Admin of Justice 3-0-3
A study of criminal law and procedure. Emphasis on the understanding of the basic elements of criminal offenses. Includes a historical study of the evolution of criminal law and its application to modern law enforcement.
Semester(s) Offered: FALL
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T

AOJ 204 Constitutional Law for Police 3-0-3
Centers on criminal procedure and its application as required by the due-process and equal-protection clauses of the Constitution. The student will be introduced to the responsibilities of a law-enforcement officer in regard to arrest, search and seizure, confessions and self-incrimination, assistance of counsel, freedom of speech, free press, the right to peaceably assemble, and civil rights legislation. The student will develop an understanding of the rules and guidelines which govern the conduct of a professional officer in enforcing both state and federal law.
Semester(s) Offered: FALL
Requisite: ENG 102 with a grade of "C" or better.
Type: T

AOJ 205 Traffic Management & Accident Analysis 3-0-3
Development of the modern transportation system, agencies involved in traffic administration and control, police-traffic engineering, education and enforcement of traffic laws are included. Principles of traffic accident investigation and reconstruction are delineated.
Semester(s) Offered: FALL
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: C

AOJ 206 Police Traffic & Crash Mgmt 1-2-2
This course is designed to develop an awareness of those components which comprise an effective traffic law enforcement effort. Knowledge and skills essential to a successful traffic crash investigation are considered.
Semester(s) Offered: ALL
Requisite: Department consent: Admissions to the Police Academy
Type: C

AOJ 238 Criminial Justice Communication 3-0-3
This course is designed for pre-service Criminal Justice students who want to improve their proficiency in communicating in a verbal or written format to a diverse population of society.
Semester(s) Offered: ALL
Requisite: Department consent: Admissions to the Police Academy
Type: C

AOJ 250 Law for Corrections 3-0-3
The course provides an in-depth view on the rights of correctional prisoners and the legal response required of correctional personnel to protect these rights. To understand what rights prisoners have requires studying the development of case law over a considerable period of time. Although there are statutory and administrative laws covering the rights of prisoners, the most important statements regarding prisoners' rights have come from decisions of appellate courts on a case-by-case basis. These decisions come from the Supreme Court and must be respected by state and federal correctional workers.
Semester(s) Offered: SPRING
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: C

AOJ 251 Rules of Criminal Evidence 3-0-3
Study of basic rules of evidence applicable to criminal justice procedure. Emphasis on the question of admissibility of evidence and the practical application of procedural/substantive constitutional guarantees. Case law exceptions to the warrant requirement are explained in operational terms.
Semester(s) Offered: FALL
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: C

AOJ 252 Organized Crime 3-0-3
This course addresses in a concise manner the nature, history, and theories of organized crime, together with the criminal justice response. This includes an evaluation of the investigation, prosecution, defense, and sentencing of organized criminals to date. This course is designed, therefore, to provide a synthesis of important developments in the understanding, prevention, and criminal justice response to organized crime in our neighborhoods and our correctional institutions.
Semester(s) Offered: SPRING
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: C

AOJ 255 Criminal Investigation - Case Prep. 3-0-3
Fundamentals of criminal investigation theory and practice. Crime scene to courtroom emphasis on techniques appropriate to specific crimes. Interview and interrogation techniques are included.
Semester(s) Offered: SPRING
Requisite: ENG 101 with a grade of "C" or better, concurrent enrollment in or completion of AOJ 203.
Type: C

AOJ 256 Crime Scene Investigations 3-0-3
The basic course in forensic science is concerned with the application of the principles of biology, chemistry and physics to the problems of law and law enforcement. Course emphasis will range from the detailed functions of the mobile crime team to the common testing procedures of police crime laboratories. Content will be selected on the basis of contemporary needs of pre-service and in-service law enforcement personnel.
Semester(s) Offered: SPRING
Requisite: AOJ 255.
Type: C

AOJ 257 Patrol Investigations 1.5-2-2.5
This course is designed to introduce the patrol officer to the skills and procedure needed for solving law violations. This course will include topics of Crimes Against Person, Crimes Against Property, Crime Scene Identification, Interview and Interrogation, Custody Arrest, Booking, Detention Facility Procedures, Fingerprinting-Rolled Impressions, Fundamentals of Investigation, Identification Procedures, Motor Vehicle Theft, and Service Calls.
Semester(s) Offered: ALL
Requisite: Department consent: Admissions to the Police Academy
Type: C

AOJ 258 Computer Forensics & Cyber Crime 3-0-3
This course is an overview of computer-related crime, cybercrime laws, and computer crime investigation including the management and custody of digital evidence. It includes an exhaustive discussion of legal and social issues, fully defines computer crime, and provides specific examples of criminal activities involving computers, while discussing the phenomenon in the context of the criminal justice system. It provides a comprehensive analysis of current case law, constitutional challenges, and governmental legislation. Organized crime and terrorism are discussed and how it relates to computer related crimes as well as more comprehensive information on processing evidence and report preparation.
Semester(s) Offered: ALL
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: C

AOJ 261 Probation and Parole 3-0-3
Covers all phases of the correctional field and attempts to reflect a balance between theoretician and practitioner. Viewpoints on theory and practice in juvenile and adult corrections are examined extensively. The law of corrections, probation, parole, and community services to offenders are studied in detail. The point of emphasis of the course starts where the court process ends.
Semester(s) Offered: FALL
Requisite: ENG 102 with a grade of "C" or better.
Type: C

AOJ 278 Work Experience: Internship 0-25-5
A rigidly structured program that attempts to bring training and education into a more meaningful relationship. The student is expected to develop poise and confidence as a relationship is established between academic learning and work in the field. The chief executive or his designee in each participating agency will provide direct supervision. Comprehensive written reports on work and observation activities will be submitted to instructor/coordinator. Formal evaluation process will be used to record student performance. Recommended for all students not transferring to a senior institution. Note: Permission of the AOJ coordinator is required to enroll. Students must have completed 24 semester credits of AOJ-prefixed degree requirements, and ENG 102 with a grade of C or better.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

AOJ 280 Law Enforcement Transition 3-2-4
This course is designed for those (1) police officers who were employed as part-time officers and now want to become employed as full-time officers, (2) out-of-state officers seeking certification in Illinois, and (3) former Illinois officers who have not been active in law enforcement for a stipulated period. This is an 80-hour transition course and as such the purpose of the program is to reinforce previous training in critical duties and responsibilities. Additionally, the full time officer may find himself/herself less supervised than the part-time officer, thereby needing the skill and knowledge gained during this transition course to ensure the safety of the officer and the public. This reinforcement of the safety of the officer and the public is especially important in the area of liability and public contact.
Semester(s) Offered: ALL
Requisite: None.
Type: C

AOJ 285 Basic Arson Investigator 9.5-3-11
This course is intended for full-time Firefighter 2 personnel who have been certified in Fire Modules 1 and 2 with a background in Fire Investigation and whose governmental authority is seeking to advance them to an arson investigator position. This course is controlled by the Office of the State Fire Marshal in conjunction with the Illinois Law Enforcement Training and Standards Board. It is not open to AOJ students nor Law Enforcement personnel. This is a 200-hour program that includes 46 hours of practical training (lab).
Semester(s) Offered: ALL
Requisite: None.
Type: C

AOJ 290 Writing for Criminal Justice 3-0-3
A course designed and structured for pre-service law-enforcement students who wish to improve their proficiency in effective writing.
Semester(s) Offered: SPRING
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: C

AOJ 299 Spec Topics In Admin of Justice Variable up to (4)-(8)-(4)
Varied topics in policing and/or security will be addressed in order to meet most current needs of the industry. NOTE: Requisite varies by topic.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

Aeronautical Information Specialist

AVG 101 Evolution of the AIS 3-0-3
This course will explore the beginning, history, requirements and responsibilities of an Aeronautical Information Specialist. The course will apply FAA policies and objectives to identify, define, manage and organize the multiple work activities of an AIS. In addition, to explore and study the evolution surrounding the design, development and maintenance of Instrument Flight Procedures (IFP's) and related publications. Understand and apply the coordination and integration of IFP's in the National Airspace System (NAS) to include the collection and verification of national and international aeronautical data.
Requisite: None.
Type: C

AVG 102 Introduction and Application of Aeronautical Navigational Systems 3-0-3
An introduction to the current navigational systems primarily used by private, commercial and military aviation today. This course is designed to develop the students understanding and application of Global Positioning Systems, Very High Frequency Omnidirectional Range (VOR's, TACAN and VORTACS), Non-Directional Beacons (NDB's), Distance Measuring Equipment (DME), Localizers, (LOC) Glide Slope and Marker Beacons. This course would include a comprehensive understanding and application of aeronautical navigation systems throughout national and international airspace. Using International Civil Aviation Organization (ICAO) requirements and guidelines the course will explore regulatory applications in the aeronautical navigational spectrum.
Requisite: None.
Type: T

AVG 105 Introduction to Aviation Safety Management Systems 3-0-3
Safety Management Systems (SMS) introduces an evolutionary process in system safety and safety management. SMS is a structured process that obligates organizations to manage safety with the same level of priority that other core business processes are managed. This applies to both internal Federal Aviation Administration and external aviation industry organizations (Operator & Product Service Provider). SMS is the formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of safety risk controls. It includes systematic procedures, practices and policies for the management of safety risk. (FAA Order 8000.369)
Requisite: None.
Type: C

AVG 210 Aeronautical Chart Legend Interpretation 3-0-3
A review, explanation and application of the Federal Aviation Administration National Aeronautical Navigation Services Aeronautical Chart users guide. Topics will include VFR Aeronautical Charts, Topographical Information, Hydrography, Chart Contour Relief, Helicopter route charts, Global Positioning Routes, VFR Flyway planning charts, IFR Aeronautical Charts, Oceanic Route Charts and U.S. Terminal procedures (TERPS). The course utilizes private, commercial and military operational practices that apply to worldwide navigation.
Requisite: None.
Type: C

AVG 280 AIS Internship 0-6-3
This course is intended to provide the student with an opportunity to apply the science, knowledge and skills of GIS/AIS in a business environment or career area of GIS/AIS and it is the application of business knowledge education received in the technology with actual work conditions and job experience. This course can only be taken if you are performing GIS/AIS work on the job which includes but not limited to employment where GIS/AIS is used, an internship where GIS/AIS is used or where you are using GIS.AIS for volunteer project. The work can be paid or unpaid.
Requisite: None.
Type: C

Aerospace Studies

AS 101 Heritage and Values of the United States Air Force 1 2-0-2
A survey course designed to introduce students to the United States Air Force and provides an overview of the basic characteristics, missions, and organization of the Air Force. Leadership Laboratory is mandatory for Air Force ROTC cadets and it complements this course by providing students with followership experiences and prepares them for Field Training. Classroom activity, one hour per week; Leadership Laboratory two hours per week. Grades earned in these courses will be computed in the student's overall grade point average. Semester credits of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons. Classes are held at Saint Louis University.
Requisite: None.
Type: T

AS 102 Heritage and Values of the United States Air Force 2 2-0-2
A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills. Leadership Laboratory is mandatory for AFROTC cadets, and it complements this course by providing students with followership experiences and prepares them for Field Training. Classroom activity, one hour per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES 101 through AES 202) are basic courses designed to acquaint students with the United States Air Force and the opportunities available as an officer. Grades earned in these courses will be computed in the student's overall grade point average, but semester credits for these courses will not be included in the total credits for graduation.
Requisite: None.
Type: T

AS 201 Team and Leadership Fundamentals 1 2-0-2
Focuses on laying the foundation for teams and leadership. The topics include skills that will allow cadets to improve their leadership on a personal level and within a team. The courses will prepare cadets for their field training experience where they will be able to put the concepts learned into practice. The purpose is to instill a leadership mindset and to motivate sophomore students to transition from AFROTC cadet to AFROTC officer candidate. Leadership Laboratory is mandatory for Air Force ROTC cadets and it complements this course by providing them with their first opportunity for applied leadership experiences and prepares them for Field Training. Classroom activity, one hour per week; Leadership Laboratory two hours per week. Grades earned in these courses will be computed in the student's overall grade point average. Semester credits of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons. Classes are held at Saint Louis University
Requisite: None.
Type: T

AS 202 Team and Leadership Fundamentals 2 2-0-2
Focuses on laying the foundation for teams and leadership. The topics include skills that will allow cadets to improve their leadership on a personal level and within a team. The courses will prepare cadets for their field training experience where they will be able to put the concepts learned into practice. The purpose is to instill a leadership mindset and to motivate sophomore students to transition from AFROTC cadet to AFROTC officer candidate. Leadership Laboratory is mandatory for Air Force ROTC cadets and it complements this course by providing them with their first opportunity for applied leadership experiences and prepares them for Field Training. Classroom activity, one hour per week; Leadership Laboratory two hours per week. Grades earned in these courses will be computed in the student's overall grade point average. Semester credits of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons. Classes are held at Saint Louis University.
Requisite: None.
Type: T

Agriculture

AGRI 100 Intro to Ag Business Management 3-0-3
This course prepares students for understanding organization and structure of agricultural businesses; resource evaluation, policy development and implementation, functions of management, and laws and taxes that affect business. An in-depth study of planning, creating, organizing, operating, and managing an agribusiness. Development of a detailed business plan in the student's area of interest.
Requisite: None
Type: C

AGRI 104 Ag Applications of the Computer 2-2-3
This course introduces students to computer hardware, platform environments, file manipulation, printers and the use of word processing, electronic presentations and communications, graphics, spreadsheet, and database management software; solution of agriculture data-related problems and use of prepared software and templates.
Requisite: None
Type: C

AGRI 105 Principles of Agronomy 3-0-3
This course is a survey of the entire field of agriculture including farm production, supply business, marketing, processing, and agricultural services through each industry pathway. Scientific principles, types of business organization and how each one functions is included, along with the types of jobs available throughout the entire industry. Students will hear from guest speakers who work in all trades and facets of the agronomy sector in preparation to choose their focus of study and program mentor.
Requisite: None.
Type: C

AGRI 106 Crop Scouting 2-2-3
This is a course designed to give students an in-depth study of crop scouting procedures. Topics include seedling and mature broadleaf weeds and grasses, diseases, insects and crop injury affecting corn, soybeans, wheat, alfalfa and specialty crops.
Requisite: AGRI 121, AGRI 235 or Department Consent
Type: C

AGRI 107 Introduction to Urban Agriculture 2-2-3
This course focuses on the adaption of agricultural principles to the urban environment, specifically the production of plant crops. Topics include: (I) urban environments and infrastructure, (II) urban crop production practices, (III) urban markets and farm management. Students will be exposed to the breadth of items that they should consider in order to be a successful urban grower.
Requisite: None.
Type: C

AGRI 110 Urban Food Production 2-2-3
This course will explore opportunities and challenges for maximizing the productivity and sustainability of urban food production systems, considering agricultural, environmental, energy, social, and economic issues. Students will examine the science and practice of urban agriculture through scientific and popular literature, case studies, online discussion, and service-learning opportunities. Production systems covered will include both outdoor (e.g., vacant lot urban farms) and controlled environment (e.g., hydroponics and aquaponics) agriculture.
Requisite: None.
Type: C

AGRI 111 Animal Science 3-2-4
The application of the science of genetics, physiology and nutrition to the improvement of the animal industries and an introduction to management and production practices. Includes animal breeds, breeding and selection; anatomy physiology and nutrition and growth; environment, health and sanitation; products and marketing; production technology and economics; animal behavior; and current issues in animal science.
Semester(s) Offered: FALL
Requisite: None.
Type: T, IAI-AG 902

AGRI 119 Introduction to Natural Resources 1-2-2
An introduction to natural resources, and how they play an important part in the modern world. This course will include how resource management can assist with biodiversity and sustainability on the local/state/country/world platform will be evaluated.
Requisite: None.
Type: C

AGRI 120 Water Acquisition and Conservation 1-2-2
This course is designed to give students an understanding of the science of water, including its chemistry, its movements in the environment, and its use in agriculture. The course introduces students to traditional and alternative ways of accessing water for agricultural use, as well as methods to conserve this most precious resource.
Requisite: None.
Type: C

AGRI 121 Soil Science 3-2-4
This course presents an introduction to the chemical, physical, and biological properties of soils; the origin, classification, and distribution of soils and their influence on people and food production; the management and conservation of soils; and the environmental impact of soil use.
Semester(s) Offered: SPRING
Requisite: None.
Type: T, IAI-AG 904

AGRI 152 Agricultural Economics 3-0-3
An introduction to the principles of economics including production principles; production costs, supply and revenue; profit maximization; consumption and demand; price elasticity; market price determination; and competitive versus noncompetitive market models. These principles are applied to agriculture and the role of agriculture in the United States and world economies. Other topics include a survey of the world food situation; natural, human and capital resources; commodity product marketing; and agricultural problems and policies.
Semester(s) Offered: FALL
Requisite: None.
Type: T, IAI-AG 901

AGRI 198 Weed Science and Management 2-2-3
This course analyzes the science of weed ecology and management and its environmental and economic impact on agricultural practices such as agronomy, turf grass, and ornamental landscapes. Identification of weed species, creation of management programs, as well as examination of future challenges in weed management at the forefront of the course.
Requisite: BIOL 151, AGRI 105, AGRI 121 Concurrent or Program Coordinator consent.
Type: C

AGRI 199 Entomology Science Management 2-2-3
This course analyzes insect science and management in relation to its environmental and economic impact on human society with a focus in agricultural. Examine the biology and evolution of insects, evaluate their role in natural ecosystems, identify the basics of their physiology, development, and behavior, as well as develop and apply management strategies in relation to agricultural careers are at the core of this course.
Requisite: BIOL 151, AGRI 105, AGRI 121, AGRI 198 or Program Coordinator consent.
Type: C

AGRI 202 Plant Pest Identification 2-2-3
This course introduces students to the identification and control of weeds, insects, and diseases. Control methods include prevention, biological control, resistant varieties, and pesticides. Pesticide terminology, formulations, calibration, environmental concerns, safe handling, and laws and regulations concerning pesticides.
Requisite: None.
Type: C

AGRI 203 Plant Pathology 2-2-3
This course introduces basic concepts of plant pathology and control. In this course students will grasp a basic understanding of various disorders caused by fungi, viruses, bacteria, and nematodes, in addition to environmental disease-causing agents such as temperature, moisture and more as well as evaluate how these factors contribute to the development of epidemics.
Requisite: BIOL 151, AGRI 105, AGRI 121, AGRI 198 or Program Coordinator consent.
Type: C

AGRI 204 Hydroponics Growing System 1-2-2
A course in hydroponic plant production that provides the practical skills and scientific concepts of growing plants in soilless growing media. A focus on food production will allow students to design, build, and experiment with hydroponic systems.
Requisite: None.
Type: C

AGRI 211 Crop Machinery & Equipment 3-0-3
Principles of choosing, operating, and maintaining machines and equipment used in production of field crops. This course incorporates mandatory OSHA Safety Awareness certification program in which successful completion results in students earning their OSHA Safety Awareness certification.
Requisite: AGRI 106, AGRI 121, AGRI 235, concurrent enrollment in AGRI 202 or Department Consent.
Type: C

AGRI 213 Soil Fertility & Fertilizers 2-2-3
Use of fertilizers for peak production at optimum cost; evaluation and comparison of different forms of macro- and micro-nutrients, their manufacture, handling, and application; plant and soil chemistry.
Requisite: None.
Type: C

AGRI 216 Agriculture Sales 3-0-3
This course examines the principles and techniques used in selling agricultural goods and services. Practical application and development of the skills and techniques necessary to sell agricultural products will be the primary focus.
Requisite: AGRI 100
Type: C

AGRI 217 Agriculture Finance 3-0-3
This course is designed to give an understanding of the finance of the farming operation. Included topics are finance and credit and the uses, sources and methods of obtaining credit. Also discussed is personal money management.
Requisite: AGRI 100
Type: C

AGRI 218 Agricultural Marketing 3-0-3
This course is an introduction to the marketing of agricultural products. The course will focus on marketing strategies, futures markets, and cash markets for both livestock and grain commodities. The course will also explore the use and application of modern technology to buy, sell, and trade agricultural commodities.
Requisite: AGRI 100
Type: C

AGRI 219 Designing Urban Agriculture 2-2-3
This course emphasizes the design process and principles related to food production in urban environments. Lecture topics will include assessing, planning, and transforming the landscape at multiple scales from regional to neighborhood to specific site. In group discussions students will critically review readings from peer-reviewed and popular literature. Students will engage in analysis and design of an existing site to integrate multiple functions, emphasizing the permanent infrastructure and perennial vegetation.
Requisite: None.
Type: C

AGRI 220 Agri-Business Internship 0-15-3
Students are placed in an internship according to their career objectives in selected agri-business for a minimum of 225 hours. This allows students to experience actual working conditions and on-the-job training. Students also develop relationships that often lead to future employment.
Requisite: Department Consent.
Type: C

AGRI 235 Crop Science 3-2-4
The basic principles of plant growth, including human and environmental influences and the theoretical and practical application of agronomic principles to crop production. Includes the historical and economic importance of crop plants for food, feed, and fiber; origin, classification, and geographic distribution of field crops; environmental factors and agronomic problems; crop plant breeding, growth, development, and physiology; cropping systems and practices; seedbed preparation, tillage, and crop establishment; pests and controls; and harvesting, storing, and marketing practices.
Semester(s) Offered: SPRING
Requisite: None.
Type: T, IAI-AG 903

AGRI 236 Crop and Irrigation 2-2-3
Weed identification and control, cultivation and fertilization, tissue testing, monitoring pests and weed, and record keeping for crops. Introduction to irrigation, crop water requirements, water resources, supply irrigation methods, surface sprinkler irrigation, water rights and legal aspects of irrigation combining irrigation scheduling with field scouting.
Requisite: None.
Type: C

AGRI 299 Special Topics in Agriculture Variable up to (3)-(4)-(4)
This course will cover special topics or problems in agriculture and provide students with the knowledge and ability to deal with those topics or problems in relation to their special requirements.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: T

Anthropology

ANTH 150 Cultural Anthropology 3-0-3
Cultural anthropology is the holistic study of human culture focusing on the nature of culture, symbols, systems of power, and the everyday lives of people around the world. By studying diverse cultures anthropologists strive to understand humanity in general. Cultural anthropology is a powerful tool for understanding our lives in the modern global society defined by cross-cultural interactions and cultural change. Completion of this course fulfills the Non-Western Culture requirement for graduation from Southwestern Illinois College.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-S1 901N

ANTH 160 Physical Anthropology 3-0-3
This course is an introduction to physical anthropology. It includes the study of human evolution, the relationship of humans to other primates both physically and behaviorally, the relationship between human evolution and the development of culture, physical variation of modern human populations, and applications of physical anthropology in medicine and forensics. The goal is to understand the connections between human biology, behavior, and culture through an examination of the process of evolution.
Semester(s) Offered: SPRING
Requisite: Eligible for ENG 101.
Type: T, IAI-S1 902

ANTH 210 Native American Cultures 3-0-3
This course examines the variety of Native American cultures. It will use an anthropological perspective to examine linkages between the cultures and their environments, their histories (written, oral and archaeological), art, religion, social structures, kinship, and political systems. Current challenges to these cultures will be examined. It is designed to give students a broad overview of indigenous cultures in North America.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 101.
Type: T

ANTH 250 Introduction to Archeology 3-0-3
This course focuses on the theory and application of archaeology. Students will be concerned with interpretation of material remains of past cultures, and through the study of such evidence, attempt to recreate the history of humanity from its earliest past to determine the nature of cultural systems at different times and places. The nature of culture (material and non-material), excavation and dating techniques, major shifts in habitation patterns and subsistence techniques, and major prehistoric world civilizations are explored and emphasized.
Semester(s) Offered: SPRING
Requisite: Eligible for ENG 101.
Type: T, IAI-S1 903

Variable up to
ANTH 299 Special Topics in Anthropology (4)-0-(4)
Special topics and issues in Anthropology presented through lectures, discussions, readings, and/or individual research. Topics vary each semester. Course may be taken more than once if different topics are covered.
Semester(s) Offered: INTERMIT
Requisite: Sophomore standing and one course in Anthropology.
Type: T

Art

ART 101 Art Appreciation 3-0-3
This course for non-art majors is an introduction to the visual arts and is intended to foster an appreciation of our Western art heritage. The focus will be on helping students understand and consequently appreciate how visual art works are made, as well as how they function or communicate within their societal context, both past and present.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-F2 900

ART 103 Survey of Non-Western Art 3-0-3
This course is a survey of the visual arts (painting, drawing, printmaking, sculpture and architecture) in selected non-Western societies. Included are the works of Neolithic/Paleolithic man; Oceanic; African; Native American; Mezzo-American; Eastern/Far Eastern to include Islamic; India; China and Japan. Emphasis will be on artistic, cultural, social, historical, and geographic contexts of the major non-Western societies. Successful completion of this course fulfills the non-Western culture requirement at SWIC.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-F2 903N

ART 104 Art History I: Prehistoric-Gothic 3-0-3
A survey of European and near Eastern Art covering prehistoric, ancient near East, Egyptian, Aegean, Greek, Etruscan, Roman, early Christian, medieval, Romanesque, and gothic art. The course will utilize front screen projection, DVDs, PowerPoints, lectures, discussions, and a museum trip.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-F2 901

ART 105 Art History II: Renaissance-Modern 3-0-3
A survey of European art covering the following units: Renaissance, Baroque, Rococo, neoclassicism, and romanticism; realism, impressionism, post-impressionism, symbolism, and art nouveau; and 20th century art. The course will utilize front screen projection, DVDs, PowerPoints, lectures, discussions, and a museum trip.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-F2 902

ART 106 History of Photography 3-0-3
This course investigates the historical development of photography as an art form from 1839 to the present, including critical analysis of types of photographs and aesthetic movements in photography. Photographs are examined for their aesthetic and humanistic values, emphasizing photographers within their cultural and social contexts.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T, IAI-F2 904

ART 107 Graphic Design I 1-5-3
This course is an introduction to graphic design principles and applications, typography usage, and the creation of visual content to communicate messages. Students are expected to supply their own creative software and hardware.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T

ART 108 Printmaking I 1-5-3
In this course students will be introduced to a range of fine art printmaking techniques. Methods explored will include relief, monotype, and basic etching processes. Hand printmaking concepts of drawing, design, color, layering, mark and space are emphasized along with engaging the students with problem solving through these techniques. Students will be introduced to the work of artists and the history/tradition of fine art prints.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T

ART 109 Intro to Graphic Illustration 1-5-3
This is an introductory course in Graphic Illustration based on the fine art principles of design that is intended to provide students with a studio experience in which they will become familiar with the concepts and techniques applied in illustration for comics, graphic novels, and illustrated books. Students will be exposed to a variety of traditional mediums and digital means for creating illustrations. Studio assignments will provide training in the practical applications.
Requisite: None.
Type: T

ART 110 Art & Gender 3-0-3
This course is a linear overview of the role of women artists in the history of the visual arts from medieval to modern times and the impact of these artists on the world of fine art.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-F2 907D

ART 111 Basic Design I 1-5-3
A studio course introducing an exploration of the elements and principles of two-dimensional design emphasizing the use of black and white media. The students will develop an understanding of compositional structure and their applications through a series of design related projects. The students will experiment with the use of line shape, texture, space, value and color. The course explores the possibilities and limitations of processes, materials and techniques as related to two-dimensional design in visual art. There is an expectation that all studio-based courses include appropriate instruction in health and safety issues relative to the methods of course materials being used.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T, IAI-ART 907

ART 112 Basic Design II 1-5-3
A studio art course reinforcing the exploration of the elements and principles of design as they relate to three-dimensional approaches. The students will develop an understanding of compositional structure and its application through a series of projects. The students will experiment with the manipulation of line, form, texture, space, light, color, time and movement. The course explores the possibilities and limitations of materials and construction methods. There is an expectation that all studio-based courses include appropriate instruction in health and safety issues relative to the methods of course materials being used.
Semester(s) Offered: FALL SPR
Requisite: ART 111.
Type: T, IAI-ART 908

ART 113 Ceramics I 1-5-3
A studio course introducing clay as a medium of expression using ancient and modern forming techniques. The students will gain an understanding of hand building, wheel throwing, and alternative forming methods through application and practice. Emphasis will be placed on surface decoration through the application of stains, slips, engobes and glazes. Firing techniques including oxidation and gas reduction will be examined. There is an expectation that all studio-based courses include appropriate instruction in health and safety issues relative to the methods of course materials being used.
Semester(s) Offered: ALL
Requisite: None.
Type: T

ART 114 Ceramics II 1-5-3
A studio course reinforcing the content of Ceramics I: approaching clay in a more personal way focusing on the development of an individual approach to the medium. Emphasis will be placed on aesthetic development and proficiency in clay forming methods, surface applications, and kiln firing techniques. There is an expectation that studio-based courses include appropriate instruction in health and safety issues relative to the methods of the course and the materials being used.
Semester(s) Offered: ALL
Requisite: ART 113.
Type: T

ART 116 Photography I 1-5-3
An introductory course that covers the basic principles of black and white photography including equipment selection and use, image processing (wet and/or digital darkrooms), and the aesthetic concerns as a Fine Art medium. Framing, composition and exposure control for both traditional and/or digital equipment will be covered as well as an overview of the history of photography and its content as both a commercial medium and form of artistic expression. Basic manipulation skills and output will be linked to the technology utilized.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T

ART 120 Introduction to Computer Art 1-5-3
This is an introductory course in computer art based on the fine art principles of design that is intended to provide students with a studio experience in which they will become familiar with the MAC operating system. Students will be exposed to the major computer applications that support art work in the field of computer art. These include Adobe Illustrator, Photoshop, Corel Draw, Painter, Sketchbook and Poser. Studio assignments will provide training in the practical applications of each of these programs.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T

ART 129 Typography 1-5-3
This course will provide a beginning study of the art of typographical design and the refined use of typography as the communication tool of the graphic designer. Lectures will focus on the historical development of letter forms and their use in the designing of various typographical pieces meant for communication. Following discussions of letter design and typeface families, creative projects will be assigned that will involve the use of letter forms as key visual components, in designs, whose purpose it is to communicate in a creative way. These assignments will provide an opportunity for students to gain practice in the unique application of text, and the letter, as a design element.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: T

ART 150 Drawing I 1-5-3
An introduction to the fundamental concepts and techniques of drawing using a variety of black and white media will form the core content of this course. There will be a strong emphasis on introductory perceptual drawing skills such as perspective, spatial relationships, and contrast through line and value. The students will work directly with a still life and will not be drawing from photos. Coursework includes vocabulary development, critical analysis activities and references to historic models of drawing. There is an expectation that studio-based courses include appropriate instruction in health and safety issues relative to the methods of the course and the materials being used.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T, IAI-ART 904

ART 200 Art Presentation and Portfolio 1-5-3
In this course students will be introduced to a range of professional techniques in presentation and in building a portfolio. Ideas explored will include digital portfolio related to individual medium on multiple platforms. Historically significant and contemporary methods of presentation of work will be discussed and researched. Students will be introduced to the work of other working artists and venues.
Semester(s) Offered: INTERMIT
Requisite: One studio art class.
Type: T

ART 207 Graphic Design II 1-5-3
This course is a continuation of Graphic Design I principles and application, intermediate desktop design and publishing, electronic typography, pagination, symbol, logo, poster and publication design.
Semester(s) Offered: FALL SPR
Requisite: ART 107.
Type: T

ART 208 Printmaking II 1-5-3
This course builds upon Printmaking I fundamentals and continues to explore a range of fine art printmaking techniques. Methods explored will include relief, monotype, and etching processes. Hand printmaking concepts of drawing, design, color, layering, mark and space are emphasized along with engaging the students with problem solving and individual expression.
Semester(s) Offered: FALL SPR
Requisite: ART 108.
Type: T

ART 209 Graphic Illustration II 1-5-3
Introductory concepts will be continued from Introduction to Graphic Illustration as new concepts are introduced. A strong emphasis will be on perceptual drawing skills from creative character and environmental designs. Special focus will be given to invention with compositional and color studies. Historical models are referenced throughout as standards for drawing excellence. Studio assignments will emphasize preparatory research and development.
Requisite: None.
Type: T

ART 211 Painting I 1-5-3
This course is an introduction to basic painting techniques, color principles and theory applied to the exploration of oil and/or acrylic painting media. Historic and contemporary methods will be examined and will serve as both models and standards. Skills and idea development are stressed. There is an expectation that studio-based courses include appropriate instruction in health and safety issues relative to the methods of the course and the materials being used.
Semester(s) Offered: SPRING
Requisite: ART 111 or ART 150.
Type: T

ART 212 Painting II 1-5-3
Exploration and refinement are experiences stressed in this, a continuation of Painting I. Special emphasis is given to invention, color utilization and compositional studies. Oil painting methodologies to be explored include the indirect, alla prima and various contemporary approaches. Historical models are referenced throughout as standards for painting excellence. There is an expectation that studio-based courses include appropriate instruction in health and safety issues relative to the methods of the course and the materials being used.
Semester(s) Offered: SPRING
Requisite: ART 211.
Type: T

ART 213 Color Theory 1-5-3
This course will provide an exploration of the fundamentals of color theory and its properties in two-dimensional and three-dimensional art. The students will attain an understanding of color systems, color concepts and their applications through a series of projects. The course will explore the possibilities and limitations of color usage in the visual arts and the development of personal color sensitivities. There is an expectation that all studio-based courses include appropriate instruction in health and safety issues relative to the methods of course materials being used.
Semester(s) Offered: INTERMIT
Requisite: ART 111 or ART 150.
Type: T

ART 217 Photography II 1-5-3
This course is a further introduction to photography and the visual language associated with the practice and cultural uses of the discipline in fine art photography. Lectures will focus on the formal design elements of photography; from composition, color and form to camera control operations; including control of aperture, depth of field, shutter speed, and focal length; and lastly, digital or film printing output. Students will utilize their digital still-image recording devices, which may range from camera phones to digital compact to the preferred DSLR cameras or SLR film camera. Use of nontraditional cameras (Holga, Diana and pinhole) in order to expand the vision of the photographer will be encouraged.
Semester(s) Offered: FALL SPR
Requisite: ART 116.
Type: T

ART 218 Introduction to Sculpture 1-5-3
This course is a basic introduction to sculptural materials, processes techniques and equipment. Includes a fundamental investigation of sculptural problems in the areas of modeling, casting, carving and fabrication. There is an expectation that all studio-based courses include appropriate instruction in health and safety issues relative to the methods of course materials being used.
Semester(s) Offered: FALL
Requisite: None.
Type: T

ART 219 Sculpture II 1-5-3
This course is a continuation of Sculpture I, approaching sculpture techniques in a more personal manner, focusing on the development of an individual approach to media. Emphasis will be placed on aesthetics related to contemporary and historical trends in sculpture. Individual projects focus on experimentation and research into the use of materials, tools and equipment appropriate to sculptural expression. Includes a fundamental investigation of sculptural problems in the areas of modeling, casting, carving and fabrication. Studio safety will be emphasized. There is an expectation that all studio-based courses include appropriate instruction in health and safety issues relative to the methods of course materials being used.
Semester(s) Offered: FALL
Requisite: ART 218.
Type: T

ART 220 Computer Art II 1-5-3
Introductory concepts will be continued from Introduction to Computer Art I. A strong emphasis will be on perceptual skills working from 3D maquettes of objects, complete scenes, and related lighting. Historical models are referenced throughout to support traditional studio practice while using digital imaging programs. There is an expectation that studio-based courses include appropriate instruction in health and safety issues relative to the methods of the course and the materials being used.
Semester(s) Offered: FALL SPR
Requisite: ART 120.
Type: T

ART 239 Advanced Typography 1-5-3
This second semester course will provide advanced instruction in the history, theory and practice of typography. Lectures will focus on the influence of visual art styles and technology on new font families that are created and introduced into the field of graphic design. Students will study best practices for using fonts that are available for their design work. Creative assignments will focus on the unique design possibilities of letterforms as images in pieces intended for mass communication.
Semester(s) Offered: INTERMIT
Requisite: ART 129.
Type: T

ART 250 Drawing II 1-5-3
Introductory concepts will be continued from Drawing I as color is introduced in Drawing II. A strong emphasis will be on perceptual drawing skills from a still life. Special focus will be given to invention with color utilization and compositional studies. Historical models are referenced throughout as standards for drawing excellence. There is an expectation that studio-based courses include appropriate instruction in health and safety issues relative to the methods of the course and the materials being used.
Semester(s) Offered: FALL SPR
Requisite: ART 150.
Type: T, IAI-ART 905

ART 252 Life Drawing 1-5-3
An introduction to the fundamental concepts and techniques of figure drawing using a variety of black and white and color media. Some skills and concepts explored will include: value, contour/line, space, mass/volume, form, gesture, proportion/scaling, perspective, and rendering surface qualities.
Semester(s) Offered: FALL SPR
Requisite: ART 111, ART 150.
Type: T

ART 253 Life Drawing II 1-5-3
This course is a further exploration of the concepts and techniques of Life Drawing I using a variety of black and white and color media. Skills and concepts will build upon the following: value, contour/line, space, mass/volume, form, gesture, proportion/scaling, perspective, and rendering surface qualities. In addition, there will be exploration with anatomy, planar structure, and spatial relationships. There is an expectation that studio-based courses include appropriate instruction in health and safety issues relative to the methods of the course and the materials being used.
Semester(s) Offered: FALL SPR
Requisite: ART 252.
Type: T

ART 290 Studio in Sculpture 1-5-3
This course is a continued exploration of sculptural materials, processes techniques and equipment. Emphasis will be placed on idea development and gaining proficiency in the selection, use and manipulation of sculptural materials and processes. Continued emphasis will be placed on studio safety. The course of study is preparation for scholastic continuation in sculpture. There is an expectation that studio-based courses include appropriate instruction in health and safety issues relative to the methods of the course and the materials being used.
Semester(s) Offered: INTERMIT
Requisite: ART 219.
Type: T

ART 291 Studio in Ceramics 1-5-3
A studio course reinforcing the content of Ceramics II: approaching clay as a self-directed course of study further focusing on the development of an individual approach to the medium. Emphasis will be placed on continued aesthetic development and proficiency in clay forming methods, surface applications, and kiln firing techniques. The course of study is preparation for scholastic continuation in ceramics. There is an expectation that studio-based courses include appropriate instruction in health and safety issues relative to the methods of the course and the materials being used.
Semester(s) Offered: ALL
Requisite: ART 114.
Type: T

ART 292 Studio in Drawing 1-5-3
Continuation of Drawing I and II. Emphasis will be on individual direction, special problems, life drawing, and research.
Semester(s) Offered: ALL
Requisite: ART 250.
Type: T

ART 294 Studio in Painting 1-5-3
A continuation of Painting II with more emphasis on personal expression and artistic development.
Semester(s) Offered: FALL
Requisite: ART 212.
Type: T

ART 296 Studio in Graphic Illustration 1-5-3
Continuation of Graphic Illustration I and II. Emphasis will be on creating models for objects and model set design with the intent of using as visual preparatory materials for 2D illustration.
Requisite: ART 109 & ART 209
Type: T

ART 297 Studio in Life Drawing 1-5-3
This course is a continuation of Life Drawing I & II. Emphasis will be on individual artistic growth concerning different mediums, concepts, research and special problems. There is an expectation that studio based courses include appropriate instruction in health and safety issues relative to the methods of the course and the materials being used.
Semester(s) Offered: FALL
Requisite: ART 253.
Type: T

ART 298 Studio in Photography 1-5-3
This course is a more focused approach to aspects of photography and the visual language associated with the practice and cultural uses of the discipline in fine art photography. Lectures will focus on the deeper understanding of the formal design elements of photography; from composition and form to camera control operations; studio lighting techniques in portraiture and small product. Students will utilize their digital still-image recording devices preferred DSLR cameras or SLR film camera.
Semester(s) Offered: FALL SPR
Requisite: ART 217.
Type: T

ART 299 Special Topics in Art Variable up to (4)-(5)-(4)
An in-depth study of various areas in art presented through lectures, discussions, and/or individual research by the students. Topics will vary. May include travel/study activities.
Semester(s) Offered: INTERMIT
Requisite: ART 111.
Type: T

Astronomy

ATY 101 Astronomy 3-2-4
A one-semester course covering the fundamentals of descriptive astronomy. Topics include identification of heavenly bodies, astronomical instruments, cosmology, the composition of the universe, time, and the solar system.
Semester(s) Offered: ALL
Requisite: Eligible for MATH 97, MATH 107, MATH 111 or higher; Eligible for ENG 97.
Type: T, IAI-P1 906L

Aviation Maintenance Technology

AVMT 121 Aircraft Systems I 2-2-3
This airframe course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for the topics in: aircraft instrument systems, communication and navigation systems, and water & waste systems.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 122 Aircraft Systems II 2-2-3
This airframe course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for the topics in: flight controls, airframe inspections, aircraft fuel systems, ice and rain control systems, and rotorcraft fundamentals.
Requisite: None.
Type: C

AVMT 126 Aircraft Structures I 2-2-3
This airframe course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for the topics in: non-metallic structures.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 127 Aircraft Structures II 2-2-3
This airframe course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for the topics in: metallic structures.
Requisite: None.
Type: C

AVMT 131 Aircraft Electrical I 2-2-3
This airframe course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for the topics in: aircraft electrical systems.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 132 Aircraft Electrical II 2-2-3
This airframe course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for the topics in: aircraft electrical systems and environmental systems.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 136 Aircraft Components I 2-2-3
This airframe course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for the topics in: hydraulic and pneumatic systems and airframe fire protection systems.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 137 Aircraft Components II 2-2-3
This airframe course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for the topics in: landing gear systems.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 140 Materials, Processes & Fabrication 2-2-3
This general course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for the topics in: fluid lines and fittings, aircraft materials, hardware, and processes, and inspection concepts and techniques.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 145 Basic Electricity & Technology 2-2-3
This general course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for topics in: fundamentals of electricity and electronics, weight and balance.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 150 Fundamentals & Operations 2-2-3
This general course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for topics in: aircraft drawings, ground operations and servicing, and mathematics.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 155 Regulations & Science 2-2-3
This general course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for topics in: cleaning and corrosion, regulations, maintenance forms, records, and publications, physics for aviation, and human factors.
Requisite: Eligible for MATH 94 or concurrent enrollment in MATH 93; Reading placement above ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 157 Propulsion Systems I 2-2-3
This powerplant course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for topics in: turbine engines and turbine engine air systems.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 158 Propulsion Systems II 2-2-3
This powerplant course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for topics in: ignition and starting systems.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 171 Powerplant Systems I 2-2-3
This powerplant course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for topics in: engine fire protection systems, lubrication systems, reciprocating engine induction and cooling systems, and engine exhaust and reverser systems.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 172 Powerplant Systems II 2-2-3
This powerplant course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for topics in: engine fuel and fuel metering systems.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 176 Powerplant Components I 2-2-3
This powerplant course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for topics in: propellers.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 177 Powerplant Components II 2-2-3
This powerplant course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for topics in: engine instrument systems and engine electrical systems.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 186 Reciprocating Engine Maintenance I 2-2-3
This powerplant course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for topics in: reciprocating engines.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 187 Reciprocating Engine Maintenance II 2-2-3
This powerplant course is designed to cover the knowledge, risk management, and skills set forth by the FAA ACS for topics in: reciprocating engines and engine inspection.
Requisite: Eligible for ENG 97 or concurrent enrollment in ENG 94.
Type: C

AVMT 299 Special Topics in Aviation Maintenance Variable up to (4)-(4)-(4)
This course will cover special topics or problems in the aviation maintenance field and provide students with the knowledge and ability to deal with those topics or problems in relation to their special requirements.
Requisite: None.
Type: C

Aviation Pilot Training/Aviation Management

AVIA 101 Private Pilot Flight Theory 4-0-4
An introductory course designed to provide the student with the basic theory of flight, aircraft design and aircraft control. This course also introduces basic meteorology, pilotage, dead reckoning and electronic navigational skills, the flight computer, cross country planning along with the Federal Aviation Regulations that pertain to private pilots. At the completion of this course, the student will have gained the knowledge and skills required to successfully pass the Federal Aviation Administration Private Pilot Airplane written exam.
Requisite: None.
Type: C

AVIA 102 Flight Training Private Part I 2-0-2
Flight instruction in pre- and post-solo phases of private pilot training. Instruction on specific procedures and maneuvers will prepare the applicant for solo flight in the local area. (Available for course credit)
Requisite: Concurrent enrollment in or completion of AVIA 101, AVIA 103.
Type: C

AVIA 103 Simulator Private 1-0-1
During this course the student will train individually with the instructor in acquiring an operational introduction of the primary aircraft maneuvering skills along with mastering many of the flight operations needed prior to conducting the first solo flight. In addition, the student will develop the ability to control the aircraft solely by reference to flight instruments. He/she will also learn the operation and utilization of basic electronic navigational systems for cross country flight operations.
Requisite: None.
Type: C

AVIA 104 Flight Training Private Part II 3-0-3
Instruction on specific procedures and maneuvers that will prepare the applicant for cross country, night flight and FAA Private Pilot certificate.
Requisite: AVIA 102.
Type: C

AVIA 105 Intro to Civil Aviation Ops 3-0-3
An in-depth study of the operational structure of Civil Aviation through the examination of Commercial Air Carrier Operations. Specific requirements of the air carrier's management structure and operating guidelines under the Federal Aviation Administration (FAA) are introduced. Airworthiness specifications, maintenance program structure, and practices and safety management systems covered under Part 121 of the Federal Aviation Regulations are reviewed.
Requisite: None.
Type: C

AVIA 108 Aviation History 3-0-3
A chronological review of the history of aviation beginning with the first balloon flight in 1783 continuing through the development of the modern turbofan jet transport airplane. This course covers the advancement of aircraft through the technological research by the military and space flight developments.
Requisite: None.
Type: C

AVIA 111 Private Pilot Flight Theory Helicopter 3-0-3
AVIA 111 is an introductory course designed to provide the student with the basic theory of helicopter flight operations, aircraft design, components, aerodynamics, and safe flight operations. This course also introduces the meteorological aspects related to flight, weather reports, forecasts and data available to the flight. The student will receive training to develop proficiency in local and cross country VFR flight operations utilizing proper aircraft operation and performance data. The student will also become familiar with the Federal Aviation Regulations that govern flight operations. At the completion of this course the student will have gained the required knowledge to successfully pass the FAA knowledge exam for Private Pilot Helicopter.
Requisite: None.
Type: C

AVIA 112 Flight Training Private Helicopter Part I 2-0-2
During this course the student develops the ability to conduct the first solo flight operation. The student will receive instruction on ground operations, basic flight maneuvers, in-flight emergencies, flight using ground references, takeoffs, traffic patterns and landings.
Requisite: Concurrent enrollment in or completion of AVIA 111.
Type: C

AVIA 113 Simulator Private Helicopter 1-0-1
During this course the student will train individually with the instructor in acquiring an operational introduction of the primary aircraft maneuvering skills. In addition the student will master many of the flight operations needed prior to conducting the first solo flight. He/She will also practice emergency procedures to a level of proficiency before solo flight.
Requisite: None.
Type: C

AVIA 114 Flight Training Private Helicopter Part II 2-0-2
During AVIA 114, the student will receive instruction in an all operations and procedures required at the Private Pilot level. Training will include local and cross-country flights, operations into unfamiliar airport, auto rotation landing procedures, confined areas, pinnacle operation and night operations. At the completion of the course the student must develop the ability to successfully accomplish the practical FAA test.
Requisite: Concurrent enrollment in or completion of AVIA 111 and AVIA 112.
Type: C

AVIA 122 Aircraft Systems and Components 2-0-2
An in-depth study of the systems installed on single-engine general aviation aircraft certified under FAR Part 23. Subjects include aircraft certification, construction, flight controls, engine design and operation, fuel systems, basic hydraulics, electrical systems, instruments and landing gear. This course is designed to provide flight students and certified pilots a thorough understanding of systems and prepares the individual for the advanced AVIA 222 Transport Aircraft Systems course.
Requisite: None.
Type: C

AVIA 126 UAS Pilot Certification 1-0-1
An introductory course designed to provide the student with the training required to successfully accomplish the Federal Aviation Administration Unmanned Aircraft Systems knowledge exam. This course provides the student with an in-depth knowledge of the Federal Aviation Regulations along with law enforcement and privacy issues governing Unmanned Aircraft Systems. In addition he//she will receive classroom training covering airspace requirements, weather, weight and balance and safety management considerations.
Requisite: None.
Type: C

AVIA 131 Air Traffic Control Systems 3-0-3
This course outlines the development of the Air Traffic Control system along with many of the FAA rules and regulations governing visual and instrument flight. This course includes a review of the intricate procedures, rules, systems and phraseology used today for controlling air traffic and provides a brief look at future requirements in the domestic and international arena. This course is a basic systems course providing current and future pilots, air traffic controllers and individuals pursuing a career in aviation, a background in the National Airspace System. Normally complemented by a field trip to a local air traffic facility.
Requisite: None.
Type: C

AVIA 133 Human Factors in Aviation 3-0-3
Human factors in aviation consist of a study of the physiology of flight and related operations in aviation. This course provides an in-depth study of the human element and how we interact with the various factors that affect safety and performance.
Requisite: None.
Type: C

AVIA 141 Federal Aviation Regulations 3-0-3
A study of the Federal Regulations under the Title 14 Code of the Federal Register that regulates Civil Aviation. Applicable parts of the Federal Aviation Regulations that include Definitions, General Aviation, Commercial Aviation, Training Requirements along with the National Transportation Safety Board Reporting Requirements are covered in this course.
Requisite: AVIA 101.
Type: C

AVIA 151 Commercial Pilot Flight Theory 3-0-3
An advanced course preparing the student for the commercial pilot written examination. Advanced instruction on weight and balance, advanced meteorology, flight computer, navigation and radio, federal aviation regulations and aircraft systems. Advanced use of computers for weather and flight planning is emphasized. To complete this course the student is required to take the FAA commercial pilot written examination.
Requisite: AVIA 101.
Type: C

AVIA 153 Simulator Intermediate 1-0-1
During this course the student will continue to develop proficiency in execution of the required flight operations in preparation for the completion of training for the Private Pilot Certificate. Emphasis will be placed on related visual reference and instrument references operations for continued development of the basic attitude instrument flight skill proficiency requirements. The student will also develop his/her ability to conduct additional in-depth navigational functions utilizing VOR and Global Positional navigational systems with emphasis on the Garmin GNS 530 Global Navigation System.
Requisite: AVIA 103.
Type: C

AVIA 154 Flight Training, Commercial I 3-0-3
Flight training that consists of both dual instruction and pilot in command time under the direction of the FAA Certified Flight Instructor. The Commercial Pilot applicant will gain in-depth training on commercial operations that will increase proficiency and operational knowledge while operating technologically advanced aircraft.
Requisite: Department consent
Type: C

AVIA 155 Flight Training, Commercial II 2-0-2
Instruction on specific procedures and maneuvers that will prepare the applicant for an FAA Commercial Pilot License. This course is based on the applicant obtaining an FAA Instrument Rating before enrolling in this course.
Requisite: Department consent
Type: C

AVIA 160 Aviation Management I 3-0-3
Introductory course in air transportation management that introduces the characteristics, scope and economic significance of the aerospace industry and its major segments. Provides an historical perspective of the U.S. airlines, air transportation, regulators and associations and the general aviation industry. Includes a study of the roles played by federal agencies that interface with the air transportation industry. The Department of Transportation, the Federal Aviation Administration and the National Transportation Safety Board.
Requisite: None.
Type: C

AVIA 161 Commercial Pilot Flight Theory Helicopter 3-0-3
An advance course that prepares the student to successfully complete the Commercial Helicopter Knowledge Exam. Subject matter includes: flight operations, aviation weather, emergency procedures and flight maneuvers. Instruction also includes advanced aerodynamics, engine operations, instruments, the flight environment, safe airport operations, communications, regulations, airspace, advanced meteorology, aircraft performance, charts and aeronautical decision making. The course also includes advanced air navigation, flight planning, safe cross-country flight operations and flight related hazards. The student will develop the ability to make quick, decisive and mature decisions in normal flight as well as in emergency situations.
Requisite: AVIA 111, AVIA 112, AVIA 114, AVIA 211 and AVIA 212.
Type: C

AVIA 163 Simulator Intermediate Helicopter 1-0-1
During this course the student will develop proficiency in execution of the required flight operations for the Instrument/Commercial Pilot Certificate. Emphasis will be placed on the related visual reference maneuvers and instrument reference operations for continued development of the basic attitude instrument flight skill proficiency requirements. The student will also develop his/her ability to conduct additional in-depth navigational functions utilizing VOR and Global Positioning Navigational systems with emphasis on the Garmin Navigational System.
Requisite: AVIA 113 or hold a Private Pilot Rotary Wing Pilot Certificate.
Type: C

AVIA 201 Instrument Flight Theory 4-0-4
A complete study of instruments, systems, advanced meteorology, instrument-flight charts, clearance shorthand, IFR planning, approach procedures, IFR regulations, and data related to instrument flight. To complete this course the student is required to take the FAA instrument pilot written examination.
Requisite: AVIA 101.
Type: C

AVIA 202 Flight Training Instrument 3-0-3
The student is introduced to all phases of instrument flying such as straight and level, climbs, turns, descents, recovery from unusual attitudes, communications, navigation, holding procedures, approaches and missed approach procedures. The training within this course is primarily conducted in the aircraft with specific segments completed in a simulator under the guidance of the instructor.
Requisite: AVIA 201, AVIA 203.
Type: C

AVIA 203 Simulator Instrument 1-0-1
During this course the student will become familiar with the instrument flight enroute and approach procedures required of an instrument rated pilot. The student will perform a series of instrument holds, VOR, nondirectional beacon and instrument landing system approaches in a BATD flight trainer.
Requisite: AVIA 103, AVIA 153.
Type: C

AVIA 205 Garmin GNS 430 VFR Operations 0.5-0-0.5
This course will introduce the student operating under visual flight rules to the operational concepts, terminology and user functions of the worldwide Global Positioning System for aircraft in-flight navigation. Students will become familiar and proficient with the features, controls, range displays, menus, flight planning and navigational source displays along with the user functions of the VHF communication radio and VOR function of the Garmin GNS 430 system.
Requisite: None.
Type: C

AVIA 207 Garmin G 1000 System Training 0.5-0-0.5
This course consists of a system overview of the components, line replaceable units and functional displays of the Garmin G1000 Integrated Flight Display and Global Navigational System for both VFR and IFR pilot operations. Instructional topics include the function of each LRU and the data that it provides for the integrated Primary and Multi-Function Flight Displays. Instructional topics also cover the data input sources for the G1000 integrated system and functional inputs to the panel displays.
Requisite: None.
Type: C

AVIA 208 Simulator-Garmin GNS 1000 VFR 0.5-0-0.5
This course consists of eight hours of VFR operational training for the Garmin GNS 1000 Global Navigational System. The student will become familiar with the operation of the GNS 1000 along with the interpretation of aircraft operational and flight data displayed on the Primary and Multi-Function displays. The student will develop competency in operation of the GNS 1000, menus and menu pages that contain the operational functions of the GNS 1000. The student will also become competent in aircraft control by reference to instrumentation as displayed on the Primary Flight Display and Multi-Function Flight Displays. Both terminal and cross country operations will be covered. Instructional topics will also cover emergency procedures and system resolution.
Requisite: AVIA 207.
Type: C

AVIA 209 Simulator-Garmin GNS 1000 IFR 0.5-0-0.5
This course consists of eight hours of IFR operational training for the Garmin GNS 1000 Global Navigational System. The student will become proficient in the operation and function of the GNS 1000 system that includes Waypoint storing or deletion, flight plan development, RAIM prediction, vertical navigation, holding, GPS approaches, ILS approaches, VOR approaches and missed approach procedures.
Requisite: AVIA 208.
Type: C

AVIA 211 Instrument Flight Theory Helicopter 3-0-3
The purpose of this course is to develop the student understanding of flight instruments, human factors and safe and efficient operation under instrument flight rule operations. Training also focuses on Instrument navigation, approaches, enroute operations along with the air traffic control system. Federal Regulations for instrument flight, helicopter Instrument operations, Aviation Weather along with the recognition of critical weather conditions are also a major area of study.
Requisite: AVIA 111, AVIA 112, AVIA 114 or hold a Private Pilot Rotary Wing Pilot Certificate..
Type: C

AVIA 212 Flight Training Instrument Helicopter 3-0-3
This course prepared the student for the instrument rating through two stages of training. During Stage l the student will receive instruction on preflight preparation, preflight procedures, air traffic control clearance and procedures, flight by reference to instruments, navigation systems and instrument approach procedures. Stage ll will provide instruction on Instrument procedures, enroute procedures and in-flight emergency. At the completion of this course the student must develop the ability to successfully accomplish the FAA practical test.
Requisite: AVIA 211 and hold a Private Pilot Rotary Wing Pilot certificate. Department consent
Type: C

AVIA 213 Instrument Training - Part I 1.5-0-1.5
This is a 20-hour lgggable training course in a Flight Device with an FAA-Certified Flight Instructor. The time logged in this course applies toward the FAA requirements of FAR Part 61.65(e)(2) instrument rating.
Requisite: Department consent
Type: C

AVIA 214 Instrument Flight Training - Part II 1.5-0-1.5
An equivalent training credit course. This course is designed to provide the student equivalent credit for the completion of the Instrument Pilot Flight Certification after the student completes the AVIA 213 20-hour simulator course. AVIA 214 will grant the student equivalent credit for the completion of the Instrument Flight Training resulting in the issuance of the FAA Airplane Instrument Rating.
Requisite: AVIA 213.
Type: C

AVIA 216 Advanced Instrument Approaches 1-0-1
This course is designed to provide the student with a review of VOR, GPS, and ILS approaches and to gain measurable proficiency in the execution of Localizer Back Course Approaches, DME Arc Approaches and Global Positioning System Approaches. This course can be applied toward the 50-hour simulator allowance authorized by FAR Part 61.129 (i)(1) for the Commercial Pilot Airplane Certification.
Requisite: Department consent
Type: C

AVIA 217 Instrument Departures and Arrivals 1-0-1
This course enhances the student's ability and experience to perform published standardized instrument Departure Procedures and Standard Instrument Arrival Procedures while transitioning to and from the enroute flight phase. The student will spend a minimum of 10 hours with an FAA-Certified Instrument Flight Instructor in an FAA-Approved Flight Training Device conducting simulated instrument flight conditions. This course can be applied toward the 50-hour simulator allowance authorized by FAR Part 61.129(i)(1) for the Commercial Pilot Airplane Certification.
Requisite: Department consent
Type: C

AVIA 220 Instrument Currency and Review 0.5-0-0.5
A multi-functional eight-hour course designed to review Instrument Flight Operations. This course consists of four hours of loggable dual instrument review in an FAA-Certified Flight Training Device that covers holding, course intercepts and tracking through use of navigational systems, non-precision and precision approach procedures. A written and oral review of the Instrument Operations and Federal Regulations that pertain to instrument flight will be included. This course can serve to provide proficiency prior to a corporate or air carrier interview simulator check or to fulfill instrument currency and proficiency.
Requisite: Department consent
Type: C

AVIA 221 Airline Simulator Transition 2-0-2
During this course the student will be introduced to initial training in a Crew Concept Flight Officer Environment of Pilot Flying, Pilot Monitoring operating under Part 121 of the Federal Aviation Regulations. He/She will be trained and required to perform specific duties related to the assigned pilot position. Emphasis is placed on crew coordination and Crew Resource Management in a multi-position crew operation.
Requisite: Student must hold an FAA Airplane Category Commercial Instrument Multi-Engine Pilot Certification or completion of AVIA 155, AVIA 201, and AVIA 270..
Type: C

AVIA 222 Transport Aircraft Systems 3-0-3
Transport Aircraft Systems is a General Familiarization course similar to an airline ground training course based on the systems incorporated on the Bombardier CRJ 700 or Embraer ERJ 145 Regional Jetliner. (Consult with the program coordinator regarding the type of aircraft taught during the planned enrollment semester). The Transport Aircraft systems course is designed for individuals who are planning a career in Commercial Aviation as a pilot or maintenance technician and desire to gain an in-depth understanding of the systems incorporated on FAR Part 25 aircraft. Subject areas covered include aircraft construction, air-conditioning, pressurization, electrical, flight controls, hydraulics, landing gear, pneumatics, fuel systems, ice and rain protection, navigation, fire protection, auxiliary power and power plants.
Requisite: Department consent
Type: C

AVIA 226 Advanced UAS Professional Pilot Certification 4-0-4
AVIA 226 is an expanded Professional level Commercial UAS course designed to provide the student with advanced in-depth training designed to satisfy a professional level of UAS operational competency. The student will meet the Federal Aviation Administration standards required to successfully accomplish the Unmanned Aircraft Systems knowledge exam. This course provides the student with an expanded operational knowledge of the Federal Aviation Regulations, Meteorology, Airspace, Human Factors, Airport Operations, Weight and Balance, Aeronautical Charts and Safety Management Systems related to UAS operations. FAA programs such as Aeronautical Decision Making and Safety Management Systems are integrated into the Human Factors concepts that relate to accidents and incidents. Student will also receive training in civil law enforcement and privacy issues governing Unmanned Aircraft Systems. This course also includes a flight operations segment that provides the student the ability to gain basic flight operations proficiency. In addition, an orientation to photography and video equipment is also included.
Requisite: None.
Type: C

AVIA 232 Air Traffic Controller Training 3-0-3
Preparatory Course in fundamentals of Air Traffic Control and the National Airspace System. Students are introduced to the intricate procedures, rules, systems and phraseology used today for controlling air traffic in the domestic and international arena. This course is complimented by one or more field trips to local traffic facilities.
Requisite: AVIA 131.
Type: C

AVIA 233 Intro to Aviation Labor Law 3-0-3
A study of the general elements concerning the process of United States Labor & Management relations in the Aviation and Aerospace Industry with other emphasis on elements of the industry covered under intrastate commerce regulations. The course is designed to provide a broad overview of two major federal labor laws utilized in the aviation labor environment; the Railway Labor Act and the National Labor Relations Act. The course will move from a survey of the historical, legal, and structural environments to a close examination of negotiations, administration and major content of the labor agreement.
Requisite: None.
Type: C

AVIA 237 Human Resources in Aviation 3-0-3
For the first time in the history of the United States, the workplace is becoming more generationally diverse than ever before. According to the Bureau of Labor Statistics, for the first time, there are five generations working together in the workforce. It is possible to have a 60+-year-olds working beside 20-year-olds and recent college graduates supervising employees old enough to be their parents. Each of these definable categories has different core values, substantially impacting the workforce. Understanding and appreciating each generation's different values, attitudes, expectations, needs, and motivations, can make it more challenging to manage and integrate everyone into a cohesive corporate culture. Each generation works, thinks, trains and communicates differently. This course is designed to identify and understand those core values and develop an understanding of basic communication predicted on a single trait of all categories, how body language works towards effective communication. This class is designed to make the student aware of the generational core values, how to interact in a diverse setting and how to utilize body language for effective communication.
Requisite: None.
Type: C

AVIA 240 Aircraft Dispatcher Practical I 3-0-3
This course prepares the student for the FAA Dispatcher computer test to include: Regulations, Equipment, Navigation & Facilities, Aerodynamics, Performance, Weight and Balance, Flight Operations, Emergencies, Hazard & Flight Physiology, Meteorology & Weather Service, based on the Federal Aviation Regulations, ASA and Gleim Test Prep Books.
Requisite: AVIA 101, AVIA 131, AVIA 141, AVIA 201, AVIA 260 or equivalent transfer credit in each; concurrent enrollment in AVIA 241. Department consent
Type: C

AVIA 241 Aircraft Dispatcher Practical II 3-0-3
This course is designed to prepare the student for the FAA oral/practical exam to include: Flight Planning/Dispatcher Release, Preflight, Takeoff and departure, Inflight Procedures, Arrival, Approach and Landing Procedures, Post Flight Procedures, Abnormal and Emergency Procedures and Practical Dispatch Applications.
Requisite: AVIA 101, AVIA 131, AVIA 141, AVIA 201, AVIA 260 or equivalent transfer credit in each; completion of or concurrent enrollment in AVIA 240. Department consent
Type: C

AVIA 251 Flight Instructor Theory 3-0-3
An introduction to the fundamentals of flight instruction. A study of the performance and analysis of flight-training maneuvers. Prepares the pilot for the flight instructor written examination.
Requisite: AVIA 151, AVIA 201.
Type: C

AVIA 252 Flight Training - Instructor 3-0-3
Flight instruction in preparation for the Flight Instructor Certificate. The material studied in AVIA 251 is applied in this course.
Requisite: Department consent
Type: C

AVIA 254 Flight Train-Instrument Instructor 3-0-3
Flight instruction in preparation for the addition of an instrument instructor rating to a flight instructor certificate.
Requisite: Department consent
Type: C

AVIA 255 Flight Train-Multi Engine Instructor 3-0-3
Flight instruction in preparation for the addition of a multi-engine rating to a flight instructor certificate.
Requisite: Department consent
Type: C

AVIA 260 Aviation Meteorology 3-0-3
This course provides current and future pilots an in-depth look at basic meteorological fundamentals. Discover the driving forces behind the global weather picture and the impacts on aviation pre- and in-flight weather. Subject matter covers basic atmospheric dynamics, weather chart analysis, storm structure, flight weather hazards and aviation weather products. The course has interactive lab activities including a comprehensive flight weather evaluation.
Requisite: None.
Type: C

AVIA 261 Aviation Management II 3-0-3
Undergraduate course in airline management that builds on the AVIA 160 Aviation Management I (Introduction to Air Transportation). This course provides an in-depth analysis of the airline characteristics, scope and economics focusing on airline management technical tools and management functions. Provides an historical perspective of the U.S. airlines, air transportation and regulators and associations. Familiarizes students with the US airline industry, management, organization and studies forecasting methods, marketing, scheduling, fleet planning, financing and labor relations. Examines basic management functions of planning, organizing and directing with a focus on airline management.
Requisite: AVIA 160.
Type: C

AVIA 262 Aviation High Altitude Meteorology 3-0-3
Aviation High Altitude Meteorology consists of a study of high altitude weather systems and phenomena that exists primarily above 25,000 feet and the resultant effects on surface weather features. This course provides an overview of general atmospheric meteorology and climatology on a global basis encountered during enroute and terminal flight operations primarily by flight crews utilizing turbine aircraft. An in-depth study of obtaining global weather conditions and forecasts for pilots is also included.
Requisite: AVIA 260.
Type: C

AVIA 263 Flight Training Commercial Helicopter Part I 2-0-2
During this course the student will initially refresh and reinforce helicopter maneuvers learned during the Private Pilot Training. The student will receive advanced instruction on ground operations, basic flight maneuvers, in-flight emergencies, flight using ground references, takeoffs, traffic patterns and landings. The student will also begin cross country flight operations for the commercial certificate.
Requisite: AVIA 161 and AVIA 212 or consent of the coordinator.
Type: C

AVIA 264 Mgmt of Aircraft Maintenance 3-0-3
A comprehensive overview of the structured aircraft maintenance and engineering programs established by the aircraft manufacturer and certified by the Federal Aviation Administration for Civil Aviation. Areas of emphasis include maintenance program development, maintenance documentation, the role of engineering, maintenance, maintenance support, quality control, reliability and safety within the program. This course provides the student with an overall understanding of the maintenance programs required for aircraft operating under FAR Part 121 in the commercial air carrier fleets.
Requisite: None.
Type: C

AVIA 265 Flight Training Commercial Helicopter Part II 2-0-2
This course continues the Commercial Pilot Flight training with student training of Commercial maneuvers and operations as directed by their Instructor Pilot. Continued instruction will provide additional local and flight operations training to unfamiliar airports. Pinnacle and platform operations along with soft and short-field take-off and landing procedures and night operations will be accomplished. At the end of this course the student will be ready to complete the FAA check ride for the Commercial Rotary Wing Pilot Certificate.
Requisite: AVIA 263.
Type: C

AVIA 266 Airport Planning and Management 3-0-3
A comprehensive examination of the management and operation of civil airports. Areas of emphasis include master planning. Federal Aviation Regulations dealing with airport operations, environmental issues, land use planning, airport capacity and delay, access factors, economic impacts, financial analysis and budgeting systems, security, liability, maintenance, professional qualifications and public relations.
Requisite: AVIA 101.
Type: C

AVIA 269 Multi-Engine Flight Theory 1.5-0-1.5
An in-depth study of the fundamentals of multi-engine flight operations and aerodynamics. During this course the student will become familiar with high performance aircraft engine operation, electrical systems, fuel systems, landing gear systems (both hydraulic and electric), pressurization and aircraft performance calculations. A review of normal, abnormal, and emergency procedures required for multi-engine instructor and multi-engine ATP are accomplished.
Requisite: AVIA 101, AVIA 151, AVIA 201.
Type: C

AVIA 270 Flight Training Multi-Engine 1-0-1
This course consists of the flight training to prepare students for the multi-engine rating. Emphasis will be placed on aircraft systems and engine.
Requisite: Department consent
Type: C

AVIA 271 Flight Instructor Helicopter Theory 3-0-3
This course prepares the student to develop instructional techniques by learning the fundamentals of the learning process, elements of effective teaching, instructor candidate evaluation and testing, course development, lesson planning, classroom training techniques and aeronautical knowledge areas required for the Private and Commercial Rotorcraft Helicopter Certificate.
Requisite: Hold a Commercial Instrument Rotary Wing Pilot Certificate
Requisite: Department consent
Type: C

AVIA 272 Flight Training Helicopter Instructor 2-0-2
This course provides the flight instructor candidate with the flight training to accomplish the FAA practical test for a Rotary Wing Flight Instructor Certificate. Training includes ground operations, flight maneuvers for rotary wing and flight related emergency procedures. The applicant must meet the appropriate standards as listed in the FAA Airmen Certification Standards.
Requisite: Concurrent enrollment in or completion of AVIA 271.
Type: C

AVIA 273 Flight Instructor Helicopter Instrument Theory 2-0-2
An advanced instructor course that prepares the student for the FAA Instrument Instructor Rotary Wing Knowledge Exam. Course contents includes; fundamentals of instruction, the learning process, elements of effective teaching, instructor candidate evaluation and testing, course developments lesson planning and classroom training techniques. The course also provides training on flight instruments, human factors, safe operations under IFR and IFR navigation, Instrument approaches and IFR enroute. In addition, the course provides training in ATC procedures, Federal Aviation Regulations for IFR flight, Helicopter IFR operations and Aviation Weather that includes recognition of critical weather conditions.
Requisite: AVIA 272 or coordinator approval.
Type: C

AVIA 274 Flight Training Helicopter Instrument Instructor 1-0-1
An advanced instructor course that prepares the student to successfully accomplish the FAA Practical Test for the Instrument Instructor Rotary Wing Certificate. Training emphasis includes preflight preparation, preflight procedures, air traffic control clearances and procedures, flight by reference to instruments, navigation systems and instrument approach procedures. The instrument instructor candidate must the standards as outlined by the FAA Airmen Certification Standards.
Requisite: Concurrent enrollment in or completion of AVIA 273.
Type: C

AVIA 280 Internship 0-15-3
Provides an opportunity to gain experience in the aviation system (non-flight) after completion of prescribed aviation courses. Experience obtained will be through a joint effort on the part of industry, ATC, Airline, FBO, FAA and SWIC faculty. A written report is required.
Requisite: Department consent
Type: C

AVIA 291 Airline Transport Pilot Ground 3-0-3
An advanced ground course that has been designed to prepare the student for the Airline Transport Pilot written examination. Advanced instruction on light and heavy jet aircraft, FAR Parts 121 and 135 will be included. Course meets two weekends, for four days or supervised self-study is available. The final is taking the ATP written examination.
Requisite: Department consent
Type: C

AVIA 292 Flight Training-ATP 3-0-3
Flight instruction in preparation for the ATP rating in airplanes. The materials studied in AVIA 291 are applied in this course.
Requisite: AVIA 291.
Type: C

AVIA 299 Special Topics In Aerospace Variable up to (5)-(10)-(5)
The student will apply aviation knowledge learned to solve problems using case studies, simulations, special or aviation management techniques. Semester credits will be based on the complexity of the problem.
Requisite: None.
Type: C

Avionics

AVE 100 Mathematics for Avionics 1.5-3-3
This course provides a foundational understanding of essential mathematical concepts and their applications in avionics. Students will develop the skills needed to work with avionics systems, troubleshoot electronic components, and analyze data relevant to aviation. Topics include algebra, trigonometry, and basic statistics.
Requisite: None.
Type: C

AVE 101 Intro to AC Maint Practices 1.5-5-4
This course introduces the student to aviation safety practices, safety management, human factors, and electrical safety practices. Students learn aircraft structural design and materials utilized in the construction of the aircraft and control surfaces. Aircraft structural drawings and electrical schematics are introduced to define specific fuselage stations and electrical system power distribution. Students also learn and perform weight and balance calculations required during modifications and upgrades to components and avionics systems. Students are also introduced to general safety procedures and cautions while operating in aircraft movement areas and near operating aircraft. In addition the students will learn to safely perform aircraft ground handling procedures utilizing industry standard precautions. He / She will also become familiar with the aircraft communication and navigation systems installed in the aircraft.
Requisite: None.
Type: C

AVE 102 Intro to AC Elec and Elect 3-4-5
This course in an introductory electrical and electronics course for students entering the aviation (Avionics) electronics program. The course introduces students to the fundamental principles of electricity and basic AC/DC circuits, electronic components. The course also introduces electrical /electronic diagrams, provides the student with the opportunity to become proficient in using common test equipment and tools used to construct, install, measure and repair electrical wiring and cabling utilized in aircraft electrical systems. Students will learn to perform a complete electrical analysis of complex DC and AC circuits consisting of resisters, capacitors, inductors, and transformers connected in various series, parallel and series-parallel configurations. The course will also cover applications of these components in common electrical circuits and will begin teaching students basic troubleshooting skills.
Requisite: AVE 100, AVE 101 or Concurrent Enrollment in AVE 101 and AVE 100.
Type: C

AVE 115 Aircraft / Avionics Elec Power 2-4-4
In this course the student will develop an in-depth understanding and operational knowledge of aircraft electrical power systems and distribution. Aircraft Batteries, AC and DC generators, inverters, rectifiers, alternators, and frequency utilized in aircraft operations will be introduced. Students will also learn and demonstrate an operational understanding of digital circuits, signal generation, antennas, amplification, and signal protection utilizing specialized types of cable shielding for signal distribution. Students will be introduced to electrostatic safe operating procedures when conducting maintenance practices on aircraft and aircraft electronic components.
Requisite: AVE 100, AVE 101 and AVE 102.
Type: C

AVE 131 Avionics Inst/ Harness MFG 2-4-4
This course will focus on the development of avionics equipment wiring, reading, and interpreting wiring diagrams and instructional manuals. The course also covers the introduction to avionics systems, use of applicable test equipment, aircraft wiring diagrams, wire terminations, connections and construction of wiring harnesses and harness testing. The student will become proficient at reading and interpreting wiring diagrams and instructional manuals, AC 43-13-1B, wire marking and identification, cable routing and wire chafe protection. The student will also become proficient at cannon plug installation, connector teminations, pin isntallation, crimping and solder connections, proper coaxial cable connections, testing signal loss, wire ring out and troubleshooting.
Requisite: AVE 100, 101, 102 and 115.
Type: C

AVE 141 Avionics Installation Trends 2-4-4
This course builds from the foundation established in the prior AVE 131 course. This course provides the student with in-depth understanding of the electrical power distribution of the aircraft, how to install the associated connections, system maintenance and the associated troubleshooting process. The course continues to reference wiring diagrams, electrical schematics, installation instructions and FAA guidance material for the installation of equipment, equipment racks, and antennas. Guidance for proper documentation is emphasized including aircraft records, aircraft maintenance logbooks and shop work orders.
Requisite: AVE 131.
Type: C

AVE 159 VHF Nav and Comm Equip 2-4-4
This course is an intermediate course designed to provide the student with an understanding of the principals of operation of VHF Aircraft communication and Navigation equipment. The student will gain experience in the construction, routing and installation of wiring harness including testing and troubleshooting for communication and navigational components. The student will become proficient at reading and interpreting wiring diagrams and instructional manuals, AC 43-13-1B, wire marking and identification, cable routing and wire chafe protection. The student will also become proficient at cannon plug installation, connector terminations, pin installation, crimping and solder connections, proper coaxial cable connections, testing signal loss, wire ring outs and harness termination at component racks in preparation for unit installation. The student will also be introduced to fiber Optics and the specific requirements for installation. An introduction to navigational data updates through the digital data bus will also be introduced and included in this course.
Requisite: AVE 131 and AVE 141.
Type: C

AVE 166 Installer / Communications / Navigation Phase I 2-4-4
This course will focus on the production benefits. The student will begin to develop proficiency installing, testing, and troubleshooting VHF communication equipment with the addition of an audio panel. The student will develop skills required to accomplish the installation of accommodations for headphone connections, speaker marker beacon and microphone wiring installations. The student will also develop the ability to assist in the installation of avionics racks utilizing support brackets with proper hardware and materials in accordance with the manufactures recommended procedures. **The student will also complete an aircraft updated aircraft weight and balance form after completing the installation. He /She will also accomplish the required return to service documents and work order(s) associated with the installation.**
Requisite: AVE 159.
Type: C

AVE 167 Transponder / ADS-B System Installation / Pilot Static System Test 2-4-4
This course introduces the student to the function and installation of the Aircraft Transponder and Automatic Dependent Surveillance - Broadcast (ADS-B) System. In addition, the student will learn the function and testing of the pitot static system to a specific standard. Students will also develop a more in-depth understanding of the digital data bus that provides uploads of aircraft navigational data. This course is a Capstone project designed to develop the student's application of knowledge to practical situations determining faults. The course continues to further the student's in-depth operational knowledge of components installed in the aircraft avionics system and basic troubleshooting of component failures and system faults.
Requisite: AVE 166.
Type: C

AVE 168 Installation of GPS Navigation and Electronics Flight Systems Phase II 2-4-4
This course continues to focus on the production benefit. The student will develop the ability to perform the installations, testing, and troubleshooting of navigation, Global Positioning Systems and Electronic Flight Information Displays. The student will also continue to develop his/her ability to support aircraft maintenance personnel with a level of proficiency in avionics rack removals and installation. The course will also include a Capstone project installing flight information displays along with unit function and testing to a specific standard.
Requisite: AVE 167.
Type: C

AVE 299 Internship Variable up to 0-(20)-(4)
Allows students to earn academic credit for supervised on-the-job experience. Eighty hours of work per semester are required for each semester credit.
Requisite: Department consent
Type: C

Biology

BIOL 100 General Biology: Ecology, Evolution, & Genetics 3-2-4
A laboratory course emphasizing scientific inquiry through the topics of cell structure and function, genetics, biodiversity, evolution, and ecology. Biological issues with personal and social implications will be introduced. Not intended for science majors.
Semester(s) Offered: ALL
Requisite: Placement above MATH 97 or completion of MATH 95 or 97 with a "C" or better; Eligible for ENG 101 or completion of ENG 97 with a "C" or better.
Type: T, IAI-L1 900L

BIOL 101 Principles of Biology I 3-2-4
A laboratory course emphasizing the fundamentals of organization, metabolism, photosynthesis, growth, genetics and evolution. Intended for science majors.
Semester(s) Offered: ALL
Requisite: Eligible for MATH 112 and ENG 97.
Type: T, IAI-BIO 910, IAI-L1 910L

BIOL 102 Principles of Biology II 3-2-4
This course is a continuation of BIOL 101. Topics include the origin and phylogeny of life, biodiversity, comparative physiology, and ecology.
Semester(s) Offered: FALL SPR
Requisite: BIOL 101 with a grade of "C" or better.
Type: T, IAI-BIO 910, IAI-L1 910L

BIOL 105 Human Biology 3-2-4
Essential principles of human anatomy and physiology are presented, including basic chemistry, microscopic investigation of cell and tissue samples, physiologic exercises, and an overview of the following body systems: body organization, basic chemistry, histology of tissues and the integumentary, skeletal, muscular, nervous systems and senses, endocrine, blood, heart and the circulatory system, lymphatic and immune systems, respiratory, digestion, urinary systems, and reproduction. This course is intended as a one semester survey course for certain health sciences and social programs.
Semester(s) Offered: ALL
Requisite: Placement above MATH 97 or completion of MATH 95 or 97 with a "C" or better; Eligible for ENG 101 or completion of ENG 97 with a "C" or better.
Type: T

BIOL 106 Environmental Science 3-0-3
Environmental science is an online course designed to provide a broad understanding of the physical, biological and social aspects of the environment. Topics include basic ecological concepts, sustainability, energy problems, natural resources, human population growth, preserving biodiversity, climate and environmental pollution. Possible solutions to these topics will be considered. This course does not meet the laboratory science requirements at SWIC. Students are expected to dedicate an additional 8 hours per week to study the course content, complete homework, analyze data, and seek assistance in a timely manner.
Semester(s) Offered: ALL
Requisite: Placement above MATH 97 or completion of MATH 95 or 97 with a "C" or better; Eligible for ENG 101 or completion of ENG 97 with a "C" or better.
Type: T, IAI-L1 905

BIOL 108 General Ecology 3-2-4
General Ecology is more of a "big picture" class that attempts to increase students' understanding of how nature works. The goal is to help students understand why things happen the way they do in the natural world. Ecology is the study of the interaction between organisms, the environment, and each other. Topics covered include: evolution and natural selection, population interactions, biological communities, ecosystems, energy flow, and the human impact on the environment. The lecture portion of this class is online and the lab portion is in person. Laboratory exercises for this class are mostly held outdoors. Some labs will involve students performing experiments, collecting data in the field, while others will involve field trips to areas of ecological significance in the SWIC district.
Semester(s) Offered: FALL SUM
Requisite: Placement above MATH 97 or completion of MATH 95 or 97 with a "C" or better; Eligible for ENG 101 or completion of ENG 97 with a "C" or better.
Type: T, IAI-L1 905L

BIOL 110 Introduction to Marine Biology 3-0-3
This course focuses on both the biological and physical aspects of marine environment. Topics discussed include the physical geography of the ocean, diversity of life, marine ecosystems, and how humans affect the marine environment. A separate field trip course may be taken to fulfill the lab requirement of this class.
Semester(s) Offered: SUMMER
Requisite: Placement above MATH 97 or completion of MATH 95 or 97 with a "C" or better; Eligible for ENG 101 or completion of ENG 97 with a "C" or better.
Type: T

BIOL 151 Plants and Society 3-2-4
This course considers the fundamental concepts of plant biology and how plants as living organisms have influenced society. Students will learn plant cell, molecular and tissue biology and examine the diversity that exists in the plant kingdom. Societal topics covered will include the ecology and evolution of plants, the role of plants in the carbon cycle, and human dependence on plants for food, shelter, fuel, medicine, and clothing. Students will read/discuss articles current to plant biology and interpret charts and graphs of agriculture and forest plants as a result of climate change. Weekly labs include examination of plants for antimicrobial properties and making your own microscope slides of plant stomata.
Semester(s) Offered: FALL SPR
Requisite: Placement above MATH 97 or completion of MATH 95 or 97 with a "C" or better; Eligible for ENG 101 or completion of ENG 97 with a "C" or better.
Type: T

BIOL 157 Human Anatomy & Physiology I 3-3-4
The course begins with a study of cells and tissues followed by a comprehensive anatomical and physiological study of the following human systems: integumentary, skeletal, muscular, nervous and senses. Basic chemistry, microscopic investigations of cells and tissues and vertebrate dissections are an integral part of this course. .
Semester(s) Offered: ALL
Requisite: Placement above MATH 97 or completion of MATH 95 or 97 with a "C" or better; Eligible for ENG 101 or completion of ENG 97 with a "C" or better.
Type: T

BIOL 158 Human Anatomy & Physiology II 3-3-4
A comprehensive anatomical and physiological study of the following human systems: Endocrine, circulatory, immune, respiratory, digestive, urinary and reproductive. Microscopic investigations of cells and tissues and vertebrate dissections are an integral part of this course.
Semester(s) Offered: ALL
Requisite: BIOL 157 with a grade of "C" or better.
Type: T, Type:

BIOL 220 Intro to Cadaver Dissection 0-2-1
This course is an introduction to human cadaver dissection with an emphasis on dissection techniques and gross anatomy of the human body. Students will work in small groups to perform supervised dissection of a human cadaver.
Semester(s) Offered: SPRING
Requisite: BIOL 105 or BIOL 157 with a grade of "C" or better.
Department consent required
Type: T

BIOL 250 Microbiology 3-2-4
This course is the study of the structure, metabolism, reproduction, heredity, evolution, ecological and pathological relationships of microbes including bacteria, viruses, fungi, yeasts and protozoa.
Semester(s) Offered: ALL
Requisite: BIOL 101 or BIOL 157 each with a grade of "C" or better or BIOL 105 and MST 104 with a grade of "C" or better
Type: T

BIOL 270 Genetics 3-2-4
This course takes a problem-solving approach to the study of three fundamental areas of modern genetics: transmission, molecular, and evolutionary genetics. Major principles in each area will be covered in sufficient detail to provide students with a broad understanding of the field. Laboratory experiments and activities will enhance and apply concepts covered in lecture.
Semester(s) Offered: SPRING
Requisite: MATH placement above MATH 112 or MATH 112 with a grade of "C" or better; BIOL 101 with a grade of "C" or better.
Type: T

BIOL 299 Special Topics in BiologyVariable up to (4)-(6)-(4)
This course will give students an opportunity to investigate special topics or problems in biology, and provide students with the knowledge and ability to deal with those topics or problems in relation to their special requirements.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: T

Brewing

BRW 101 Introduction to Brewing Processes 2-0-2
This is an introductory course covering the fundamental raw materials and methodologies utilized in the processes of brewing and fermentation. This course will not only provide an overview of brewing and fermentation operations, including handling, managing, storing, and sanitizing, but will also provide essential reinforcement of technical terminology as regards to ingredients, equipment, and standard vocabulary used in the industry. More specifically, students will learn about the distinctions in producing wine, cider, beer, and mead, among others.
Requisite: None.
Type: C

BRW 103 Principles of Brewing Science 3-2-4
This course will provide a broad overview of the principles involved in brewing and fermentation science. Basic knowledge of quality and recipe design for various styles of alcoholic beverages will be covered, as well as a general history and understanding of raw materials, proper laboratory techniques, brewing processes, quality assurance matters, and varieties of beverages. The course will act as an introduction to brewing and fermentation sciences in context and will include laboratory meetings, case studies, and excursions to local partnered brewing, packaging, and/or distribution facilities for inspection/assessment of operational equipment.
Requisite: None.
Type: C

BRW 151 Biochemistry of Brewing 3-2-4
This course provides the foundational knowledge for the chemistry involved in brewing and distillation. It introduces students to concepts such as chemical bonding, pH, pressure, enzymes, ingredient analysis, fermentation, and biopolymers in order to identify and analyze the properties of various alcoholic beverages. Students will be expected to apply these principles in the laboratory and utilize this knowledge in order to improve the quality of brewing. This course will include laboratory meetings, case studies, and excursions to local partnered brewing facilities.
Requisite: BRW 103.
Type: C

BRW 201 Brewing Science Operations I 2-2-3
Students will acquire knowledge of brewing science crucial to the management and operation of the laboratory brewing operations when converting raw materials to product. Students be able to recognize each raw material—namely, malt, hops, water, and yeast—and their characteristics and elaborate upon the processes necessary for manufacturing. This course ensures that students are able apply the appropriate calculations and analyze proper chemical properties at each level of the production process. It will highlight standard principles of milling, mashing, separating wort and hops, boiling, and chilling wort in order to yield high quality product. Quantitative and qualitative methods will be implemented to analyze the success and quality control throughout the process. This course will include laboratory meetings, case studies, and excursions to local partnered brewing facilities.
Requisite: Concurrent enrollment in or completion of BRW 103.
Type: C

BRW 202 Brewing Science Operations II 2-2-3
This course will require and reinforce the knowledge learned in the prerequisite Operations in Brewing Science I. The goal will be to take a more in-depth approach to build upon previous topics such as fermentation analysis, aging, yeast handling, conditioning and filtration procedures, converting chilled wort, and other advanced beer making processes. Other topics will include specialty beers, quality assurance, sustainable brewing techniques, packaging systems, as well as touching upon legal requirements and basic cost analysis. An emphasis will be placed on safe and appropriate maintenance, cleaning, and handling of all equipment and materials encountered in daily operations. This course will include laboratory meetings, case studies, and excursions to local partnered brewing facilities.
Requisite: BRW 103 & BRW 201.
Type: C

BRW 207 Beers & Wines of the World 3-0-3
This course will contain a broad look at beer and wine in a cultural and historical context and examine the evolution of their roles and influence through time and various cultures. Students will learn about a variety of beers and wines, how different methods create different styles and tastes, as well as how foods are paired to wines and beers globally. Furthermore, this course will encourage students to value the marketing and presentation of the beverages, including packaging and service, in order to understand traditions and practices around the world.
Requisite: None.
Type: C

BRW 250 Brewing Technology 2-2-3
Through this course students will be exposed to different kinds of brewery equipment, technology, and facilities typically used today. The course will ensure students have a solid understanding of not only the design, construction, installation, performance, and proper maintenance of equipment utilized in beer production, but will also reinforce strict guidelines for safe and efficient operation of the equipment at all stages of the brewing process. This includes utilizing the provided safety equipment and safely disposing of waste materials, but also embraces the practices of sustainable brewing. Students will have contact with operational machinery and engage with brewing technologies directly at local brewery facilities. Some of the equipment involved will include vessels, piping and valves, pumps, heat exchangers, pasteurizers, carbon dioxide systems, counter-pressure-filling machines, conveyers, and other machinery.
Requisite: BRW 101.
Type: C

BRW 251 Intro to Fermentation Science 2-2-3
This course explores the biological and chemical processes involved in fermentation science. Students will gain an understanding of how micro-organisms function in the creation of fermented food and beverages in cultures all over the world. The course will not assume any previous chemistry or biology knowledge and will initially provide an overview discussion regarding chemical bonding, molecule structures, and types of organisms involved in the process of fermentation. Students will engage in lab experiments where basic knowledge of fermentation science can be applied and observed in a variety of beverages and foods.
Requisite: BRW 103.
Type: C

BRW 260 Legal Topics in Brewing 2-0-2
Students will be familiarized with state and federally mandated regulations for the brewing, distillation, and fermentation industry through this course. The course will emphasize quality control of all raw, packaging, and processing materials, ethical obligations, mandatory permits and inspections, sustainability issues, licensing laws, and taxation. Upon completion, students will possess a firm understanding of the legal parameters within the industry at each step process as they pertain to both craft brewing and large-scale manufacturer compliancy.
Requisite: None.
Type: C

BRW 269 Brewing Operations Internship 0-5-1
This course provides an opportunity for hands-on training within the working brewery environment. All progress will be monitored and supervised, and internships will likely take place in a local partnered brewing, packaging, and/or distribution facility. Students can work with other facilities subject to approval by their advisor. Students will be able to apply their knowledge of fermentation and brewing practices, observe daily management and processing techniques, and enhance their brewing and fermenting skills in this practicum. The internship offers a practical augmentation of the instruction provided during the semester in order to properly orient themselves in any facet of the fermentation/brewing operations.
Requisite: BRW 201, BRW 202, BRW 250.
Type: C

BRW 270 Sensory Analysis of Beer 2-2-3
In this course, students will develop the sensory skills necessary to evaluate beer quality and recognize industry quality standards as well as flavor abnormalities that may arise. Students will be provided with commonly used terminology to define beer properties and analyze aromas, finishes, flavors, and expressions as established within the industry and judging systems. Special attention will be paid to understanding the biochemical and microbiological processes that create the gustatory and olfactory expressions amongst a range of styles, but also explain the off-flavors that might occur. Students will be equipped with the skills to pinpoint which steps of the processes—raw material quality evaluation, brewing, fermentation, or sanitation—cause various defects, and can work to improve quality in the future. This knowledge will also lend itself useful in understanding how beer is paired with foods and giving solid recommendations in customer service.
Requisite: None.
Type: C

BRW 280 Brewing Science Capstone 0-6-3
This course acts as the culmination of the degree through practical application of their brewing and fermentation science skills while engaging with the knowledge accrued throughout previous courses. This practicum will give students an opportunity to showcase their acquired skills by creating their own beer product. A supervisor will oversee the progress and ensure that students comply with all safety measures, but students will be responsible for the process from start to finish, including designing a recipe, choosing raw materials, performing all scientific testing and analysis throughout brewing, recording the appropriate data, observing the quality, maintaining the equipment, and marketing their product.
Requisite: BRW 201, BRW 202, BRW 250.
Type: C

Bricklayer Apprentice

BLA 118 Construction Bricklayer Apprentice I 3-2-4
This course will acquaint the student with some of the basic knowledge of the bricklaying trade. Material covered in the first year will include history, manufacturing processes and structural properties of masonry materials. Types of mortar and sand will also be covered.
Requisite: None.
Type: C

BLA 128 Construction Bricklayer Apprentice II 3-2-4
Materials covered in this course will include manufacturing processes and structural properties of masonry materials. This course is a continuation of BLA 118.
Requisite: None.
Type: C

BLA 138 Construction Bricklayer Apprentice III 3-2-4
This course of study will introduce the student to the tools, math and blueprints used in the bricklaying trade. Material will include the trowel, brick hammer, blacking chisel, story pole, and spacing ruler. Trade arithmetic, blueprints, and sketching will also be covered.
Requisite: None.
Type: C

BLA 148 Construction Bricklayer Apprentice IV 3-2-4
Materials covered in this course will include the trowel, brick hammer, blacking chisel, story pole, and spacing ruler. Trade arithmetic, blueprints and sketching will also be covered. This course is a continuation of BLA 138.
Requisite: None.
Type: C

BLA 258 Construction Bricklayer Apprentice V 3-2-4
This course is designed to give the three-year apprentice some practical shop work along with his on-the-job training. Material covered will include motion study, structural patterns, and laying of units.
Requisite: None.
Type: C

BLA 268 Construction Bricklayer Apprentice VI 3-2-4
Materials covered will include motion study, structural patterns and laying of units. This course is a continuation of BLA 258.
Requisite: None.
Type: C

BLA 299 Special Topics in Construction Bricklaying Variable up to (4)-(8)-(4)
This course is designed to familiarize students with special topics or problems in the construction bricklayers' field, to provide them with knowledge and ability to deal effectively with those topics or problems in relation to their specific requirements.
Requisite: None.
Type: C

Business

BUS 101 Introduction to Business 3-0-3
A survey of the functional areas of business. Major topics include: the economic, legal, social and global environment in which modern businesses operate; social responsibilities of business; forms of business ownership; functions and responsibilities of managers; and fundamental concepts of marketing, accounting, finance, information management, and labor relations and human resource management.
Semester(s) Offered: ALL
Requisite: None.
Type: T

BUS 102 Business Mathematics 3-0-3
This course covers the fundamental processes in mathematical computations used in business and consumer finance. Topics covered include: percentage; interest; consumer credit; cash and trade discounts; mark-up; payroll, property and income taxes; social security; amortization tables; time value of money; stocks; and bonds.
Students may receive credit for only one of the following: BUS 102 or MGMT 102
Semester(s) Offered: ALL
Requisite: None.
Type: C

BUS 205 Economic and Business Statistics 4-0-4
The following concepts and statistical techniques are included: measures of central tendency and variability; random variables and probability distributions; binomial, normal, and sampling distributions; estimation; tests of hypotheses; chi square tests; linear regression and correlation; and multiple regression. Statistical software projects are required. Use of a graphing calculator, as recommended by the instructor, is required for this course. At the conclusion of this course, students will be able to extract and interpret information from data and apply statistical tests to make and communicate informed decisions in business and related fields. Students may receive credit for only one of the following: MATH 107, MATH 191, or BUS 205.
Semester(s) Offered: ALL
Requisite: Math placement above MATH 112 or completion of MATH 112 with a grade of "C" or better.
Type: T, IAI-BUS 901, IAI-M1 902

BUS 209 Business Computer Systems 3-0-3
This course is designed primarily for students planning to pursue a baccalaureate degree with a major in a field of business. It covers the basics of management information systems from a business perspective. Hardware, operating systems, and applications software used in business enterprises are described. The course also discusses the role of the internet, World Wide Web and e-commerce in modern business enterprises. It introduces application software offered in popular business computer packages, including word processing, database management, spreadsheets, and presentation software, and provides students with a limited amount of hands-on experience with this software.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-BUS 902

BUS 215 Business Law 3-0-3
An introduction to the history and philosophy of law and the American legal system and its relationship to business. Discussed are fundamentals of contracts, agency and employment, business organizations, and personal property and bailment. A lecture case approach is used.
Semester(s) Offered: ALL
Requisite: None.
Type: T

BUS 220 Data Analytics for Business 3-0-3
This course will introduce students to the concept of data analysis. Microsoft Excel will be used to analyze and interpret financial data as it applies to business-related decisions.
Requisite: None.
Type: C

BUS 240 Ethics in the Workplace 3-0-3
This course provides an opportunity for the student to examine personal ethics related to the workplace; determine how those ethics compare to other students' ethical standards; review common ethical issues in the workplace and discuss how to resolve them; discuss management's role in establishing an ethical atmosphere; review a variety of companies' codes of ethics; and, briefly review corporate social responsibility.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: C

BUS 241 Fundamentals Of Finance 3-0-3
This course provides critical financial information required for entrepreneurial success. Topics covered include: forms of ownership; break-even analysis; time value of money; balance sheets, cash flow statements, and income statements; forecasting; risk management; and personal financial management as it relates to business success. Students may receive credit for only one of the following: BUS 241 or MGMT 241.
Semester(s) Offered: FALL SPR
Requisite: ACCT 105 or ACCT 110 in the last five years with a grade of "C" or better.
Type: T

BUS 261 Business Communications 3-0-3
This course focuses on helping learners to develop skills needed for effective written and verbal communication in professional or work-related settings. During the course, learners will strengthen their knowledge and enhance their communication skills, including key areas of career preparation, listening, team work, culture, ethics, writing, and presenting.
Requisite: None.
Type: C

BUS 280 Copyright/Trademark/Patent Law 3-0-3
This course will provide students with an overview and understanding of the various intellectual property disciplines, including copyright, trade secret, trademark, and patent law. This course will emphasize both the theoretical and practical application of these areas of law. Students will be required to complete writing projects. Students may receive credit for only one of the following: BUS 280 or PARL 280.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

BUS 294 Special Topics/Issues in Business Variable up to (4)-(8)-(4)
Presents projects and topics in business by simulated experiences, observations, discussions, conferences, readings and individual research. Projects and topics will vary to meet individual interest and needs.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

Cannabis

CAN 101 Cannabis Industry and Law 3-0-3
This course provides an overview of fundamental information about the history, law, and culture of cannabis cultivation and consumption. The course will not only familiarize students with legal issues surrounding the cultivation, production, and use of cannabis today, but also provide a backdrop of knowledge to help students understand the stigma and previous status of cannabis in the U.S. as well as its functions abroad. This course will also give students an overview of regulations and legal issues regarding cannabis cultivation and use throughout the U.S., and students will be able to distinguish between local, federal, and state laws. Students will review federal policies on prescribing and dispensing cannabis and focus particularly on the laws concerning medical marijuana. Important terminologies related to the production/processing of cannabis will be utilized. Students will understand the distinctions between different varieties of cannabis products (e.g., hemp, CBD oil, and marijuana). The course will also emphasize potential career paths within the industry and what requirements may be necessary for different specializations.
Requisite: None.
Type: C

CAN 102 Medical Cannabis Use/Research 3-0-3
This course will provide students with a foundational understanding of how cannabis can be utilized as treatment in the medical field as well as relevant modern topics in cannabis research. Students will learn about how the body reacts chemically to cannabis usage through both benefits and side effects. Legislation specifically regarding the usage of medical cannabis will be covered, and students will become familiar with safe and reliable medical cannabis practices. The course will also seek to address misinformation about cannabis, and students will explore the latest findings from industry experts and research programs in regards to proper cultivation, processing, and usage. The course will not only cover researched benefits, but disadvantageous effects, including misuse, addiction, and social consequences and cultural implications as well. Discussions about ethics in medical and non-medical cannabis usage will also be emphasized
Requisite: None.
Type: C

CAN 130 Cannabis Operations 3-0-3
In this course, students will be exposed to a variety of industry perspectives and will explore different tracks within the cannabis industry, including entrepreneurship, dispensary operations, hemp production, CBD oil processing, medicinal plant chemistry, and greenhouse cultivation. Furthermore, students will apply their knowledge of cannabis dispensary practices, familiarize themselves with daily management and processing techniques, and enhance their understanding of compliance laws through this course. The course will include information about how cannabis careers can be supplemented with further education in related fields, such as agriculture, business, horticulture and Health sciences.
Semester(s) Offered: ALL
Requisite: CAN 101, CAN 102 or concurrent enrollment.
Type: C

Chemistry

CHEM 100 Chemistry in Everyday Life 3-2-4
A survey of chemistry in the context of the things that can or do affect us in our everyday lives. Topics include air and water quality, global warming, fossil, solar and nuclear fuels, acid rain, plastics and nutrition. This course is designed for transfer students in liberal arts, and elementary education majors.
Semester(s) Offered: FALL SPR
Requisite: Placement in MATH 97 or higher or completion of or concurrent enrollment in MATH 95.
Type: T, IAI-P1 903L

CHEM 101 Introductory Chemistry 3-4-5
Fundamental concepts in chemistry through discussion of the structure of matter, atomic theory, simple chemical calculations, the nature of chemical reactions, and introduction to organic chemistry. For students who have had no previous chemistry.
Semester(s) Offered: ALL
Requisite: Placement above MATH 97 or completion of Math 95 or 97 with a "C" or better; Eligible for ENG 101 or completion of ENG 97 with a "C" or better.
Type: T, IAI-P1 902L

CHEM 103 Introductory Organic & Biological Chemistry 3-4-5
An overview course designed to give students a basic understanding of organic nomenclature, functional groups, basic organic reactions, and biological molecules such as enzymes, proteins, lipids, carbohydrates and nucleic acids.
Semester(s) Offered: ALL
Requisite: CHEM 101 or CHEM 105 each with a grade of "C" or better.
Type: T

CHEM 105 General Chemistry I 3-4-5
Basic principles of inorganic chemistry with emphasis on atomic structure, bonding, stoichiometry, chemical reactions, thermochemistry, gas laws, periodicity, states of matter, and solutions. For the chemistry major, other science major, engineering, pre med, pharmacy and other pre-professional fields.
Semester(s) Offered: ALL
Requisite: 1 yr HS Chemistry w/"C" or better & placement above or completion of MATH 112 w/"C" or better; or CHEM 101 w/"C" or better & math placement above or concurrent enrollment in MATH 112; & Reading placement above ENG 92 or completion of ENG 92.
Type: T, IAI-CHM 911, IAI-P1 902L

CHEM 106 General Chemistry II 3-4-5
Continuation of Chemistry 105 with special emphasis on kinetics, thermodynamics, solution chemistry, control of equilibrium, acid-base theory, solubility, electrochemistry, complex ions, and some nuclear chemistry.
Semester(s) Offered: ALL
Requisite: CHEM 105 with a grade of "C" or better; Math placement above MATH 112 or completion of MATH 112 with a grade of "C" or better.
Type: T, IAI-CHM 912

CHEM 201 Organic Chemistry I 3-4-5
An introduction to organic chemistry dealing principally with structure, reaction mechanisms and properties of organic compounds; with special emphasis on alkanes, alkenes, alkyl halides, alcohols, and ethers.
Semester(s) Offered: ALL
Requisite: CHEM 106 with a grade of "C" or better.
Type: T, IAI-CHM 913

CHEM 202 Organic Chemistry II 3-4-5
A continuation of Chemistry 201 with special emphasis on spectra, aldehydes, ketones, carboxylic acids, derivatives of carboxylic acids, amines, and phenols.
Semester(s) Offered: ALL
Requisite: CHEM 201 with a grade of "C" or better.
Type: T, IAI-CHM 914

Chinese

CHIN 101 Elementary Chinese I 4-0-4
This introductory language course focuses on establishing a solid foundation in the four basic skill areas of reading writing, listening comprehension and speaking in Mandarin Chinese. Students are also introduced to the history and cultures of the Chinese-speaking world.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 97 or higher.
Type: T

CHIN 102 Elementary Chinese II 4-0-4
This introductory language course is a continuation of CHIN 101 and focuses on establishing a solid foundation in the four basic skill areas of reading, writing, listening comprehension and speaking in Mandarin Chinese. Students are also introduced to the history and cultures of the Chinese-speaking world.
Semester(s) Offered: INTERMIT
Requisite: CHIN 101.
Type: T

Cisco Networking Academy

CISC 106 Introduction to Cybersecurity 1-0-1
This course provides an overview of cybersecurity including the importance of cybersecurity, the characteristics and operation of malware, and options for defense against cyber threats. Students will also explore why cybersecurity is important in various industries. NOTE: Successful students will possess a basic understanding of networking concepts prior to enrolling.
Semester(s) Offered: ALL
Requisite: None.
Type: C

CISC 116 Cisco Cybersecurity Essentials 2-0-2
Cybersecurity Essentials provides foundational knowledge of the security domains in the cyber world. The course introduces information security, systems security, network security, mobile security, and physical security. Additional topics include ethics and laws, related technologies, defense and mitigation techniques use in protecting businesses. The course discusses the characteristics and tactics of cyber criminals and explores the technologies, products, and procedures used by cybersecurity professionals to combat cybercrime.
Semester(s) Offered: FALL SPR
Requisite: Concurrent enrollment in or completion of CISC 106.
Type: C

CISC 126 CyberOps Associate 3-2-4
Uncovering cybercrime, cyber espionage, and other networking threats are just some of the exciting cybersecurity jobs spanning across every industry. In this course, you will learn the skills to join this fast-growing field and take advantage of the opportunities found in security operation centers.
In this course you will learn security concepts, security monitoring, host-based analysis, network intrusion analysis, and security policies procedures. This course also aligns with the National Initiative for Cybersecurity Education (NICE) Cybersecurity Workforce Framework to support consistent communication language for cybersecurity education, training, and workforce development.
Semester(s) Offered: FALL SPR
Requisite: CISC 106 and CISC 116 with a grade of "C" or better
Type: C

CISC 130 Python Essentials 3-2-4
Python is an essential skill for network automation and network support. The aim of the course is to familiarize students with general computer programming concepts like conditional execution, functions, loops, Python programming language syntax, semantics, and the runtime environment, as well as with general coding techniques and object-oriented programming.
Semester(s) Offered:
Requisite: None.
Type: C

CISC 161 Cisco Networking Essentials 3-2-4
Cisco Networking Essentials teaches the fundamentals of networking. Students will learn how devices communicate on a network, network addressing, network services, how to build a home network and configure basic security. Additional course topics include configuring devices, and test and troubleshooting networks.
Semester(s) Offered: FALL
Requisite: Concurrent enrollment in CISC 162.
Type: C

CISC 162 Cisco Network Communication 3-2-4
Cisco Network Communication introduces students to networking architectures, models, protocols and components. These components facilitate the connection of users, devices, applications and data across modern computer networks and through the Internet. By the end of the course, students can build simple Local Area Networks that integrate IP addressing schemes with foundational network security.
Semester(s) Offered: FALL
Requisite: CISC 161 with a grade of "C" or better.
Type: C

CISC 163 Cisco Switching and Routing 3-2-4
Cisco Switching and Routing focuses on switching technologies and router operations that support small-to-medium business networks. The course also includes wireless local area networks (WLANs) and security concepts. Students learn fundamental switching and routing concepts. Students will perform basic network configuration and troubleshooting, identify and mitigate LAN security threats, and configure and secure a basic WLAN.
Semester(s) Offered: SPRING
Requisite: CISC 162 with a grade of "C" or better.
Type: C

CISC 164 Cisco Enterprise Networking 3-2-4
Cisco Enterprise Networking describes the architectures and considerations related to designing, securing, operating and troubleshooting enterprise networks. This course covers wide area network (WAN) technologies and quality of service (QoS) mechanisms used for secure remote access. It also introduces software-defined networking, virtualization and automation concepts that support the digitalization of networks. Students gain skills to configure and troubleshoot enterprise networks and learn to identify and protect against cybersecurity threats. Students are introduced to network management tools and learn key concepts of software-defined networking, including controller-based architectures and how application programming interfaces (APIs) enable network automation. Students will prepare to take the CCNA certification exam.
Semester(s) Offered: SPRING
Requisite: CISC 163 with a grade of "C" or better.
Type: C

CISC 299 Special Topics in Cisco Networking
Variable up to (4)-0-(4)
This course presents projects and topics in Cisco Networking by simulated experiences, observations, discussions, conferences, readings and individual research. Projects and topics will vary to meet individual interest and needs. Note: Requisite varies by topic.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

Communications

COMM 151 Fundamentals of Public Speaking 3-0-3
The basic principles of public speaking, including selecting a subject, determining the specific purpose of the speech, collecting materials, adapting the speech to a particular audience, organizing the speech, wording the speech, using visual materials and delivering the speech. Each student prepares and delivers several informative and persuasive speeches.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 97 or higher.
Type: T, Type: , IAI-C2 900

COMM 155 Interpersonal Communication 3-0-3
This course will provide the student with the means for becoming a better interpersonal communicator through the study of interpersonal communication theory and the application of major concepts, including language processes; types of verbal and nonverbal communication; oral and visual means of transmitting information; methods of encoding information; social consequences; and creating, maintaining and terminating various types of relationships.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-MC 901

COMM 200 Oral Interpretation 3-0-3
The principles of selecting, cutting and interpreting poetry, prose and drama, and of reading these materials to the class. Also featured is work preparing and taking part in readers theatre presentations.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 97 or higher.
Type: T, IAI-TA 916

COMM 213 Intro to Public Relations 3-0-3
This course is designed to introduce students to the history and evolution of public relations as a profession. The course looks at the range of responsibilities and functions that public relations practitioners assume in a variety of organizational structures as well as the significant issues and trends that will continue to influence the practice of public relations in the future. Through lectures, discussions, activities and assignments, students will learn about the history and theories of public relations and ultimately have a better understanding of current public relations practices.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 97 or higher.
Type: T, IAI-MC 913

COMM 240 Group Communication 3-0-3
Group Communication introduces students to the fundamental principles, skills and dynamics of the group process. The course will give students practical experience in working within the group framework and will focus on problem-solving, leadership, listening, conflict, and interpersonal relationships as they pertain to the overall effectiveness and success of small group discussions and presentations.
Semester(s) Offered: SPRING
Requisite: COMM 151 or COMM 155 each with a grade of C or better.
Type: T

COMM 299 Problems in Speech Variable up to (3)-(6)-(3)
Seminar on a special topic or current issue in speech.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 97 or higher.
Type: T

Community Health Worker

CHW 102 Public Health Client Care 1-0-1
This course presents pertinent medical terminology to the profession, client-centered care and communication, cultural awareness and health inequities. Professional communication, conflict resolution, and ethical behaviors will be covered. The course will include health payer systems, patient privacy and consent, and care management concepts.

Requisites: None
Type: C

CHW 104 Chronic Disease Management 2-0-2
This course provides an overview of chronic disease and epidemiology with relevant medical terminology. Chronic disease pathology, anatomy and physiology, treatment, and healthy maintenance options will be discussed. The course will include client education, health inequities, health outcomes, and documentation of client interaction.
Requisite: None.
Type: C

CHW 106 Behavioral and Mental Health 2-0-2
This course provides an overview of behavioral and mental health conditions with relevant medical terminology. Pathology, contributions, disease progression, treatment options, and support options will be discussed, This course will include client education, coping strategies, medications and related side effects, community health resources, and documentation of client interaction.
Semester(s) Offered: ALL
Requisite: None.
Type: C

CHW 108 Maternal and Infant Health 2-0-2
This course provides concepts in normal and complicated pregnancy and infant care for the first year of life. Discussions will include anatomical, physiological, and emotional care of the pregnant client, post-partum client, and child. The course will cover special needs infant, substance abuse, vaccinations, and community health resources.
Requisite: None.
Type: C

CHW 110 Clinical Experience 0-8-4
This course is a clinical education experience that provides students an opportunity to practice client care as an individual, small group, or community under the supervision of a practicing community health worker, social worker, or other qualified healthcare professional. Students will intern at the healthcare facility up to 20 hours per week for a maximum of 240 contact hours.
Requisite: None.
Type: C

Computer Aided Design

CAD 100 Print Reading for Tech Trades 3-0-3
This course is an introduction to ASME Y14 drafting standards. Topics such as spatial visualization, orthographic, multiview, oblique, axonometric projection, lettering, sections, geometric construction, auxiliary views, and dimensioning provide the necessary foundation for pictorial communication.
Requisite: None.
Type: C

CAD 101 Basic Drafting 2-4-4
This course is an introduction to sketching and computer aided drafting. Topics such as orthographic, multiview, oblique, axonometric projection, lettering, sections, geometric construction, auxiliary views, and dimensioning provide the necessary foundation for pictorial communication.
Requisite: Concurrent enrollment in or completion of CAD 120.
Type: C

CAD 102 Intermediate Drafting 2-4-4
This course is a continuation of CAD 101, including descriptive geometry, intersections and developments, welding symbols and welding nomenclature, threads and thread nomenclature, working drawings, and introduction to sheet metal bends allowances. Students work in groups to solve problems and create complete sets of drawings simulating the workforce environment.
Requisite: CAD 101, CAD 120.
Type: C

CAD 120 Introductory CAD 3-2-4
This course is an introduction to Computer Aided Design. It will prepare students to operate the system and understand the applications of CAD to industry standards. Students will create, store, retrieve, edit, and print/plot commercial quality drawings. This course is offered as a dual credit course for area high schools. Credit does go towards the certificate and the associate's degree in Computer Aided Design.
Requisite: None.
Type: C

CAD 200 Manufacturing Processes and CAD Drawings 3-2-4
This course will introduce the student to various manufacturing processes and reverse engineering. Assembled mechanical components will be unassembled, measurements with use of micrometers, calipers, height gauge, thread gauges, and hole gauges will be taken to create sketches that will be used to create CAD drawings. Students will also be introduced to the various mill, lathe, and CNC equipment as it relates to the manufacturing process.
Requisite: CAD 102, CAD 220.
Type: C

CAD 201 Introduction to Architectural Drafting 1-2-2
This course will introduce the student to plot plans, floor plans, elevation views, and foundation drawings. Students will create the necessary plans to create a scaled model of an architectural structure.
Requisite: CAD 102, CAD 220.
Type: C

CAD 202 Structures Drafting 2-2-3
This course is a continuation of CAD 210. Drawings created in CAD 201 and CAD 210 will be used to create window and door schedules, trusses, and other necessary structural features.
Requisite: CAD 102, CAD 210, concurrent enrollment in or completion of CAD 220.
Type: C

CAD 203 Civil Engineering Drafting 2-2-3
This course covers all aspects of Highway design drafting. Including: typical sections, details, plan and profile drawing, cross sections, drainage basics, and subdivision drawing. Basic survey and roadway calculations are also included..
Requisite: CAD 102, CAD 225.
Type: C

CAD 204 Manufacturing Drafting 2-2-3
This course is a continuation of CAD 200 with the focus on the design process as it relates to the manufacturing industry. Students will take a problem identified, research and come up with a design. Porotypes will be created with a 3-D printer. A set of working drawings will be created once the porotype functions as designed. Reverse engineering, with the use of precision measuring instruments, will be used to generate sketches. Quality control and inspection will be discussed as it relates to the design process. SolidWorks will be the software utilized in this course.
Requisite: CAD 102, CAD 220, CAD 221.
Type: C

CAD 206 E & I Drafting 2-2-3
This course includes the drafting and design of electrical distribution and instrumentation for the chemical, petroleum, utility and other related industries.
Requisite: CAD 102, CAD 220.
Type: C

CAD 207 Intro to Metallurgy 2-0-2
This course covers physical properties, definitions, abbreviations, and terminology used in making various types of metals.
Requisite: CAD 100.
Type: C

CAD 208 Pipe Drafting 2-2-3
This course reviews aspects of pipe drafting including symbols, piping accessories, equipment, plot plans, piping plans, elevations, sections, isometrics, working drawings and field data.
Requisite: CAD 102, CAD 220.
Type: C

CAD 210 HVAC/EL/Plumb Drafting 2-2-3
This course is a continuation of CAD 201. Drawings created in CAD 201 will be used to create plans and details of the heating, ventilation and air conditioning, power, lighting and plumbing systems for residential/ commercial buildings.
Requisite: CAD 201.
Type: C

CAD 220 Advanced CAD I 2-2-3
An advanced course in Computer Aided Drafting using AutoCAD where the latest industrial standards and procedures will be implemented. Topics include: advance drawing and modification commands, blocks, attributes, layouts and external references.
Requisite: CAD 101, CAD 120.
Type: C

CAD 221 Advanced CAD II 3-2-4
This course begins the semester introducing computer aided drafting concepts to generate 3D models utilizing AutoDesk Inventor software. This course takes an in-depth look at AutoDesk Inventor to generate solid model objects. The output of drawings will include detail, assembly, and other presentation drawings including 2D drawings.
Prerequisite: Keyboarding and Windows knowledge.
Requisite: None.
Type: C

CAD 222 Machine CAD Post Assessment 1-0-1
This course will consist of an overview of American Society of Mechanical Engineers Computer Aided Drafting and machine drafting terminology the student has completed during the two years. Emphasis will be placed on machine terminology. Students will take the certification exam at the end of the semester.
Requisite: CAD 200, CAD 221, concurrent enrollment in or completion of CAD 204.
Type: C

CAD 225 MicroStation CAD 2-2-3
The purpose of this of the course is to provide the student with an entry level understanding of the features, limitations, and considerations associated with the operation of MicroStation CAD software.
Requisite: None.
Type: C

CAD 226 Introduction to Geometric Dimensioning & Tolerancing 2-2-3
This course will introduce the student to geometric dimensioning and tolerancing concepts as established by the American Society of Mechanical Engineers (ASME) Y14.5 standards.
Requisite: CAD 102, CAD 220.
Type: C

CAD 230 3D Architectural CAD 1-2-2
This course focuses on 3-D modeling as it relates to architectural drafting utilizing Revit and 3DMax Autodesk software. Students will create 3-D models from floor plans and elevation views created in CAD 201.
Requisite: CAD 102, CAD 220.
Type: C

CAD 231 Architectural CAD Post Assessment 1-0-1
This course will consist of an overview of American Society of Mechanical Engineers Computer Aided Drafting and architectural drafting terminology the student has completed during the two years. Emphasis will be placed on architectural terminology. Students will take the certification exam at the end of the semester.
Requisite: CAD 201, CAD 210, concurrent enrollment in or completion of CAD 202.
Type: C

CAD 232 Structural Detail Mtl Cd & Std 2-0-2
This course is a comprehensive study of steel shapes, grades, sizes, basic codes and AISC (American Institute of Steel Construction) standards. Emphasis is placed on steel formation and properties and routine mathematics and technical calculations associated with steel detailing. Students must have completed college algebra, geometry and trigonometry courses before enrolling.
Requisite: Completion of or concurrent enrollment in CAD 204 or CAD 231..
Type: C

CAD 233 Structural Detail CAD 1-2-2
This course is an introduction to Structural Detailing computer aided drafting using structural modeling 30 building information modeling (BIM) using SDS/2 software. Students will learn how to model structures that incorporate different kinds of building materials, including steel and concrete into a 3D model. Detail, assembly, and other pictorial views for 2D drawings will be covered.
Requisite: Concurrent enrollment in or completion of CAD 232..
Type: C

CAD 234 Basic Structural Detail Draft 2-2-3
This course covers terms, abbreviations and symbols used by structural steel fabricators and by structural steel erectors. Steel erection plans, anchor rod plans, beams, joists and detailed shop fabrication drawings of structural steel beams and columns will be created according to the American Institute of Steel Construction standards. Special emphasis is placed on the design of bolted and welded structural steel connections. It is recommended that students have completed or concurrently enrolled in WLDT 101.
Requisite: CAD 232, CAD 233.
Type: C

CAD 290 Supervised Internship I Variable up to 0-(30)-(6)
This course allows students to earn academic credit for supervised on-the-job experience. Five hours of work per week per semester is required for each hour of credit. The maximum number of internship semester credits permitted in the program is six.
Requisite: Department consent
Type: C

CAD 291 Supervised Internship II Variable up to 0-(30)-(6)
This course allows students to earn academic credit for supervised on-the-job experience. Five hours of work per week per semester is required for each hour of credit. The maximum number of internship semester credits permitted in the program is six.
Requisite: Department consent
Type: C

CAD 292 Supervised Internship IIIVariable up to 0-(30)-(6)
This course allows students to earn academic credit for supervised on-the-job experience. Five hours of work per week per semester is required for each hour of credit. The maximum number of internship semester credits permitted in the program is six.
Requisite: Department consent
Type: C

CAD 299 Special Topics in Drafting Variable up to (6)-(12)-(6)
The application of drafting principles to specific problems. Case studies, simulations, special problems or problem-solving techniques will be used.
Requisite: Department consent
Type: C

Computer Information Systems

CIS 101 Computer Literacy Skills 1-0-1
This course covers the skills necessary to use a computer, operating system, application software, and the Internet. Students learn to manage files and folders on fixed, removable, and cloud storage, exchange messages and attachments using communications software, search for information and download files from the Internet, and interact with instructor using a learning management system. Additional topics include defending malicious software and the proper and legal use of computers.
Note: Keyboarding skill recommended.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: T

CIS 147 Fonts & Type 3-0-3
This course will teach students the basic concepts and techniques necessary to use type as an element of design and more than just words on a page. The course is designed to look at font faces as well as families, and explores the use of not only the type face but how through the effective use of type tools and color it can interact with other graphics on the page to become a true element of design.
Note: CIS 120 or basic computer skills preferred. Recommended experience with Adobe Creative Software.
Semester(s) Offered: FALL SUM
Requisite: None.
Type: C

CIS 165 Python Programming 3-0-3
The course introduces the fundamentals of the Python programming language. Students develop business applications written in Python. Procedural programming topics include input, processing, output, variables, decision and repetition structures, lists, and functions written in Python. Object oriented programming topics include creating instances of objects, encapsulation of data attributes and behavior, and class and method definitions. The course also includes an introduction to dictionaries and sets. NOTE: Students who meet the requisite through previous computer programming experience should contact the program coordinator.
Semester(s) Offered: FALL SPR
Requisite: One of the following: CIS 180, CIS 187, CIS 252.
Type: C

CIS 168 Graphic Design 3-0-3
This course is designed to teach students the basic design vocabulary, elements, and principles. Individual elements of design such as line, shape, value, texture, space, size and color will be explored as they relate to electronically generated digital formats and print designs. Students will create basic designs in a variety of different software and mediums.
NOTE: File management skills recommended.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

CIS 171 Computer Graphics 3-0-3
This course will teach students advanced design skills in creating vector graphics using Adobe Illustrator. Students will prepare original publications including logos and advertisements.
Note: File management skills recommended.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

CIS 172 Photo Manipulation 3-0-3
This course will teach students how to scan, create, modify and reproduce photographs, artwork, and printed advertising pieces. Students will learn how to deal with all types of graphics and prepare them for print or web applications. Students will be exposed to techniques and skills to prepare them for employment as a photo retouch artist, or graphic designer. Students will also be exposed to vector graphic elements and how they interrelate to Adobe Photoshop.
Note: File management skills recommended.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

CIS 173 Graphics and Animation 3-0-3
This class will focus on using Adobe Animate to create graphic animations, developing buttons and menus, designing Adobe Animate web pages, sustaining a viable web site and providing user interactive web pages. Course curriculum will cover Adobe Animate User Interface (UI), using layers and timeline. Adobe Animate Objects, sound/video, ActionScript Environment, debugging and using HTML. After taking this class, students will have a good understanding of Adobe Animate design, development, interactivity, usability and how to create a user-friendly web experience.
NOTE: CIS 174 or HTML coding proficiency recommended.
Semester(s) Offered: SPRING
Requisite: None.
Type: C

CIS 174 Web Fundamentals I 3-0-3
This course will teach students to create webpages using the latest World Wide Web Consortium standards. They will create multimedia webpages with hypertext links, tables, frames, and forms. They will also be exposed to cascading style sheets, scripting programming, and dynamic content and layout.
Note: File management skills recommended.
Semester(s) Offered: ALL
Requisite: None.
Type: C

CIS 176 Web Fundamentals II 3-0-3
This course allows students to develop a large graphic multimedia website with various industry standard tools. Web authoring, image editing, and website management tools give students a real world prospective.
Note: CIS 174 or HTML coding proficiency skills recommended.
Semester(s) Offered: SPRING
Requisite: CIS 174.
Type: C

CIS 177 Web Development I 3-0-3
This course will help students develop browser-based applications using modern, professional grade tools. Tangential topics include version control with Git, basic terminal/shell commands, tooling and packaging, advanced HTML semantics and advanced CCS leveraging frameworks like Tailwind. Simple unit and integration tests will also be introduced.
Semester(s) Offered: FALL SPR
Requisite: CIS 174, CIS 180.
Type: C

CIS 178 Administrative Scripting 3-0-3
This course introduces the fundamentals of a language used to administer client and server operating systems. Students learn to use built-in cmdlets, write and execute scripts, run commands and scripts from remote network locations, and include commands that configure the operating system and manipulate network resources.
Semester(s) Offered: FALL
Requisite: CIS 180.
Type: C

CIS 179 Computer User Support for Help Desk 3-0-3
This course will enable students perusing a help desk career to provide high-quality technical customer support in any situation. They will develop the skills they need to interact effectively and appropriately with customers, whether face to face, on the telephone, or in written documents.
Semester(s) Offered: FALL
Requisite: None.
Type: C

CIS 180 Introduction to Programming 3-0-3
This course is an introduction to computer programming and software development. Students will use a visual development environment and an object oriented programming language to learn fundamental programming concepts. Various predefined object types will be introduced and students will learn how to control object attributes and behaviors as they write event procedures containing variables, conditions, and loops.
Note: File management skills recommended.
Semester(s) Offered: ALL
Requisite: None.
Type: C

CIS 185 Intro to Information Technology 3-0-3
This course provides an overview to the field of computer information systems. The history of computers, computer hardware and software, programming concepts, processing techniques, application software, file structures, data storage concepts, and data communications are included.
Semester(s) Offered: ALL
Requisite: None.
Type: T

CIS 187 Web Programming I 3-0-3
This course is designed to teach students the basic concepts and skills necessary to create programs using the Web Programming language. Programs will include various control structures and techniques used in creating interactive programs for the Web. Object oriented programming techniques will be used.
Semester(s) Offered: ALL
Requisite: One of the following CIS 165 or CIS 180 or CIS 252.
Type: C

CIS 195 Introduction to Databases 3-0-3
This course is an introduction to database concepts using relational database management systems. Students are introduced to the fundamentals of the relational model using various relational products and practical case studies. Topics include structured query language, data modeling, database design, and database administration. Products include SQL Server, MySQL, Oracle, and/or Microsoft Access.
NOTE: File management skills recommended.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

CIS 210 Web Design and Usability 3-0-3
This course familiarizes the student with those techniques necessary to develop websites that meet the organization's objectives and usability goals. The major emphasis of this course will focus on making websites more usable for all users, including those with disabilities.
Semester(s) Offered: INTERMIT
Requisite: CIS 174.
Type: C

CIS 212 Web Development II 3-0-3
This course introduces the student to web site design, authoring, standards, protocols, tools, and advanced development techniques for client-sided websites.
Semester(s) Offered: FALL
Requisite: CIS 177.
Type: C

CIS 230 Video Graphics 3-0-3
This course will teach students the introduction to digital video storytelling and editing. Students will learn the foundation for video import, export and editing functions. It will incorporate photographs, titles, graphics, animation and audio, capturing, editing, and rendering and digital video.
NOTE: File management skills.
Semester(s) Offered: FALL
Requisite: None.
Type: C

CIS 241 Visual Basic for Applications 3-0-3
The course is designed for students who want to further their database skills by learning how to identify database requirements, analyze and design database applications, and develop (program) complete applications. Students will learn project planning and development, structured design and programming techniques, testing and debugging, and documentation of actual database applications using Microsoft Access.
NOTE: (CIS 184 or CIS 252) and OAT 185 or database skills and experience with programming language recommended.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

CIS 246 Systems Development & Design 3-0-3
This course introduces the student to basic approaches and methods used in the development of integrated business information systems. Topics include systems study and analysis, specification writing, data flow diagrams, systems flowcharting, data collection techniques, file design, determination of equipment requirements, and reporting methods. Typical business information problems will be analyzed using case studies.
Semester(s) Offered: SPRING
Requisite: CIS 185 or CIS 180.
Type: C

CIS 250 C++ Programming I 3-0-3
This course is an introduction to the rules for coding computer programs in the language C++. In addition to coding, entering, running, and verifying programs, students will use library files to complete the programming process. Students will learn about basic programming concepts and object-oriented concepts. They will develop solutions to problems using selection statements and looping structures. Programs covering a variety of simple applications emphasizing array and object-oriented concepts are written, compiled and executed by students. Programs will be run using the command line and/or using VisualStudio's Integrated Development Environment depending on the language used.
Semester(s) Offered: INTERMIT
Requisite: Completion of MATH 95 or MATH 97 with a grade of "C" or better; and one of the following CIS 180, CIS 184, CIS 187, CIS 252.
Type: C

CIS 252 C# Programming I 3-0-3
This course introduces the fundamentals of the Visual C# programming language. Students develop Console and Windows Forms applications written in Visual C# using the Visual Studio development environment. Procedural programming topics include variables, control structures, built-in functions and data types, arrays, self-defined subroutines and functions written in Visual C#. Object oriented programming topics include instantiation, encapsulation, class, property, method, and constructor declarations. The course ends with an introduction to collections, and language integrated queries.
Semester(s) Offered: FALL SPR
Requisite: Completion of MATH 95 or MATH 97 with a grade of "C" or better; and one of the following CIS 180, CIS 187.
Type: C

CIS 256 Web Server Programming I 3-0-3
This course students will be introduced on how to plan design, create, and publish dynamic, database-driven websites to a web server.
Semester(s) Offered: SPRING
Requisite: CIS 174, CIS 177, CIS 180, CIS 195.
Type: C

CIS 257 Electronic Publishing 3-0-3
This course will teach students to write, assemble and design publications using Adobe InDesign electronic desktop publishing software. Students will prepare publications from four broad categories: reports and proposals; directories, price lists, and catalogs; tables, and charts; and newsletters and magazines.
NOTE: File management skills recommended.
Semester(s) Offered: SPRING
Requisite: None.
Type: C

CIS 259 Current Web/Graphic Technology 3-0-3
This course is designed to familiarize students with the most current technology and its impact on web and graphic design. Because this is such a fast-paced field, the course will continually be updated to match the needs of the changing graphic and web design occupations. Topics include content management systems, Adobe suite application integration, current graphic and web development marketing trends and current software applications including graphic design, web design and online content marketing. Interpersonal skills, teamwork, communication skills and ethical considerations applicable to today's graphic and web environment will be developed and practiced.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

CIS 262 C# Programming II 3-0-3
This course is a continuation of C# language topics, including exception handling, delegates, inheritance, polymorphism, and interfaces. Students will use the Visual C# language to develop advanced software components and class libraries in Visual Studio.
Semester(s) Offered: FALL
Requisite: CIS 252.
Type: C

CIS 263 Data Access 3-0-3
This course is an introduction to data access. Students use an integrated development environment and multiple object oriented programming languages to create user interfaces that query and manipulate data from a variety of data providers. Students will create datasets that define data tables, queries, constraints and relationships. Students will also learn techniques to query in-memory data structures, handle errors in a multi-user environment, and use visual tools to create reports.
Semester(s) Offered: SPRING
Requisite: CIS 177, CIS 262, CIS 275.
Type: C

CIS 264 ASP 3-0-3
This course teaches students how to create dynamic, data driven Web applications using Microsoft's Active Server Pages. Students use MS Visual Studio and one or more programming languages to create Web applications that execute in the context of an IIS compatible web server and are accessed through a Web browser. Students will learn to manipulate data sources using command objects, and present data using various server-side data controls. Students will also design custom server-side controls that encapsulate business logic. Additional topics include state preservation, data binding, Web services, and master pages.
Semester(s) Offered: SPRING
Requisite: CIS 177, CIS 262, CIS 275.
Type: C

CIS 266 Database Design 3-0-3
This course is a survey of logical and physical database design theory. Students learn to analyze database system requirements and produce formal requirement specifications. Students will create models of database systems by identifying various system entities and their relationships. This includes eliminating anomalies using normalization and developing entity relationship (ER) and UML diagrams that represent the system's logical structure. Additional topics include cardinality, weak and strong entities, and orthogonality. Students will also use popular data modeling software tools.
Semester(s) Offered: INTERMIT
Requisite: CIS 195.
Type: C

CIS 272 Photo Manipulation II 3-0-3
This course is designed for students to acquire an advanced knowledge of photo editing tools and techniques as they are applied to graphic design, multimedia and other studio art applications. While using these tools, students will interact and understand how to work with a client. The course will cover advanced editing, special effects, 3-D environment, understanding clients' needs, and project-based work for portfolios.
Semester(s) Offered: SPRING
Requisite: CIS 172.
Type: C

CIS 273 Advanced Graphics and Animation 3-0-3
This course is an introduction to one of the industry's most popular motion graphics software tools. Students produce animations through key framing, text, masking, mattes and 3D space. Compositing, video, film and title sequences are emphasized.
Semester(s) Offered: FALL
Requisite: None.
Type: C

CIS 274 Mobile Application Development 3-0-3
This course focuses on the techniques and tools necessary to achieve successful system implementation of mobile applications. Topics covered include managing the system implementation process, implementation design issues, how mobile application development is affected/constrained by existing software, techniques for writing quality code, techniques for testing code, understanding the role of proper documentation, and understanding, designing and managing implementation support functions.
Semester(s) Offered: FALL
Requisite: CIS 187.
Type: C

CIS 275 SQL 3-0-3
This course introduces students to Structured Query Language, the universal language used to control all relational database management systems. Students will learn to create, manipulate, and query data in a database using SQL commands.
NOTE: CIS 195 or database skills recommended.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

CIS 277 Web Technologies 3-0-3
This course is designed to familiarize students with the most current web development technology. Due to the rapid changes in this field, the course will be continually updated to match the needs of web development occupations.
Semester(s) Offered: FALL
Requisite: CIS 177.
Type: C

CIS 281 Database Programming 3-0-3
This course is designed to teach students procedural programming using a relational database product. Students use fundamental language elements, including variables and control structures, to create and work with procedures, functions, and packages within the context of a popular relational database management system.
Semester(s) Offered: INTERMIT
Requisite: CIS 180, CIS 275.
Type: C

CIS 283 Database Administration 3-0-3
This course is an introduction to database administration. Students will install and configure a relational database management system, create and remove database instances, monitor and optimize performance, import and export data, configure logical and physical storage, manage users and roles, grant and revoke user and object privileges, and backup and restore databases.
Semester(s) Offered:
Requisite: CIS 275
Type: C

CIS 284 Visual Basic Programming II 3-0-3
The course is a continuation of Visual Basic language topics, including exception handling, delegates, inheritance, polymorphism, and interfaces. Students will use the Visual Basic language to develop advanced software components and class libraries in Visual Studio.
Semester(s) Offered: INTERMIT
Requisite: CIS 184.
Type: C

CIS 287 Web Programming II 3-0-3
This course is designed to expand the subject material covered in the Java Programming I class. Students will become familiar with file and network I/O, generics, lambdas, threading/concurrency, and database access. Students will use all these to develop text-based interactive applications.
Semester(s) Offered: FALL SPR
Requisite: CIS 187.
Type: C

CIS 288 Web Server Programming II 3-0-3
This course students will use the skills learned in previous classes to plan, design, create, and publish dynamic, database-driven websites to a web server. The work completed in this course should demonstrate the student's ability to design and manage a complex website.
Semester(s) Offered: SPRING
Requisite: CIS 256.
Type: C

CIS 296 Web and Graphics Internship 3-0-3
The student will complete a special assignment with an approved employer for 160 hours of related work experience. Evaluation of the student's performance will be a cooperative effort between the employer and the instructional staff. The primary purpose of the field project is to give the student an opportunity to gain meaningful work experience. NOTE: Minimum GPA of 2.5. Students should be enrolled in the last semester of study prior to graduation.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

CIS 297 CIS Internship 1-10-3
The student will complete a special assignment with an approved employer for 160 hours of related work experience. Evaluation of the student's performance will be a cooperative effort between the employer and the instructional staff. The primary purpose of the field project is to give the student an opportunity to gain meaningful work experience. NOTE: Minimum GPA of 2.5. Students should be enrolled in the last semester of study prior to graduation.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

CIS 299 Topics in CIS Variable up to (4)-0-(4)
CIS 299 is designed to enhance the student's understanding of a particular information processing technology or application. Current technologies, software, and cases relating to the information processing environment will be presented and discussed.
Note: Requisite varies by topic.
Semester(s) Offered: ALL
Requisite: None.
Type: C

Construction Carpentry

CCA 116 Health & Safety I 1.5-1-2
This course enhances the student's ability to recognize and address hazards involved in residential, commercial, and industrial construction work. This class is designed to help meet the industry demand for a trained workforce. It addresses OSHA safety regulations and safe operating practices related to hazards in construction and the safe use of elevated work platforms.
Requisite: None.
Type: C

CCA 117 Shop Orientation 1.5-1-2
This course is an introductory course whose purpose is to help the beginning-level apprentice become proficient in basic print reading. The apprentice will also be able to recognize and address hazards involving the use of shop power tools as they construct various projects. An introduction is given to the elements of prints, such as lines, symbols, dimensions and notes. Emphasis is placed on both construction drawings (plans, elevations, sectionals, details, and specifications) and shop safety, through lecture and classroom exercises.
Requisite: None.
Type: C

CCA 118 Concrete Formwork I 1.5-1-2
This course is the first of two courses designed to introduce students to basic hands-on concrete forming applications and systems, hardware use, multiple anchoring procedures, use of concrete terminology, and provide the skills needed for psychomotor techniques in concrete construction. Students will also learn how to work with others to make the job more efficient. Students will achieve building layout procedures, establish elevations, install footings formwork, and foundation formwork. Students will also be given an opportunity to read forming diagrams.
Requisite: None.
Type: C

CCA 119 Concrete Formwork II 1.5-1-2
This course is the second of two courses designed to introduce basic hands-on concrete forming applications and systems, hardware use, multiple anchoring procedures, use of concrete terminology, and provide the skills needed for psychomotor techniques in concrete construction. Students will also learn how to work with others to make the job more efficient. Students will achieve building layout procedures, establish elevations and install foundations. Students will be given the opportunity to read forming diagrams. Students will also be introduced to commercial concrete stair forming, insulated concrete forms, piling, and commercial footings and foundations.
Requisite: None.
Type: C

CCA 126 Residential Framing I 1.5-1-2
The Residential Construction course will cover basic home building procedures for sub floor and wall framing. Emphasis will be placed on preparing students to start the lay-out process required for residential home building. Procedures followed and taught will be current field methods used by today's residential carpenters.
Requisite: None.
Type: C

CCA 127 Residential Framing II 1.5-1-2
The Residential Construction course will cover basic home building procedures including the roof framing and basic stair building. Procedures followed and taught will be current field methods used by today's residential carpenters. This class consists of classroom lecture and study, along with hands on shop time constructing a small house with stairs and a hip roof.
Requisite: None.
Type: C

CCA 128 Interior Systems Framing I 1.5-1-2
This course is the first of two courses covering interior systems for carpenters. The emphasis will be on rough framing with metal studs. Students will gain knowledge and develop skills necessary to read commercial prints, layout projects with a laser plumb, level, and square, to be used to erect their projects with metal studs. Coursework will be performed according to the latest codes and the USG Cooperation Handbook.
Requisite: None.
Type: C

CCA 129 Interior Systems Framing II 1.5-1-2
This course is the second of two courses covering interior systems for carpenters. The emphasis will be on rough framing and finishes with metal studs. In this course, students gain knowledge and skills necessary to read commercial prints, layout projects with a laser plumb, level, erect a project with metal studs, plumb, level, and square. Student projects will consist of walls with doors and borrow lights, ceiling joists that overhang to the front, soffits under overhangs, over framing to simulate a storefront, install acoustical ceilings, level, square, develop correct elevation, install drywall, drywall trims per plan, install hollow metal doors, and frames per plan. These activities will be completed according to the latest codes and USG handbook.
Requisite: None.
Type: C

CCA 165 Construction Carpentry Internship I 0-20-4
The Construction Carpentry Internship I course has been developed and established as the on-the-job component of the Construction Carpentry Apprenticeship program. This course will reinforce both knowledge and skills of the apprentice by hands-on experience relating to topics such as the interpretation of drawings and layout, rough framing, roof framing, exterior and interior finish work for the modern home or light commercial building, heavy timber construction and reinforced concrete structures. All of the on-the-job work-related activities will be performed under the direct supervision of a journeyman carpenter.
Requisite: None.
Type: C

CCA 236 Millwright Basics I 1.5-1-2
A mechanical print is a detailed plan of what is to be installed, constructed, or assembled. It contains all of the information necessary to complete a project and may include multiple views, detailed instructions, and precise information about the size and promotion of what is to be built. Reading mechanical prints correctly helps ensure that project is completed properly. This workshop discusses how to read a mechanical print. It introduces the type of prints that may be encountered by a millwright. It also describes the information provided on a print and how to use the information effectively. This course will also address OSHA safety regulations and safe work practices related to hazards in millwright work. Training will be delivered through classroom instruction and a series of hands-on exercises designed to evaluate the proficiency of the student.
Requisite: None.
Type: C

CCA 237 Millwright Basics II 1.5-1-2
Millwright Basics II class is an introduction course whose purpose is to help the beginning-level apprentice become proficient in the safe and accurate manipulation of the tools specific to millwright field. The apprentice will learn to recognize and address hazards involving the use of millwright power tools as they construct various shop projects. An introduction is given to the jobs and tasks specific to millwright trade, as modern machinery is manufactured according to very exact sizing, weight, and quality standards. For this reason, it is vital that the millwright possess the skills necessary to use precision tools necessary to perform safely and effectively on any jobsite. Training will be delivered through classroom instruction and a series of hands-on exercises designed to evaluate the proficiency of the student. Written quizzes and a final exam will also be utilized to evaluate the student's ability to identify specific tools and manipulate them to a job-like setting.
Requisite: None.
Type: C

CCA 238 Carpentry Welding Basics I 1.5-1-2
This is the first course of two courses designed to introduce students to basic hands on cutting and welding processes. Students will also learn this course will provide welding and cutting safety, welding terms and definitions, weld positions, joint design, weld symbols, weld discontinuities, base and filler metal identification. Students will be provided the skills needed for psychomotor techniques in commercial welding. Students will also learn how to work with others to make the job more efficient.
Requisite: None.
Type: C

CCA 239 Carpentry Welding Basics II 1.5-1-2
This is the second course of two whose purpose is to introduce welder qualification and certification, American Welding Society testing procedures and standards, nondestructive testing, and destructive testing. Vertical up shielded metal arc welding will be the main concentration.
Requisite: None.
Type: C

CCA 246 Safety Orientation I 1.5-1-2
This course is one of two courses designed to introduce students to the safe use of elevated work platforms or scaffolding. This course enhances the student's ability to recognize and address hazards involved in residential, commercial, and industrial construction work. This class is designed to help meet the industry demand for a trained workforce. It addresses OSHA safety regulations and safe operating practices related to hazards in construction and the safe use of scaffolding. Scaffolding Erection provides information and guidance for calculating capacity and contributory leg loads. It introduces criteria for all scaffold types and provides methods for platform construction and assembly techniques for frame, tube and clamp, and system scaffolds. It discusses scaffold access and egress and safe use guidelines, including fall protection and falling object protection. It presents the training requirements for scaffold erectors, dismantlers, and users and provides clarification of the difference between a competent person and a qualified person.
Requisite: None.
Type: C

CCA 247 Safety Orientation II 1.5-1-2
This course is intended to supplement the hands-on experience gained in instruction on rigging techniques and hardware. It introduces the subject by beginning with the history of rigging, followed by information about safety, wire rope, chain construction, slings, hardware, and knot-tying techniques. This will be followed by discussion on rigging procedures that cover common hitch configuration, hardware and sling attachments, working with different types of cranes, and directing crane movements with hand and voice signals used by riggers to signal crane operators.
Requisite: None.
Type: C

CCA 248 Interior/Exterior Trim 1.5-1-2
The Interior/Exterior trim class will cover basic procedures and proven methods of installation for vinyl siding, kitchen cabinets, and finish trim moldings. Procedures followed and taught will be current field methods used in the construction industry. This class consists of classroom work along with hands-on shop experience, although shop time will make up the majority of the class, students will learn safety, procedures, terminology, and estimating in the classroom before proceeding to the shop area.
Requisite: None.
Type: C

CCA 249 Intermediate Prints 1.5-1-2
This course will provide the student with print reading experience in residential and light commercial construction. Print reading fundamentals, construction materials, light frame construction utilized in residential, and light commercial building are covered in detail. Heavy emphasis is placed on residential, commercial building, and the Americans with Disabilities Act code requirements. The student will be introduced to job specifications and how they relate to job prints, mechanical and electrical prints, and schedules for all interior finish products. The course will prepare the student with realistic project experience for future employment.
Requisite: None.
Type: C

CCA 270 Construction Carpentry Internship II 0-20-4
The Construction Carpentry Internship II course has been developed and established as the on-the-job intermediate component of the Construction Carpentry Apprenticeship program. This course will reinforce both knowledge and skills of the apprentice at an intermediate level by hands-on experience relating to topics such as the interpretation of drawings and layout, rough framing, roof framing, exterior and interior finish work for the modern home or light commercial building, heavy timber construction and reinforced concrete structures. All of the on-the-job work-related activities will be performed under the direct supervision of a journeyman carpenter.
Requisite: None.
Type: C

CCA 290 Construction Carpentry Internship III 0-20-4
The Construction Carpentry Internship III course has been developed and established as the on-the-job advanced component of the Construction Carpentry Apprenticeship program. This course will reinforce both knowledge and skills of the apprentice at an advanced level by hands-on experience relating to topics such as the interpretation of drawings and layout, rough framing, roof framing, exterior and interior finish work for the modern home or light commercial building, heavy timber construction and reinforced concrete structures. All of the on-the-job work-related activities will be performed under the direct supervision of a journeyman carpenter.
Requisite: None.
Type: C

CCA 299 Special Topics in Construction Carpentry Variable up to (4)-8-(4)
This course is designed to familiarize students with special topics or problems in the Construction Cement Masons' field, to provide them with knowledge and ability to deal effectively with those topics or problems in relation to their specific requirements.
Requisite: Department consent.
Type: C

Construction Cement Mason

CMA 113 Construction Cement Mason Apprenticeship I 3-2-4

This course will acquaint the student with some of the practical knowledge of the cement masons trade. Material covered in this first course will include information about job opportunities, concrete materials and quality mix concrete.
Requisite: None.
Type: C

CMA 114 Introduction To Construction Plastering 3-2-4

This course will explore exterior and interior plastering systems common to the industry. Instruction and demonstration will introduce the student to the applied math, tools, and safety regulations of all new employees.
Requisite: None.
Type: C

CMA 123 Construction Cement Mason Apprenticeship II 3-2-4

This course will introduce the student to information concerning tools, placing and finishing concrete slabs, how to estimate during hot weather, and concreting in cold weather.
Requisite: None.
Type: C

CMA 124 Construction Plastering Materials & Systems 3-2-4

This course is an extension of CMA 114. Materials will include working conditions, exterior insulation and finishing systems, backing materials and an overview of scaffolding systems.
Requisite: None.
Type: C

CMA 133 Construction Cement Mason Apprenticeship III 3-2-4

This course is designed to give the second year apprentice practical experience in handling transit level and laying out buildings. The care and use of the hand tools will also be covered.
Requisite: None.
Type: C

CMA 134 Construction Plastering Principles 3-2-4

This course is an extension of CMA 124. Materials will include working conditions, exterior insulation and finishing systems, backing materials and an overview of scaffolding systems.
Requisite: None.
Type: C

CMA 144 Construction Plastering Applications 3-2-4

This course will introduce materials used in construction plastering. Materials will include veneer plaster, grouting, and fireproofing.
Requisite: None.
Type: C

CMA 245 Construction Cement Mason Apprentice IV 3-2-4

This course is designed to give the second-year apprentice practical knowledge in math, concrete figuring and blueprint reading. Also included will be job-site safety and safe work practice.
Requisite: None.
Type: C

CMA 254 Plaster Substrates and Finishes 3-2-4

This course will introduce the student to substrates and various plastering materials, application and mixing procedures.
Requisite: None.
Type: C

CMA 255 Construction Cement Mason Apprenticeship V 3-2-4

This course will include information concerning drafting, types of form layouts and the setting of forms. The course will also include new materials and methods developed for the industry.
Requisite: None.
Type: C

CMA 264 Advanced Plastering Techniques 3-2-4

This course is a continuation of CMA 254. It will cover plastering finishes, applying plaster and the finishing techniques for each type of application. An introduction to blueprint reading will also be included.
Requisite: None.
Type: C

CMA 265 Construction Cement Mason Apprenticeship VI 3-2-4

This course will acquaint the student with practical knowledge of cement troweling machines, CMT paving and blueprint reading. A short course in first aid will also be included.
Requisite: None.
Type: C

CMA 274 Principles of Plaster Material 3-2-4

This course will include cement plaster on metal lath cement block and bricks, below grade foundations. It will include an introduction to molding and ornamentation using plaster.
Requisite: None.
Type: C

CMA 284 Plaster Molds and Ornamentation 3-2-4

This course will include an introduction to plaster ornamentation using various techniques. It will also include Blueprint Reading and Estimating for plasterers.
Requisite: None.
Type: C

CMA 299 Special Topics for Cement Masons Variable up to (4)-(8)-(4)

This course is designed to familiarize students with special topics or problems in the construction cement masons' field, to provide them with knowledge and ability to deal effectively with those topics or problems in relation to their specific requirements.
Requisite: None.
Type: C

Construction Ironworker

IWA 119 Construction Ironworker Apprentice I 3-2-4

The ironworker apprentice in the first course is introduced to the basic information about his trade. Materials covered will include basics in blueprint reading, welding, safety and rigging.
Requisite: None.
Type: C

IWA 129 Construction Ironworker Apprentice II 3-2-4

This course is basically an extension of the first semester course. More information is given in blueprint reading, welding, safety and rigging.
Requisite: None.
Type: C

IWA 139 Construction Ironworker Apprentice III 3-2-4

This is the first section course of an apprentice's second year training. Instruction will be in trade math, blueprints, structural, safety, welding and rigging.
Requisite: None.
Type: C

IWA 249 Construction Ironworker Apprentice IV 3-2-4
This is the second semester of the apprentice's second year training. This instruction will include information in trade math, blueprints, structural, safety, welding and rigging. Although the units of study are the same, the material is more detailed and technical each semester.
Requisite: None.
Type: C

IWA 259 Construction Ironworker Apprentice V 3-2-4
This course is the first semester of the ironworker's third year. The material covered will be included in three basic units of instruction. These units of instruction are blueprints and drawings, welding, structural, reinforcing, safety and ornamental ironwork.
Requisite: None.
Type: C

IWA 269 Construction Ironworker Apprentice VI 3-2-4
This course is the second semester of the ironworker's third year. This course completes the apprentices formal classroom related training. The units of instruction will be the same as used in IWA 259. The material offered in this course, along with new materials, will include a review of the five previous courses of study.
Requisite: None.
Type: C

IWA 279 Construction Ironworker Apprentice VII 3-2-4
This course will supplement the fourth year apprentices on-site work experience with classroom instruction. The course will include reading blueprints for metal buildings; advanced rigging, welding and safety as they relate to metal buildings will also be addressed.
Requisite: None.
Type: C

IWA 289 Construction Ironworker Apprentice VIII 3-2-4
This course will supplement the fourth year apprentices on site work experience with classroom instruction. The course will include advanced blueprint reading, commercial glass installation, commercial fencing, welding and safety training.
Requisite: None.
Type: C

IWA 299 Special Topics in Ironworking Variable up to (4)-(8)-(4)
This course is designed to familiarize students with special topics or problems in the Construction Ironworkers' field, to provide them with knowledge and ability to deal effectively with those topics or problems in relation to their specific requirements.
Requisite: None.
Type: C

Construction Management

CMT 100 Introduction to Construction 2-0-2
This course introduces students to Construction Industry and Trends, Design and Construction Project Phases, Construction Contracts, Project Management, Estimating, Scheduling, Project Controls, Project Administration, Quality Control and Health/Safety, BIM and Sustainability.
Requisite: None.
Type: C

CMT 102 Construction Documents 2-2-3
This course introduces students to construction contract documents. Emphasis is placed on where to look for and interpret information necessary to construct a building and associated site work. The course exposes students to several residential and light commercial construction projects. Bluebeam REVU software will be introduced and used to mark-up PDF drawings.
Requisite: None.
Type: C

CMT 103 Construction Materials & Methods I 3-0-3
This course is a comprehensive study of the materials and methods used in building construction. Emphasis is placed on structural materials including soil, wood, steel, masonry and concrete.
Requisite: None.
Type: C

CMT 105 Computer Applications 2-2-3
Building Information Modeling (BIM) allows construction professionals to communicate with the AEC community and workforce when virtual projects are a project requirement. BIM modeling results in 3-D virtualized buildings that contain information typically found in plans and specifications, allowing designers and constructors to communicate freely without confined barriers that result in adversarial relationships between owner, builder and designer. BIM's virtual world brings us an unprecedented amount of control and knowledge before the shovel hits the ground. The first semester of BIM introduces students to steps necessary for constructing a 3-D model using Autodesk REVIT software. 2-D projects including plans and specifications of constructed buildings will be used for modeling and identification of assembly parts and products. The resulting 3-D model will provide necessary experience and familiarity for students to continue with the second semester of BIM.
Requisite: None.
Type: C

CMT 145 Building Trades Craft Survey I 3-2-4
The construction students will explore the basic trades' skills required to complete a modern building project. The course will survey carpentry, ironwork, laborer's work, sheetmetal and concrete finishing.
Requisite: None.
Type: C

CMT 146 Building Trades Craft Survey II 3-2-4
The construction students will explore the basic trades' skills required to complete a modern building project. The course will survey painting, bricklaying, electrical and plumbing/pipefitting.
Requisite: Concurrent enrollment in or completion of CMT 145 or Coordinator approval.
Type: C

CMT 147 Energy Auditor 3.5-1-4
This course provides students with training in preparation for the Building Performance Institute written exam for the BPI Building Analyst Professional Certification. This course is based on the core competencies for the Weatherization Assistance Program developed by the Weatherization Trainers Consortium. The course also is compliant with the BPI Building Analyst Professional Standards. Instruction will include principles of energy, energy and the building shell, air leakage, insulation, windows and doors, heating, cooling, water heating, health and safety and energy audits. Students will complete the following coursework for seminars and certifications in: Lead for Renovation EPA and OSHA 10-Hour Card. The BPI certification written test is given the following day after the classroom training is completed. The BPI certification is contingent upon the successful completion of one field audit.
Requisite: Department consent
Type: C

CMT 148 Weatherization Specialist 3.5-1-4
This course provides students with training in preparation for the Building Performance Institute written exam for the BPI Envelope Professional Certification or Residential Building Envelope Whole House Air Leakage Control Installer. This course also prepares students for the BPI field exam portion of the certification. This course is based on the review core competencies for the Weatherization Assistance Program developed by the Weatherization Trainers Consortium. The course also is compliant with the BPI Building Analyst Professional Standards. Instruction will include review principles of energy, energy and the building shell, air leakage, insulation, windows and doors, heating, cooling, water heating, health and safety and energy audits. The BPI certification is contingent upon the successful completion of one field audit and successful completion of written examination.
Requisite: Department consent
Type: C

CMT 149 Weatherization II 0.5-2-1.5
This course provides students with training in preparation for the Building Performance Institute oral and field practicum evaluation for RBE-WHALCI certification. This course is compliant with BPI RBE-WHALCI standards. Instruction will include insulation, air leakage, duct insulation, duct leakage, air barriers, IC and non-IC rated lighting, door seals and gaskets, and material selection for proper dams. The BPI certification oral and practicum exam is given within 14 days of completion of the course. The BPI certification is contingent upon the successful completion of oral and field practicum. The course will also in OSHA Health and Safety training.
Requisite: Department consent
Type: C

CMT 150 Construction MGT Internship I 0-20-3
This course provides experience in a construction management discipline, including, but not limited to: Safety, Quality Control, Scheduling or Estimating. Students must be employed in a construction related field and monitored by experienced supervisory personnel. Program Coordinator approval is required.
Requisite: Department consent
Type: C

CMT 151 Construction MGT Internship II 0-20-4
Provides experience in construction management. Each student will be required to be employed in a construction related field. The student will be monitored by experienced supervisory personnel. The student will be required to document and work a minimum of 240 to 320 clock hours per semester.
Requisite: Department consent
Type: C

CMT 152 Construction Materials & Methods II 3-0-3
A comprehensive study of the materials and methods used in building construction. Emphasis on closure and finishes.
Requisite: None.
Type: C

CMT 153 Construction Estimating 2-2-3
This course introduces students to the estimating process. Emphasis is placed on plan interpretation and breaking down a project into individual "scopes of work" where individual pieces are quantified and priced. Microsoft EXCEL is used to construct an integrated database including a summary sheet and a number of detail sheets.
Requisite: CMT 102.
Type: C

CMT 200 Advanced Blueprint Reading For Building Trades I 3-0-3
The class emphasizes an understanding of the skills, the application and coordination of the contract documents that are used for large building and civil construction projects. Architectural documents of current building projects, as well as engineering drawings and specs will be reviewed and studied in detail.
Requisite: CMT 102.
Type: C

CMT 201 Construction MGT Internship III 0-20-4
Provides experience in construction management. Each student will be required to be employed in a construction related field. The student will be monitored by experienced supervisory personnel. The student will be required to document and work a minimum of 240 to 320 clock hours per semester.
Requisite: Department consent
Type: C

CMT 204 Basic Engineering for Builders 3-0-3
The course will provide the student with a basic understanding of engineering principles that are used to build a building.
Requisite: CMT 102, CMT 103, GT 105.
Type: C

CMT 205 International Building Code 3-0-3
The scope of this code covers all buildings except detached one- and two-family dwellings and townhouses not more than three stories in height. This comprehensive code features time-tested safety concepts, structural, and fire and life safety provisions covering means of egress, interior finish requirements, comprehensive roof provisions, seismic engineering provisions, innovative construction technology, occupancy classifications, and the latest industry standards in material design. It is founded on broad-based principles that make possible the use of new materials and new building designs.
Requisite: CMT 102, CMT 103, CMT 152.
Type: C

CMT 206 Building Systems 3-0-3
This course introduces students to mechanical, electrical and plumbing systems. Students will develop basic vocabulary and understanding of how these commonly used systems function. Related building and specialty codes, regulatory requirements, commissioning and sustainable building principles will be discussed.
Requisite: CMT 102, CMT 103 CMT 152.
Type: C

CMT 242 OSHA Certification 1-0-1
The OSHA Outreach Training Program for Construction Industry provides training for entry-level workers and employers on recognition, avoidance, abatement, and prevention of safety and health hazards in workplaces in the Construction Industry. Supplemental topics will be added to ensure student lab safety awareness. This program also provides information regarding workers" rights, employer responsibilities, and how to file a complaint. Through this training, OSHA helps to ensure that workers are more knowledgeable about workplace hazards and their rights. Students who successfully complete this course receive an OSHA 10-Hour Construction or General Industry wallet card from the OSHA Training Institute (OTI).
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

CMT 243 Construction Safety 2-0-2
OSHA 10 Training topics for entry-level work force will be expanded upon through discussion, research and a major writing assignment. Emphasis will be placed on recognition, avoidance, abatement, and prevention of safety and health hazards in the workplace. Additional information related to worker rights, employer responsibilities and how to file a complaint will emphasized.
Semester(s) Offered: FALL SPR
Requisite: Completion of or concurrent enrollment in CMT 242.
Type: C

CMT 244 Occupational Safety & Health I 3-0-3
Familiarizes students with a total accident prevention program and safety movement. Concepts of safety education with special emphasis placed on obligations, responsibilities, principles and practices necessary in understanding accident prevention. For those individuals interested in or having direct responsibilities for the implementation and/or operation of an accident-prevention program.
Requisite: None.
Type: C

CMT 251 Construction MGT Internship IV 0-20-4
Provides experience in construction management. Each student will be required to be employed in a construction related field. The student will be monitored by experienced supervisory personnel. The student will be required to document and work a minimum of 240 to 320 clock hours per semester.
Requisite: Department consent
Type: C

CMT 257 Construction Planning & Scheduling 2-2-3
This course introduces students to the scheduling process. Emphasis is placed

on plan interpretation and creation of a logical sequence of events resulting in an efficiently built project. Microsoft Project is the primary tool used to build construction project schedules for several light-commercial projects.
Requisite: None.
Type: C

CMT 258 Contracts & Claims 3-0-3
This course introduces students to the legal aspects of construction and problems that can arise and result in litigation. Each topic presents one or more case studies used to reinforce concepts related to the construction process. Topics include contract language, liability, tort liability, contract documents and breach of contract.
Requisite: None.
Type: C

CMT 265 Advanced Computer Applications 2-2-3
This course is a continuation of CMT 105 and introduces students to 4-D (schedule) and 5-D (cost) associated with the virtual 3-D model. A 3-D model is used to analyze data for the purpose of system integration, clash detection, constructability modeling, estimating, scheduling and other related pre-construction tasks. Autodesk REVIT and Navisworks are introduced as the primary tools for this course.
Requisite: CMT 105.
Type: C

CMT 268 Project Administration 2-0-2
This course is a comprehensive overview of the building life cycle. Construction process documentation is reinforced through careful study of contractual requirements and industry standard guidelines used to create construction documents.
Requisite: CMT 153.
Type: C

CMT 299 Problems in Construction Variable up to (4)-(8)-(4)
Application of construction principles to specific problems through case studies, special projects or problem-solving procedures.
Requisite: None.
Type: C

Construction Painting & Decorating

PDA 117 Painting & Decorating Apprentice I 3-2-4
This course is designed to introduce the first-year apprentice to painting and decorating. He/she will be given information and instruction in the fundamentals of the trade to supplement his/her on-the-job training.
Requisite: None.
Type: C

PDA 127 Painting & Decorating Apprentice II 3-2-4
This course is designed to introduce the first-year apprentice to the painting and decorating trade. He/she will be given information and instruction in the fundamentals of the trade to supplement his/her on-the-job training. This course is an extension of PDA 117.
Requisite: None.
Type: C

PDA 137 Painting & Decorating Apprentice III 3-2-4
This course is designed to provide the more experienced apprentice instruction in the phase of the trade that requires detailed information about materials and their uses. The second-year course is divided into two parts. Material covered will include color, tinting, graining, dyes and sealers.
Requisite: None.
Type: C

PDA 147 Painting & Decorating Apprentice IV 3-2-4
This course is designed to give the more experienced apprentice instruction in the phases of trade that require detailed information about materials and their uses. Material to be covered will include wall preparation, scaffolding and safety.
Requisite: None.
Type: C

PDA 257 Painting & Decorating Apprentice V 3-2-4
This third year course is designed for the more experienced apprentice. Information covered in this course will include procedures seldom used in the trade. Blueprint reading and estimating will also be covered. This will be a two-semester course.
Requisite: None.
Type: C

PDA 267 Painting & Decorating Apprentice VI 3-2-4
Information covered in this course will include procedures seldom used in the trade. Blueprint reading and estimating will also be covered. This course is an extension of PDA 257.
Requisite: None.
Type: C

PDA 278 Painting & Decorating Apprentice VII 3-2-4
This course will supplement the fourth-year apprentices on-site work experience with classroom instruction. The course will include blueprint reading, types of wall paper and their application, power equipment used for painting, specialized painting techniques and safety training.
Requisite: None.
Type: C

PDA 288 Painting & Decorating Apprentice VIII 3-2-4
This course will supplement the fourth-year apprentices on-site work experience with classroom instruction. The course will include power cleaning, hazardous waste collections/disposal, dry wall taping and finishing, sign painting, estimation, and safety.
Requisite: None.
Type: C

PDA 299 Special Topics in Construction Painting Variable up to (4)-(8)-(4)
This course is designed to familiarize students with special topics or problems in the pipefitting/plumbers' field, to provide them with knowledge and ability to deal effectively with those topics or problems in relation to their special requirements.
Requisite: None.
Type: C

Construction Sheetmetal

SMA 114 Construction Sheetmetal Apprenticeship I 3-2-4
This course will acquaint the student with some of the basic knowledge of the sheetmetal trade. Materials covered in the first course will include information about tools, equipment and pattern development.
Requisite: None.
Type: C

SMA 124 Construction Sheetmetal Apprenticeship II 3-2-4
This course will introduce the student to more related information about tools, equipment, sheetmetal fittings and their fabrication.
Requisite: None.
Type: C

SMA 134 Construction Sheetmetal Apprenticeship III 3-2-4
This course is designed to give the second-year apprentice practical experience working with shop-work problems. Items covered will include layout and welding of sheetmetal fittings.
Requisite: None.
Type: C

SMA 144 Construction Sheetmetal Apprenticeship IV 3-2-4
This course is designed to give the second-year apprentice practical experience working with shop-work problems. Items covered will include round layouts, 45- and 90-degree tees, tools, and equipment.
Requisite: None.
Type: C

SMA 154 Sheet Metal Applications 0-2-1
This course is an extension of SMA 114 and will include the use of basic hand tools common to the trade, and the construction and fabrication of sheet metal objects with the use of simple pattern development templates.
Requisite: None.
Type: C

SMA 164 Sheet Metal Duct Design 0-2-1
This course is an extension of SMA 124 and will include the use of hand tools common to the trade and the construction of fittings and duct work corrections common to the sheet metal trade.
Requisite: None.
Type: C

SMA 174 Sheet Metal Fastening Systems 0-2-1
This course is an extension of SMA 134 and will include the use of welding and soldering to fabricate sheet metal fittings.
Requisite: None.
Type: C

SMA 184 Sheet Metal Construction 0-2-1
This course is an extension of SMA 144 and will include pattern development for 45- and 90-degree elbows and fittings.
Requisite: None.
Type: C

SMA 214 Sheet Metal Caulks and Sealant 0-2-1
This course is an extension of SMA 264 and will include the application of brazing as a water seal along with the type of sealing materials.
Requisite: None.
Type: C

SMA 224 Sheet Metal Layout 0-2-1
This course is an extension of SMA 274 and will include triangulation pattern, development problems, and fabrication using MIG welding.
Requisite: None.
Type: C

SMA 234 Sheet Metal Installation 0-2-1
This course is an overview of previous work and a review of previous experience. Activities will include pattern development, welding, brazing and fabrication.
Requisite: None.
Type: C

SMA 244 Sheet Metal Pattern Development 0-2-1
This course is an extension of SMA 254 and will include problems in radial line development of cones and intersections. Gas tungsten arc welding will be used for fastening.
Requisite: None.
Type: C

SMA 254 Construction Sheetmetal Apprenticeship V 3-2-4
This course is designed to give the third-year apprentice practical shop work problems concerning radial line development and heli-arc welding.
Requisite: None.
Type: C

SMA 264 Construction Sheetmetal Apprenticeship VI 3-2-4
This course is designed to give the third-year apprentice practical shop work problems concerning welding, brazing and radial line pattern development.
Requisite: None.
Type: C

SMA 274 Construction Sheetmetal Apprenticeship VII 3-2-4
This course is designed to give the apprentice experience and knowledge in new materials and methods used in the sheetmetal trade. Layout problems involving triangulation will be given. MIG welding, cutting and brazing will also be covered.
Requisite: None.
Type: C

SMA 284 Construction Sheetmetal Apprenticeship VIII 3-2-4
This course will include a review of all work covered in the previous seven semesters of apprenticeship. It will also include shortcut methods of triangulation layout. A welding test will also be given.
Requisite: None.
Type: C

SMA 299 Special Topics in Construction Sheetmetal Variable up to (4)-(8)-(4)
This course is designed to familiarize students with special topics or problems in the construction sheetmetal workers' field, to provide them with knowledge and ability to deal effectively with those topics or problems in relation to their specific requirements.
Requisite: None.
Type: C

Culinary Arts and Food Management

CUL 101 Introduction to Culinary Arts 1-0-1
This course is designed to introduce students to the food service industry and the culinary arts program at SWIC. Students will explore the importance of hospitality and culinary organizations such as the National Restaurant Association Educational Foundation and American Culinary Federation and what the organizations mean to their education/industry career. Class time will focus on uniform requirements, knife skills, equipment safety training, myculinarylab and material data safety sheets training. An understanding of program expectations will be outlined. This course must be completed with a passing grade before students can enroll in lab classes.
Requisite: None.
Type: C

CUL 105 Food, Beverage & Labor Cost Control 3-0-3
The course will examine cost control techniques of successful and effectively operated hospitality businesses. The primary focus will be on food, beverage, labor and supply controls. Topics include numerous operational formulas designed to enable effective control over food, beverage, and supply inventories, effective and profitable pricing controls, sales controls, and labor controls. The course will detail various aspects of auditing an establishment based on standard operational practices and costing methods.
Requisite: Basic Algebra skills recommended, CUL 101.
Type: C

CUL 110 Professional Food Preparation I 3-4-5
Introduction to the kitchen and cooking. Lectures focus on safety, sanitation, kitchen equipment operations, basic cooking, and basic food science. Lab work includes knife skills, lunch and dinner preparation, stocks and sauces, and teamwork in a kitchen environment. Uniform with chef's toque, knife(s), and thermometer are requirements for this course. NOTE: Students who have not completed CUL 116 but possess a valid ServSafe® Food Protection Manager Certification or Illinois Food Handler Certification should contact the program coordinator for CUL 116 credit.
Requisite: CUL 101, CUL 116 or concurrent enrollment.
Type: C

CUL 111 Professional Food Preparation II 3-4-5
This course is a continuation of CUL 110 Professional Food Preparation I. Through the use of lab and lecture, students will move to more complex menus, including meats, poultry and seafood. They will study the proper storage and preparation of these items. A group, class project will expose the student to menu planning, preparation and presentation of a multi-course meal. NOTE: Students who have not completed CUL 116 but possess a valid ServSafe® Food Protection Manager Certification or Illinois Food Handler Certification should contact the program coordinator for CUL 116 credit.
Requisite: CUL 110, CUL 116.
Type: C

CUL 112 Advanced Professional Cooking 2-2-3
Advanced Professional Cooking is an advanced food preparation course designed to help prepare students for careers and to help professional cooks advance their careers in the culinary arts as practiced today in top quality American food service operations.
Requisite: CUL 110, CUL 111, CUL 116.
Type: C

CUL 113 Soups, Stocks, and Sauces 1-4-3
This course is designed for students who are seeking to expand their knowledge and practical skill in soup, stock, and sauce preparation. Students will learn a variety of preparation methods and how each particular soup, stock, and/or sauce relates to different dining scenarios. Students will receive detailed instruction in understanding complex soup, stock, and sauce recipes and the food science underlying each item's creation. NOTE: Students who have not completed CUL 116 but possess a valid ServSafe® Food Protection Manager Certification or Illinois Food Handler Certification should contact the program coordinator for CUL 116 credit.
Requisite: CUL 101, CUL 116 or concurrent enrollment.
Type: C

CUL 114 Garde Manger 1-4-3
This course is designed for those students who are seeking to expand their knowledge of the art and craft of the cold kitchen. Students will learn preparation methods for cold sauces, soups, salads, forcemeats, sausages, pates, terrines, cured and smoked foods. Cheeses, hors d'oevres, appetizers, relishes, compotes, and condiments will be prepared, presented, and tested for taste. Various presentations will be covered. NOTE: Students who have not completed CUL 116 but possess a valid ServSafe® Food Protection Manager Certification or Illinois Food Handler Certification should contact the program coordinator for CUL 116 credit.
Requisite: CUL 110, CUL 111, CUL 116.
Type: C

CUL 115 Table Service 2-0-2
This course is dedicated to various forms of table service. Everything from general job descriptions to the specific placement of silver and glassware. Learn how the French and Russians dine. Experience the art of napkin folding and other final touches that give tables that special flair. Coursework includes importance and development of job descriptions, hand-on training and developing training workshops aimed at production of service. NOTE: Students who have not completed CUL 116 but possess a valid ServSafe® Food Protection Manager Certification or Illinois Food Handler Certification should contact the program coordinator for CUL 116 credit.
Requisite: CUL 101, CUL 116 or concurrent enrollment.
Type: C

CUL 116 Food Service Sanitation 1-0-1
This course is designed to educate students in the importance of sanitation in food preparation. Topics emphasized are safe food environments, pest control and local, state, and federal codes. An additional fee of $35 must be paid to the State of Illinois upon satisfactory completion of the course.
Requisite: None.
Type: C

CUL 117 Housekeeping Management I 3-0-3
Housekeeping Management is the fundamental course in the study of managing a housekeeping facility in hotels and hospitals. The course is designed to introduce the student to the management theories that are needed to supervise the staff of a hotel or hospital.
Requisite: None.
Type: C

CUL 118 Fundamentals of Meat Processing 1-4-3
This course is designed for students who are seeking to expand their knowledge and practical skill in meats identification, analysis, and cutting. Students will learn a variety of preparation methods for beef, lamb, poultry, pork, and fish. Detailed instruction in understanding desired characteristics of particular products, proper form, grading, and to particular meats will be discussed in detail.
Requisite: CUL 101, CUL 116 or concurrent enrollment.
Type: C

CUL 123 Legal Aspects of Food Service Management 3-0-3
This course is designed for those students who are seeking a down-to-earth explanation of legal subjects relevant to food service. The course will focus on employee relations, food liability, liquor liability, patron civil rights and federal regulations that are of concern to food service managers.
Requisite: None.
Type: C

CUL 127 Baking & Pastry 1-2-2
A general introduction to the baking of breads, cookies, cakes, pastry dough, puff pastry, danish and eclairs. Learn how to prepare beautiful and tempting baked goods. NOTE: Students who have not completed CUL 116 but possess a valid ServSafe® Food Protection Manager Certification or Illinois Food Handler Certification should contact the program coordinator for CUL 116 credit.
Requisite: CUL 101, CUL 116 or concurrent enrollment.
Type: C

CUL 128 Advanced Professional Baking 1-2-2
This course provides students with challenging baking and pastry concepts and emphasis on complex recipes. The course focuses on the study and preparation of breads, tortes, cake decorating, cheesecakes, custards, puddings, Bavarian creams, mousses and other baked goods. Through lecture and hands-on application, students will prepare recipes from scratch. They will study proper preparation, scaling, measuring and mixing techniques. An understanding of numerous types of flours, yeasts and the ability to troubleshoot problems will be developed through demonstration and laboratory exercises. NOTE: Students who have not completed CUL 116 but possess a valid ServSafe® Food Protection Manager Certification or Illinois Food Handler Certification should contact the program coordinator for CUL 116 credit.
Requisite: CUL 101, CUL 116, CUL 127.
Type: C

CUL 129 Cake Decorating I 1-2-2
This course is designed to expose students to the proper procedure for producing traditional and contemporary cakes. Emphasis will be placed on decoration of cakes including proper use of a pastry bag and various tips, writing with chocolate, use of piping and other techniques. Butter cremes, royal icing and moldable icing (fondant) will be emphasized in this class. Additional hours outside regularly scheduled class time will be required to complete projects. NOTE: Students who have not completed CUL 116 but possess a valid ServSafe® Food Protection Manager Certification or Illinois Food Handler Certification should contact the program coordinator for CUL 116 credit.
Requisite: CUL 101, CUL 116 or concurrent enrollment.
Type: C

CUL 130 Cake Decorating II 1-2-2
This course is designed to build upon techniques learned in Cake Decorating I. Emphasis will be placed on intermediate and advanced techniques with buttercream, royal icing and moldable icing (fondant), as well as contemporary cake sculpting techniques. NOTE: Students who have not completed CUL 116 but possess a valid ServSafe® Food Protection Manager Certification or Illinois Food Handler Certification should contact the program coordinator for CUL 116 credit.
Requisite: CUL 101, CUL 116, CUL 129.
Type: C

CUL 131 Experimental Baking Techniques 1-2-2
This course provides the opportunity to discover functions of bakeshop ingredients through lab experiments and explore the chemical and physical changes in foods that occur during baking. Topics include wheat and grains, sugar and sweeteners, fats and oils, egg products, leavening agents and dairy products. NOTE: Students who have not completed CUL 116 but possess a valid ServSafe® Food Protection Manager Certification or Illinois Food Handler Certification should contact the program coordinator for CUL 116 credit.
Requisite: CUL 101, CUL 116 or concurrent enrollment.
Type: C

CUL 132 Ice Cream & Frozen Desserts 1-2-2
This course is designed for those students who are seeking to expand their knowledge of the art and craft of frozen desserts. Students will learn how to prepare assorted frozen classical and non-traditional desserts with proper methods and techniques. NOTE: Students who have not completed CUL 116 but possess a valid ServSafe® Food Protection Manager Certification or Illinois Food Handler Certification should contact the program coordinator for CUL 116 credit.
Requisite: CUL 101, CUL 116 or concurrent enrollment.
Type: C

CUL 133 Sustainable Kitchen 1-2-2
This course focuses on the knowledge, skills and techniques needed to create a sustainable commercial kitchen. Participants will learn to utilize an indoor (hydroponic herb garden) and outdoor (raised bed herb garden) which will supply fresh herbs for the culinary lab classes as well as microgreens for salad applications. Students will create and maintain kitchen waste programs for composting. They will explore the application of rain barrel irrigation for outdoor gardens. Culinary plant(s) identification and commercial kitchen usage along with local product availability will introduce students to industry methods and trends to include sustainable opportunities in food production.
Requisite: None.
Type: C

CUL 135 Food Truck/Mobile Catering I 1-2-2
This course is dedicated to the fundamental of owning and operating a food truck or cart. It familiarizes students with the tools needed to formulate a food truck concept and turn it into a standardized plan. The focuses is on menu planning, truck /cart design and location, federal/state/local regulations, and licenses and permits. Learn to design, cost and budget for a mobile food unit, while developing the necessary skills for succeeding in the foodservice segment of mobile food ownership. Case studies, field trips and established food truck businesses all aid you in designing your own mobile food unit.
Requisite: CUL 101, CUL 116.
Type: C

CUL 200 Culinary Competition Techniques 1-2-2
This course is designed to help individuals develop and practice skills necessary for successful completion of American Culinary Federation competencies for a certified culinarian. The course will focus on competition techniques established in accordance with the American Culinary Federation guidelines. Course assignments will focus on culinary skills in food production, garde manger, and baking as outlined by the ACF competencies for practicums.
Requisite: CUL 110, CUL 111, CUL 114.
Type: C

CUL 206 Menu Development & Pricing 3-0-3
This course will teach you how to create effective menus utilizing various formats, colors, sizes and menu items. This course will cover development and pricing for salad bars, buffets, and general catering events. By understanding menu pricing, find out how profitability can be increased.
Requisite: Basic Algebra skills recommended, CUL 101.
Type: C

CUL 209 Hospitality Management 3-0-3
This course is designed to assist students in becoming better managers and to put them at the leading edge of the hospitality industry. Students will study such topics as supervision, communication, training, motivation, decision making and a variety of other leadership qualities that are related to the hospitality industry.
Requisite: None.
Type: C

CUL 212 Food Service Purchasing 3-0-3
This course is designed to give the student fundamental answers to the problems encountered in food service purchasing. The course will address development of purchasing specifications, vendor sourcing, sourcing quality, quality control, pricing, inventory control, receiving and storage and other aspects involved with food service purchasing.
Requisite: Basic Algebra skills recommended, CUL 101.
Type: C

CUL 217 Equipment Layout and Design 3-0-3
Survey of the basic requirements needed for effective layout. Students learn about selecting equipment based on quality, specifications and use requirements. Other items such as facility construction, training guides, equipment operation and maintenance are also covered.
Requisite: None.
Type: C

CUL 228 Culinary Nutrition for Food Service 3-0-3
This course is designed to help individuals develop a better understanding of the importance of nutrition. Communicating with nutritional specialists is also an important part of food preparation. Items to be covered will include nutrition in industry, eating habits, recipe development and trends in nutrition.
Requisite: None.
Type: C

CUL 230 Internship I 0-15-3
The student will be assisted in finding a position in a hands-on field experience of 240 hours. This will enable the student to apply classroom theories to actual situations. Students will be graded on participation and on written reports which describe their experience.
Requisite: Department consent
Type: C

CUL 231 Internship II 0-15-3
The student will be assisted in finding a position in a hands-on field experience of 240 hours. This will enable the student to apply classroom theories to actual situations. Students will be graded on participation and on written reports which describe their experience.
Requisite: Department consent
Type: C

CUL 232 Advanced Decorating Techniques 2-4-4
This course provides students with challenging baking and pastry concepts and emphasis on complex recipes. The course focuses on the study of advanced methods and mediums used in the pastry art industry. Through lecture and hands-on application, students will prepare recipes from scratch. They will study proper preparation, scaling, measuring and mixing techniques. This course will focus on an understanding of numerous techniques in sugar, chocolate, moldable mediums, gelatin designs, advanced fondant, gum paste, marzipan, royal icing and pastillage.
Requisite: CUL 101, CUL 116, CUL 129, CUL 130.
Type: C

CUL 233 Contemporary Plating Techniques 1-2-2
This course is designed for those students who are seeking to expand their knowledge of the art and craft of food presentations. Focus of class will elevate student's foundational knowledge on presentation of food mediums. They will be introduced to different styles and cultural influences in plating techniques. NOTE: Students who have not completed CUL 116 but possess a valid ServSafe® Food Protection Manager Certification or Illinois Food Handler Certification should contact the program coordinator for CUL 116 credit.
Requisite: CUL 101, CUL 110, CUL 116, CUL 128.
Type: C

CUL 234 Breads, Rolls & Pastries 1-2-2
This course provides students with challenging baking and pastry concepts with emphasis on bread and pastry recipes. The course focuses on the study and preparation of breads, tortes, pastries, pies, mousses and other baked goods. Through lecture and hands-on application, students will prepare recipes from scratch. They will study proper preparation, scaling, measuring and mixing techniques. An understanding of numerous types of flours, yeasts and the ability to troubleshoot problems will be developed through demonstration and laboratory exercises. NOTE: Students who have not completed CUL 116 but possess a valid ServSafe® Food Protection Manager Certification or Illinois Food Handler Certification should contact the program coordinator for CUL 116 credit.
Requisite: CUL 101, CUL 110, CUL 116, CUL 128.
Type: C

CUL 235 Food Truck/Mobile Catering II 1-2-2
This course is dedicated to the advanced fundamentals of owning and operating a food truck or cart. The focus is on menu planning, truck/cart design and location, federal/state/local regulations, and licenses and permits. Learn to design, cost and budget for a mobile food unit, while developing the necessary skills for succeeding in the food service segment of mobile food ownership. Focus will be on utilizing social media resources. Creating themed events and execution of events. Case studies, field trips and established food truck businesses all aid you in designing your own mobile food unit.
Requisite: CUL 135.
Type: C

CUL 299 Special Topics/Culinary Arts Variable up to (4)-(6)-(4)
This course will focus on the study of specific topics in the food service industry. The student will be given case studies, simulation, special projects in cooking or problem solving procedures.
Requisite: None.
Type: C

Diagnostic Medical Sonography

DMS 101 Diagnostic Medical Sonography 1-2-2
Students become oriented to the profession of medical sonography and the scanning process. Primary topics emphasized in this course include the historical perspectives of sonography, introduction to patient care and communication, ergonomics of scanning, medical ethics and law, medical techniques, sonographic guidelines, terminology, basic principles, and knobology.
Requisite: Acceptance into the Diagnostic Medical Sonography Program or Instructor consent..
Type: C

DMS 102 DMS Physics & Instrumentation I 1-2-2
This is the first of a two-course sequence providing an in-depth study of ultrasound physics and instrumentation. This course includes the basic principles of sound wave generation, propagation of ultrasound through human tissue, interaction with media, transducers and sound beams, and pulse echo instruments and imaging.
Requisite: Acceptance into the Diagnostic Medical Sonography Program or Instructor consent..
Type: C

DMS 103 Abdominal Sonography I 2-2-3
This is the first of a two-course sequence providing an in-depth study of abdominal sonographic imaging. Covered topics include scanning guidelines, protocols, anatomy, and pathology of the abdominal vasculature liver, gallbladder, biliary system, pancreas, spleen, and urinary system. Emphasis is also placed on patient preparation regarding clinical signs and symptoms.
Requisite: Acceptance into the Diagnostic Medical Sonography Program or Instructor consent..
Type: C

DMS 104 OB & GYN Sonography I 2-2-3
This is the first of a two-course sequence providing an in-depth study of obstetrical and gynecological sonographic imaging including patient preparation and associated clinical signs and symptoms. Covered within this course are scanning guidelines, protocols, anatomy and physiology, and pathology of the female pelvis as related to gynecology and obstetrics. An emphasis is placed on the first trimester as well as abnormal pregnancies.
Requisite: Acceptance into the Diagnostic Medical Sonography Program or Instructor consent..
Type: C

DMS 105 Sonography Lab I 0-2-1
This course provides synthesized laboratory practice in the basics of ultrasound imaging and safe operation of ultrasound equipment to perform sonograms. It introduces professional expectations of the student sonographer and covers proper procedure and body mechanics for an ultrasound exam. Students are oriented to identify anatomy in the transverse, longitudinal, and coronal scanning planes.
Requisite: Acceptance into the Diagnostic Medical Sonography Program or Instructor consent..
Type: C

DMS 106 DMS Physics & Instrumentation II 3-0-3
This is the second of two-course sequence providing a continuation of an in-depth study of ultrasound physics and instrumentation. This course continues on pulse-echo instrumentation focusing on harmonics, artifacts of imaging, and Doppler instrumentation. Students are exposed to color flow imaging with Doppler instrumentation in this course. This course includes bioeffects of sonographic instrumentation and safety in ultrasound imaging along with related quality assurance topics.
Requisite: Satisfactory completion with a "C" or better in DMS 101, DMS 102, DMS 103, DMS 104, DMS 105, and DMS 110 or program coordinator consent.
Type: C

DMS 107 Abdominal Sonography II 2-2-3
This is the second of a two-course sequence providing an in-depth study of abdominal and small parts sonographic imaging. This course covers scanning guidelines, protocols, anatomy and physiology, and pathology of the retroperitoneum, peritoneal cavity, gastrointestinal tract, small parts, superficial structure, and musculoskeletal systems. Emphasis is placed on patient preparation through clinical signs and symptoms.
Requisite: Satisfactory completion with a "C" or better in DMS 101, DMS 102, DMS 103, DMS 104, DMS 105, and DMS 110 or program coordinator consent.
Type: C

DMS 108 OB and Gyn Sonography II 2-2-3
This is the second of a two-course sequence providing an in-depth study of obstetrical and gynecological sonographic imaging. Covered are scanning guidelines, protocols, anatomy and pathology of the female pelvis as related to gynecology and obstetrics. Emphasis is placed on the second and third trimester as well as high-risk pregnancy through patient preparation and clinical signs and symptoms.
Requisite: Satisfactory completion with a "C" or better in DMS 101, DMS 102, DMS 103, DMS 104, DMS 105, and DMS 110 or program coordinator consent.
Type: C

DMS 109 Sonography Lab II 0-2.5-1
This course provides synthesized laboratory practice through the concepts of ultrasound imaging ensuring safe operation of sonography instrumentation. The laboratory experience will expand on the principles of abdominal, small parts, obstetrics, and gynecology sonography through the use of advancing instrumentation techniques as well as clinical case reviews.
Requisite: Satisfactory completion with a "C" or better in DMS 101, DMS 102, DMS 103, DMS 104, DMS 105, and DMS 110 or program coordinator consent.
Type: C

DMS 110 DMS Clinical Experience I 0-10-5
This course is the first of three clinical education experiences that provides students an opportunity to practice patient care and sonographic scanning under the supervision of an ARDMS registered sonographer. Clinical instructors in the healthcare facility to which the students are assigned provide student supervision.
Requisite: Acceptance into the Diagnostic Medical Sonography Program or Instructor consent..
Type: C

DMS 200 Vascular & Specialties DMS 2-0-2
This course is an introduction to vascular and pediatric sonography. Topics will include anatomy, physiology and pathology of the vascular system and pediatric systems. Vascular emphasis will be placed on carotid duplex color flow imaging, upper and lower extremity arterial and venous duplex/color flow imaging, and ankle brachial indices. Pediatric emphasis will be placed on neonatal and pediatric head, spine, hip, abdomen, and urinary systems. Supplementary emphasis will be placed on physics and instrumentation review.
Requisite: Satisfactory completion with a "C" or better in DMS 106, DMS 107, DMS 108, DMS 109, and DMS 201 or program coordinator consent.
Type: C

DMS 201 DMS Clinical Experience II 0-16-8
This course is the second of three clinical education experiences that provides students an opportunity to practice patient care and sonographic scanning under the supervision of an ARDMS registered sonographer. Clinical instructors in the healthcare facility to which the students are assigned provide student supervision.
Requisite: Satisfactory completion with a "C" or better in DMS 101, DMS 102, DMS 103, DMS 104, DMS 105, and DMS 110 or program coordinator consent.
Type: C

DMS 202 DMS Clinical Experience III 0-12-6
This course is the final clinical education experience that provides students an opportunity to practice patient care and sonographic scanning under the supervision of an ARDMS registered sonographer. Students assume greater responsibility during exams, continue competency testing, and begin work towards mastery of clinical practice. Clinical instructors in the healthcare facility to which the students are assigned provide student supervision.
Requisite: Satisfactory completion with a "C" or better in DMS 106, DMS 107, DMS 108, DMS 109, and DMS 201 or program coordinator consent.
Type: C

Early Childhood Education

ECE 101 Foundations in Early Childhood Education 3-0-3
This course is designed as an overview of basic principles of child development and learning, professionalism in the field of early care and education, and planning and maintaining safe and healthy learning environments. The course includes how providers advance and support children's physical, intellectual, social, and emotional development. Experiential learning opportunities engage students in building productive relationships with families.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 97 or higher.
Type: C

ECE 102 Experiential Learning 0-90-3
The student will participate in a minimum of 480 hours of work experience and a variety of workshops, conferences, meetings, and/or service-learning opportunities as agreed upon by the instructor and the student. Verification and reflection of learning will be assessed by the instructor.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 97 or higher.
Type: C

ECE 110 Introduction to Early Childhood Education 3-0-3
Designed to familiarize students with the current philosophy of early childhood education, guidance techniques, classroom design, early childhood education teacher responsibilities, strategies for home-center collaboration, and the curriculum in early childhood education settings. Students will review the different types of early childhood education arrangements in the United States, including infant/toddler and school age programs. Federal laws, licensing and regulatory requirements for programs serving children birth to 12 years are covered. The history of educating children birth to 12 years will be addressed. Observations of children in selected early childhood settings will be required. This course is accepted statewide by four-year institutions for students majoring in early childhood education. Successful completion of this course will require 10 observation hours in approved early childhood programs.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 97 or higher.
Type: C

ECE 112 Growth & Development of Children 3-0-3
Designed to cover the theories of Erikson, Piaget, Vygotsky and others as a foundation to understanding the physical, social/emotional, cognitive, language and aesthetic developmental milestones in children prenatally to 12 years. The influence of family, community, gender, race, and socio-economic factors on development will be addressed. Observations in selected early childhood settings will be required.
NOTE: This course is accepted statewide by four-year institutions for students majoring in early childhood education.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 97 or higher.
Type: C

ECE 114 Child Health Maintenance 3-0-3
Designed to address the health, safety and nutritional issues related to children in early childhood settings. Communicable illnesses, prevention methods, child care regulations, treatments for common injuries, legal mandates for reporting abuse and neglect, effects of violence on children, nutritional needs and menu planning will all be covered.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 97 or higher.
Type: C

ECE 116 Children with Special Needs 3-0-3
Designed to provide the student with knowledge and skills related to caring for children with special needs due to deviations in growth and developmental patterns. Methods of assessing needs and designing appropriate learning experiences will be stressed. Study of applicable federal and state laws and requirements conducted including: Individuals with Disabilities Education Act, Individualized Family Service Plan, Individual Education Programs, and inclusive programming. Fulfills requirements of School Code 25.25. Observations at selected agencies will be required.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101; ECE 110, ECE 112.
Type: T, IAI-ECE 913

ECE 118 Early Childhood Practicum I 1-10-3
Designed to apply theory to practice while caring for small groups of children in cooperating early childhood agencies. Students will have one hour of lecture/discussion per week and 150 hours of supervised experiences, which may include caring for children with special needs. The 150 hours must be completed by the 15th week of the semester. Students must be able to perform with reasonable accommodation the essential functions as specified on the practicum application.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: C

ECE 121 Early Childhood Curriculum 3-0-3
Surveys the theory and methods related to planning and maintaining a early childhood curriculum for preschool children. Students devise educational plans for children in individual, small group, and in large group learning situations. The importance of play as an avenue for learning is addressed in the following curricular areas: language, science, art, math, music, dramatic play, blocks, and sensory play.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101; ECE 110, ECE 112.
Type: C

ECE 122 Infant and Toddler Care 3-0-3
Examines the fundamentals of infant and toddler development, including planning and implementing programs in group care settings. Emphasizes meeting physical, social, emotional, and cognitive needs of children from birth to three years. Specific infant and toddler child care issues to be addressed are scheduling, preparing age appropriate activities, health and safety policies and procedures, record keeping, designing effective learning environments, and reporting to parents.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 101; ECE 110, ECE 112.
Type: C

ECE 125 Early Childhood Administration 3-0-3
This course examines the skills needed for establishing and managing early childhood programs. Emphasizes such topics as developing effective interpersonal communication techniques, staff selection and development, establishing programming and management philosophies and relevant policies, budgeting, record keeping, and overview of state licensing standards.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101; ECE 110, ECE 112.
Type: C

ECE 200 ECE Leadership & Supervision 3-0-3
This course will provide the student with knowledge of the leadership role in early childhood education. Effective supervision strategies will be examined. Additional topics include professionalism, ethical behavior, and advocacy.
Semester(s) Offered: SPRING
Requisite: ECE 110, ECE 112.
Type: C

ECE 210 Understanding & Guiding Behavior of Young Children 3-0-3
This course is designed to address the guidance and teaching techniques that will promote positive behavior in young children. The course will review developmental theories and practical strategies for working with young children and their families. The effects of the environment and adult/child interactions will be explored.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 101; ECE 110, ECE 112.
Type: C

ECE 220 Math for Young Children 3-0-3
This course will explore various strategies to promote mathematical understanding in children ages birth through age 8. Students will learn and demonstrate how to support young children's emerging math skills by utilizing developmentally appropriate practice, play, and hands on materials including technology. Throughout the course students will plan, prepare and assess various techniques in the early childhood mathematics curriculum. Emphasis will be on the following concepts: counting, number of operations, patterns, measurement, data analysis, spatial relationships , and shapes.
Requisite: ECE 110, ECE 112.
Type: C

ECE 250 Child, Family and Community 3-0-3
This course focuses on the child in the context of family, school and community. Specific issues such as diversity, professionalism, and social policies will be discussed. The course will also promote awareness and effective use of community resources and partnership building. Parent education, changing families, and legal responsibilities of those involved in the care of children will be addressed.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101; ECE 110, ECE 112.
Type: C

ECE 299 Special Topics/Early Childhood Variable up to (4)-0-(4)
An in-depth study of various areas in early childhood education presented through lectures, discussions, and/or individual research and readings by the students. Topics will vary.
Semester(s) Offered: SUMMER
Requisite: ECE 110, ECE 112.
Type: C

Earth Science

ES 101 Earth Science 3-2-4
In this course, students will learn how and why Earth is the way it is, and why humans should care. A systems-based approach to Earth Science will be utilized which incorporates components of geology (such as the rock cycle and plate tectonics), meteorology (including winds and weather), the hydrosphere (water in the geosphere, atmosphere and oceans), astronomy (the sun and Earth's place in space), and climatology. Students in ES 101 will use the tools of science to find patterns in nature, which is useful when considering how humans interact with and are affected by our natural world. Students will analyze climate change, our need and use of natural resources (possibly including water, mineral, and energy resources), and causes and impacts of natural hazards (possibly including flooding, earthquakes, volcanoes, and severe storms).
Semester(s) Offered: ALL
Requisite: Placement in MATH 97 or higher or completion of or concurrent enrollment in MATH 95.
Type: T, IAI-P1 910L

ES 102 Physical Geology 3-2-4
Examine what materials comprise the Earth, what processes shape the Earth and will understand how geologists study the Earth. Specific topics include Earth's interior, plate tectonics, earthquakes, details of the rock cycle and geologic time. Lab activities stress but aren't limited to rock and mineral identification as well as topographic map use. Students will also use scientific methods to study the Earth. ES 101 is not a prerequisite for this course.
Semester(s) Offered: FALL SPR
Requisite: Placement in MATH 97 or higher or completion of or concurrent enrollment in MATH 95.
Type: T, IAI-P1 907L

ES 114 Earth and the Environment 3-2-4
Students in this course will explore the ways people impact and are impacted by our Earth. Students will evaluate factors that determine how and which water, mineral and energy resources are used, and apply sustainability concepts to critique the costs and benefits of natural resource use. Both scientific and societal aspects of natural hazards, such as earthquakes, volcanoes, landslides, and floods will also be studied. Finally, impacts of human activities, such as population growth, pollution, land-use change, and global climate change will be interwoven throughout.
Semester(s) Offered: INTERMIT
Requisite: Eligible for MATH 97, MATH 107 or MATH 111.
Type: T, IAI-P1 908L

ES 180 Historical Geology 3-2-4
An introduction to the geologic evolution of the Earth with emphasis on North America. Investigated will be the principles, methods, procedures and problems of interpreting Earth history from rock sequences, fossils and geologic maps.
Semester(s) Offered: INTERMIT
Requisite: Eligible for MATH 97, MATH 107 or MATH 111.
Type: T, IAI-P1 907L

ES 250 Introduction to Meteorology 3-2-4
This course is an introduction to the physical elements and processes of weather including a global survey of major climate types. Topics to be investigated include temperature, pressure, moisture and how these elements interact to produce weather and climates. Other aspects of meteorology will be examined including thunderstorms, tornadoes, hurricanes, interpretation of weather maps, and climate change.
Semester(s) Offered: INTERMIT
Requisite: Eligible for MATH 97, MATH 107 or MATH 111.
Type: T, IAI-P1 905L

ES 299 Problems in Earth Science Variable up to (3)-(6)-(4)
A seminar for in-depth study of current topics in the earth sciences. Readings, literature reviews, discussion and individual research emphasized. Topics vary according to student and instructor interest.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: T

Economics

ECON 115 Introduction to Economics 3-0-3
ECON 115 is a survey of macro- and microeconomic principles to acquaint the student with economic concepts, institutions, and policies. Credit will not be given if this course is taken after ECON 201 or ECON 202; students needing more than one course in economics should take ECON 201 and ECON 202.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-S3 900

ECON 201 Principles of Economics I (Macro) 3-0-3
ECON 201 is a one-semester introduction to macroeconomics. Major topics include the production possibilities model, basic supply and demand analysis, measurement and interpretation of gross domestic product, inflation, and unemployment, classical and Keynesian theories, aggregate supply and aggregate demand, money and banking, the Federal Reserve System, fiscal and monetary policies, and the determinants of long-run economic growth.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-S3 901

ECON 202 Principles of Economics II (Micro) 3-0-3
ECON 202 is a one-semester introduction to microeconomics. Major topics include the theory of consumer choice, the price elasticity of demand, costs of production, price and output determination in different product market structures, wage and employment determination in labor markets, government policies to deal with market failures such as monopoly, public goods and externalities, the gains from trade based on comparative advantage, and an overview of current economic problems and issues facing the United States.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-S3 902

Education

ED 120 Paraprofessional Test Prep 1-0-1
This pass/fail course for paraprofessional educators is intended to prepare candidates for the WorkKeys and ETS ParaPro tests that are used by the State of Illinois to certify paraprofessionals. Five learning modules will be covered, including an introduction to assessments and test taking strategies, reading, writing, mathematics, workplace documents, and responsibilities of a paraprofessional. The course will include practical application examples and situations similar to those found on the WorkKeys and ETS ParaPro tests. Students will gain a better understanding of how they learn as adults and effective strategies for test preparation.
Requisite: None.
Type: C

ED 252 Educational Psychology 3-0-3
Educational psychology is a survey course introducing students to major areas related to teaching and learning. It explores motivation, intelligence, creativity, evaluation, measurement, growth and development learning perspectives. It focuses on the learning process and the impact of culture on learning styles. It may include observational experiences. Students may not receive credit for both ED 252 and PSYC 252.
Semester(s) Offered: ALL
Requisite: PSYC 151; Eligible for ENG 101.
Type: T

ED 255 Introduction to Education 3-0-3
This course is an introduction to the field of education, examining the different aspects of education as a profession. The organizational structure, education reform, finance, and curriculum of schools at the federal, state, and local levels will be discussed. Current issues in education, basic instructional strategies, teacher responsibilities, and cultural diversity, along with overviews of the social, historical, and philosophical foundations of education will be addressed. Instructional technology use will be demonstrated and experienced. Transferring to a four-year education program and state requirements for licensure will also be addresses. Students should plan schedules in advance for 20 hours of field experience at an assigned school site 2-4 hours per week. Placements will be assigned through Junior Achievement (teach JA lessons). Students must complete fingerprinting prior to placement (will be arranged for as part of course). Students should also be prepared to submit a cleared tuberculosis test result before entering most school (student responsible for paying and arranging this test). Online sections may be required to attend an orientation prior to the start of class (instructor will notify as needed).
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 97 or higher.
Type: T

ED 256 Field Experience in Education Variable up to (1)-(6)-(3)
This course is intended for education majors. It may be taken for a maximum of three semester credits in the final semester before transfer to a four-year institution or entry into the workforce. One semester credit is equivalent to 30 hours of experience in partner school classrooms. The course is designed to provide students with the opportunity to gain additional experience in the classroom prior to transfer to four-year institutions. Students will be observing classrooms in their specific areas of interest (special education, elementary education, early childhood education, or secondary education). (This course requires assigned field experience in a school setting. Hours will vary dependent upon the course hours registered for by the student.)
*May be taken as independent study course. (See Education coordinator the semester before).
Semester(s) Offered: INTERMIT
Requisite: Department consent
Type: T

ED 260 Introduction to Educational Technology 3-0-3
This course is designed to provide pre-service and in-service educators with an introduction to the field of educational technology. The theory and practice of educational technology will be discussed and applied. This hands-on, project-based course will also present a systematic framework for integrating various technologies (such as software applications, multimedia, and the Internet) into the curriculum. In addition, students will be introduced to the concept of the education portfolio.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T

ED 265 Introduction to Special Education 3-0-3
This is a survey course that presents the historical, philosophical and legal foundations of special education, as well as an overview of the characteristics of individuals with disabilities. The diversity of the populations of individuals with disabilities will be studied. The Individuals with Disabilities Education Act (IDEA) will be examined as well as the programs that serve special education populations as a result of this act. Students should plan schedules in advance for 30 hours of field experience at an assigned school site 2-4 hours per week. Students must complete fingerprinting prior to placement (will be arranged for as part of this course). Students should also be prepared to submit a cleared tuberculosis test result before entering most schools (student responsible for paying and arranging this test). Online sections may be required to attend an orientation prior to the start of class (instructor will notify as needed).
Semester(s) Offered: FALL
Requisite: Completion of ENG 101 with a "C" or betterENG 101C.
Type: T

ED 267 Methods and Materials for Teaching Diverse Students 3-0-3
Exploration and analysis of relevant K-12 pedagogical approaches, methods, and strategies needed to convey state and professional standards-based curricula to a diverse population. Development, adaptation, and evaluation of materials for implementation in lesson planning and assessment for teaching English to speakers of other languages, particular groups, of various ages, ability levels, and cultural backgrounds. Inclusion of strategies that foster both language acquisition and academic achievement in speaking, reading, writing, and listening.
Semester(s) Offered: ALL
Requisite: Completion of ENG 101 with a "C" or betterENG 101C.
Type: T

ED 280 Literacy Methods 3-0-3
Examines and demonstrates how to support children's literacy skills through balanced instruction, best practices, strategies, and theory. The course includes topics such as phonemic awareness, word study, decoding, spelling, vocabulary development, comprehension, fluency, writing, listening, speaking, and instructional sources to promote literacy as a lifelong learning process. Throughout the course, students will plan, prepare, and assess various techniques in the literacy curriculum as well as methods of instruction that are responsive to the individual needs of all students, including, but not limited to ELL students those with exceptional needs.
Requisite: Completion of ENG 101 with a "C" or better.
Type: T

ED 293 Children's Literature 3-0-3
Primarily for the prospective early childhood or elementary teacher, the course emphasizes the selection and presentation of children's literature (fables, fairy tales, nursery rhymes, picture books, and novels, etc.) with a focus on diversity and multiculturalism. Students may not receive credit for both LIT 293 and ED 293. This course is cross-listed with LIT 293.
Semester(s) Offered: FALL SPR
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T

ED 299 Special Topics in Education Variable up to (4)-0-(4)
An in-depth study of various areas in education presented through lectures, discussions, and/or individual research and readings by the students. Topics will vary.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: T

Emergency Medical Services

EMS 105 Emergency Medical Responder 3-2-4
This course is designed to provide training in all aspects of emergency medical care. It is for rescuers who are not emergency medical technicians and who do not transport patients to a hospital. The majority of training time is devoted to the practical aspects of emergency care. NOTE: Occasional Saturdays may be required for specialized instruction and testing. The dates, times and locations will be announced the first day of class. This course requires access to a reliable internet connection to complete online assignments. Students must be competent computer and internet users.
Semester(s) Offered: ALL
Requisite: None.
Type: C

EMS 106 First Responder Recertification Variable up to (3)-0-(3)
Current trends in emergency medical prehospital care are presented at the First Responder level to assist practitioners in achieving recertification experiences for both state and national recognition.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

EMS 107 Medical Response 4-0-4
This course expands on the emergency medical knowledge and skills gained from completion of police academy certification. It further prepares certified police officers to provide emergency care as needed prior to the arrival of EMS personnel to the scene.
Semester(s) Offered: INTERMIT
Requisite: Department consent
Type: C

EMS 110 Emergency Medical Technician 4-8-8
Provides students with overall role and responsibility of the emergency medical technician in performing emergency care. The student will develop skill in assessment and in emergency treatment procedures short of those rendered by physicians or by allied health personnel under the direct supervision of a physician. Note: Occasional Saturdays may be required for specialized instruction and testing. The dates, times and locations will be announced the first day of class. This course requires access to a reliable Internet connection to complete weekly online assignments. Students must be competent computer and internet users. A criminal background check and drug testing is required for this course. Details are provided the first day of class. For more information contact 618-235-2700, ext. 5355. The basic fee for these tests are included in lab fees, however additional fees may be required for students who have resided in states other than Missouri and Illinois. Basic algebra skills encouraged.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: C

EMS 115 EMT-Basic Recertification Topics Variable up to (5)-0-(5)
Current trends in emergency medical prehospital care are presented at the EMT-Basic level to assist practitioners in achieving recertification experiences for both state and national recognition.
Semester(s) Offered: INTERMIT
Requisite: Department consent
Type: C

EMS 116 EMT Certification Review 0.5-0-0.5
This course will provide students with the opportunity for an academic review of the information required and study strategies needed to prepare for the National Registry of Emergency Medical Technicians certification examination or Illinois licensure examination. This class will include two opportunities to complete a timed, computerized full length examination that will identify both areas of strength and weakness, as well as offer specific suggestions for remedial activities.
Semester(s) Offered: INTERMIT
Requisite: Completion of EMS 110 or current Illinois EMT licensure.
Type: C

EMS 120 A & P and Pathophys for EMS 3.5-1-4
This course provides students pursuing a career as a paramedic with a foundational knowledge of anatomy, physiology, pathophysiology and medical terminology. These topics will be presented with a concentration on relevant information, diseases, disorders and injuries that will allow students to prepare for future Emergency Medical Services courses or workplace situations.
Requisite: Students must enroll in both CISC 151-062 and CISC 152-062.
Type: C

EMS 130 CPR & First Aid 0.5-0.5-0.5
Performance of CPR and First Aid in accordance with an articulated agreement between the Illinois Community College Board and the Department of Corrections. For IDOC personnel responsible for initial emergency medical care at correctional facilities.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

EMS 205 Intro to Paramedicine 7-2.5-8.5
The first of four didactic courses designed to provide the student with the knowledge and skills necessary to perform as a paramedic as well as meet state and national classroom and lab standards for certification. Topics covered in this section include anatomy and physiology review, airway management, assessment skills, intravenous therapy, and trauma.
Semester(s) Offered: FALL
Requisite: Program admission.
Type: C

EMS 206 Paramedic Medical Emergencies 3.5-1.5-4.5
The second of four didactic courses designed to provide the student with the knowledge and skills necessary to perform as a paramedic as well as meet state and national classroom and lab standards for certification. Topics covered in this section include pharmacology, cardiovascular emergencies, ECG interpretation and arrhythmias.
Semester(s) Offered: SPRING
Requisite: EMS 205, EMS 210, EMS 220 each with a grade of "C" or better.
Type: C

EMS 207 Paramedic Trauma 3.5-1-4
The third of four didactic courses designed to provide the student with the knowledge and skills necessary to perform as a paramedic as well as meet state and national classroom and lab standards for certification. Topics covered in this section include respiratory and other medical emergencies, environmental emergencies, obstetrical emergencies, pediatrics and neonatology.
Semester(s) Offered: SPRING
Requisite: EMS 206, EMS 211, EMS 221 each with a grade of "C" or better.
Type: C

EMS 208 Paramedic Special Pts & Ops 4-1.5-5
The last of four didactic courses designed to provide the student with the knowledge and skills necessary to perform as a paramedic as well as meet state and national classroom and lab standards for certification. Topics covered in this section include toxicology, behavioral emergencies, geriatrics, special patient populations and EMS operations.
Semester(s) Offered: SUMMER
Requisite: EMS 207, EMS 212, EMS 222 each with a grade of "C" or better.
Type: C

EMS 210 Paramedic Clinical Practice I 0-2-1
The first of four clinical courses designed to provide the student, under supervision, with observation experience, practice and application of patient assessment as well as other paramedic skills and procedures in the clinical environment. This course is designed to meet state and national clinical standards for certification. Clinical settings include emergency department and operating room.
Semester(s) Offered: FALL
Requisite: Program admission.
Type: C

EMS 211 Paramedic Clinical Practice II 0-15-1
The second of four clinical courses designed to provide the student, under supervision, with observation, experience, practice and application of patient assessment as well as other paramedic skills and procedures in the clinical environment. This course is designed to meet state and national clinical standards for certification. Clinical settings usually include various hospital and clinical areas.
Semester(s) Offered: SPR SUM
Requisite: EMS 205, EMS 210, EMS 220 each with a grade of "C" or better.
Type: C

EMS 212 Paramedic Clinical Practice III 0-2-1
The third of four clinical courses designed to provide the student, under supervision, with observation, experience, practice and application of patient assessment as well as other paramedic skills and procedures in the clinical environment. This course is designed to meet state and national clinical standards for certification. Clinical settings usually include various hospital and clinical areas.
Semester(s) Offered: SPRING
Requisite: EMS 206, EMS 211, EMS 221 each with a grade of "C" or better.
Type: C

EMS 213 Paramedic Clinical Practice IV 0-2-1
The last of four clinical courses designed to provide the student, under supervision, with observation, experience, practice and application of patient assessment as well as other paramedic skills and procedures in the clinical environment. This course is designed to meet state and national clinical standards for certification. Clinical settings usually include various hospital and clinical areas.
Semester(s) Offered: SUMMER
Requisite: EMS 207, EMS 212, EMS 222 each with a grade of "C" or better.
Type: C

EMS 220 Paramedic Field Experience 0-6-2
The first of five field internship courses designed to provide the student, under supervision, with experience by observing patient assessment as well as other paramedic skills and procedures in the EMS field environment. This course is designed to meet state and national field internship standards for certification. The field internship will typically take place on an ambulance.
Semester(s) Offered: FALL
Requisite: Program admission.
Type: C

EMS 221 Paramedic Field Internship I 0-6-1
The second of five field internship courses designed to provide the student, under supervision, with experience by observing patient assessment as well as other paramedic skills and procedures in the EMS field environment. This course is designed to meet state and national field internship standards for certification. The field internship will typically take place on an ambulance.
Semester(s) Offered: SPRING
Requisite: EMS 205, EMS 210, EMS 220 each with a grade of "C" or better.
Type: C

EMS 222 Paramedic Field Internship II 0-6-1
The third of five field internship courses designed to provide the student, under supervision, with experience by observing patient assessment as well as other paramedic skills and procedures in the EMS field environment. This course is designed to meet state and national field internship standards for certification. The field internship will typically take place on an ambulance.
Semester(s) Offered: SPRING
Requisite: EMS 206, EMS 211, EMS 221 each with a grade of "C" or better.
Type: C

EMS 223 Paramedic Field Internship III 0-12-1
The fourth of five field internship courses designed to provide the student, under supervision, with experience by observing patient assessment as well as other paramedic skills and procedures in the EMS field environment. This course is designed to meet state and national field internship standards for certification. The field internship will typically take place on an ambulance.
Semester(s) Offered: SUMMER
Requisite: EMS 207, EMS 212, EMS 222 each with a grade of "C" or better.
Type: C

EMS 224 Paramedic Field Internship IV 0-12-2
The last of five field internship courses designed to provide the student, under supervision, with experience by observing patient assessment as well as other paramedic skills and procedures in the EMS field environment. This course is designed to meet state and national field internship standards for certification. The field internship will typically take place on an ambulance.
Semester(s) Offered: FALL
Requisite: EMS 208, EMS 213, EMS 223, FS 160, FS 280 each with a grade of "C" or better.
Type: C

EMS 270 Critical Care Transport I 2-2-3
Critical Care Transport I course is the first in a series of 2 courses that prepares medical professionals to function as competent members of a critical care transport team by training the students with the information and skills needed to operate effectively in the prehospital critical care environment. The course is designed to prepare students for the Critical Care Paramedic (CCP-C), Certified Flight Paramedic (FP-C), and Certified Flight Registered Nurse (CFRN) exams.
Semester(s) Offered: INTERMIT
Requisite: Department consent
Type: C

EMS 271 Critical Care Transport II 2-2-3
The Critical Care Transport II course is the second in a series of 2 courses that prepares medical professionals to function as competent members of a critical care transport team by training the students with the information and skills needed to operate effectively in the prehospital critical care environment. The course is designed to prepare students for the Critical Care Paramedic (CCP-C), Certified Flight Paramedic (FP-C), and Certified Flight Registered Nurse (CFRN) exams.
Semester(s) Offered: INTERMIT
Requisite: Department consent
Type: C

EMS 275 Critical Care Experience 0-3.5-1
The Critical Care Experience course allows students who have completed or are currently enrolled in the Critical Care Paramedic I & II courses to interact with patients, both real and simulated, requiring critical care in various settings. Students will also observe and perform critical care skills with critical care equipment while being monitored by qualified practitioners. The course is designed to prepare students for the Critical Care Paramedic (CCP-C), Certified Flight Paramedic (FP-C), and Certified Flight Registered Nurse (CFRN) exams.
Semester(s) Offered: INTERMIT
Requisite: Department consent
Type: C

EMS 299 Special Topics In EMS Variable up to (4)-0-(4)
Application of emergency medical principles to specific problems current in EMS through case studies, simulation, special class projects or problem-solving procedures. Projects and topics will vary to meet specific interests and needs.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

Engineering

ENGR 103 Engineering Graphics 2-4-4
This course in engineering graphics is for all students in the engineering transfer program. Both traditional and microcomputer based computer-aided drafting will be used to produce technical drawings. Topics covered include: design problems, lettering, technical sketching, multi-view orthographic projection, section views, auxiliary views, isometrics, obliques, dimensioning, & tolerances, descriptive geometry, and working drawings.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T, IAI-EGR 941

ENGR 251 Surveying 2-2-3
Provides the participant with an understanding of the use of the transit, level, tape, Theodolites and total stations, fundamental surveying procedures, and land surveying. It is recommended that students have completed algebra, geometry and trigonometry courses before enrolling.
Semester(s) Offered: SPRING
Requisite: None.
Type: C

ENGR 263 Analytical Mechanics - Statics 3-0-3
The application of the principles of mechanics to problems of equilibrium. Topics include resultants, equilibrium, center of gravity, and moments of inertia.
Semester(s) Offered: FALL
Requisite: PHYS 204, MATH 203 each with a grade of "C" or better.
Type: T, IAI-EGR 942

ENGR 264 Analytical Mechanics-Dynamics 3-0-3
The application of the principles of mechanics to problems of motion and acceleration. Topics include plane motion, force, mass and acceleration, work and energy; impulse and momentum.
Semester(s) Offered: SPRING
Requisite: ENGR 263, MATH 203 each with a grade of "C" or better.
Type: T, IAI-EGR 943

ENGR 271 Electrical Circuits 3-0-3
An introduction to DC and AC circuit analysis. This course is designed to provide a complete overview of electric circuit analysis used in electrical engineering and electronics engineering. Electric circuit analysis is the most fundamental concept for electrical engineering, electronics engineering, and computer engineering. Topics include key concepts of electricity and magnetism, circuit variables (including voltage, inductance, power, energy, and units), circuit elements (R,L, C and operational amplifiers), simple resistive circuits, circuit analysis (including node-voltage, mesh-current, equivalents and superposition), transient analysis, and sinusoidal steady-state analysis, Students may need to complete a laboratory after transfer if the engineering school requires one.
Semester(s) Offered: SPRING
Requisite: MATH 205 (with a grade of "C" or better) and PHYS 205 (with a grade of "C" or better).
Type: T, IAI-EGR 931

ENGR 275 Mechanics of Solids 3-0-3
A prerequisite course for many upper division engineering courses. Topics include elastic deformations and stresses in two-dimensional structural elements caused by axial, bending, shear, and torsion loads; stress-strain relationships; Mohr's Circle; elementary design concepts.
Semester(s) Offered: INTERMIT
Requisite: ENGR 263 with a grade of "C" or better.
Type: T, IAI-EGR 945

English

ENG 94 Integrated Reading & Writing 3-0-3
ENGLISH 94 is designed to help prepare students for transfer-level courses by connecting college reading and writing strategies. Students will learn multiple approaches to strengthen their reading comprehension as well as read with deeper connections through analysis of texts, accumulating skills that will help them in future classes as well as lifelong learning. Students will assemble a portfolio of their written work for an audience consisting of reading and writing faculty. This course offers three hours of non-transferable credit. Students who complete ENG 94 may pass to ENG 97 or may receive a waiver to ENG 101 Based on the success of their portfolio.
Semester(s) Offered: FALL SPR SUM
Requisite: None.
Type: P

ENG 97 College Writing Strategies 3-0-3
English 97 is designed to help prepare students for transfer-level courses by gaining practice in writing essays while learning how to reflect on and evaluate their and others' writing. Students will also further develop their reading skills by learning to read rhetorically and use the texts as inspiration for written work. This class includes practice (sometimes in a collaborative mode) in invention, drafting, revising, and editing as part of a recursive writing process. Students will write multiple essays, culminating in a portfolio crafted for an audience consisting of reading and writing faculty. This course offers three hours of non-transferable credit.
Semester(s) Offered: FALL SPR SUM
Requisite: None.
Type: P

ENG 100 Accelerated English Learning Lab 0-3-1
English 100 is an accelerated pathway for students who may need additional support in writing and reading. Students co-enroll in ENG 101 and ENG 100. In the ENG 100, students will receive supplemental instruction from their ENG 101 instructor to assist in completing additional assignments, workshopping drafts of essays, and conferencing about writing.
At the end of the semester, students will submit a portfolio of their work for an audience consisting of writing faculty. Students who enroll in ENG 100 must remain in the co-enrolled ENG 101 class until the withdrawal deadline. Students who pass ENG 100 but do not pass ENG 101 may enroll in a standalone ENG 101 in a subsequent term.
Requisite: Eligible for ENG 101 Co-requisite: enrolled in ENG 101 paired course with the same instructor. Concurrent enrollment in ENG 101.
Type: T

ENG 101 Rhetoric & Composition I 3-0-3
English 101 is designed to help students write for a variety of general and specific audiences. Students will learn to recognize features that make writing effective, and learn different strategies writers use while prewriting, drafting, revising, and editing. Students will learn to read their own work more critically and to constructively critique the work of others. The course also provides a brief introduction to the writing of source-supported papers and methods of documenting sources.
Semester(s) Offered: FALL SPR SUM
Requisite: Eligible for ENG 101 or enrolled in an English 97 - Accelerated Learning (AL)/English 101 paired course.
Type: T, IAI-C1 900

ENG 102 Rhetoric and Composition II 3-0-3
English 102 focuses on the processes of academic inquiry and source-supported writing, while continuing to practice prewriting, drafting, revising, and editing strategies. Students will gain experience using a variety of research methods including interview, observation, survey, peer-reviewed journals, electronic databases, and other written/visual/aural texts or artifacts. Students will use reflection to critically analyze and evaluate information and ideas from a variety of sources, and use such sources effectively in their own writing.
Semester(s) Offered: FALL SPR SUM
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-C1 901R

ENG 103 Introduction to Technical Communication 3-0-3
This course focuses on effective technical and professional communication. Students will learn to read professional situations rhetorically, considering the needs, attitudes, and assumptions of their audiences, as well as the demands and limitations imposed by different contexts. The course stresses writing, collaboration, critical thinking and reading, and effective uses of technology in communication. Note: This course is considered an alternative to English 102 in Associate in Applied Science programs, and therefore is not automatically transferable to all four-year colleges.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: C

ENG 104 Technical Editing 3-0-3
This course will introduce students to the theories and applications of technical editing. In this course, students will learn levels of editing, including development, technical, and copy editing. Other topics include the editor's role in the publication cycle within a technical publications department, working with writers in the department, the creation and uses of style guides, and the role of the editor in online mediums. In addition, students will develop word choice, consistency, sentence structure, and other technical editing principles. Through the study of editing as an essential part of the writing process, this course will give students the opportunity to learn editing techniques that will help improve the quality of writing, which is an essential skill set critical to professional technical communication.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101.
Type: T

ENG 107 Creative Writing 3-0-3
A workshop course to give direction and criticism to students who want to write fiction, creative non-fiction, or poetry. Students are part of a critical circle. They submit material to the group and critique work of others. After practicing the craft of writing, students are encouraged to investigate publishing options.
Semester(s) Offered: FALL SPR SUM
Requisite: Eligible for ENG 101.
Type: T

ENG 203 Technical, Scientific, and Professional Communication 3-0-3
English 203 introduces and focuses on effective technical, scientific, and professional communication through an advanced lens and examines the conventions and discourses within STEM+M fields. Students will acquire writing and technological skills along with understanding the value of how to use those skills to create communication that is suited to the appropriate audience, purpose, context, genre, and modality. This course will enable students to produce written and visual discourse that communicates important concepts in STEM+M fields. In this course, students not only will become aware of how to produce professional communication but also how to critique digitally produced texts and become confident, prepared communicators in the technical, scientific, and professional domains and STEM+M careers.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101.
Type: T

ENG 207 Advanced Creative Writing 3-0-3
English 207 is designed as a sequel to English 107 so as to provide students with advanced instruction in fiction, poetry and dramatic writing, and to offer further advanced critical evaluation of student work and the work of professional writers in a workshop environment.
Semester(s) Offered: FALL SPR SUM
Requisite: ENG 107.
Type: T

ENG 299 Special Topics in English Variable up to (4)-0-(4)
Special topics and issues in English presented through lectures, discussions, readings, and/or individual assignments and research projects. Topics vary each semester. Course may be taken more than once if different topics are covered.
Semester(s) Offered: INTERMIT
Requisite: Department consent
Type: T

eSports Management

ESM 100 Introduction to Esports Management 3-0-3
This is an introductory course for sports and Esports management. Students will be taught the history, development, operations, basic principles of administrative and management concepts associated with sports and Esports. Descriptions of career opportunities are provided to help the student design a course of study that best meets his/her career goals.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

ESM 150 Contemporary Issues in Esports 3-0-3
This course provides students with an understanding of current events and important ethical issues of the modern esports industry. This course offers an understanding of contemporary issues and allows students to apply their knowledge to the current industry. Students will assess the field of esports from different perspectives, debate contemporary issues, and respectfully engage in discourse regarding controversial topics in Esports.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

ESM 200 Esports Management I 3-0-3
An overview of the sports and Esports management industries focusing on identification and applying theoretical knowledge to real-world actions. The course will dive into professional sports, as well as collegiate and introduce how the emergence of Esports is impacting the sports industry. Content will include sales, marketing and promotions, and public relations and communications as it pertains to sports.
Semester(s) Offered: FALL SPR
Requisite: EMS 100.
Type: C

ESM 205 Esports Event and Facility Management 3-0-3
An in-depth focus and practical application of sports and Esports management to include strategic planning, finance, event management, and personnel management. Course content will include strategic planning, event management, personnel management, finance, marketing, and emerging technologies in sports/Esport. Upon completion of this course, you will understand the competencies necessary for managing and operating sports and Esports events.
Semester(s) Offered: FALL SPR
Requisite: ESM 200.
Type: C

ESM 210 Competitive Gaming, Culture and Performance 3-0-3
Integrates and builds upon knowledge learned in prior Esports and business courses, Competitive Gaming domains of performance and motivation for participation are studied. Additional focus includes training components for Esports and ethical issues in Gaming. In-depth analysis of the governance structures and policies that exist in esports at various levels of competition and in international settings. Students gain an understanding of how esports competitions are structured in order to provide a fair level of play. Ideas related to international levels of competitions and associated regulations will be discussed.
Semester(s) Offered: FALL SPR
Requisite: ESM 200.
Type: C

ESM 215 Esports Coaching and Athlete Development 3-0-3
This course will introduce Coaching Leadership on a sports level but show how that leadership can relate to personal, business and everyday successes for individuals. Creating success in the sports arena, a leader has to communicate, to bring a set of individuals together to accomplish one common goal. Students will gain an understanding of coaching methods across games and genres in esports, as well as how to optimize Esports athlete performance through training techniques and conditioning practices.
Semester(s) Offered: FALL SPR
Requisite: ESM 210.
Type: C

Film

FILM 105 Screenwriting I 3-0-3
An introduction to movie writing, with an emphasis on the short narrative script. Students will learn the conventions of screenplay format, gain experience using screenwriting software, and practice techniques for crafting believable characters, effective dialog, and suspense.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: T

FILM 115 Film Appreciation 3-0-3
An introduction to film study, with an emphasis on how moviemaking techniques like cinematography, editing, set design, and sound are used for artistic and dramatic effect. In addition to watching and discussing films of different genres and time periods, students will learn about different critical approaches to film and how historical, political, and cultural contexts shape films.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-F2 908

FILM 140 Video Editing I 1-5-3
This course provides an introduction to the principles of videos editing using Final Cut Pro editing software. Students will learn to create smooth, effective edits following the conventions of continuity editing. Students will also learn how to do basic sound editing, log and transfer video footage, organize files and workflow, create graphics such as titles and credits, and export finished projects.
Requisite: Prior computer experience strongly recommended.
Type: T

FILM 150 Moviemaking I 1-5-3
Provides an introduction to motion picture production using digital video. Students will gain experience in all aspects of the production stage of the moviemaking process, including operating digit video cameras and DSLR's, setting up and operating lighting equipment, capturing location sound, and serving in all the main crew positions found on professional film sets.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T

FILM 205 Screenwriting II 3-0-3
A continuation of FILM 105, in which students will write a feature-length screenplay. Students will gain further practice creating effective film stories, while adhering to proper screenplay format. In addition, students will focus on the conventions of narrative feature scripts such as three-act structure, character arcs, plot points and reversals, etc. Students will continue to develop skills in giving and receiving constructive feedback of their peers" work and revision. Student will also work on marketing their script by creating a logline and treatment, and pitching their idea orally.
Semester(s) Offered: FALL SPR
Requisite: FILM 105 with a grade of "C" or better.
Type: T

FILM 215 Film History 3-0-3
A survey of the history of motion pictures, with an emphasis on important cinematic movements, directors, and technological innovations that have impacted the direction of the art form.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: T, IAI-F2 909

FILM 225 Film and Literature 3-0-3
A study of the relationship between film and literature. This course will analyze the literary aspects of narrative films, including plot, setting, character, theme, point of view, etc., as well as examining film adaptations of literary works (novels, plays, short stories, graphic novels, and others) and the similarities and differences between the different media.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 101.
Type: T, IAI-HF 908

FILM 230 Sound Design 1-5-3
A hands-on course in sound design, sound editing, and sound mixing for video and film. Using Apple Final Cut Pro, students will learn how to edit dialog, clean up location audio, add sound effects and ambient sound, create musing using loop, place music into video projects effectively, and create a balanced final mix of audio levels. The course will also provide an introduction to setting up and recording ADR (automated dialog replacement), and foley sound effects.
Semester(s) Offered: SPRING
Requisite: None.
Type: T

FILM 240 Video Editing II 1-5-3
A continued hands-on workshop in digital video editing. Student will edit a variety of narrative, informative, and experimental projects. There will be a focus on more complex editing techniques such as chroma keying, compositing, color correction, working with stills and round footage, and advanced sound editing.
Semester(s) Offered: FALL SPR
Requisite: FILM 140 with a grade of "C" or better.
Type: T

FILM 250 Moviemaking II 3-0-3
A continued hands-on experience with motion picture production, with an increased emphasis on the duties of the director through preproduction (casting, shotlisting, storyboarding, scheduling), production (working with actors and crew throughout the stages of auditions, rehearsals, and shooting) and post-production (editing, sound design, and promotion). Students will also gain more in-depth experience with lighting, camera movement, and other aspects of digital cinematography. Each student will plan and direct their own short film project.
Semester(s) Offered: FALL SPR
Requisite: FILM 150 with a grade of "C" or better.
Type: T

FILM 260 Documentary Moviemaking I 3-0-3
Provides an introduction to documentary movie production. Working individually or in pairs, students will research, plan, shoot, and edit an original short documentary movie. Students will also study some of the major types of documentaries (biographical, historical, ethnographic, experimental, issue-based, and others) and important documentary directors. The main focus of the course, however, will be production: identifying a good documentary subject, conducting interviews, shooting visually interesting footage, getting good location sound, and finding a story or pattern that can serve as an organizing principle while editing.
Semester(s) Offered: SPRING
Requisite: None.
Type: T

FILM 261 Documentary Moviemaking II 3-0-3
Provides continued hands-on experience with documentary movie production. Each student will be expected to produce and direct a longer, more in-depth documentary which involves more research and higher production quality. Students will also be expected to conduct independent research into the work of a documentary filmmaker of their choosing.
Semester(s) Offered: SPRING
Requisite: FILM 260 with a grade of "C" or better.
Type: T

FILM 280 Digital Cinematography 1-5-3
This course provides hands-on instruction in cinematography for all types of digital video production. Emphasis will be placed on understanding and controlling exposure, focal length, depth of field, composition, and color balance. Students will also practice advanced lighting techniques, creating time-lapse videos, and post-production methods of improving image quality such as color correction, cropping, chroma keying, and compositing.
Semester(s) Offered: SPRING
Requisite: FILM 150 with a grade of "C" or better.
Type: T

FILM 298 Special Topics in Film Production 3-5-3
A hands-on course in a specific area of film/video production. Topics will vary and may include (but are not limited to) the following: Specific aspects of the production process such as lighting, production design, and acting for the camera; topics in postproduction such as visual effects and scoring; and video production in specific genres such as experimental video, music videos, animation, etc.
Semester(s) Offered: FALL
Requisite: FILM 150 with a grade of "C" or better.
Type: T

FILM 299 Special Topics in Film Study 3-0-3
An in-depth study of one particular topic or aspect of film. Topics will vary with each course topics may include (but are not limited to) the following: a specific film genre; a cinematic period or movement; a particular regional or national cinema; a film technique such as musical score, special effects, or lighting; or the work of a particular film direction or writer.
Semester(s) Offered: SPRING
Requisite: Eligible for ENG 101.
Type: T

Fire Science

FS 100 Fire Fighter A 3-2-4
This is the first of three courses designed to prepare a firefighter trainee to become a certified firefighter according to standards set by the National Fire Protection Association. It includes instruction in fire service history and organization, fire fighter safety, fire behavior, personal protective equipment, portable fire extinguishers, water supply, fire hose, fire streams, and ladders. NOTE: Students must be an active member of a fire department.
Semester(s) Offered: SPRING
Requisite: Department consent
Type: C

FS 101 Principles of Emergency Services 3-0-3
This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

FS 102 Fire Behavior & Combustion 3-0-3
This course explores the theories and fundamentals of how and why fires start, spread, and how they are controlled.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

FS 110 Fire Prevention 3-0-3
This course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built-in fire protection systems, fire investigation, and fire and life-safety education.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

FS 115 Fire Fighter B 2-2-3
This is the second of three courses designed to prepare a firefighter trainee to become a Certified Firefighter according to standards set by the National Fire Protection Association. It includes instruction in rescue, building construction, forcible entry, ventilation, and fire control.
Semester(s) Offered: FALL
Requisite: FS 100.
Type: C

FS 116 Building Construction for Fire Protection 3-0-3
This course provides the components of building construction that relate to fire and life safety. The focus of this course is on fire fighter safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies.
Semester(s) Offered: INTERMIT
Requisite: FS 100 or FS 101.
Type: C

FS 120 Fire Service Vehicle Operator 1-0-1
This course is designed to give fire science personnel the basic knowledge and skills to safely perform fire service vehicle operations according to state and national standards. Note: Coordinator Permission required to enroll.
Semester(s) Offered: SPRING
Requisite: Department consent
Type: C

FS 130 Fire Fighter C 1-2-2
This is the third of three courses designed to prepare a firefighter trainee to become a certified firefighter according to standards set by the National Fire Protection Association. It includes instruction in ropes and knots, fire protection systems, salvage, overhaul, protection of fire scene evidence, fire department communications, fire prevention, and public education.
Semester(s) Offered: FALL
Requisite: FS 115.
Type: C

FS 131 Fire Protection Systems 3-0-3
This course provides information relating to the features of design and operation of fire alarm systems, water based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.
Semester(s) Offered: INTERMIT
Requisite: FS 110 or FS 130.
Type: C

FS 159 Fire Suppression & Rescue 0.5-0-0.5
This is a refresher course for active fire department personnel. The successful student shall possess the skills necessary to properly function as a member of a fire suppression and rescue company.
Semester(s) Offered: INTERMIT
Requisite: Department consent
Type: C

FS 160 Technical Rescue Awareness 0.5-0-0.5
This course is designed to introduce the student to the risk of structural collapse, rope, confined space, vehicle and machinery, water, wilderness, and trench rescues.
Semester(s) Offered: INTERMIT
Requisite: Department consent
Type: C

FS 170 Strategy & Tactics 3-0-3
This course provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the fire grounds.
Semester(s) Offered: INTERMIT
Requisite: FS 101 or FS 130.
Type: C

FS 181 Haz Mat First Responder 2.5-0-2.5
The successful student shall possess the skills necessary to operate as a hazardous materials first responder at the operations level according to national regulations and standards.
Semester(s) Offered: SUMMER
Requisite: Department consent
Type: C

FS 200 Fire Service Instructor I 3-0-3
The successful student shall possess the skills necessary to operate as a Fire Service Instructor I according to standards set by the National Fire Protection Association.
Semester(s) Offered: SPRING
Requisite: FS 130.
Type: C

FS 201 Fire Officer I 3-0-3
The successful student shall possess the skills necessary to operate as a company fire officer according to standards set by the National Fire Protection Association.
Semester(s) Offered: FALL
Requisite: FS 130.
Type: C

FS 205 Fire Apparatus Engineer 3-0-3
A study of the operation of fire apparatus and the theory of hydraulics as used in fire protection. Emphasis is placed on the safe and proper use of fire apparatus and the application of hydraulic principles in fire protection problems.
Semester(s) Offered: INTERMIT
Requisite: FS 130.
Type: C

FS 210 Fire Service Instructor II 3-0-3
The successful student shall possess the skills necessary to operate as a Fire Service Instructor II according to standards set by the National Fire Protection Association.
Semester(s) Offered: SPRING
Requisite: FS 200.
Type: C

FS 211 Fire Officer II 3-0-3
The successful student shall possess the skills necessary to operate as a multi-company fire officer according to standards set by the National Fire Protection Association.
Semester(s) Offered: FALL
Requisite: FS 201.
Type: C

FS 260 Vehicle Rescue Operations 3-0-3
The successful student shall possess the skills necessary to operate as a rescue technician at the vehicle and machinery operations-level according to standards set by the National Fire Protection Association.
Semester(s) Offered: INTERMIT
Requisite: FS 130 or EMS 105 or EMS 110.
Type: C

FS 262 Rope Rescue I & II 3-0-3
The successful student in this course shall possess the rope rescue skills necessary to perform a safe and effective rope rescue according to the applicable NFPA standards.
Semester(s) Offered: INTERMIT
Requisite: FS 130 or EMS 105 or EMS 110.
Type: C

FS 264 Confined Space Rescue I & II 3-0-3
The successful student shall possess the skills necessary to perform a safe and effective confined space rescue according to the applicable NFPA standards.
Semester(s) Offered: INTERMIT
Requisite: FS 130 or EMS 105 or EMS 110.
Type: C

FS 268 Water Rescue I & II 3-0-3
The successful student shall possess the skills necessary to perform a safe and effective water rescue according to applicable NFPA standards.
Semester(s) Offered: SPRING
Requisite: FS 130 or EMS 105 or EMS 110.
Type: C

Variable up to
FS 280 Hazardous Materials - Awareness (1.5)-0-(1.5)
This course is designed to provide the educational components required for individuals who may come in contact with a hazardous materials incident.
Semester(s) Offered: SUMMER
Requisite: Department consent
Type: C

Variable up to
FS 299 Special Topics In Fire Science (4)-0-(4)
Application of fire science principles to specific problems through case studies, simulation, special projects, or problem-solving procedures. Prerequisite: Coordinator permission - employed by a fire department or fire brigade.
Semester(s) Offered: INTERMIT
Requisite: Department consent
Type: C

French

FREN 101 Elementary French I 4-0-4
This introductory language course focuses on establishing a solid foundation in the four basic skill areas of reading, writing, listening comprehension and speaking in French. Students are also introduced to the history and cultures of the French-speaking world.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 97 or higher.
Type: T

FREN 102 Elementary French II 4-0-4
This introductory language course is a continuation of FREN 101and focuses on establishing a solid foundation in the four basic skill areas of reading, writing, listening comprehension and speaking in French. Students are also introduced to the history and cultures of the French-speaking world.
Semester(s) Offered: SPRING
Requisite: FREN 101.
Type: T

FREN 201 Intermediate French I 4-0-4
Continued development of listening, speaking, reading and writing skills in French. Grammar review. Cultural and literary readings, compositions. Course is conducted almost entirely in French.
Semester(s) Offered: FALL
Requisite: FREN 102.
Type: T

FREN 202 Intermediate French II 4-0-4
Continued development of listening, speaking, reading and writing skills in French. Grammar review. Cultural and literary readings, compositions. Course is conducted almost entirely in French.
Semester(s) Offered: SPRING
Requisite: FREN 201.
Type: T, IAI-H1 900

FREN 299 Special Topics in French Variable up to (4)-0-(4)
An in-depth study of various areas in French language and culture presented through lectures, discussions, and/or individual research and readings by the students. Topics will vary. May include travel/study activities.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: T

GS-Dev/Review Vocation Skills

GSVR 66 Foundry/Sandcasting 1-2-2
This course shall consist of lectures, demonstrations, and laboratory work involving the technology and skills of foundry (sandcasting). It includes the study of the history and the process of making a sandcasting mold, and the gating procedures that are used in industrial casting of brass and aluminum.
Requisite: None.

GS-Develop/Preparatory Studies

Variable up to
GSBS 60 Communication Skills For College (12)-0-(12)
This whole language communication course is required for high school graduates whose Southwestern Illinois College entrance exam scores indicate a need for improved skills in reading, writing, speaking, and listening.
Requisite: None.
Type: P

Variable up to
GSBS 61 Comm Skills for College II (12)-0-(12)
This whole language communications course is for high school graduates whose Southwestern Illinois College entrance exam scores indicate a need for improved skills in writing, speaking and listening.
Requisite: None.
Type: P

General Technology

GT 104 Math for Electronics 1.5-3-3
Topics of fundamentals of algebra, operations of signed numbers, exponents and square roots, triangular trigonometry and metric conversion with emphasis on the applications found in the study of electrical/electronics circuits will be studied. Offered in fall, spring, and summer. Graphing calculator required (TI-84).
Requisite: None.
Type: C

GT 105 Intro to Technical Mathematics 1.5-3-3
GT 105 will cover operations of signed numbers, exponents and square roots, basic algebra, ratios and proportions, angle measurements, area and perimeters of polygons, circles, geometric solids, and triangular trigonometry. Offered in fall, spring, and summer. Graphing calculator required (TI-84).
Requisite: None.
Type: C

Geography

GEOG 143 Travel/Study Tour 3-0-3
An in-depth study of various world regions via travel. The regions emphasized vary each semester the course is offered. The course may be taken more than once for credit under different itineraries.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: T

GEOG 151 Geography of the United States and Canada 3-0-3
A systematic investigation of environmental conditions and geographic patterns of human activities in the United States and Canada. Attention is given to physiography, climate, human occupance patterns, economic activities, and human-environment relations.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: T

GEOG 152 World Regional Geography 3-0-3
This course introduces the basic concepts and tools of geography through a survey of the various regions of the world. Students will use spatial ideas and frameworks to explore and evaluate the causes of and interrelationships between environmental conditions and uneven patterns of human activities across the globe. Completion of this course fulfills the Non-Western Culture requirement for graduation from Southwestern.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, IAI-S4 906

GEOG 202 Economic Geography 3-0-3
This course investigates the changing geography of the global economy. Topics covered include economic globalization, trade and investment, production, and regional development. Completion of this course fulfills the Non-Western Culture requirement for graduation from Southwestern.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: T, IAI-S4 903N

GEOG 240 Geographic Info Systems I 3-0-3
This course is a hands-on introduction to the Geographic Information Science. Students will combine a conceptual understanding of cartography and geodetic science with a working knowledge of GIS software to perform geospatial data analysis and produce professional-quality maps.
Semester(s) Offered: FALL
Requisite: None.
Type: T

GEOG 241 Geographic Info Systems II 3-0-3
In this course, students will both expand their conceptual understanding of geospatial science and learn additional practical GIS software skills. The course focuses on remote sensing and raster data analysis, with additional attention given to 'spatially enabling' various types of data for use in a GIS.
Semester(s) Offered: SPRING
Requisite: GEOG 240.
Type: T

Variable up to
GEOG 299 Special Topics In Geography (3)-0-(3)
An in-depth study of selected areas of geography. Individual research is emphasized. Topics vary each semester. This course may be taken more than once for credit under different topics.
Semester(s) Offered: INTERMIT
Requisite: Sophomore standing, one course in geography.
Type: T

Geospacial & Aeronautical Information Systems

GIS 100 Intro to Mapping and GIS 3-0-3
This course is a practical study of Geographic Information Systems (GIS). Emphasis is placed on the use of ArcGIS software to map, analyze, and model geographic information relevant to fields such as forestry, economics, cartography, city planning, and health. Topics include map making, GIS data creation and management, and map projections and coordinate systems. This course is designed for students majoring in geographic information systems and professionals in the field who want to update their skills.
Requisite: None.
Type: C

GIS 101 GIS and Cartography 3-0-3
This course is designed for students who possess a basic background in Geographic Information Systems (GIS). Learning in this course focuses on cartographic principles of map design, production, and evaluation through the application of hands-on activities using ArcGIS software. Topics covered include data acquisition methods in map production (Global Positioning Systems/GPS, scanning, and georeferencing of data); spatial analysis techniques (using geoprocessing); and GIS project planning techniques. Cartographic tools and enhancements such as map layout, symbology, and labeling are emphasized. Students will apply project management skills to a class project.
Requisite: None.
Type: C

GIS 102 Remote Sensing 3-0-3
This course introduces students to the basics of remote sensing, characteristics of remote sensors, and remote sensing applications in academic disciplines and professional industries. Emphasis is placed on image acquisition and data collection in the electromagnetic spectrum and data set manipulations. This course is designed for geographic information systems (GIS) students interested in imagery analysis.
Requisite: None.
Type: C

GIS 103 GIS Data Analysis and Data Management 3-0-3
This course focuses on the development and application of spatial database models and processing techniques. Students of Geographic Information Systems (GIS) who wish to gain exposure to emerging data structures and methods via problem-based learning benefit from this course. The course deals with conceptual issues in spatial database development, analysis, display, and designing and creating spatial databases. Students work with a variety of GIS data types and edit GIS data within the geodatabase environment, with emphasis on real-world applications. The class project focuses on the design, creation and use of geodatabase to solve a problem.
Requisite: None.
Type: C

GIS 110 Intro into GIS Programming 1-4-3
This course introduces GIS scripting techniques and web mapping using the following ESRI products; ArcGIS Desktop, Online, AppBuilder, and API for JavaScript. The student will learn basic and advanced customization, scripting, automation strategies, and web map development. This course covers the basic python, HTML, JavaScript language and how they are used in geospatial technologies. Students will learn how to customize the ArcMap user interface, read and write GIS scripts, model geoprocessing work flows, update map documents, create script tools, and create a web map application.
Requisite: None.
Type: C

GIS 120 Spacial Analysis 3-0-3
This course explores analytical capabilities of geographic information systems. Covers techniques to locate and to describe features and moves to advanced techniques based on higher-level spatial objects. Use the ArcGIS Spatial Analyst extension to analyze raster datasets in the lab.
Requisite: None.
Type: C

GIS 210 GPS and Imagery 2-2-3
This course uses global positioning system (GPS) technology, this course will introduce topics of data capture editing, registration and rectification to provide an image for the extraction of geographic data such as property boundaries, streets, streams, and structures. Uses of GPS in this course are to provide reference points for registering and rectification of images, verifying and creating spatial data.
Requisite: None.
Type: C

GIS 220 Technical Writing 3-0-3
Prepares students to produce instructive, informative, and persuasive technical documents. Grounded in rhetorical theory, the course focuses on producing usable, reader-centered content that is clear, concise, and ethical. Students will engage in current best practices and work individually and in groups to learn strategies for effective communication in the digital and networked, global workplace.
Requisite: None.
Type: C

GIS 225 Planning and Implementing GIS 1-2-2
This course focuses on the methodology for planning and implementing a GIS. This course examines the procedures and methods for designing a GIS, Project Management skills, evaluating system requirements & amp; data sources, evaluating various methodologies, testing, hardware and software planning, cost benefit analysis/ROI, system implementation and project lifecycle.
Requisite: None.
Type: C

GIS 240 GIS Design with Rater Analysis 3-2-4
This course focuses on Raster/remote sensing principles, technologies, and application. Emphasizes processing raster imagery into useful information to be used in GIS. Includes demonstrating raster and remote sensing techniques.
Requisite: None.
Type: C

German

GERM 101 Elementary German I 4-0-4
This introductory language course focuses on establishing a solid foundation in the four basic skill areas of reading, writing, listening comprehension and speaking in German. Students are also introduced to the history and cultures of the German-speaking world.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 97 or higher.
Type: T

GERM 102 Elementary German II 4-0-4
This introductory language course is a continuation of GERM 101 and focuses on establishing a solid foundation in the four basic skill areas of reading, writing, listening comprehension and speaking in German. Students are also introduced to the history and cultures of the German-speaking world.
Semester(s) Offered: SPRING
Requisite: GERM 101.
Type: T

GERM 201 Intermediate German I 4-0-4
Continued development of listening, speaking, reading and writing skills in German. Grammar review. Cultural and literary readings, compositions. Course is conducted almost entirely in German.
Semester(s) Offered: FALL
Requisite: GERM 102.
Type: T

GERM 202 Intermediate German II 4-0-4
Continued development of listening, speaking, reading and writing skills in German. Grammar review. Cultural and literary readings, compositions. Course is conducted almost entirely in German.
Semester(s) Offered: SPRING
Requisite: GERM 201.
Type: T, IAI-H1 900

GERM 299 Special Topics in German Variable up to (4)-0-(4)
An in-depth study of various areas in German language and culture presented through lectures, discussions, and/or individual research and readings by the students. Topics will vary. May include travel/study activities.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: T

Health & Exercise Science

HES 130 Physical Fitness I 0-2-1
An introduction to and participation in an individual physical fitness program using a combination of resistance training and aerobic conditioning. After initial orientation and assessment, students will be provided opportunities to improve levels of muscular and cardiovascular fitness using a prescribed program of exercise.
Semester(s) Offered: ALL
Requisite: None.
Type: T

HES 131 Physical Fitness II 0-2-1
A continuation of physical fitness programming based upon individual improvement.
Semester(s) Offered: ALL
Requisite: HES 130.
Type: T

HES 151 Personal Health and Wellness 2-0-2
A study of vital health principles and problems using a wellness approach. Emphasis will be on the importance of making healthy lifestyle choices that affect individuals, families, and communities.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T

HES 152 First Aid-Medical Self Help 2-0-2
This course is designed to teach emergency care to be given to a victim in the event of accidental injury or sudden illness. Students will have the opportunity to obtain certification from the American Red Cross for Adult, Child and Infant CPR/AED and Standard First Aid,
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T

HES 154 Nutrition, Exercise, & Weight Management 2-0-2
Designed to help the student better understand the relationship of dieting and exercise to obesity. Emphasis will be on the practical application of effective methods of weight management, including physical and behavior approaches. Fad diets, eating disorders, common problems of dieting, and proper eating habits will be studied.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T

HES 155 Physical Fitness & Wellness 2-0-2
Designed to help the student understand and evaluate wellness and exercise needs and develop an individual physical fitness program. The information presented represents a consensus of presently available scientific evidence in the areas of exercise physiology and health.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T

HES 156 Individual Exercise and Health 2-0-2
This course is designed to develop attitudes, strategies, and lifetime exercise habits for health. Emphasis will be placed on understanding the relationship between exercise and health over one's lifetime. .
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T

HES 158 Consumer Health 3-0-3
This course is designed to help the student develop the skills and strategies necessary to make intelligent decisions regarding the purchase and the use of health products and services.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T

HES 160 Nutrition for Health, Fitness and Sport 3-0-3
Introduces the student to current dietary guidelines appropriate for a healthy and physically active lifestyle. Explores the nutritional needs of physically active individuals, including recreational as well as competitive athletes. The role of each nutrient is reviewed, with emphasis on their utilization during exercise and recovery. Dietary modifications to optimize performance during different types of physical activity also will be discussed. A review of scientific data regarding ergogenic aids also will be presented.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T

HES 170 Introduction to Exercise Science 3-0-3
An introduction to physical education and exercise science for those considering careers in teaching, health, fitness, or recreation. Topics include historical foundations, teacher preparations, exercise physiology, exercise and sport psychology, physical fitness and health, and career preparation.
Semester(s) Offered: SPRING
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T

HES 172 Physical Fitness Testing & Prescription 3-0-3
This course is an introduction to the principles of exercise testing and prescription as they apply to fitness, health, and performance. Topics covered include the role of the health- related components of fitness in health and performance, the physical fitness of normal and special populations, and the significance of cardiovascular programs through the life cycle.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T

HES 180 Personal Trainer Certification Prep 4-0-4
This course introduces the fundamentals of personal training to help prepare students for a national fitness certification examination. Students will learn how to develop and implement an individualized approach to exercise leadership in healthy populations and/or those individuals with medical clearance.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T

HES 230 Physical Fitness III 0-2-1
A continuation of physical fitness programming based upon individual improvement.
Semester(s) Offered: ALL
Requisite: HES 131.
Type: T

HES 231 Physical Fitness IV 0-2-1
A continuation of physical fitness programming based upon individual improvement.
Semester(s) Offered: ALL
Requisite: HES 230.
Type: T

HES 299 Spec Topics: Hlth & Ex Science Variable up to (4)-(4)-(4)
This course will cover special topics or problems in health and exercise science and provide students with the knowledge and ability to deal with those topics or problems in relation to their special requirements.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T

Health Information Technology

HIT 101 Health Information Intro 2-0-2
This course covers: introduction to the Health Information Management field including orientation to various health care delivery systems (example: hospitals, ambulatory care, etc.), health information departments, the medical record, documentation requirements, the medical staff, role(s) of the health information technologist, the American Health Information Management Association, ethics, accrediting and licensing bodies (example: Joint Commission), and forms design. The student practices basic medical record techniques in the college laboratory and observes health information department functions through field trip(s) to area health care facilities and/or practical or simulated applications. NOTE: This course requires access to a reliable Internet connection to complete online assignments. Students must be competent computer and internet users.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 101 and MATH 97.
Type: C

HIT 110 Health Information Nomenclature I 2-0-2
This course is designed to introduce the student to the nomenclature used in the health information fields so that he/she may function professionally as he/she engages in oral and written communication, record analysis, coding, quality improvement activities, abstracting medical data, research, teaching and training employees, and preparing reports using medical language. NOTE: This course requires access to a reliable Internet connection to complete online assignments. Students must be competent computer and Internet users.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 101 and MATH 97.
Type: C

HIT 130 Intro to Computers for HIT 3-0-3
This course focuses on healthcare administration applications of software, including word processing, spreadsheets, databases, and presentation graphics. The course is designed to assist students to acquire basic computer skills in word processor, spreadsheet, database, and presentation applications with a focus on navigation and accuracy; discussing and demonstrating how these applications are used in the healthcare environment; introducing methods to assemble and analyze patient data for the purpose of improving patient care and controlling costs. NOTE: This course requires access to a reliable Internet connection to complete online assignments. Students must be competent computer and Internet users.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 101 and MATH 97.
Type: C

HIT 151 Pathophysiology 3-0-3
This course is designed to introduce the student to the study of diseases, disease processes and medical conditions. Through this class the student will acquire knowledge about surgical procedures used to treat these diseases. In addition, the student will learn about medications, laboratory tests and diagnostic resources used to detect and inhibit these conditions. NOTE: This course requires access to a reliable Internet connection to complete online assignments. Students must be competent computer and Internet users.
Semester(s) Offered: SPRING
Requisite: HIT 101, HIT 110 each with a grade of "C" or better.
Type: C

HIT 160 Health Data Management 3-0-3
This course is a continued study of medical record/health information management practices including: health information technology applications and health information (medical record) functions, filing systems, record organization methodologies (assembly, scanning, etc.), quantitative and qualitative analysis, correspondence procedures and resume development and writing. The student practices basic health information (medical record) techniques in the college laboratory and observes overall health information (medical record) department functions through field trips to area health care facilities and/or practical or simulated applications. NOTE: This course requires access to a reliable internet connection to complete online assignments. Students must be competent computer and internet users.
Semester(s) Offered: SPRING
Requisite: HIT 101 with a grade of "C" or better.
Type: C

HIT 161 Microcomputer Applications in HIT 3-0-3
This course will provide an overview of basic information technology concepts and its application to health care and associated delivery systems, the electronic health record or computerized medical record and the health information management department. The software laboratory assignments will focus on computer techniques in spreadsheet design, database management, work processing/transcription, and other health care applications. Topics include spreadsheet design, word processing/transcription, data collection/analysis, archival systems, data sources/sets, quality and integrity of health care data including introduction to the chargemaster, reimbursement methodologies, etc. NOTE: This course requires access to a reliable internet connection to complete online assignments. Students must be competent computer and internet users.
Semester(s) Offered: SPRING
Requisite: HIT 101, HIT 110, HIT 130 each with a grade of "C" or better.
Type: C

HIT 170 Health Information Nomenclature II 2-0-2
This course is a continuation of Health Information Nomenclature I. It is designed to teach the student proper spelling, pronunciation and meanings of medical terms. It is vitally important for the student to be able to converse with other health care providers in a professional manner. Understanding medical nomenclature is one of the basics needed to accomplish this. This course will also assist health information students to sufficiently analyze and evaluate health information (medical record) data. NOTE: This course requires access to a reliable internet connection to complete online assignments. Students must be competent computer and internet users.
Semester(s) Offered: SPRING
Requisite: HIT 110 with a grade of "C" or better.
Type: C

HIT 200 Health Care Delivery 4-0-4
Students will continue their study of nomenclature and classification systems; applicable reimbursement methodologies (example: DRGs, MS-DDRGs), indexes and statistical reports of medical information; information handling and computer/information technology. Federal structure as it relates to health care, quality assessment and improvement, cancer and other registries and varied delivery systems (example: Managed Care, etc). NOTE: This course requires access to a reliable internet connection to complete online assignments. Students must be competent computer and internet users.
Semester (s) Offered: FALL
Requisite: HIT 160 with a grade of "C" of better.
Type: C
Semester(s) Offered: FALL
Requisite: HIT 160 with a grade of "C" or better.
Type: C

HIT 210 Health Statistics 3-0-3
This course will include the study of vital and public health statistics incorporating statutory and/or regulatory requirements as it relates to health information management; in-depth study of hospital statistics; sources, definitions, collection, reporting; presentation of data with the emphasis of reliability and validity of data. The importance of health care statistics as it relates to management, decision making, governmental agencies, quality assessment and research will be introduced. NOTE: This course requires access to a reliable internet connection to complete online assignments. Students must be competent computer and internet users.
Semester(s) Offered: FALL
Requisite: HIT 130, HIT 151, HIT 160, HIT 161, HIT 170 each with a grade of "C" or better.
Type: C

HIT 220 Classification Systems I 4-0-4
During this course students are introduced to the current classification and applicable legacy systems with emphasis on diseases, injury and procedure codes. Application of coding practices to applicable reimbursement methodologies (DRGs, MS-DRGs), and encoders. Students will apply skills learned with practical application and/or simulated activities/scenarios. NOTE: This course requires access to a reliable internet connection to complete online assignments. Students must be competent computer and internet users.
Semester(s) Offered: FALL
Requisite: BIOL 105, HIT 151, HIT 160, HIT 161, HIT 170 each with a grade of "C" or better.
Type: C

HIT 240 Classification Systems II 3-0-3
This course covers: instruction covering basic principles of current classification system (CPT/HCPCS), sequencing of codes and impact on reimbursement. Students will gain information about APC grouping, chargemaster, and medical necessity, and application of skills incorporating practical application and/or simulated activities/scenarios covered in HIT 220 and HIT 240. NOTE: This course requires access to a reliable internet connection to complete online assignments. Students must be competent computer and internet users.
Semester(s) Offered: SPRING
Requisite: HIT 220 with a grade of "C" or better.
Type: C

HIT 245 Pharmacology for the HIT 2-0-2
The course provides an overview of basic concepts and terminology associated with medication structure, function, interaction and administration available for clinical management of patient care. Identification of diseases associated with certain medications will be studied. NOTE: This course requires access to a reliable internet connection to complete online assignments. Students must be competent computer and internet users.
Semester(s) Offered: SUMMER
Requisite: HIT 151, HIT 170 each with a grade of "C" or better.
Type: C

HIT 250 Legal Aspects of HI 2-0-2
This course covers: study of the medical record as a legal document; confidential communications, release of information, the medical record in court, consents, authorizations and releases, privacy and security, e-role(s) or information technology as it relates to legal aspects, Health Insurance Portability and Accountability Act, legislative process including federal court systems, legal vocabulary and retention management principles. NOTE: This course requires access to a reliable Internet connection to complete online assignments. Students must be competent computer and Internet users.
Semester(s) Offered: SPRING
Requisite: HIT 101 with a grade of "C" or better.
Type: C

HIT 260 Professional Practice 0-4-2
Continuation Practicum I. The student is assigned to local health care/health information facilities or applicable department/location to practice the theory and techniques of the classroom. Note: Completion of all HIT courses or courses currently enrolled in last semester.
Semester(s) Offered: SPRING
Requisite: Department consent
Type: C

HIT 270 Health Information Management 4-0-4
This course covers the basic principles of efficient and effective management, supervision, policy and procedure development, roles/functions of teams/committee leadership, training program design and implementation, operational workflow, revenue cycle, organization resource activities (budgeting) as it applies to the health information management profession. Includes also a basic overview of assessment and improvement processes and investigates health care delivery in the long-term care setting. NOTE: This course requires access to a reliable internet connection to complete online assignments. Students must be competent computer and internet users.
Semester(s) Offered: SPRING
Requisite: HIT 200 with a grade of "C" or better.
Type: C

HIT 280 Advanced Coding 3-0-3
This course is designed to assist students in their efforts to achieve an explicit set of coding competencies needed to successfully pass the CCA examination. These competencies have been determined through a job analysis study conducted of practitioners. The competencies are divided into domains and tasks as outlined by AHIMA. This nationally recognized credential distinguishes coders by exhibiting commitment to the coding profession and demonstrating coding competencies across all settings, including both hospitals and physician practices. NOTE: This course requires access to a reliable internet connection to complete online assignments. Students must be competent computer and internet users.
Semester(s) Offered: SPRING
Requisite: Concurrent enrollment in or completion of HIT 240 with a grade of "C" or better.
Type: C

HIT 285 Advanced Data Analytics 3-0-3
This course is designed to assist students in their efforts to advance their skills in analytics for carious health care settings. The course will start with an overview of data mining techniques, tools for data organization/analysis, process of analyzing data, and the use of external data for benchmarking. These techniques and tools will be covered in the context of healthcare data using an electronic health record. The course will address the benefits and challenges of analyzing healthcare data, and the integration strategies for various data types commonly found in EHRs as well as environmental and biological data that affects healthcare. NOTE: This course requires access to a reliable internet connection to complete online assignments. Students must be competent computer and internet users.
Semester(s) Offered: SPRING
Requisite: HIT 210 with a grade of "C" or better.
Type: C

HIT 290 Health Information Capstone 1-0-1
This review class is designed to assist students in their efforts to prepare for the American Health Information Management Association's (AHIMA's) Registered Health Information Technician (RHIT) examination. NOTE: This course requires access to a reliable Internet connection to complete online assignments. Students must be competent computer and Internet users.
Semester(s) Offered: SPRING
Requisite: HIT 220, HIT 230 each with a grade of "C" or better; concurrent enrollment in or completion of HIT 270 with a grade of "C" or better.
Type: C

Health Related Occupations

HRO 100 Medical Terminology 1-0-1
A course designed to provide an introduction to medical terminology through the study of word roots, prefixes and suffixes.
Semester(s) Offered: ALL
Requisite: None.
Type: C

HRO 101 Health Science Careers 2-0-2
In this course, students will explore allied health professional opportunities focusing on the educational and professional requirements, unique skill characteristics, historical viewpoints and progression of the profession, and the scope of professional practice for each profession. Student will learn of career growth potential while exploring personal professional assessment in allied health careers.
Requisite: None.
Type: C

HRO 105 Nurse Assistant 5.5-3-7
This state-approved Nursing Assistant training course prepares students to perform simple and basic nursing functions utilized in a variety of health care settings under the supervision of a nurse. Instruction includes hands-on experience in the classroom, lab and clinical settings. Skills taught include the 21 IDPH required skills as well as all elements of personal care, proper body mechanics, safety measures including cardiopulmonary resuscitation (CPR), vital signs, resident rights, infection control, communication and observation. Students will also learn basic anatomy & physiology as well as medical terminology. Following successful completion of the course, a student must pass a written state competency examination to work as a certified nurse assistant (CNA). NOTE: To meet the Illinois Department of Public Health's requirements, students must be 16 years of age and pass a criminal background check to participate in this course which is offered in either accelerated (six weeks), summer (eight weeks) or extended (16 weeks) time frame. Students will be dropped from the course if they fail to pass the criminal background check, meet IDPH course attendance requirements, or fail to meet clinical facility requirements. Students must have completed, at a minimum, eight years of grade school or provide proof of equivalent knowledge; be in good physical and emotional health; and have good interpersonal communication skills.
Semester(s) Offered: ALL
Requisite: None.
Type: C

HRO 106 Advanced Nursing Assistant 5.5-3-7
This state-approved Advanced Nursing Assistant training program provides Illinois Registered certified nurse assistants a bridge to the next level of patient care and management under the supervision of a nurse. In addition, this course prepares graduates for the written state competency examination to work as an Advanced Certified Nurse Assistant (CNA II). Instruction includes hands-on experience in the classroom, lab and clinical settings.
Semester(s) Offered: ALL
Requisite: None.
Type: C

HRO 110 Venous Access Skills I 0-1-0.5
The course provides basic information and practical application required for proficiency in venous access for blood collection or medication administration. Emphasis is on vein selection and proper technique for access.
Requisite: Enrollment in a health sciences program or designation as pre-health science.
Type: C

HRO 111 Venous Access Skills II 0-1-0.5
The course provides basic information and practical application required for proficiency in venous access for blood collection or medication administration. Emphasis is on medication administration.
Requisite: HRO 110.
Type: C

HRO 120 Pharmacology 3-0-3
This course is designed to study the classification of drugs, their actions and effects within the human body. Study will include indications, side effects, adverse reactions, dosages and administration. Legal aspects will also be included in course content.
Semester(s) Offered: ALL
Requisite: None.
Type: C

HRO 150 Fundamentals of Nutrition 2-0-2
A presentation of normal nutrition emphasizing the purpose of nutrition, the food nutrients and sources, dietary application of nutrition to meet the needs of the normal, altering dietary needs to comply with age, cultural and regional differences, and some modifications for illness and disease.
Semester(s) Offered: ALL
Requisite: None.
Type: T

HRO 160 Medical Terminology 3-0-3
A course designed to provide an in-depth study of medical terminology as it relates to the structure and function of the human body in health and disease.
Requisite: None.
Type: C

Variable up to
HRO 299 Problems in Health Related Occupations (4)-(2)-(4)
The study of problems facing workers in the health care delivery system. Application of allied health occupation principles to specific problems through case studies, simulation, special class projects or problem-solving procedures.
Requisite: None.
Type: C

Heating, Ventilation, Air Cond, & Refrigeration

HVAR 100 Fitting, Fusion and Fabrication 3-2-4
Practical welding, soldering and brazing of copper, aluminum and steel tubing will be covered. Several joining processes will be used to fabricate and repair the various connections and fittings used in air conditioning systems. Black iron and galvanized pipe, pipefittings, and hand valves for water and gas will be discussed, as well as PVC pipe and connections.
Requisite: None.
Type: C

HVAR 101 Refrig. & A.C. Principles I 3-2-4
Maintenance and repair of single-unit portable air conditioners. Emphasizes checking compressor and air circulator. Basic refrigeration theory and component application. Refrigerant recovery and recycling processes will be demonstrated.
Requisite: Concurrent enrollment in or completion of HVAR 103 or coordinator approval.
Type: C

HVAR 103 Basic Electrical Controls & Systems 3-2-4
Introduction to basic electricity, electrical test equipment, wiring diagrams, electrical symbols and electrical motors. The course also includes an introduction to residential air conditioning and heating controls.
Requisite: None.
Type: C

HVAR 152 Advanced Refrig. & A.C. Principles 3-2-4
An advanced course in air conditioning and refrigeration. Different types of units will be discussed with emphasis on split-system air conditioners. Refrigerant recovery and recycling processes will be demonstrated.
Requisite: HVAR 101 or coordinator approval.
Type: C

HVAR 153 Heating Fundamentals 3-2-4
Introduces the student to four major categories of heating systems, gas-fired forced-air, oil heating, hydronics, and electric furnaces. The basic configurations, components, and controlling systems for each category will be covered and compared to the others. Troubleshooting for each type of heating system will also be discussed.
Requisite: HVAR 103 or coordinator approval.
Type: C

HVAR 201 Psychrometrics & Load Calculations 3-2-4
Contains ventilation and air conditioning basics with emphasis placed on psychrometrics and heat load calculations in order to determine equipment size needed for specific applications of both winter and summer air conditioning.
Requisite: Concurrent enrollment in or completion of HVAR 152 or Coordinator approval.
Type: C

HVAR 202 Commercial Refrigeration I 3-2-4
Introduces the components that make up commercial refrigeration systems as well as their application within the systems. Troubleshooting and repair of commercial refrigeration systems are introduced. Testing of compressors, metering devices, evaporators, condensers and specialty controls are emphasized.
Requisite: HVAR 101 or coordinator approval.
Type: C

HVAR 203 High Efficiency Heating Systems 1-2-2
Emphasizes changes that have occurred in recent years in the field of heating technology. Includes the introduction of pulse furnaces, condensing furnaces, sealed combustion systems, and advanced electronic ignition systems. Solid state control modules will also be introduced.
Requisite: HVAR 103 and HVAR 153 or Coordinator approval.
Type: C

HVAR 208 Intro to HVAR Computer Applications 1-1-1.5
This course is designed to introduce the student to the use of computer related HVAR aids such as computerized load calculations, online job searches and HVAR training aids.
Requisite: None.
Type: C

HVAR 210 Mech Codes & Installation Practices 3-2-4
Students will learn how to install various major appliances. Plumbing and venting codes as set forth in the local codes will be discussed.
Requisite: None.
Type: C

HVAR 211 Distribution Panels & Elect Building Wiring 2-2-3
Students will learn how to install, repair, and estimate costs for wiring in residences and commercial establishments for appliances.
Requisite: None.
Type: C

HVAR 251 Commercial Refrigeration II 3-2-4
Commercial refrigeration systems designs identified and component efficiency studies are made to help explain the overall make-up of commercial refrigeration systems. Troubleshooting of these systems is emphasized.
Requisite: HVAR 202 or Coordinator approval.
Type: C

HVAR 252 Air Conditioning & Htg Sys. Design 3-2-4
Using blueprints and heat load information, the student designs air conditioning and heating distribution systems. The student is introduced to commercial roof top air conditioning units in this course.
Requisite: HVAR 201 or Coordinator approval.
Type: C

HVAR 253 Licensing & Certification Prep 3-0-3
The course consists of a series of practice tests over a wide variety of subjects. These subjects include: residential heating, residential cooling, heat pumps, light commercial equipment, commercial equipment, mechanical installation practices, as well as some major appliance topics. The tests are designed to help the student prepare for any type of certification test that he/she may be required to take.
Requisite: 12 hours of HVAR courses completed.
Type: C

HVAR 256 Advanced Elect. Controls & Systems 3-2-4
A review of basic controls and circuitry leading to advanced air conditioning, heating and refrigeration controls and circuitry as well as solid state electronics controls.
Requisite: HVAR 103 or coordinator approval.
Type: C

HVAR 257 Internship 0-20-4
Gives the students occupational experience while completing the prescribed course of study in HVAR. This is an elective to provide on-the-job experience for the student entering the air conditioning, heating and refrigeration field. The student must complete 320 hours of work experience for four semester hours of credit.
Requisite: 12 hours of HVAR courses completed. Department consent
Type: C

HVAR 258 Natl Electrical Code Interpretation 3-0-3
Advanced studies of the terms and concepts that are required for proficiency in interpretation of electrical codes and regulations. Based on the National Electrical Code and a review of practical electrical field knowledge and industrial/residential qualifying exams. This course prepares the student for future career advancements that involve testing by various regulatory agencies. Of particular interest to electricians, contractors, inspectors, and pre-architecture/engineering students.
Requisite: None.
Type: C

HVAR 260 Refrigerant Transition/Recovery Cert 0.5-0-0.5
Prepares individuals with a basic knowledge of air conditioning and refrigeration to successfully pass an environmental protection agency approved certification exam. This exam will allow the individual to work in the refrigeration and air conditioning industry.
Requisite: HVAR 101 or Coordinator approval.
Type: C

HVAR 262 Air Delivery Systems Materials & Methods 0-2-1
Introduces sheet metal components necessary to physically install a heating and air conditioning system. Tools and assembly will also be covered.
Requisite: None.
Type: C

HVAR 263 Heat Pumps 1-2-2
Introduces air-to-air and ground source heat pump systems. Components unique to heat pumps will be discussed, along with their function in the system. Control systems and troubleshooting will be covered. Emphasis will be placed on the selection of components and the installation of heat systems.
Requisite: HVAR 152 or Coordinator approval.
Type: C

HVAR 280 Commercial Cooking Equipment I 1-2-2
This course introduces the components that make up commercial cooking equipment as well as their application. Troubleshooting and repair of commercial cooking equipment are introduced as well. Testing of ignition systems and operating systems as well as specialty controls are emphasized.
Requisite: HVAR 103 and HVAR 153 or Coordinator approval.
Type: C

HVAR 289 USS MOD19-Principles Of HVAC 1.5-1-2
This course will introduce the students to the principles of heating, ventilation, air conditioning and refrigeration. Additionally students will be prepared to take the EPA exam for a refrigerant transition/recovery certificate.
Requisite: None.
Type: C

HVAR 299 Special Problems in HVARVariable up to (4)-0-(4)
This course is designed to meet the needs of students requiring instruction on special topics or problems in the heating, ventilation, air conditioning and refrigeration field. This course provides the student with the knowledge and/or skills necessary to address the particular topics or problems outlined in the course syllabus.
Requisite: None.
Type: C

History

HIST 101 World Civilization I 3-0-3
This course is a survey of world history from the birth of civilization to the beginning of the Age of Exploration at the close of the 15th century. Subjects discussed will include the evolution of Greek, Roman, Chinese, Japanese, Islamic, and Native American civilizations; the development of the great world religions; and the birth and growth of Europe. This course will conclude with a discussion and a review of the Age of Exploration.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T, IAI-S2 912N

HIST 102 World Civilization II 3-0-3
This course is a survey of world history from the Age of Exploration to modern times. Subjects discussed include the stabilization and growth of Europe. Europe's impact on the Americas, the development of non-Western civilizations, the age of Enlightenment and revolution in Europe, the development of industrialization, nationalism, imperialism, and the major events of the twentieth century.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, IAI-S2 913N

HIST 114 Latin American History 3-0-3
This course is a review of the history and development of Latin America, beginning with the peopling of the Western hemisphere and the evolution of the native states of Central and South America. Specific subjects covered include the Spanish conquest and its effects on the Americas, the Latin American revolutions and the post-revolutionary period, and the rise and development of the modern Latin American states. The course concludes with a review of modern developments and current events in Latin America. Completion of this course fulfills the non-western culture requirement for graduation from Southwestern Illinois College.
Semester(s) Offered: SPRING
Requisite: Eligible for ENG 101.
Type: T, IAI-S2 920N

HIST 115 Mid-East History 3-0-3
An introduction to the area and nations which comprise the Middle East. The historical, political, and religious evolution of the Middle East will be reviewed, along with the development and current status of regional and national problems which confront the area. Completion of this course fulfills the Non-Western Culture requirement for graduation from SWIC.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, IAI-S2 920N

HIST 117 African History 3-0-3
A broad overview of the historic, economic, political, social and cultural development of the African continent. Particular emphasis will be upon the background of this area and how this impacted its development and importance to the industrialized world. Completion of this course fulfills the Non-Western Culture requirements for graduation from Southwestern Illinois College.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 101.
Type: T, IAI-S2 920N

HIST 118 Asian History 3-0-3
The course is an introduction to the area and nations which comprise Asia. The historical, political, and religious evolution of Asia will be reviewed, along with the development and current status of regional and national problems which confront the area. Completion of this course fulfills the Non-Western Culture requirement for graduation from SWIC.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 101.
Type: T, IAI-S2 920N

HIST 154 History Travel/Study Tour 3-0-3
An in-depth historical study of various regions via travel. The regions emphasized vary each semester the course is offered. The course may be taken more than once for credit with different itineraries.
Requisite: None.
Type: T

HIST 180 U.S. History to 1865 3-0-3
The development of the American civilization starting with the European background and ending with the Civil War. Includes the Age of Discovery; the period of colonization of the Spanish, French, Dutch and English; the American Revolution; the early years of the Republic; the development of the Constitution; the War of 1812; the growth of nationalism and manifest destiny; and the Civil War.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, IAI-S2 900

HIST 181 U.S. History, 1865 to the Present 3-0-3
The course begins with the Reconstruction period, and includes the transformation of America from an agrarian to urban civilization with emphasis on politics, business, finance, labor and society. Among the topics covered are the end of Isolation, the Populist and Progressive movements, World War I, the Roaring 20s, the Great Depression, World War II, the Cold War, the emergence of the Civil Rights Movement, the 1960s, and National Politics: 1968-1998.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, IAI-S2 901

HIST 230 African-American History 3-0-3
A course designed to study the African-American impact on the economic, political, social and cultural institutions of the United States. Topics covered include slavery prior to the Civil War, the war itself, Reconstruction and the establishment of the Jim Crow system. Included in this course is an examination of the role of the African-American in the 20th century, the Civil Rights movement and the election of the first African-American President, Barack Obama.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, IAI-H2 909D

HIST 232 United States at War 3-0-3
This course attempts to identify the social, cultural, economic, diplomatic and political influences of war on life in the United States. It also examines the causes, diplomacy, battles, leaders, and results of the different wars. The course covers the Revolutionary War to the conflict in the Persian Gulf.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 101.
Type: T

HIST 250 20th Century Western Civilization 3-0-3
A survey of the 20th Century Western Civilization which includes interactions with Eastern and third world countries, and an examination of the definitions, causes, and effects of the major forces and events that have shaped the development of the modern western societies and the world.
Semester(s) Offered: SPR
Requisite: Eligible for ENG 101.
Type: T

HIST 286 History of Religion 3-0-3
A survey of the history of the world's religions with an emphasis upon each faith's origins, important leaders, mythology and doctrine, organizational development, and influence upon society. Primal religions, Hinduism, Buddhism, Jainism, Sikhism, Confucianism, Taoism, Shinto, Judaism, Christianity, and Islam are among the religions examined. The approach of the course is open and unbiased, promoting the intellectual study of religion. Completion of this course fulfills the Non-Western Culture requirement for graduation from Southwestern.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, IAI-H5 904N

HIST 292 U.S. History Since 1945 3-0-3
The course involves concentration in areas of U.S. history since 1945. Includes the roles played by women, minorities, the business labor movement, cultural patterns, the civil rights movement, presidential administrations, the cold war, and foreign policy. U.S. foreign policy will be examined from the prewar era to the present day.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T

HIST 299 Special Topics In History Variable up to (3)-0-(3)
An in-depth study of history presented by discussions and/or individual research and reading by the student. Topics vary each semester. This course may be taken more than once if different topics are discussed.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101.
Type: T

Homeland Security

HS 100 Intro to Homeland Security 3-0-3
This course addresses the functions of Homeland Security and critical infrastructure and asset protection as they relate to government, industry, and the community. The key functions of threat prevention, crisis response, and operations recovery are addressed from a variety of perspectives given that homeland security is a responsibility that is shared by government agencies, the private sector, and individuals, encompassing a broad spectrum of professional career positions throughout our society. This course provides an overview of the elements involved in the homeland security function, as well as the challenges critical infrastructure managers in government and industry can/will face while maintaining mission operations and staff accountability in the midst of multiple overlapping roles and responsibilities in our rapidly changing world. NOTE: This course requires access to a reliable Internet connection to complete online assignments. Students must be competent computer and Internet users.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: C

Horticulture

HORT 102 Intro to Horticulture 3-0-3
This course teaches the basic principles in the science and art of growing fruits, vegetables, flowers or ornamental flowers. It is required of all first-year students in the program unless requirement is waived by divisional approval.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T, IAI-AG 905

HORT 112 Media & Fertility 3-2-4
This course contrasts the nature and properties of artificial soils and their fertility with natural soils. Media and fertility requirements for hydroponics, vegetables, bedding plants, nursery stock in the greenhouse and outdoors are discussed. Special emphasis is placed on soil sterilization, preparation of media, irrigation and drainage, liquid fertilization, and time-released fertilizers.
Semester(s) Offered: FALL
Requisite: None.
Type: C

HORT 120 Container Gardening 1-2-2
This course is designed to teach students the art, skill, and technique of container gardening. Selection of appropriate containers, media, and plant materials for various types of container gardens and the maintenance of these container gardens will be the primary focus.
Semester(s) Offered: SPRING
Requisite: None.
Type: C

HORT 132 Garden Center & Nursery Mgmt 3-2-4
The study of cultural and production practices, such as propagation by seeding, cutting and grafting. It also teaches nursery management and layout, including purchasing, marketing, and pricing (offered fall).
Semester(s) Offered: FALL
Requisite: None.
Type: C

HORT 135 Turf Management 3-2-4
The study of grass types, uses, land preparation, seeding, sodding, irrigation, fertilization, pests and management practices of turf (offered summer).
Semester(s) Offered: SUMMER
Requisite: HORT 102.
Type: C

HORT 136 Identification & Use of Ornamentals 2-2-3
The study of the identification, ecology and use of ornamental plants, woody and herbaceous plants, deciduous trees, shrubs, and ground covers.
Semester(s) Offered: FALL
Requisite: HORT 102.
Type: C

HORT 152 Greenhouse Management 3-2-4
The study of watering, fertilization, ventilation, temperature, humidity, light and general management practices of greenhouses (offered spring).
Semester(s) Offered: SPRING
Requisite: HORT 102.
Type: C

HORT 165 Floral Design 2-2-3
This course includes the study of basic design principles, decorative uses and arrangements of flowers, foliages, and accessories. This includes the construction of occasional floral arrangements (offered fall).
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

HORT 175 Home Gardening 3-0-3
The study of lawn care, plantings, seedlings, flowers, fruits, vegetables, trees and shrubs with the homeowner in mind.
Semester(s) Offered: SPRING
Requisite: None.
Type: C

HORT 195 Indoor Plant Culture and Gardening 2-2-3
The student will learn identification, culture techniques and propagation of foliage and conservatory plants, with uses in accenting interior décor (offered fall of odd-numbered years).
Semester(s) Offered: INTERMIT
Requisite: HORT 102.
Type: C

HORT 215 Horticultural Diagnostics 2-2-3
A diagnostic approach to plant problems is given using a systematic evaluation of the site and affected plants. Diagnostic tools and sampling are discussed. Examples of noninfectious disorders, insects, infectious diseases, as well as environmental problems are presented (offered fall).
Semester(s) Offered: FALL
Requisite: Concurrent enrollment in or completion of HORT 102.
Type: C

HORT 226 Landscaping 3-0-3
This course teaches the principles of design in landscaping, site analysis, construction and costs with the aid of drawings, models and case studies (offered spring).
Semester(s) Offered: SPRING
Requisite: Concurrent enrollment in or completion of HORT 136.
Type: C

HORT 228 Computer-Aided Landscaping 1-4-3
In this course students will use a current computer software package to create two-dimensional and perspective views, as well as three-dimensional presentations of landscape designs. They will create photorealistic color designs, generate professional drawings, and produce detailed estimates that match the landscape plans (offered spring).
Semester(s) Offered: SPRING
Requisite: None.
Type: C

HORT 235 Advanced Turf Management 2-2-3
Topics covered in this course include grass types, uses, land preparation, seeding, sodding, irrigation, fertilization, pests, and management practices of turf.
Semester(s) Offered: FALL INTERMIT
Requisite: None
Type: C

HORT 237 Arboriculture 3-0-3
The study of production of trees, shrubs and herbaceous plants as well as their placement, cultivation, arrangement and management for ornamental use (offered spring of even-numbered years).
Semester(s) Offered: INTERMIT
Requisite: HORT 132.
Type: C

HORT 242 Fruit Production 2-2-3
The study of the science and practice of growing, harvesting, handling, storing, processing, and marketing of fruits. It is designed to present students with the scope of tree fruits, brambles, and other fruits commonly grown in the area (offered fall of even-numbered years).
Semester(s) Offered: INTERMIT
Requisite: HORT 102.
Type: C

HORT 252 Advanced Greenhouse Management 3-0-3
Commercial crop production and management practices including cultural and technical aspects, and management of personnel, records and overhead.
Semester(s) Offered: EVEN ONLY FALL
Requisite: HORT 152.
Type: C

HORT 262 Small Fruit Production 2-2-3
This course teaches the science and practice of growing, harvesting, handling, storing, processing, and marketing of small fruits (offered spring of even-numbered years).
Semester(s) Offered: SPRING
Requisite: HORT 102.
Type: C

HORT 265 Advanced Floral Design 2-2-3
This is an advanced floral design course with emphasis on artistic qualities, sympathy floral arrangements, bridal designs, and theme development.
Semester(s) Offered: INTERMIT
Requisite: HORT 165.
Type: C

HORT 275 Grounds Maintenance 4-0-4
This course emphasizes practical applications of grounds management techniques which are approached abstractly in other horticulture classes. When possible, the school facilities will be used as examples, but area parks, cemeteries, and other real estate complexes will also be visited (offering spring of odd-numbered years).
Semester(s) Offered: INTERMIT
Requisite: HORT 132, HORT 135.
Type: C

HORT 280 Vegetable Gardening 2-2-3
This course is designed to teach students the science and practice of growing, harvesting, handling, storing, processing, and marketing vegetables for the home garden and commercial production (offered spring of odd-numbered years).
Semester(s) Offered: INTERMIT
Requisite: HORT 102.
Type: C

HORT 287 Supervised Intern Employment 0-10-2
This course allows students to earn academic credit for supervised on-the-job experience at local horticulture businesses. Students will apply skills learned within the horticulture curriculum.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

HORT 288 Supervised Intern Employment 0-20-4
This course allows students to earn academic credit for supervised on-the-job experience at local horticulture businesses. Students will apply skills learned within the horticulture curriculum.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

HORT 289 Supervised Intern Employment Variable up to 0-(30)-(6)
This course allows students to earn academic credit for supervised on-the-job experience at local horticulture businesses. Students will apply skills learned within the horticulture curriculum.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

HORT 298 Horticultural Project 2-0-2
The student will propose, plan, budget time and labor, and complete a project within their Horticultural option. This will include a final presentation before the Horticultural Advisory Committee and other members of the horticultural community to demonstrate a proficiency in an area of horticulture.
Semester(s) Offered: ALL
Requisite: HORT 102, HORT 132, HORT 135, HORT 136, HORT 152, HORT 226, HORT 287, HORT 288.
Type: C

HORT 299 Special Topics In Horticulture Variable up to (4)-(4)-(6)
Application of horticulture principles to specific problems through case studies, simulation, special projects or problem-solving procedures.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

Human Services Technology

HMS 100 Introduction to Human Services 3-0-3
This course provides an introduction to the field of human services as preparation for advanced study or employment in the human services profession. Beginning with historical developments, the course will present issues encountered in the field and techniques and resources for intervention. An overview of human services ethics, research, model programs, and policies will be covered. In addition, various specializations including youth care, rehabilitation, criminal justice, and elder care services will be discussed.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T

HMS 200 Human Services Applications 3-0-3
This course provides an overview of the skills and applications necessary to work in the field of human services. This course also serves as elective preparation for advanced study in the human services profession. Specific issues encountered in the field will be addressed in regards to current ethical and professional standards, policy, procedures, and practice. The diversity of special populations and the interdependent relationships of community organizations designed to meet their needs will be examined.
Semester(s) Offered: FALL SPR
Requisite: HMS 100 with a grade of "C" or better.
Type: C

HMS 250 Human Services Seminar 3-0-3
This seminar provides coursework essential to preparation for the transition from the classroom to the "real world." Various issues will be covered such as the purpose and goals of supervision and encountering diverse populations. The practice of critical thinking skills and an emphasis on legal and ethical concerns will be discussed. Maintaining perspective will be addressed when dealing with common major problems such as poverty and homelessness, chemical dependency and substance abuse, sexually transmitted diseases including HIV/AIDS, and death and dying. Planning for the future including networking, interviewing strategies, professional certifications, and advanced degrees will be examined.
Semester(s) Offered: FALL SPR
Requisite: HMS 200 with a grade of "C" or better.
Type: C

HMS 280 Human Services Practicum 0-20-4
This course provides supervised experience in various human services agencies and specializations. Clinical exposure provides students with the opportunity to practice concepts and skills learned throughout the program. Students will be required to sign a Code of Ethics Compliance before entering fieldwork.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

Humanities

HUM 200 Humanities Travel/Study 3-0-3
This course seeks to introduce students to another part of the world through travel. The class will focus on select features of a country or place. These might include such things as culture, language and literature, politics, geography, art and architecture, etc. The places and aspects focused on may change with each offering of the course. Given these changes, the course may be taken more than once for credit.
Requisite: None.
Type: T

Independent Study

IND 296 Independent Study Variable up to (4)-(6)-(6)
For the student with the unique capability and unusual interests. Designed cooperatively between the student and the division with a faculty adviser assigned to the student by the dean to guide the student and evaluate progress.
Requisite: Department consent
Type: T

Industrial Electrical Wireman

IEW 110 Intro to Math Apps for the IBEW 2-0-2
This course is part of the IBEW Apprenticeship Program. The topics to be covered include basic math concepts, units and conversion, metric system, square roots, solving algebraic equations, scientific notation, and basic principles of geometry, vector, ratios and proportions.
Requisite: None.
Type: C

IEW 111 IBEW Electrician Inside Wireman I 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include job site safety, electrician's tools, material rigging, basic conduit bending, electrical calculations and basic blueprint reading.
Requisite: None.
Type: C

IEW 112 IBEW Electrician Inside Wireman II 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include direct current theory, series and parallel circuits, circuit calculations and national electrical code.
Requisite: None.
Type: C

IEW 113 IBEW Electrician Inside Wireman III 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include codeology as it relates to the National Electrical Code, measuring processes used in the electrical industry, intermediate conduit bending, and hydraulic, mechanical and hand benders.
Requisite: None.
Type: C

EW 114 IBEW Electrician Inside Wireman IV 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include inductance and capacitance in AC circuits, National Electrical Code standards relating to transformers, transformer theory, transformer design and calculations, wiring methods and devices.
Requisite: None.
Type: C

IEW 118 IBEW Elec Wireman Internship I 0-20-4
This course is designed to compliment classroom instruction for the Construction Electrical Specialist program. This on-the-job component will reinforce both knowledge and skills of the apprentice by hands-on experience relating to topics such as the wiring of residential, commercial, industrial and/or specialized electrical systems. All of the on-the-job work-related activities will be performed under the direct supervision of a journeyman electrician.
Requisite: None.
Type: C

IEW 131 IBEW Electrician Residential I 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include job site safety, introduction to the National Electrical Code, basic algebra, basic trigonometric functions, DC Theory, electrician's tools, material rigging, basic electrical calculations.
Requisite: None.
Type: C

IEW 132 IBEW Electrician Residential II 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include direct current theory, series and parallel circuits, circuit calculations, basic blueprint reading and the National Electrical Code
Requisite: None.
Type: C

IEW 138 IBEW Elec Residential Internship I 0-20-4
This course is designed to complement classroom instruction for the Construction Electrical Specialist program. The on-the-job component will consist of work relating to the wiring of residential installations and specialized electrical systems for residential applications. All of the on-the-job work-related activities will be performed under the direct supervision of a journeyman electrician.
Requisite: None.
Type: C

IEW 141 IBEW Electrician Lineman I 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include job site safety, electrician's tools, material and equipment rigging and handling. OSHA standards, electrical hazard awareness, flagging, specific climbing and digging equipment, protective line devices, personal protective equipment, and the introduction to electron and electrical theory.
Requisite: None.
Type: C

IEW 142 IBEW Electrician Lineman II 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include emphasis on job site safety, Lock-out/Tag-out OSHA standards, electrical hazard awareness, Ohm's Law, electrical theory and calculations, guy installations, line conductions, insulators, excavating and shoring, planning and designing for underground systems.
Requisite: None.
Type: C

IEW 145 IBEW Elec Lineman Internship I 0-20-4
This course is designed to complement classroom instruction for the construction electrical specialist program. The on-the-job component will reinforce both knowledge and skills of the apprentice by hands-on experience relating to topics such as the wiring of electrical service to residential, commercial, industrial and/or specialized electrical systems. All of the on-the-job work-related activities will be performed under the direct supervision of a journeyman electrician.
Requisite: None.
Type: C

IEW 151 IBEW Electrician Installer/Tech I 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include safety, tools and fastening devices, rigging, cable installation, bonding and grounding according to the National Electrical Code, fiber-optics, and blueprint reading.
Requisite: None.
Type: C

IEW 152 IBEW Electrician Installer/Tech II 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include history of labor and the apprenticeship program, the National Electrical Code, metric conversions, basic algebra, DC Theory, series and parallel circuits.
Requisite: None.
Type: C

IEW 153 IBEW Electrician Installer/Tech III 3.5-1-4
This course is a continuation of the IBEW Apprenticeship Program. The topics to be covered include direct current combination circuits, alternating current circuits, telephone systems, security and alarm systems and the National Electrical Code.
Requisite: None.
Type: C

IEW 154 IBEW Electrician Installer/Tech IV 3.5-1-4
This course is a continuation of the IBEW Apprenticeship Program. The topics to be covered include the use of TIA/EIA Standards, Life Safety Systems, Network cabling, LAN Systems, interface of telephone and sound systems, and the National Electrical Code.
Requisite: None.
Type: C

IEW 157 IBEW Elec Installer/Tech Internship I 0-20-4
This course is designed to complement classroom instruction for the Construction Electrical Specialist program. The on-the-job component will consist of work relating to telecommunications installation; which includes telephone, fire alarm, security, fiber-optics, CCTV home automation, nurses call systems, the National Electrical Code and testing of various systems. All of the on-the-job work-related activities will be performed under the direct supervision of a qualified Telecommunications Installer/Technician.
Requisite: None.
Type: C

IEW 211 IBEW Electrician Inside Wireman V 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include AC/DC review, semiconductors, transistors, SCRs, amplifiers, and electronic applications.
Requisite: None.
Type: C

IEW 212 IBEW Electrician Inside Wireman VI 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include the National Electrical Code Article 250, electrical theory to grounding, grounded conductor, service grounding, earth testing, WYE and DELTA three-phase transformers, and load calculations.
Requisite: None.
Type: C

IEW 213 IBEW Electrician Inside Wireman VII 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include lightning protection, fiber optics, motor constructions, motor installations, motor protection, motor controls, and schematic diagrams.
Requisite: None.
Type: C

IEW 214 IBEW Electrician Inside Wireman VIII 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include digital logic, ladder logic, logic circuits and controls, AC motor speed controls, programmable logic controllers basics, operation, and installation; designing and programming PLC; air conditioning and refrigeration systems, cable tray, motor control circuits and protection, and hazardous locations.
Requisite: None.
Type: C

IEW 215 IBEW Electrician Inside Wireman IX 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include fire alarm systems-operation, installation, maintenance, troubleshooting; fundamentals of instrumentation and equipment used for calibration; telephone wiring and introduction to TIA/EIA standards and codes; air conditioning systems and basic security systems.
Requisite: None.
Type: C

IEW 216 IBEW Electrician Inside Wireman X 3.5-1-4
This course is part of the IBEW Apprenticeship Program. The topics to be covered include solar power systems, high voltage maintenance and testing, power problems, power quality, power harmonics, automation networks, National Electrical Codes for special conditions, and NEC calculations.
Requisite: None.
Type: C

IEW 218 IBEW Elec Wireman Internship II 0-20-4
This course is designed to complement classroom instruction for the Construction Electrical Specialist program. The on-the-job component will reinforce both knowledge and skills of the apprentice by hands-on experience relating to topics such as the wiring of residential, commercial, industrial and/or specialized electrical systems. All of the on-the-job work-related activities will be performed under the direct supervision of a journeyman electrician.
Requisite: Department consent
Type: C

IEW 233 IBEW Electrician Residential III 3.5-1-4
This course is a continuation of the IBEW Apprenticeship Program. The topics to be covered include blueprint reading, codeology as it relates to the National Electrical Code, Single and three-phase transformers, and comparison of alternating current and direct current theory along with emphasizing the importance of job site safety.
Requisite: None.
Type: C

IEW 234 IBEW Electrician Residential IV 3.5-1-4
This course is a continuation of the IBEW Apprenticeship Program. The topics to be covered include the National Electrical Code for proper sizing and installation of services, feeders, branch circuits, specialty equipment, conduit bending, signaling circuits, fire alarm and security circuits, along with emphasizing the importance of job site safety.
Requisite: None.
Type: C

IEW 235 IBEW Electrician Residential V 3.5-1-4
This course is a continuation of the IBEW Apprenticeship Program. The topics to be covered include RL, RC, and RLC circuits, National Electrical Code calculations, motor control, telephone and sound systems.
Requisite: None.
Type: C

IEW 236 IBEW Electrician Residential VI 3.5-1-4
This course is a continuation of the IBEW Apprenticeship Program. The topics to be covered include National Electrical Code calculations for pool and fountains, home automation structured for the future, fire & security systems, UPS systems, solar power and generation, fiber optics and local area networks.
Requisite: None.
Type: C

IEW 238 IBEW Elec Residential Internship II 0-20-4
This course is designed to complement classroom instruction for the Construction Electrical Specialist program. The on-the-job component will consist of work relating to the wiring of residential installations and specialized electrical systems for residential applications. All of the on-the-job work-related activities will be performed under the direct supervision of a journeyman electrician.
Requisite: None.
Type: C

IEW 241 IBEW Electrician Lineman III 3.5-1-4
This course is a continuation of the IBEW Apprenticeship Program. The topics to be covered include emphasis on job site safety, hazardous communication, metering devices, distribution circuits, the principles of three phase alternating current, transformers, blueprint fundamentals, symbols, specifications, electrical drawings and diagrams, introduction to using a transit, reading maps, plans and profiles, and construction standards/NESC.
Requisite: None.
Type: C

IEW 242 IBEW Electrician Lineman IV 3.5-1-4
This course is a continuation of the IBEW Apprenticeship Program. The topics to be covered include emphasis on job-site safety, cable types, sizes, splicing and terminations, fault indicators, explosives, mobile cranes, lifting and digging operations, hot line tools, tower footings and erections, joining high-line conductors, street lighting and traffic signals, over voltage protection, phasing and typing-in circuits and overload capabilities of electrical equipment.
Requisite: None.
Type: C

IEW 243 IBEW Electrician Lineman V 3.5-1-4
This course is a continuation of the IBEW Apprenticeship Program. The topics to be covered include emphasis on job site safety, testing ground resistance, maximeters, a review of alternating current, inductance, capacitors, fiber optics and codes and standards, rubber protective devices, live line maintenance, extra high voltage primary metering and fusing, fuse principles, substation equipment, construction and safety procedures, oil circuit breakers, air break switches, watt hours and watt-hour meters.
Requisite: None.
Type: C

IEW 244 IBEW Electrician Lineman VI 3.5-1-4
This course is a continuation of the IBEW Apprenticeship Program. The topics to be covered include emphasis on job site safety, fault currents, testing for line faults, voltage regulation, step regulators and tap changing transformers, capacitors and capacitor switching, lightning protection, wind energy, photovoltaics, labor management, foremanship and a comprehensive review on transformers, insulator testing, live line maintenance, substation control equipment, power factor, power harmonics, and blueprints.
Requisite: None.
Type: C

IEW 245 IBEW Elec Lineman Internship II 0-20-4
This course is designed to complement classroom instruction for the Construction Electrical Specialist Program. The on-the-job component will reinforce both knowledge and skills of the apprentice by hands-on experience relating to topics such as the wiring of electrical service to residential, commercial, industrial and/or specialized electrical systems. All of the on-the-job work-related activities will be performed under the direct supervision of a journeyman electrician.
Requisite: None.
Type: C

IEW 251 IBEW Electrician Installer/Tech V 3.5-1-4
This course is a continuation of the IBEW Apprenticeship Program. The topics to be covered include inductive and capacitive reactance, diodes, power supplies, transistors, amplifiers, oscillators, CCTV, and security systems.
Requisite: None.
Type: C

IEW 252 IBEW Electrician Installer/Tech VI 3.5-1-4
This course is a continuation of the IBEW Apprenticeship Program. The topics to be covered include CCTV surveillance systems, security ID systems, home automation theater, audio & video, nurse call systems, high performance testing of cabling systems, along with grounding and bonding according to the National Electrical Code.
Requisite: None.
Type: C

IEW 257 IBEW Elec Installer/Tech Internship II 0-20-4
This course is designed to complement classroom instruction for the Construction Electrical Specialist program. The on-the-job component will consist of work relating to telecommunications installation; which includes telephone, fire alarm, security, fiber-optics, CCTV home automation, nurses call systems, the National Electrical Code and testing of various systems. All of the on-the-job work-related activities will be performed under the direct supervision of a qualified Telecommunications Installer/Technician.
Requisite: None.
Type: C

IEW 299 Special Topics in Construction Electrical Specialist Variable up to (4)-(8)-(4)
This course is designed to familiarize students with special topics or problems in the construction electrical specialists' field, to provide them with knowledge and ability to deal effectively with those topics or problems in relation to their specific requirements.
Requisite: None.
Type: C

Industrial Electricity

EET 101 Intro to Electricity & Electronics 3-4-5
This course is designed as the beginning course for those entering the electrical and/or electronics career field. The course's primary focuses are to (1) inform students about the variety of specialty areas, categories of work relevant to the field, and educational requirements and opportunities that can lead to successful employment; (2) introduce students to the fundamental principles of electricity, basic DC and AC electrical circuits, electrical/electronic components, electrical/electronics diagrams; and (3) provide the opportunity for students to become skilled in using common test equipment and tools used to construct, install, measure, and repair electrical wiring and cabling, and electrical/electronic systems and equipment. Students will learn to perform complete electrical analysis of complex DC and AC circuits consisting of resistors, capacitors, inductors and transformers connected in various series, parallel, and seriels-parallel configurations. Course will cover applications of these components in common electrical circuits and will begin teaching students basic troubleshooting skills.
Requisite: None.
Type: C

EET 102 Electrical/Electronics Computer Applications 1.5-1-2
This course is designed to familiarize students with computer applications and software routinely used in the electrical and electronics career field. Course covers basic principles of computer operation, use of productivity software common to the workplace, and technical applications frequently used by electrical or electronic technicians to design, draw, construct, and simulate/test electrical circuits and systems.
Requisite: None.
Type: C

EET 111 Electrical Circuits 2-2-3
This course continues the study of electrical and electronic circuits by going more in-depth in electrical circuit analysis. Students will learn to perform complete electrical analysis of complex DC and AC circuits consisting of resistors, capacitors, and inductors connected to various series, parallel, and series-parallel configurations. Course will cover applications of these components of common electrical circuits and will begin teaching students basic circuit troubleshooting skills.
Requisite: EET 101,GT 104.
Type: C

EET 121 Electronic Devices and Circuits 2-2-3
This third course in electrical and electronic fundamentals introduces the student to theory, design, and application of a wide variety of semiconductor devices and circuits. Lab experiments continue to build the students' competence in the use of test equipment and tools in constructing and analyzing the performance of electronic circuits and devices. Computer simulation will also begin to be used to test more complex circuits.
Requisite: EET 101.
Type: C

EET 131 Electrical Wiring Practices 1.5-3-3
Course is designed to provide the student with the basic knowledge and skills necessary to install, repair, and estimate costs for wiring of residential, commercial, industrial and/or specialized electrical systems. Students will learn the principles of and get hands-on experience on how to safely and properly wire electrical circuits and devices according to the National Electrical Code.
Requisite: EET 101.
Type: C

EET 200 Digital Electronic Circuits 2-2-3
Knowledge of electronics will be expanded in this course to include the principles and operation of digital devices and circuits used in computers and automated industrial/commercial equipment. Breadboarding of logic elements into functional circuits in laboratory projects/computer simulation will validate and reinforce classroom learning.
Requisite: EET 101.
Type: C

EET 201 Wind and Solar Power Installation and Maintenance 1.5-1-2
This course is designed to introduce students to the basic concepts and equipment involved in installing and maintaining photovoltaic electrical systems and wind turbine electrical systems. Students will learn how to connect various types of wind and solar electrical systems such as stand-alone or interconnected electrical systems. Content includes advantages and disadvantages, component identification and operation, and hands-on operation, analysis and evaluation of working photovoltaic and wind power systems
Requisite: None.
Type: C

EET 205 Digital Electronic Circuits II 3.5-1-4
This course continues the study of digital concepts. Introduces digital arithmetic and associated circuits, expands knowledge of counters and shift registers, explores integrated circuits families, decoders, multiplexers, interfacing, and memory devices. Laboratory exercises and computer simulation emphasis concepts learned in the classroom.
Requisite: EET 200.
Type: C

EET 210 Introduction to Microprocessors 3.5-1-4
This course is designed as an introduction to microprocessor hardware and software fundamentals. It will emphasize the use of the microprocessor in industrial/commercial control. Laboratory work will include assembly language programming of a microprocessor trainer.
Requisite: EET 200.
Type: C

EET 225 Microprocessor Interfacing 3.5-1-4
The principles of interfacing the microprocessor to analog and digital circuitry will be covered in this course. Input/output, serial/parallel data transfer and circuit isolation and loading principles are included. Laboratory exercises will require construction of external circuits to be interfaced with an operating microprocessor.
Requisite: EET 210.
Type: C

EET 231 Introduction to Robotics 3.5-1-4
This course provides a comprehensive approach to learning the technical aspects of robotics. The course covers robotic principles, power supplies and movement systems, sensing and end-of-arm tooling, and control systems. The course also covers typical programming techniques for basic robots as well as larger industrial robots.
Requisite: EET 101.
Type: C

EET 232 Instrumentation Fundamentals 3.5-1-4
This course will provide the fundamental principles of automatic process control. It will include primary measurement, transmission, and control. Laboratory work will consist of demonstrations, the use of test equipment for calibration and hands-on exercises. This course will assist the student in becoming familiar with primary elements, transducers, recorders, indicators and controllers.
Requisite: EET 101.
Type: C

EET 234 Instrumentation Systems 3.5-1-4
This course is designed to reinforce and build on topics learned in instrumentation fundamentals. The student will gain comprehensive knowledge of measurement, transmission, control and documentation. This course will have special emphasis on hardware, calibration, and troubleshooting.
Requisite: EET 232.
Type: C

EET 235 Programmable Logic Controllers 2-2-3
This course offers electricians, maintenance mechanics, or electronic technicians a first course in programmable logic controllers. It focuses on the underlying principles of how PLCs work and provides practical information about installing, programming, and maintaining a PLC as a separate stand-alone automated control component. No previous knowledge of PLC systems or programming is necessary. This course presents PLCs in a generic sense, and the content is broad enough to allow the information to be applied to a wide range of PLC models. All topics are covered in small segments, developing a firm foundation for each concept and operation before advancing to the next. Each topic covered contains a variety of generic programming assignments that are compatible with most types of PLCs.
Requisite: EET 200.
Type: C

EET 238 Special Purpose Electrical Devices and Wiring 2.5-1-3
This course is designed for students desiring to enter the residential or commercial electrician field. It provides the student with an overview of knowledge and skills regarding special purpose electrical devices and circuits that electricians may encounter on the job. Covers basic instrumentation concepts such as flow, pressure, temperature sensors and controls; basic principles and electrical aspects of heating, ventilation, and air conditioning; and principles of other wiring and cabling commonly encountered such as computer network cabling, coaxial cable systems, audio/video, telephone, fiber optics, alarm system and lighting systems; and an introduction to programmable logic controllers
Requisite: EET 101.
Type: C

EET 239 Advanced PLCs 2-2-3
This course will expand students' knowledge of programmable logic controllers from stand-alone use to being an integral part in a larger automated manufacturing system. Students will learn how to connect and program Contrologix 5000 PLCs to monitor and control various components in a system and then learn how to network multiple PLCs into an integrated system. Emphasis will be on using analog devices. Course will continue with the introduction of using PanelView and other HMI devices and then work with the PLC and HMI software packages to build a complete working machine control system.
Requisite: EET 235.
Type: C

EET 240 Motors and Drives 2-2-3
Presented in this course will be construction features, principles of operation and characteristics of DC and AC motors and variable-speed drives. The testing and troubleshooting of motors will be covered along with connecting and programming variable-speed drives. Lab work will include demonstrations and hands-on work with various motors and drives including basic test equipment.
Requisite: EET 101.
Type: C

EET 241 Electrical Power, Motors & Controls 2.5-1-3
An additional course for students desiring to enter the residential or commercial electrician field. This course provides an overview of the concepts, operation and application of a variety of components, control devices and electrical systems frequently encountered by electricians. Course includes theoretical and practical application of electrical power systems, single/three phase power circuits, transformers, motors and generators, and motor controls.
Requisite: EET 101.
Type: C

EET 242 Electrical Control Systems I 3.5-1-4
The intent of this course is to introduce the student to electrical drawings, which are the electrician's primary means of communication. The rules for working with line diagrams will be covered as well as the principles of operation and application of the components used to make up electrical control circuits. The classroom study of the text and workbook will be supplemented by lab projects whenever practical.
Requisite: EET 101.
Type: C

EET 243 NEC for Industrial/Commercial 3-0-3
Advanced studies of the terms and concepts that are required for proficiency in the interpretation of electrical codes and regulations. Based on the National Electrical Code and a review of practical electrical field knowledge and industrial/commercial qualifying exams. This course prepares the student for future career advancements that involve testing by various regulatory agencies. Of particular interest to electricians, contractors, inspectors, and pre-architecture/engineering students.
Requisite: EET 101.
Type: C

EET 244 Electrical Control Systems II 2-2-3
This course is intended to supplement and expand the knowledge required in control systems. More complex circuitry will be presented along with applications to specific equipment requirements. Concepts of power distribution, principles of operation and application of more control devices and troubleshooting concepts will be covered.
Requisite: EET 240, EET 242.
Type: C

EET 246 Power Generation/Distribution 2-2-3
This course will cover the generation, transmission and distribution of electric power. The components and methods used to accomplish this will be included along with the safety procedures that are necessary in handling high voltage electricity.
Requisite: EET 244.
Type: C

EET 247 DC Crane Controls 3.5-1-4
This course is designed for persons to become knowledgeable in the principles of electrical overhead traveling cranes. Students will learn to read and understand various electrical diagrams and be able to apply safe working procedures related to the maintenance of several of the major types of equipment operating time control equipment. Troubleshooting and corrections of most electrical problems found in DC crane controls and periodic preventive maintenance inspections will be covered.
Requisite: EET 240.
Type: C

EET 250 Microcomputer Maintenance-Beginning 2-2-3
This is the first of a three-course sequence for the Microcomputer Technology degree. This course is for people who want to learn how to upgrade, repair, maintain, and troubleshoot microcomputers. This course covers state-of-the-art hardware and accessories. Coverage includes: hardware operation, hardware/software interaction, motherboards and their components, memory, installing, configuring and troubleshooting integrated drive electronics hard drives, introduction to personal computer networking, and the role of the PC technician in logical troubleshooting. This course helps to prepare the student for a successful result on the Computer Technology Industry Association (CompTIA) A+ PC Hardware (Core) exam
Requisite: EET 200.
Type: C

EET 252 Microcomputer Maintenance-Intermediate 2-2-3
This is the second of a three-course sequence for the Microcomputer Technology degree. This course is for people who want to upgrade, repair, maintain, and troubleshoot microcomputers. This course covers state-of-the-art hardware and accessories. Coverage includes: Learning the personal computer boot process and use of command line programming, introduction

into electricity and power supplies, floppy drives and other removable media, installing and troubleshooting peripheral input/output devices, video cards, monitors, and modems, the use of personal computers on the Internet, understanding the basics of the Small Computer Systems Interface and installing and configuring SCSI hard drives and devices. This course helps to prepare the student for a successful result on the Computer Technology Industry Association (CompTIA) A+ PC Hardware (Core) exam.
Requisite: EET 250.
Type: C

EET 255 Microcomputer Maintenance-Advanced 2-2-3
This is the third of a three-course sequence for the Microcomputer Technology degree. This course is for people who want to upgrade, repair, maintain, and troubleshoot microcomputers. This course covers state-of-the-art hardware and software. Coverage includes: Understanding, installing, managing, and troubleshooting the Windows 9x, Windows NT Workstation, Windows 2000 Professional, and Windows XP Professional architectures, supporting notebook computers and personal digital assistants, installing, troubleshooting and sharing printers, and guidelines for assembling a personal computer from separately purchased parts. This course helps to prepare the student for a successful result on the Computer Technology Industry Association (CompTIA) A+ PC Hardware (Core) exam and the CompTIA A+ PC Operating System exam.
Requisite: EET 252.
Type: C

EET 256 Preparation for A+ Certification 2-2-3
This course will prepare you to support users and their resources on networks, desktops, laptops, mobile devices, virtual machines, and in the cloud. This course covers the most current hardware and software technologies. It also provides through preparation for the content on the new Comp TIQ A+ Core1 (220-1101) and Core 2 (EET-1102) Certification Exams.
NOTE: Competency in using a compute. No background knowledge of electronics or networking is assumed.
Requisite: NETW 101 or CISC 161 or EET 255.
Type: C

EET 260 Communication Electronics I 2-2-3
First in a three-course sequence for communication electronics degree. An introduction to digital and data transmission techniques. Terminal and network protocols and limitations are explored.
Requisite: EET 101.
Type: C

EET 269 Electrical/Electronics Technology Capstone 1.5-1-2
This course is designed as a capstone class for Electrical and Electronics Technology Associate in Applied Science students who are preparing to graduate and enter the workforce. Course will summarize all electrical and electronics courses students took to fulfill their degree requirements. Additionally course will cover information students need to prepare for their job search such as resume writing, interviewing skills, preparation for employment testing, customer service skills, and other information students need for a successful career in the electrical and electronics field.
Requisite: None.
Type: C

EET 290 Supervised Internship I Variable up to 0-(30)-(6)
Allows students to earn academic credit for supervised on-the-job experience. Eighty hours of work per semester are required for each semester credit.
Requisite: Department consent
Type: C

Variable up to
EET 299 Special Topics in Electricity/Electronics (4)-(8)-(4)
This course will cover topics or problems in the electrical and electronics field and provide students with the knowledge and ability to deal with those topics or problems in relation to their special requirements.
Requisite: None.
Type: C

Industrial Mechanics

IML 101 O.S.H.A. Awareness 0.5-0-0.5
This course familiarizes the student with the industries' regulatory agencies (e.g., Occupational Safety and Health Administration, Environmental Protection Agency, and Department of Transportation).
Requisite: None.
Type: C

IML 105 Industrial Math II 3.5-1-4
This course is divided into three parts: (1) deals with the fundamentals of applied algebra which includes sections on symbols, equations, ratios and proportion, exponents, radicals, and formulas; (2) deals with fundamentals of applied geometry, geometric lines and shapes common in geometry, geometric lines and shapes common in geometric construction; (3) deals with fundamentals of trigonometry right triangles, acute triangles, and oblique triangles, by use of specialized workbooks. Students are exposed to craft related mathematics in their field.
Requisite: Department consent
Type: C

IML 106 Industrial Piping Fundamentals 3.5-1-4
This course is designed to introduce the non-pipefitter with an overview of the more important areas of study for industrial pipefitting. The course is designed to introduce mechanics with a practical knowledge of those skills required to function in industry as a pipefitter.
Requisite: None.
Type: C

IML 119 Mechanical Systems 1-4-3
Designed to help the mechanic recognize types of mechanical power transmission devices and applications, the course includes such practical aspects as troubleshooting, lubrication, parts replacement and alignment procedures. In addition, the importance and practices of precision measurement are covered.
Requisite: None.
Type: C

IML 120 Mechanical Blueprint Reading I 0.5-3-2
Fundamental training in blueprint interpretation with special emphasis on visualization and interpretation of material presented in this communications medium. Upon completion, the student should be able to relate dimensions to a pictorial representation correctly and accurately, and read and understand drawing convention, symbols, and notations.
Requisite: None.
Type: C

IML 125 Industrial Maintenance Welding 1-4-3
This course is designed to introduce the student to the fundamentals of typical arc welding processes commonly found in the Industrial Maintenance field. The course introduces the Student to the OAW (oxyacetylene welding), SMAW (stick welding), GTAW (tig), GMAW (mig), and PAC (plasma arc cutting). Also included is the acetylene cutting of mild steel, along with the care and use of welding tools and equipment. Materials covered in this course will include welding machines, equipment, and welding supplies.
Requisite: None.
Type: C

IML 133 Rigging (Industrial) 1.5-1-2
Units on lifting practices, wire and fiber rope, size and weight estimation, and material handling devices are presented to prepare the participant to meet the dangerous and demanding conditions relevant to the loading, unloading, storing and assembly or erection of equipment and structural members.
Requisite: None.
Type: C

IML 139 Industrial Bearings 3.5-1-4
This course is designed to introduce the many types of bearings used by modern industries. The material will include types of bearings, types of applications for each, lubrication practices, bearing codes, and maintenance practices used by modern industry.
Requisite: None.
Type: C

IML 145 USS MOD 13 Alignment 1.5-1-2
This course is designed to provide mechanical maintenance personnel information and exercises pertaining to the various types of alignment systems. The course will include terminology, alignment procedures, preventative maintenance, safety and troubleshooting.
Requisite: None.
Type: C

IML 149 Industrial Pumps & Compressors 3.5-1-4
This course is designed to introduce the many types of industrial pumps and compressors used by modern industries. The material will include the types of pumps and compressors, types of application, parts identification, lubrication, and safety along with related auxiliary equipment.
Requisite: None.
Type: C

IML 150 Stationary Engineering I 4-0-4
This course is designed to introduce students to the general concepts of low and high pressure boilers, including pressure, stress and safety factors along with explanation and purpose of all the pertinent equipment used.
Requisite: None.
Type: C

IML 151 Stationary Engineering II 4-0-4
This course is designed to expand students' knowledge of the detailed concepts of low and high pressure boilers, including pressure, stress and safety factors along with a detailed explanation and purpose of all equipment used with emphasis on pumps.
Requisite: None.
Type: C

IML 189 Fork Lift Truck Safety 0.5-0-0.5
This course will provide the student with safety training in the operation of a fork lift truck and also provide knowledge of the OSHA regulations as required by CFR 1910.178 and CFR 1910.179.
Requisite: None.
Type: C

IML 200 Confined Space Entry 1-0-1
This course covers a basic understanding of the regulations governing the entry into confined spaces under the Occupational Safety and Health Administration. Students will be trained in entry, monitoring, and rescue of a confined space.
Requisite: None.
Type: C

IML 203 24 Hour HAZWOPER 0.5-1-1
This course provides training in the clean-up resulting from a hazardous spill. The course will consist of eight hours of lecture with a 16-hour lab simulating clean-up and disposal of a spill in Class A suites.
Requisite: None.
Type: C

IML 205 O.S.H.A. 30 Hour Outreach 2-0-2
This course will provide the student with an OSHA 30-hour certification card which covers the entire spectrum of OSHA compliance areas such as Lockout/Tagout, OSHA awareness, Personal Protective Equipment, and fit testing, medical surveillance, fire protection, HAZCOM, and working hazards.
Requisite: None.
Type: C

IML 250 Stationary Engineering III 4-0-4
This course is designed to expand students' knowledge of the detailed concepts of steam engines, turbines, air-compressors, related theory and application of electricity.
Requisite: None.
Type: C

IML 251 Stationary Engineering IV 4-0-4
This course is designed to expand students' knowledge of the detailed concepts and applications of electricity and refrigeration principles.
Requisite: None.
Type: C

IML 299 Problems in Millwright Variable up to (4)-(8)-(4)
This course is designed to familiarize students with special topics or problems in the industrial millwright field, and to provide them with the knowledge and ability to deal effectively with those topics or problems in relation to their specific requirements.
Requisite: Department consent
Type: C

Industrial Pipefitting

IDP 116 Industrial Pipefitter A 1-4-3
This course is designed to give the pipefitter apprentice knowledge and skill in the use of rigging, ladders, scaffolds, safety, traps, pipe layout, alignment and template making.
Requisite: None.
Type: C

IDP 126 Industrial Pipefitter B 3.5-1-4
This course is designed to give the second-semester apprentice knowledge and skills in the use of metrics, steam piping, heat exchangers, pipe supports, filters, pipe insulation, lubrication and pipe bending.
Requisite: IDP 116.
Type: C

IDP 276 Industrial Hydraulics I 1-4-3
This course is designed to give students an understanding of the fundamental principles of hydraulic circuitry. This course will also teach students correct shop procedures and develop mechanical skills required for proper installation and maintenance of components.
Requisite: None.
Type: C

IDP 299 Problems in Pipefitting Variable up to (4)-(8)-(4)
This course will familiarize students with special topics or problems in the industrial pipefitter field, and to provide them with the knowledge and ability to deal effectively with those topics or problems in relation to their specific requirements.
Requisite: None.
Type: C

Labor

LABR 120 Laborer Craft Orientation 2-1-2.5
This course will introduce the student to the construction industry and acquaint the student with the required personal skills necessary for entry level into the major construction industries. This course will also include four-hour highway workzone flagger training, Illinois flagging certification, basic construction rigging and knot tying, 10-hour OSHA certification, basic math, first aid/CPR certification, back injury prevention, hazard communication training, drug and alcohol awareness, and sun sense training.
Requisite: None.
Type: C

LABR 121 Laborer - Mason Tending 1.5-1-2
This course will introduce the student to the practices and procedures of mason tending and the respective OSHA regulations. The course will include rough terrain forklift operation training, frame scaffolding, Morgen scaffolding, non-stop scaffolding, mason king scaffolding, and masonry saw operator training.
Requisite: LABR 120.
Type: C

LABR 122 Concrete Practices & Procedures 1.5-1-2
This course will introduce the student to concrete practices and procedures and Bobcat operator training. The course will include information on concrete components, materials; mix proportions, the hardening process, concrete finishing techniques, E-Z pavement breaker, concrete saws and vibrators.
Requisite: None.
Type: C

LABR 123 Asphalt Technology & Construction 1.5-1-2
This course will introduce the student to asphalt technology and construction. The course will include information on the model DM-4000 Paver; Eager Beaver Paver; Manual Tape Applicator; Carbide Asphalt Grinder; the asphalt roller and paint striping process.
Requisite: None.
Type: C

LABR 124 Lead Base Paint Abatement 1.5-1-2
This course will cover important information and aspects that the laborer must know regarding lead-base paint abatement to work safely, effectively, and efficiently on the job. The course will provide information on both technical and common sense details of what may be encountered every day while working on the job site and relevant regulations and guidelines for working with lead in construction and target housing. This course will also introduce the student to oxyacetylene equipment.
Requisite: None.
Type: C

LABR 125 Principles of Pipe Laying 1.5-1-2
This course will introduce the student to the principles of pipe laying, gravity flow piping systems, batterboards, sewer laser and utility line and grade, and the metric uses in pipe laying. The course will also include trenching and excavation safety pertinent to pipe laying.
Requisite: None.
Type: C

LABR 126 Construction Landscaping Maintenance 1.5-1-2
This course will introduce the student to the principles of landscaping maintenance relating to the construction trades. The course will also include information on lawn and ground covers, fertilizing, soil testing, irrigation, and the elements of pruning.
Requisite: None.
Type: C

LABR 127 Basic Construction Surveying 1.5-1-2
This course will introduce the student to the fundamentals of construction surveying. The course will cover terms and definitions, basic construction drawings, instruments, calculations, lines, grades, and hand signals common to surveying in the construction trades.
Requisite: None.
Type: C

LABR 128 Bridge Constr., Renov. & Demolition 1.5-1-2
This course will introduce the student to the fundamentals of bridge construction, renovation, and demolition. The course will include safety regulations, rigging, equipment and materials, and skills required for the laborer working in this setting.
Requisite: None.
Type: C

LABR 129 Laborers-AGC 80 Hr Hazardous Waste 4-1-4.5
This course will improve the student's ability to identify hazards in hazardous waste work, provide specific information relating to hazardous chemicals, and explain a worker's responsibility for following all safety and health rules required for the laborer working in a potentially hazardous setting.
Requisite: None.
Type: C

LABR 130 Labr Constr Bp Reading Intro 1.5-1-2
This course will orient the student to construction blueprint reading and specifications. This course will cover various symbols and notations necessary to properly read and interpret a variety of working drawings used in the construction industry.
Requisite: None.
Type: C

LABR 131 Laborers Asbestos Abatement 1.5-1-2
This course is designed to introduce the student to the important aspects, techniques and safety procedures that a Construction Craft Laborer must know regarding asbestos abatement. Also included in this course is the history of asbestos, asbestos components, personal protective equipment, and health information in reference to the hazardous substance of asbestos. Upon successful completion, students will have met the requirements and have the option to apply for licensure through the State of Illinois in asbestos abatement.
Requisite: None.
Type: C

Variable up to
LABR 299 Special Topics in Construction Laborers(4)-(8)-(4)
This course is designed to familiarize students with special topics or problems in the construction/laborers' field, to provide them with knowledge and ability to deal effectively with those topics or problems in relation to their specific requirements.
Requisite: None.
Type: C

Literature

LIT 113 Introduction to Fiction 3-0-3
A study of the short story, novel and/or novella, with the primary objective of learning to read with greater understanding and pleasure, greater taste and discrimination, with exposure to a variety of literary forms and periods. Through study of the short story and novel form, students will be introduced to various methods of literary criticism, learning the vocabulary of literary criticism. The novels that are studied will be grouped thematically, and demonstrative of the range and techniques of the novel form.
Semester(s) Offered: FALL SPR SUM
Requisite: Eligible for or concurrent with ENG 101.
Type: T, IAI-H3 901

LIT 117 Literature Written by Women 3-0-3
This course principally uses contemporary American literature by women of minority races, ethnicities, and socio-economic classes as well as European American women. Completion of this course fulfills the Human Relations AA, AFA, AS, AES, or General Education degree requirement.
Semester(s) Offered: SPR SUM
Requisite: Eligible for or concurrent with ENG 101.
Type: T, IAI-H3 911D

LIT 120 Introduction to Poetry 3-0-3
Through a survey of poems and criticism, Literature 120 will introduce students to poetry as genre, field of interpretation and analysis, rhetorical stance, and historical artifact. Students will read and discuss a variety of world poetry, gain critical and literary vocabularies, learn interpretive schemes, and deepen their appreciation for poetry in many forms, including formal, free, and spoken verse.
Semester(s) Offered: INTERMIT
Requisite: Eligible for or concurrent with ENG 101.
Type: T, IAI-H3 903

LIT 125 Drama as Literature 3-0-3
This course provides insight into dramatic literature from different cultures and periods. The historical, cultural, and artistic contexts of each work will be explored, as will issues of staging and performance.
Semester(s) Offered: FALL
Requisite: Eligible for or concurrent with ENG 101.
Type: T, IAI-H3 902

LIT 133 Bible as Lit–Hebrew Tradition 3-0-3

A study of selected literature from the Old Testament including narrative, short story, poetry ,and the essay.
Semester(s) Offered: INTERMIT
Requisite: Eligible for or concurrent with ENG 101.
Type: T, IAI-H5 901

LIT 134 Bible as Lit - Christianity 3-0-3
A study of the literature of the New Testament period, which includes both canonical and non-canonical works.
Semester(s) Offered: INTERMIT
Requisite: Eligible for or concurrent with ENG 101.
Type: T, IAI-H5 901

LIT 201 World Lit to Enlightenment 3-0-3
A study of Asian, Middle Eastern, Mesoamerican, African, and European (including classical Greek and Roman) literature in translation from the ancient through the Renaissance eras. The course places each author and work in its historical context while delineating specific developments in literature.
Semester(s) Offered: FALL
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-H3 906

LIT 202 World Lit from Enlightenment 3-0-3
A study of Asian, Middle Eastern, Latin American, and European literature in translation from the Enlightenment era to the present. The course places each author and work in its historical context while delineating specific developments in literature.
Semester(s) Offered: SPRING
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-H3 907

LIT 205 Lit of Non-Western Countries 3-0-3
Participants in this course will study the current literature of countries outside the Western intellectual tradition. An effort will be made to (1) determine the self-perception of the peoples of these countries; (2) compare and contrast these perceptions with those of the peoples from the Western tradition; (3) heighten awareness of the influences of geography, economics, politics, religion, and culture in a given society. These efforts will be accomplished through a study of short stories, novels, poems, and films written by the peoples of Africa, Asia, and Latin America. Works will be studied for their social, political, cultural, historical, and moral ideas as well as for their merit as literary compositions. Completion of this course fulfills the Third World culture requirement for graduation at Southwestern.
Semester(s) Offered: FALL SPR SUM
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-H3 908N

LIT 213 Early American Literature 3-0-3
This is a survey course which introduces students to a wide range of authors from 1492 to 1865, the colonial period to the Civil War. The course will celebrate the rich diversity of American cultural heritage, including the study of the work of Native Americans, African-Americans, women, and Latino/a writers. Students will begin to appreciate the rich cultural heritage of America, and to see comparisons and contrasts between male and female writers, one ethnic group and another, and one social class and another. The metaphor of American Literature I shall be a "mosaic of American writers."
Semester(s) Offered: FALL
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-H3 914

LIT 214 Modern American Literature 3-0-3
This is a survey course which introduces students to major works of American writers of prose and poetry, representative of periods from 1865 to the present. While the course may touch on an author's work in terms of style, language, and literary technique, the course is designed for the student who may never take another literature course again, as well as for potential English majors. LIT 213 is NOT a prerequisite for LIT 214.
Semester(s) Offered: FALL DUAL CREDIT, SPR
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-H3 915

LIT 215 Contemporary Multicultural American Literature 3-0-3
This course introduces students to a variety of marginalized writers in the literature of the United States, especially the work of African Americans, Asian Americans, Native Americans, and Latinos/as authors. Through the study of these writings, students will learn to appreciate both traditional and new forms of literature as minority voices, including the LGBTQ+community, explore the American experience. Students will begin to value the mosaic of a culture where each group retains its individual characteristics while adding to the richness of the whole. At the same time, students will examine how people from outside the mainstream culture encounter and struggle with that culture and with a society that all too frequently has excluded them. Completion of this course fulfills the Human Relations, AA, AFA, AS, AES, or General Education degree requirement.
Semester(s) Offered: FALL SPR SUM EVEN YEARS
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-H3 910D

LIT 216 African American Literature 3-0-3
This course will survey a wide range of African American literature exploring cultural norms, historical and social context, and the intersectionality of gender, race, and class in various genres using both traditional and non-traditional texts. Completion of this course fulfills the Human Relations AA, AFA, AS, AES, or General Education degree requirement.
Semester(s) Offered: FALL SPR SUM ODD YEARS
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-H3 910D

LIT 219 Comics and Graphic Novels 3-0-3
A literature course designed to introduce students to important works in the medium of comics and graphic novels. The focus will be on full-length works with genuine literary and artistic merit. The course will also give students a vocabulary and methodology for critically analyzing and discussing these works.
Semester(s) Offered: SPRING
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T

LIT 251 Early British Literature 3-0-3
This is a survey of British literature from the Middle Ages through the 18th century. The disparate voices that comprise the literature of the British Isles at the time are examined. LIT 252 is NOT a prerequisite for LIT 251.
Semester(s) Offered: FALL
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-H3 912

LIT 252 British & Commonwealth Lit 3-0-3
This is a survey of British literature from the 19th century to the present. This course analyzes multiple genres of Britain's disparate voices, including colonial and post-colonial voices, that comprise British literature during these centuries are emphasized. LIT 251 is NOT a prerequisite for LIT 252.
Semester(s) Offered: SPRING
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-H3 913

LIT 290 Shakespeare - Comedies & Histories 3-0-3
LIT 290 is a study of Shakespeare's comedies and histories. This study will pursue an understanding of Shakespeare's language, dramatic art, production values and performance, as well as multiple critical perspectives. LIT 291 is NOT a prerequisite for LIT 290.
Semester(s) Offered: FALL
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-H3 905

LIT 291 Shakespeare - Tragedies & Romances 3-0-3
LIT 291 is a study of Shakespeare's tragedies and romances. Emphasis is on reading and understanding Shakespeare's language as well as various aspects of his dramatic art. Issues of staging and performance are explored, both for an Elizabethan-Jacobean audience and for a modern audience.
Semester(s) Offered: SPRING
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-H3 905

LIT 293 Children's Literature 3-0-3

Primarily for the prospective early childhood or elementary teacher, the course emphasizes the selection and presentation of children's literature (fables, fairy tales, nursery rhymes, picture books, and novels, etc.) with a focus on diversity and multiculturalism. Student may not receive credit for both LIT 293 and ED 293. This course is cross-listed with ED 293.
Semester(s) Offered: FALL SPR
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T, IAI-H3 918

LIT 299 Topics in Literature Variable up to (4)-0-(4)
Examination of a selected topic or movement through study and discussion of representative works of literature. No topic/problem can be offered more than twice in three years
Semester(s) Offered: INTERMIT
Requisite: Completion of ENG 101 with a grade of "C" or better.
Type: T

Management

MGMT 117 Personal Finance 3-0-3
This course explores the role of the consumer in our economy, problems of financing family and individual needs, including budgeting, banking relationships, borrowing, insurance, risk management, real estate, investing, portfolio management, retirement and personal taxes.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

MGMT 201 Entrepreneur Basics 3-0-3
This course reviews a variety of topics for a potential entrepreneur to consider before starting a business. These topics include an assessment of one's suitability for the entrepreneurial life both personally and financially, evaluating the marketability of your product or service, and protecting your idea.
Semester(s) Offered: ALL
Requisite: None.
Type: C

MGMT 202 Entrepreneur: First Year 1-0-1
The course addresses the start-up business during the first year of operation beginning with the opening of the business. The key topics include: Employee-management issues, hiring and training employees, financial management, and market planning for year two and beyond.
Semester(s) Offered: ALL
Requisite: Concurrent enrollment in or completion of MGMT 201 & MGMT 203.
Type: C

MGMT 203 Business Plan Basics 1-0-1
This course provides an overview of the development of a basic business plan for a start-up operation. Key topics include: competitive analysis, financial projections and start-up costs. Students will develop a business plan as part of the course.
Semester(s) Offered: ALL
Requisite: Concurrent enrollment in or completion of MGMT 201.
Type: C

MGMT 213 Human Relations in the Workplace 3-0-3
This course focuses on the development of effective human relations skills to help students maximize their personal workplace effectiveness and success. The course addresses a number of topics including: human relations and their role in workplace success, understanding one's self and others, personal communications effectiveness, motivation, leadership, conflict management and general workplace habits.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: C

MGMT 214 Principles of Management 3-0-3
A detailed analysis of management functions including planning, organizing, staffing, directing and controlling. The schools of management are explained. The orderly presentation of fundamental knowledge of management provides the student with the framework for further studies in management and related business fields as well as a background for practical application of management principles in business and other organizations.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: C

MGMT 217 Human Resource Management 3-0-3
This course is concerned with the human resource management functions. This course will emphasize the legal environment surrounding equal employment opportunities, job design and analysis, recruiting, orientation and training, performance appraisal, compensation systems, labor relations, collective bargaining and grievance handling, and health and safety in the workplace.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: C

MGMT 219 Small Business Management 3-0-3
This course focuses on the fundamental business management skills needed to open and operate a small business. Topics include identifying opportunities, business plans, marketing fundamentals, and managing growth. Case studies and current issues are used to illustrate text concepts.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: C

MGMT 270 Business Planning 3-0-3
This course emphasizes the integration of previous coursework to provide a student with knowledge and understanding of strategic management processes, techniques, concepts and skills. The course takes a problem-solving approach to understanding industry dynamics. It emphasizes the connection between the functional areas of the firm and the external environment to develop managerial strategies. Students will demonstrate mastery of course objectives by analyzing a case and by developing a strategic management plan.
Semester(s) Offered: SPRING
Requisite: Eligible for ENG 101; MGMT 204, BUS 241; Sophomore standing.
Type: C

MGMT 280 Introduction to Logistics 3-0-3
This course is an analysis of the activities and decisions necessary to plan, implement and control private and public physical distribution and transportation channel systems. There is an emphasis on physical, human, informational, and organizational system components.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

MGMT 281 Logistics Models & Systems Analysis 3-0-3
This course will present fundamental quantitative modeling tools that address the design and control of operations in the supply chain. Topics covered will include modeling design concepts that are used in transportation shaping, network flow, along with computational and quantitative measurements that facilitate the procurement process.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

MGMT 282 Supply Chain Management 3-0-3
This course covers basic principles of supply chain management and provides techniques used to analyze logistics systems. Areas examined include inventory management, warehousing, distribution, and strategic facility location as it relates to supply chain efficiencies. Asset productivity strategies are studied by investigating both inbound materials management/production processes and outbound physical distribution procedures. Emphasis on strategic coordination of all supply members is reinforced.
Semester(s) Offered: ALL
Requisite: None.
Type: C

MGMT 283 Global Supply Chain Management 3-0-3
Global supply chain management involves planning how the entire supply chain will function as an integrated whole system. Special emphasis on generating the optimum level of customer service while being cost efficient will be discussed. Analysis of supply chain processes to include sourcing, distribution, transportation, warehousing, sales and customer service will be examined to promote value. The use of logistics software as a way to improve the functioning of supply chains, while assessing risk will be emphasized.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

MGMT 284 Import/Export Logistics Management 3-0-3
This course covers the conceptual framework for the conduct of international trade, and focuses on importing/exporting as a basic foreign market entry strategy. It provides the student the tools for assessing and analyzing the import/export potential of products and services as well as the screening and selection of foreign target markets. It presents the interplay of dynamic forces influencing the global business environment: economic and socio-cultural, physical and environmental, political and legal, competitive and distributive, and how they impact on formulating export marketing strategies. It comprehensively covers the import/export marketing mix and provides working knowledge of the procedures, documentation, as well as the conduct of business according to generally accepted International trade and banking practices.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C, Type:

MGMT 299 Special Topics In Management Variable up to (4)-0-(4)
This course presents projects and topics in business management by simulated experiences, observations, discussions, reading and individual research. Projects and topics will vary to meet individual interest and needs.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

Marketing

MKT 126 Introduction to Marketing 3-0-3
The course introduces students to basic marketing principles with particular emphasis on environmental factors that affect a business, target market selection, and the four primary elements of the marketing mix: product, price, distribution and promotion.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, Type:

MKT 226 eMarketing 3-0-3
This course provides an overview of the ways marketers use the internet to connect with customers to promote and sell products and services. The course examines email marketing, advertising, search marketing, social media and mobile marketing. The course will address the need to integrate online and offline marketing efforts. Search engine optimization and analytics are introduced as well. Students will be required to register for several social media websites. Note: MKT 126 recommended; students must be competent computer and internet users.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: C, Type:

MKT 227 SEO & Web Analytics for Marketing 3-0-3
The course introduces students to search engine optimization techniques used to help drive traffic to a web page. Commonly used web analytics tools are reviewed to demonstrate how to assess the effectiveness of basic online marketing efforts. Google Analytics will be featured. Note: Students must be competent computer and internet users.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

MKT 228 Social Media Tools 3-0-3
This course provides instruction for using a variety of social media tools. It includes a discussion of how social media is used to market products and services. Students will create accounts on a number of social networking sites and develop basic skills in their use from a personal and/or business perspective. Discussion topics will include: best practices in the use of social media; trends in social media use, and ethical issues.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

MKT 229 Marketing Plans 3-0-3
This course provides a systematic approach to the application of the marketing concept. This systematic approach involves a determination of the organization's marketing objectives, an analysis of market opportunities, selection of target-market segments, development of marketing strategies and plans, and observation of target market responses. Evaluation of responses suggests adjustments that may be needed within the marketing system to better accomplish organizational marketing goals.
Semester(s) Offered: FALL
Requisite: MKT 126.
Type: C

MKT 242 Marketing Communications 3-0-3
This course focuses on the promotion element of the marketing mix. Advertising, sales promotion, public relations, social network marketing and direct mail are addressed. The course highlights the importance of an integrated approach to promotion. Small business applications are a featured part of the course.
Semester(s) Offered: FALL
Requisite: MKT 126.
Type: T, Type: , IAI-MC 912

MKT 243 Basic Selling Techniques 3-0-3
This course introduces the student to fundamental sales skills. Students will examine and apply common selling concepts: prospecting, features/benefits, relationship selling, objections, closing the sale and follow up on the sale.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 101.
Type: C

MKT 265 Marketing Internship I Variable up to 0-(15)-(3)
This course is a supervised work-experience program requiring an average of 15 hours per week in a marketing focused position. If the student is already employed in a marketing position, the job may qualify for the internship but is subject to approval by the instructor. The instructor and the college's internship coordinator also provide assistance to students in finding an appropriate internship position.
Semester(s) Offered: INTERMIT
Requisite: Sophomore standing; MKT 126; 6 additional MKT semester hours; minimum GPA of 3.0 in MKT coursework.
Type: C

Mass Communication

MCOM 101 Introduction To Journalism 3-0-3
A study of the basic principles of news gathering, reporting, interviewing and writing. The course examines the following: the idea of news writing; types of journalistic articles; lead writing techniques; ethical issues in journalism; the application of research methods, including the use of library and online sources; and the types of publications which use journalistic writing. Students write basic stories under real-time constraints.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: T, IAI-MC 919

MCOM 201 Introduction to Mass Communication 3-0-3
A survey of mass media and their effect on American society. The course will explore the major forms of the mass media, including the Internet and social media, newspapers, magazines, radio, television, film, advertising, and public relations. Emphasis will be placed on the historical development and the major functions, elements, and theories of mass communication.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 97 or higher.
Type: T, IAI-MC 911

MCOM 220 Voiceover: Vocal Production 3-0-3
A performance and critique based course introducing the student to the art of voice acting with an emphasis on voice and articulation. The student will develop skills and techniques to evaluate voice and speech patterns, interpret commercial, industrial and narrative copy or scripts, mark copy, and effectively communicate ideas naturally while becoming familiar with the intimacy of microphone use.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 97 or higher.
Type: T

MCOM 221 Voiceover: Characterization 3-0-3
A performance and critique based course expanding on the student's voice acting work in Voiceover I. Course emphasis is on characterization development as a tool for improving analysis and delivery of dramatic and narrative copy. Students in broadcasting, communication and theatre will find the course beneficial in developing skills and techniques for evaluating voice and speech patterns; interpreting commercial, dramatic, industrial and narrative copy or scripts; and effectively communicating ideas naturally through the intimacy of microphone use.
Semester(s) Offered: SPRING
Requisite: Eligible for ENG 97 or higher.
Type: T

MCOM 230 Podcast and Radio Production 1-5-3
This course is designed to introduce the student to the fundamentals of broadcast production techniques and digital audio equipment operation. Topics include general production principles and the techniques and operation of broadcast audio tools such as audio board, microphones, digital recorders, and computers. Students will be required to meet production deadlines while demonstrating knowledge of basic script writing, editing, and audio production of commercials, public service announcements, news casts and other studio projects produced in the campus broadcast lab using Audacity editing software.
Semester(s) Offered: SPRING
Requisite: Eligible for ENG 97 or higher.
Type: T

MCOM 240 Writing for Media 3-0-3
Emphasizes writing for audio and visual presentations, including continuity, commercials, public service announcements, news, and special events. Students will learn to write on deadline, edit copy for timed broadcasts, research subjects, write to visuals, and examine potential legal conflicts and ethical issues when writing for broadcast and new media.
Semester(s) Offered: FALL
Requisite: Eligible for ENG 101.
Type: T

MCOM 255 Broadcast Announcing 3-0-3
This is a media performance class designed to introduce students to the principles, tools and techniques of broadcast announcing. Through hands on experience, students will learn to prepare and deliver commercials, news, interviews, public service announcements, and special events. Students will develop communication skills and confidence through regular performance before the microphone and camera.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 97 or higher.
Type: T

MCOM 299 Topics In Mass Communication 3-5-3
This course features an in-depth study of some aspect of film, television, radio, or other form of mass media. Topics will vary and may include (but are not limited to) the following: aspects of the history of film or other mass media; new developments in media; particular movements in film or television; important directors or writers, etc. Alternatively, the focus may be hands-on instruction in a specific aspect of film, radio, or television production.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 97 or higher.
Type: T

Massage Therapy

MT 101 Therapeutic Massage I 4-2-5
This course lays the foundation for developing the skills of a massage therapist. Upon course completion, students will be able to perform a full Swedish massage utilizing proper technique and body mechanics. In addition, students will learn the rich history of massage therapy, how to develop a professional and therapeutic patient/client relationship and the proper methods for communication within the profession as well as the health care community.
Semester(s) Offered: FALL SPR
Requisite: Coordinator's permission, concurrent enrollment in or completion of ENG 97. Department consent
Type: C

MT 102 Body Structure & Function 4-0-4
Student will develop a basic understanding of human anatomy and physiology as it relates to mastering the theory and practice of therapeutic massage. The course covers basic structure and function of the integumentary, skeletal, muscular, and nervous systems, as well as common pathologies affecting these systems.
Semester(s) Offered: FALL SPR and/or SUM
Requisite: Coordinator's permission, concurrent enrollment in or completion of ENG 97. Department consent
Type: C

MT 190 Clinical Practicum 0-6-3
Students will be providing massage therapy services to clients in the clinical setting under close supervision of an instructor. Students will practice setting appointments, consultations and performing basic massage techniques on the client. Students will have an opportunity to enhance documentation, communication and time management skills.
Semester(s) Offered: SPR SUM
Requisite: Coordinator's permission, concurrent enrollment in or completion of MT 101 with a grade of "C" or better. Department consent
Type: C

MT 200 Business Practices in Massage Therapy 1-0-1
Students learn about state laws and regulations governing the practice of massage therapy. In addition, they will learn how to open, own and operate a massage therapy practice and strategies for marketing their business. Students will discuss business ethics related to massage therapy and utilize ethical guidelines when making decisions in massage therapy practice. Classroom discussions are facilitated by the instructor and include issues such as appropriate clinical behaviors, cultural difference, legal issues and the changing health care environment.
Semester(s) Offered: FALL SPR
Requisite: Coordinator's permission, concurrent enrollment in or completion of MT 101 with a grade of "C" or better. Department consent
Type: C

MT 201 Therapeutic Massage II 4-2-5
Building on the foundation of the first semester, students will enhance their palpation skills by moving deeper into the tissues, gain greater understanding of the specific musculature and recognize various soft tissue dysfunctions. Basic assessment procedures and the ability to locate trigger points prepare students to develop a treatment plan for clients with chronic pain and/or address client's special needs. Students will learn to adapt their massage protocols to meet the needs of pregnant mothers and other special populations.
Semester(s) Offered: FALL SUM and/or SPR
Requisite: Coordinator's permission, completion of MT 101 with a grade of "C" or better.
Type: C

MT 202 Body Structure And Function II 4-0-4
This course is the second unit of study on basic human structure and function as it relates to massage therapy. Course content will include the following systems and common pathologies related to each: circulatory, endocrine, respiratory, digestive, and reproductive.
Semester(s) Offered: SUMMER, FALL and/or SPRING
Requisite: Coordinator's permission, concurrent enrollment in or completion of ENG 97. Department consent
Type: C

MT 203 Complementary Techniques 3-0-3
In this course students will continue to expand their knowledge and understanding of massage modalities utilized by a massage therapist. Course content includes many complementary techniques and alternative approaches to massage. Students will demonstrate the proper technique for sports massage in addition to developing a basic understanding of: lymphatic massage, reflexology, hydrotherapies, aromatherapy, shiatsu, craniosacral therapy, and other somatic therapies.
Semester(s) Offered: FALL SPR
Requisite: Coordinator's permission, concurrent enrollment in or completion of MT 101 with a grade of "C" or better. Department consent
Type: C

MT 220 Pathology for the Massage Therapist 2-0-2
This course is designed to provide the student with an overview of basic pathologic concepts and processes with a clinical emphasis. Components of each disease covered include: etiology, incidence, risk factors, manifestations, and special implications for the MT. Concepts on health and aging pertaining to the various systems are included to achieve a clinical awareness of life span changes.
Semester(s) Offered: FALL SPR
Requisite: Coordinator's permission, concurrent enrollment in or completion of ENG 97. Department consent
Type: C

MT 299 Spec Topics in Massage Therapy Variable up to (4)-(8)-(4)
Varied topics in massage therapy will be addressed in order to meet most current needs of profession.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

Mathematics

MATH 91 Statistics Foundations 1-0-1
This course is to be taken concurrently with General Education Statistics (MATH 107). Math skills which are necessary for a student to be successful in the general education math course will be emphasized, specifically: order of operations; fractions and ratios; graphs and graph interpretation; evaluating expressions and formulas; set theory and Venn diagrams; and inequalities and interval notation. In addition, this course will integrate appropriate study skills in time management, test preparation, and organization.
Semester(s) Offered: INTERMIT
Requisite: Concurrent enrollment in MATH 107.
Type: P

MATH 92 College Algebra Foundations 0-3-1
This course is to be taken concurrently with College Algebra (MATH 112). Math skills which are necessary for a student to be successful in College Algebra will be emphasized, specifically: graphing; solving equations and inequalities; functions; fundamental algebraic skills; and matrices. In addition, this course will integrate appropriate study skills in time management, test preparation, and organization.
Semester(s) Offered: INTERMIT
Requisite: Concurrent enrollment in MATH 112.
Type: P

MATH 93 Review of Arithmetic 3-0-3
This course is for students who want to improve their mastery of arithmetic skills or who are not prepared for Math 95 or Math 97. The course covers operations with whole numbers, fractions, decimals, percentages, ratios, proportions, operations with signed numbers, and beginning algebra and geometry. Students whose math placement test scores indicate arithmetic weaknesses are required to pass this course (with grade of C or better) or complete ALEKS PPL preparation prior to enrolling in Math 95 or Math 97.
Semester(s) Offered: ALL
Requisite: None.
Type: P

MATH 94 Basic Algebra Variable up to 5 - 0 - 5
This is an introductory course in algebra. It covers such topics as signed numbers, linear equations and inequalities in one variable, applied problems, exponents, polynomials, factoring, graphs of linear equations in two variables, and systems of two linear equations.
Semseter(s) Offered: INTERMIT
Requisites: Math Placement above Math 93 or completion of MATH 93 with a grade of "C" or better.
Type: P

MATH 95 Mathematical Literacy 4-0-4
This course serves as a prerequisite for General Education Statistics (MATH 107) and Liberal Arts Mathematics (MATH 111). The primary goal of this course is to enable students to develop conceptual understanding and problem-solving competence at the intermediate algebra level. This course emphasizes conceptual understanding and modeling rather than procedures. However certain procedures are essential to the study of algebra and they will be included. This course focuses on developing mathematical maturity through problem-solving, critical thinking, data analysis, and the writing and communication of mathematics. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts.
Semester(s) Offered: ALL
Requisite: Completion of MATH 93 with a "C" or better; or completion of ALEKS math skills assessment; or academic advisor/department chair approval.
Type: P

MATH 96 Elementary Geometry for College Students 4-0-4
This is an elementary geometry course for students who have not successfully completed one year of high school geometry. This course covers such topics as line and angle relationships, parallel lines, similar and congruent triangles, two-column deductive proofs, indirect proofs, properties of quadrilaterals and circles, areas, and volumes.
Semester(s) Offered: INTERMIT
Requisite: Math placement above MATH 93 or completion of MATH 93 with a grade of "C" or better.
Note: Geometry requirement: ACT math sub-score of 22, SAT math sub-score of 530, appropriate placement scores on SWIC placement assessment, or students provide proof to Enrollment Services of two semesters of high school geometry with passing grades. Students may also show proficiency on test given by Math Department Chair or complete MATH 96 or MATH 97 with a grade of C or better.
Type: P

MATH 97 Algebra for STEM 5-0-5
This course serves as a prerequisite for College Algebra (Math 112) and Math for Elementary Teachers I (Math 105). The primary goal of this course is to enable students to develop the graphing and algebraic skills needed for success in a first college math course in STEM (science, technology, engineering, math) and business. The course consists of the following topics: real numbers, linear

equations and inequalities, graphs of equations and inequalities, functions, systems of linear equations, exponents and polynomials, factoring, rational expressions, roots and radicals, quadratic equations, and nonlinear inequalities. Use of a graphing calculator, as recommended by the instructor, is required for this course.
Semester(s) Offered: ALL
Requisite: Completion of MATH 93 with a "C" or better; or completion of ALEKS math skills assessment; or academic advisor/department chair approval.
Type: P

MATH 105 Mathematics for Elementary Teachers I 4-0-4
This is the first of a two-course sequence (MATH 105 and MATH 106) designed to meet the needs of students majoring in elementary education. Students are strongly encouraged to successfully complete both classes at the same college. MATH 105 alone does not fulfill the general education requirement for an AA degree. MATH 105 covers problem solving, logic and mathematical reasoning, sets, functions, numeration systems, interpretations of the four basic arithmetic operations, algorithms for the arithmetic operations, mental computation strategies, elementary number theory, fractions, decimals, proportions, and irrational numbers.
(Note: This course is a content course, not a methods course.)
Semester(s) Offered: FALL
Requisite: Math placement above MATH 97 or completion of MATH 97 with a grade of "C" or better.
Type: T

MATH 106 Mathematics for Elementary Teachers II 4-0-4
This is the second course of a two-course sequence (MATH 105 and MATH 106) designed to meet the needs of students majoring in elementary education. Students are strongly encouraged to successfully complete both classes at the same college. Completion of this two-course sequence fulfills the math requirement for an AA degree. MATH 106 covers: probability and statistics; introductory geometry; congruence, similarity, and constructions; motion geometry and tessellations; and concepts in measurement. (Note: This course is a content course, not a methods course.)
Semester(s) Offered: SPRING
Requisite: MATH 105 with a grade of "C" or better, Completion of the geometry requirement.
Note: Geometry requirement: ACT math sub-score of 22, SAT math sub-score of 530, appropriate placement scores on SWIC placement assessment, or students provide proof to Enrollment Services of two semesters of high school geometry with passing grades. Students may also show proficiency on test given by Math Department Chair or complete MATH 96 or MATH 97 with a grade of C or better.
Type: T, IAI-M1 903

MATH 107 General Education Statistics 4-0-4
The following concepts and statistical techniques are included: organization, presentation, and description of quantitative data (graphical methods and numerical methods); probability and probability distributions; sampling and statistical inferences (interval estimation and hypothesis testing); and correlation and regression. Students will be required to use a graphing calculator and a statistical software package, as recommended by the instructor, in this course. This course is designed for transfer students in Liberal Arts. Students may receive credit for only one of the following: MATH 107, MATH 191, or BUS 205.
Semester(s) Offered: ALL
Requisite: Math placement above MATH 107/MATH 111 or completion of MATH 95 with a grade of C or better or completion of MATH 97 with a grade of C or better.
Type: T, IAI-M1 902

MATH 111 Liberal Arts Mathematics 4-0-4
This course focuses on mathematical reasoning and the solving of real-life problems by looking at a few topics in depth. Three or four topics will be chosen from the following by the instructor for in-depth study: set theory and logic, geometry, counting methods and probability, statistics, graph theory, consumer mathematics and voting and apportionment. Use of a scientific calculator, as recommended by the instructor, is required for this course. This is a terminal course in mathematics for Associate in Arts majors and is not a prerequisite for any other mathematics course.
Semester(s) Offered: ALL
Requisite: Math placement above MATH 107/MATH 111 or completion of MATH 95 with a grade of C or better or completion of MATH 97 with a grade of C or better.
Type: T, IAI-M1 904

MATH 112 College Algebra 4-0-4
College Algebra strengthens and expands algebraic and function concepts. Topics included are: conics; complex numbers; intercepts, asymptotes and symmetry; transformations of graphs; algebra of functions; inverse functions; zeros of polynomial functions; properties and graphs of linear, quadratic, polynomial, radical, rational, exponential, and logarithmic functions; systems of linear and non-linear equations; matrix solutions to linear systems of equations; and an introduction to sequences and series. Students will be required to use graphing calculators on some assignments and/or tests.
Semester(s) Offered: ALL
Requisite: Note: Geometry requirement: ACT math sub-score of 22, SAT math sub-score of 530, appropriate placement scores on SWIC placement assessment, or students provide proof to Enrollment Services of two semesters of high school geometry with passing grades. Students may also show proficiency on test given by Math Department Chair or complete MATH 96 or MATH 97 with a grade of C or better.
Requisite: Math placement above MATH 97 or completion of MATH 97 with a grade of "C" or better; Completion of the geometry requirement.
Type: T

MATH 113 Finite Math for Business & Social Science 4-0-4
This course covers topics in mathematics with current applications in business and social science. Topics included are mathematical modeling, solving systems of linear equations, matrices and matrix algebra, linear programming, the simplex method, mathematics of finance, sets and counting, probability and Markov chains. Use of a graphing calculator, as recommended by the instructor, is required for this course. This course is not designed for engineering, mathematics or physical science majors but for transfer students in business and social science.
Semester(s) Offered: FALL SPR
Requisite: Math placement above MATH 112 or completion of MATH 112 with a grade of "C" or better.
Type: T, IAI-M1 906

MATH 114 Trigonometry 3-0-3
Math 114 is a calculus preparatory course designed primarily for students majoring in mathematics, science or engineering. The topics covered include right triangle trigonometry, trigonometric functions, graphs, inverse trigonometric functions, identities, equations, Law of Sines, Law of Cosines, and an introduction to complex numbers in trigonometric form. Real-world problems will be analyzed. Use of a graphing calculator, as recommended by the instructor, is required for this course.
Semester(s) Offered: ALL
Requisite: Math placement above MATH 112 or completion of MATH 112 with a grade of "C" or better; Completion of the geometry requirement.
Note: Geometry requirement: ACT math sub-score of 22, SAT math sub-score of 530, appropriate placement scores on SWIC placement assessment, or students provide proof to Enrollment Services of two semesters of high school geometry with passing grades. Students may also show proficiency on test given by Math Department Chair or complete MATH 96 or MATH 97 with a grade of C or better.
Type: T

MATH 171 Computer Science I - JAVA 4-0-4
This is a beginning course for students in the Computer Science curriculum and other related areas. The structure and facilities of the Java language are introduced. Topics to be covered include selection, repetition, methods, classes, arrays, files, an introduction to GUI, and program design and documentation. Students will learn to program from the command line and be introduced to an IDE. It is recommended that students complete both Computer Science I and II at the same institution.
Semester(s) Offered: FALL SPR
Requisite: Math placement above MATH 114 or concurrent enrollment in or completion of MATH 114 with a grade of "C" or better.
Type: T, IAI-CS 911

MATH 191 Introduction to Statistics 4-0-4
The following concepts and statistical techniques are included: measures of central tendency and variability; random variables and probability distributions; binomial, normal, and sampling distributions; estimation; tests of hypotheses; chi square tests; linear regression and correlation; and multiple regression. Statistical software projects are required. Use of a graphing calculator, as recommended by the instructor, is required for this course. At the conclusion of this course, students will be able to extract and interpret information from data and apply statistical tests to make and communicate informed decisions in business and related fields. Students may receive credit for only one of the following: MATH 107, MATH 191, or BUS 205.
Semester(s) Offered: ALL
Requisite: Math placement above MATH 112 or completion of MATH 112 with a grade of "C" or better.
Type: T, IAI-M1 902

MATH 203 Analytic Geometry & Calculus I 5-0-5
The calculus sequence is designed for students whose area of concentration is mathematics, science, or engineering. The SWIC Mathematics faculty believes calculus students must become aware of the advances in technology and its uses in mathematics, particularly in calculus. Therefore, computer technology is integrated in the calculus sequence through the use of the Mathematica software package. Students are also required to use graphing calculators, as recommended by the instructor, on some assignments and/or tests. It is recommended that any calculus sequence be completed in the college in which it was begun. However, if a student transfers during the sequence, the student is urged to discuss the calculus entry level with the math department of the transfer school. The MATH 203 course content includes limits of functions, derivatives, extrema of functions, tangents, asymptotes, definite and indefinite integrals, differentiation and integration of transcendental functions, and applications of calculus in physical science and engineering.
Semester(s) Offered: ALL
Requisite: Math placement above MATH 114 or completion of MATH 114 with a grade of "C" or better.
Type: T, IAI-MTH 901, IAI-M1 900-1

MATH 204 Analytic Geometry & Calculus II 5-0-5
The calculus sequence is designed for students whose area of concentration is mathematics, science, or engineering. The SWIC Mathematics faculty believes calculus students must become aware of the advances in technology and its uses in mathematics, particularly in calculus. Therefore, computer technology is integrated in the calculus sequence through the use of the Mathematica software package. Students are also required to use graphing calculators, as recommended by the instructor, on some assignments and/or tests. It is recommended that any calculus sequence be completed in the college in which it was begun. However, if a student transfers during the sequence, the student is urged to discuss the calculus entry level with the math department of the transfer school. The MATH 204 course content includes the topics of applications of integration, techniques of integration, infinite series, conic sections, parametric equations, and polar functions.
Semester(s) Offered: ALL
Requisite: MATH 203 with a grade of "C" or better.
Type: T, IAI-MTH 902, IAI-M1 900-2

MATH 205 Analytic Geometry & Calculus III 4-0-4
The calculus sequence is designed for students whose area of concentration is mathematics, science, or engineering. The SWIC Mathematics faculty believes calculus students must become aware of the advances in technology and its uses in mathematics, particularly in calculus. Therefore, computer technology is integrated in the calculus sequence through the use of the Mathematica software package. Students are also required to use CAS symbolic calculators, as recommended by the instructor, on some assignments and/or tests. It is recommended that any calculus sequence be completed in the college in which it was begun. However, if a student transfers during the sequence, the student is urged to discuss the calculus entry level with the math department of the transfer school. The MATH 205 course content includes vectors, vector valued functions, functions of two or more variables (with applications), partial differentiation, multiple integration, and vector analysis.
Semester(s) Offered: ALL
Requisite: MATH 204 with a grade of "C" or better.
Type: T, IAI-MTH 903, IAI-M1 900-3

MATH 210 Computer Programming for Engineers 3-0-3
This course introduces the fundamental principles, concepts, and methods of computing with emphasis on applications in the physical sciences and engineering. Topics include basic problem solving and programming techniques, fundamental algorithms and data structures, and use of computers in solving engineering and scientific problems. It is expected that the student will have some basic knowledge of computers. This course is taught using C++.
Semester(s) Offered: SUMMER
Requisite: MATH 203 with a grade of "C" or better.
Type: T

MATH 213 Calculus for Business & Social Sciences 4-0-4
This course introduces the concepts of differential and integral calculus with applications to problems in business and social science. Topics included are limits, derivatives, continuity, integration techniques, logarithmic and exponential functions, and partial derivatives. Computer and/or calculator aided instruction will be used throughout the course; use of a graphing calculator, as recommended by the instructor, is required. The course is designed for transfer students in business and social science; it is not for engineering, mathematics, or physical science majors.
Semester(s) Offered: ALL
Requisite: Math placement above MATH 112 or completion of MATH 112 with a grade of "C" or better.
Type: T, IAI-M1 900-B

MATH 271 Computer Science II - JAVA 4-0-4
An introduction to the fundamentals of algorithms, including searching, sorting, and recursion, associated with data structures using the Java language. Topics covered include classes, linked lists, stacks, queues, trees, maps, and algorithm complexity.
Semester(s) Offered: SPRING
Requisite: MATH 171 with a grade of "C" or better; concurrent enrollment or completion of MATH 203 with a grade of "C" or better.
Type: T, IAI-CS 912

MATH 290 Differential Equations 3-0-3
This is a first course in ordinary differential equations with applications to the sciences. Topics include first-order differential equations, separation of variables, exact equations, linear equations with constant coefficients, undetermined coefficients, linear independence, LaPlace transforms, boundary value problems, and numerical methods. Students will be required to use CAS systems such as Mathematica and symbolic calculators.
Semester(s) Offered: SPR SUM
Requisite: MATH 205 with a grade of "C" or better.
Type: T, IAI-MTH 912

MATH 292 Linear Algebra 3-0-3
Topics include vector methods, vector spaces, equivalent matrices, systems of linear equations, linear transformations and matrices, and determinants with applications. Use of a graphing calculator, as recommended by the instructor, is required for this course.
Semester(s) Offered: FALL SUM
Requisite: MATH 203 with a grade of "C" or better.
Type: T, IAI-MTH 911

MATH 299 Special Topics in Mathematics Variable up to (4)-0-(4)
This course will cover special topics or problems in mathematics and provide students with the knowledge and ability to deal with those topics or problems in relation to their special requirements.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: T

Medical Assistant

MA 110 Phlebotomy Skills 0-2-1
This course is designed to enhance student's competency in the following blood drawing skills: capillary or dermal puncture, evacuated tube method, syringe, and butterfly. Review of tube types, order, and complications or problems with blood drawing will be reviewed along with the practice of the blood drawing skills.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: C

MA 130 Medical Office Clinical Procedures I 1-2-2
Clinical Procedures I introduces the student to basic aseptic technique as it involves the obtaining of vital signs and preparing and assisting with the physical exam.
Semester(s) Offered: FALL SPR
Requisite: Program Admission.
Type: C

MA 135 Health Care & Patient Communications 2-0-2
Provides the student with skills in communication which are the basis of their function as a professional medical assistant. Techniques of interaction are taught to enable the student as a professional to reduce stress for themselves and for those with whom they will come in contact. Legal and ethical issues relative to communication are discussed.
Semester(s) Offered: FALL SPR
Requisite: Program Admission.
Type: C

MA 140 Medical Office Procedures 3-0-3
This course introduces the student to the job description and attitudes needed to work in the medical office. Specific skills taught are administrative procedures, which involve reception, mailing, phone, filing, maintaining medical records, financial record-keeping, applied medical-legal concepts, billing, banking and collection.
Semester(s) Offered: FALL SPR
Requisite: Program admission.
Type: C

MA 141 Medical Insurance & Coding 2-0-2
This course introduces the student to insurance terminology, medical coverage and common insurance forms. The student identifies and codes procedures and diagnoses for completion of insurance forms.
Semester(s) Offered: SPR SUM
Requisite: MA 140, MA 150 each with a grade of "C" or better.
Type: C

MA 143 MA Automation 2.5-0-2.5
Information regarding coding and charges will be filed for specific services and retrieved for analysis of total office efficiency. Billing and age analysis information will be generated from existing files and insurance forms for private, state, and federal agencies will be completed and printed. Office financial statement will be created and updated.
Semester(s) Offered: FALL SPR
Requisite: Program Admission.
Type: C

MA 145 Medical Law and Ethics 2-0-2
Medical Law & Ethics is a course designed to introduce the student to legal and ethical issues in the medical field. This course will provide an introduction into the legal terminology, regulations, licensure of the various allied health fields, ethical standards, professional liability, documentation and professional responsibilities.
Semester(s) Offered: FALL SPR
Requisite: Program Admission.
Type: C

MA 150 Medical Pathology I 3-0-3
Medical Pathology I is a course designed to integrate medical terminology, laboratory tests, common symptoms and diseases related to a body system. In this manner a sequenced and coordinated course of study of dermatology, musculoskeletal system, nervous system, endocrine system, and blood and lymphatic system is provided. (Two hours lecture, four hours lab, eight-week module) Fall
Semester(s) Offered: FALL SPR
Requisite: Program admission.
Type: C

MA 151 Medical Pathology II 4-0-4
Medical Pathology II is a continuation of the study of medical terminology as it relates to each body system, disease conditions, symptoms and lab tests used in diagnosis. In this course the word roots presented will be related to common conditions, symptoms and methods of diagnosis.
Semester(s) Offered: FALL SPR
Requisite: MA 150 with a grade of "C" or better.
Type: C

MA 170 Medical Lab Orientation I 1-2-2
This course is designed to provide the student with the opportunity to perform basic medical lab tests that are performed in the office; basic techniques of blood drawing, specimen collection, preservation of specimens, correct labeling techniques and patient test preparation; to practice good technique in hematology laboratory procedures and apply to all lab testing in performance, care and maintenance of equipment. The course will also prepare the graduate with the knowledge to set up an office and assist with the preparation of patients for lab testing at other facilities. (3-0-3 lecture, four hours lab, eight-week module)
Semester(s) Offered: FALL SPR
Requisite: Program Admission.
Type: C

MA 171 Medical Lab Orientation II 1-2-2
This course continues with lab skills in urinalysis testing, serology, chemistry and microbiology. Good laboratory techniques and quality control are stressed. (2-0-2 lecture, four hours lab, eight-week module)
Semester(s) Offered: SPR SUM
Requisite: MA 170 with a grade of "C" or better.
Type: C

MA 180 Medical Office Clinical Procedures II 1-2-2
This course introduces the student to aseptic technique and minor surgery procedures; special procedures in general practice; care and maintenance of equipment and performance of emergency procedures.
Semester(s) Offered: FALL SPR
Requisite: MA 130 with a grade of "C" or better.
Type: C

MA 181 Cardiopulmonary Procedures 1-2-2
This course introduces the student to cardiac and respiratory anatomy and physiology, and cardiac and pulmonary function testing; electrocardiography performance, equipment and maintenance, recognition of normal findings, and response in emergency situations.
Semester(s) Offered: FALL SPR
Requisite: Program Admission.
Type: C

MA 182 Pharmacology and Administration Techniques 3-2-4
This course presents the calculations for medication administration, the classification of pharmacology agents and clinical techniques for medication administration.
Semester(s) Offered: FALL SPR
Requisite: MA 130, MA 150 each with a grade of "C" or better.
Type: C

MA 195 Office Practicum 0-10-5
The student will practice previously learned skills in a supervised clinical experience at a physicians office. This clinical practicum will be under the direction of a physician and a medical assistant. NOTE: Student needs to have completed 34.5 units/credits of the MA certificate with a grade of "C" or better in each to enroll in this course.
Semester(s) Offered: SPR SUM
Requisite: Department consent
Type: C

MA 199 Capstone Review 1-0-1
This course prepares the Medical Assistant program students and individuals who are employed as Medical Assistants for the CMA exam. The class includes a review of administrative and clinical procedures. Mock exams are part of the review and preparation.
Semester(s) Offered: SPR SUM
Requisite: Department consent
Type: C

MA 255 Medical Assistant Management Internship 2-0-2
This course builds on basic administrative skills and introduces the student to management skills needed in a medical facility. The student will complete course objectives on preparation and implementation of office policies, employee selection, and required legal forms in management. (10 hours administrative practicum) NOTE: Students must have completed the MA certificate to enroll in this course.
Semester(s) Offered: SPR SUM
Requisite: Department consent
Type: C

MA 299 Problems in Med Assist Variable up to (4)-(8)-(4)
Application of medical assisting principles to specific problems through case studies, simulation, special class projects or problem-solving procedures. Projects and topics will vary to meet individual interests and needs. NOTE: Requisite varies by topic.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

Medical Laboratory Technology

MLT 100 Introduction to Phlebotomy Procedures 1-2-2
This course is an introduction to the basic skills of a phlebotomist. The course focuses on venous and capillary blood draws, but instruction is provided on other collection methods common in the laboratory. Students are instructed in safety, patient preparation and identification, proper technique, problem solving and basic specimen processing.
Semesters offered: Spring and Fall
Prerequisite: None
Type: C

MLT 130 Specimen Collection and Handling 1-2-2
This course introduces students to preanalytical collection and processing of clinical specimens. Students will follow the course of laboratory testing from specimen ordering, billing considerations, patient preparation, specimen collection and handling, distribution to laboratory departments and packaging for shipment. Particular emphasis is placed on venipuncture and capillary blood draws.
Semesters offered: FALL SPR
Prerequisite: Department Consent
Requisite: Program admission. Department consent
Type: C

MLT 150 Intro to Clinical Laboratory 1-2-2
The Introduction to the Clinical Laboratory course exposes students to basic laboratory information on safety, organization and personnel, quality control, applied mathematics, basic laboratory procedures and professionalism.
Semesters offered: Spring and Fall
Prerequisite: Department Consent
Semester(s) Offered: FALL SPR
Requisite: Program admission. Department consent
Type: C

MLT 200 Hematology 3-3-4
Hematology is one of four major laboratory disciplines. Hematology focuses on formation and properties of human blood. Testing includes procedures performed in the routine clinical laboratory with an emphasis on cell identification and manual differentials. Students will study the role of the laboratory in diagnosis of anemia, leukemia and other hematologic disorders.
Semesters offered: FALL SPR
Prerequisite: Program admission
Type: C

MLT 210 Applied Clinical Microbiology 3-3-4
Clinical microbiology is one of four major laboratory disciplines. The study of normal and pathogenic microflora emphasizes methods for isolation, recognition and identification of microorganisms of medical significance. Lecture material focuses on general characteristics pathogenicity and drug susceptibility of infectious organisms. Student laboratory instruction includes media selection and inoculation, staining and interpreting gram stain reactions, colony identification and supplemental testing.
Semesters offered: FALL SPR
Prerequisite: Program Admission
Type: C

MLT 220 Serology 1-2-2
Serology is concerned with immunology. Topics include function of the human immune system, antibody/antigen reaction and applied immunology for laboratory testing methods. Introduction to molecular diagnostics is shared with clinical chemistry.
Semesters offered: FALL SPR
Prerequisite: Program Admission
Type: C

MLT 230 Microbiology Clinical Practice 0.5-3-2
The course is hybrid with lecture material presented as an online module. Lecture covers basic information regarding mycobacteria, fungi, parasites and viruses. Correlation with disease states includes etiology, epidemiology, syptoms and basic treatment options. Discussion of detection methods focuses on staining, morphology and molecular testing. Lab will consist of microbiology laboratory simulation on campus.
Semesters offered: FALL SPR
Prerequisite: Completion of MLT 210 with a grade of C or better.
Type: C

MLT 240 Immunohematology 3-3-4
Immunohematology is one of four major laboratory disciplines which encompasses topics from the other disciplines to address diagnosis and treatment of hematologic disorders, immune proliferative disorders and coagulopathy. The focus is on proper protocols for the collection, selection, preparation and transfusion of blood products. Special attention is paid to record keeping, blood typing and quality assurance measures
*Eight-week module, six hours of lecture and six hours of lab
Semesters offered: FALL SPR
Prerequisite: Program Admission
Type: C

MLT 242 Phlebotomy Clinical 0-4-2
Clinical experience is in specimen collection primarily venipuncture. Students must complete 120 hours and 100 successful venipunctures at an assigned site. Clinical rotations are assigned at affiliated off campus clinical sites. Exact schedule varies but is usually day shift with many sites beginning before 8AM.
*Eight hours per week for two weeks at clinical location
Semesters offered: FALL SPR
Prerequisite: Department Consent
Type: C

MLT 243 Lab Processing Clinical 0-6-3
Clinical experience is in specimen collection and processing. Rotation may include waived testing, reagent and control preparation and specimen packaging dependent on the clinical site.
Clinical rotations are assigned at affiliated off campus clinical sites. Exact schedule varies but is usually day shift with many sites beginning before 8AM.
*Three weeks forty hours per week at clinical location.
Semesters offered: FALL SPR
Prerequisite: Department Consent
Type: C

MLT 245 Clinical Practice I 0-10-5
Clinical experience is in hematology, clinical chemistry, coagulation, serology, urinalysis and molecular diagnostics. (Many laboratories group these in the core lab). Students participate in supervised laboratory experience during a regular workday. Students should prepare for Monday to Friday, eight hours per day.
** Eight weeks - forty hours per week at clinical location.*
Students will have online learning assignments to begin review for the ASCP BOC exam.
Semesters offered: FALL SPR
Prerequisite: Program admission and completion of MLT 130, MLT 150, MLT 200, MLT 220, MLT 250, MLT 260 and MLT 270 with grade of "C" or better.
Type: C

MLT 250 Coagulation 1-2-2
Coagulation discusses major components of hemostasis. Testing includes procedures performed in the routine clinical laboratory. Students will study the role of the laboratory in diagnosis of hemorrhagic and thrombotic disorders.
Semester(s) Offered: FALL SUM
Requisite: Program admission.
Type: C

MLT 260 Clinical Microscopy 1-2-2
Clinical microscopy address urinalysis and body fluid examination. Laboratory time places emphasis on physical, chemical and microscopic analysis of urine. Body fluid procedures include gross exam, cell counts and cellular identification. Lecture material covers anatomy of the renal system, processes of urine formation and body fluid collection and significance.
Semesters offered: FALL SPR
Prerequisite: Program Admission
Type: C

MLT 270 Clinical Chemistry 3-3-4
Clinical chemistry is one of four major laboratory disciplines. Lecture focuses on the wide variety of diagnostic tests performed in the clinical laboratory. Students are instructed in the interpretation of test results as they apply to anatomical systems and pathologic disorders. Labroatory focuses on principles of insturmetation, proper reagent preparation, quality control and basic troubleshooting.
Semesters offered: FALL SPR
Prerequisite: Program Admission
Type: C

MLT 275 Clinical Practice II 0-6-3
Clinical experience is in blood bank microbiology. Students should prepare for Monday to Friday eight hours per day for three weeks.
Students whose clinical rotation does not include antibody identification and postpartum testing will complete two weeks at the facility and one week on campus. Students will have online learning assignments to review for the ASCP BOC exam.
Semesters offered: FALL SPR
Prerequisite: Program admission and completion of MLT 240 with grade of ""C" or better
Type: C

Medical Surgical Technology

MST 100 Ethical & Moral Concepts 1-0-1
Students become oriented to the profession of medical surgical technologists. Primary topics emphasized in this course include professionalism; ethical, moral, and legal concepts; biopsychosocial concepts of death and dying; and collaborative healthcare teamwork.
Semester(s) Offered: SPR
Requisite: Acceptance into the Med Surg Tech program.
Type: C

MST 102 Healthcare Facility Management 3-3-0
This course covers healthcare facility management concepts including hazard identification and management, daily facility operations, physical environmental controls, and related information technology. Students are oriented to various types of healthcare hazards, operating room procedures, necessary safety controls, and the use of electronic records.
Semester(s) Offered: SPR
Requisite: Acceptance into the Med Surg Tech program.
Type: C

MST 104 Sterile Processing Fundamentals 1-2-2
This course will introduce asepsis and sterile techniques applicable within healthcare settings focusing on normal and pathological pre-operative, intra-operative, and post-operative processes. This synthesized laboratory experience provides students an opportunity to practice sterile processing techniques an procedures while maintaining asepsis and sterile techniques.
Semester(s) Offered: SPR
Requisite: Acceptance into the Med Surg Tech program.
Type: C

MST 106 Surgical Technology 3-2-4
This course introduces physics concepts and safety controls for peri-operative settings with synthesized laboratory practice. The didactic and laboratory experiences will cover topics including electricity, lasers, and interventional radiology. Students will practice assembly, use, and application of equipment and instrumentation found within healthcare facilities.
Semester(s) Offered: FALL
Requisite: MST 100, MST 102 and MST 104 w/grade of "C" or better.
Type: C

MST 108 Pre-operative Case Management 3-4-5
This is the first of a three-course sequence providing an in-depth sequential study of surgical technology needed throughout operative care. The didactic and laboratory experiences in this course will focus on pre-operative preparation and patient care, including pathological surgical case management. Students will have an opportunity to determine and practice the processes to implement surgical attire, establish a sterile field, demonstrate surgical counts, and physically prepare a patient for surgery.
Semester(s) Offered: FALL
Requisite: MST 106 with a grade of "C" or better.
Type: C

MST 200 Perioperative Pharmacology 3-0-3
This course covers patient pharmacological needs for patients, including patients with various pathological conditions, along the peri-operative continuum. Students learn indications, contraindications, and side effects of operative medications including anesthesia. Dosage calculation, medication preparation, and correlative monitoring procedures are included in this course.
Semester(s) Offered: SPR
Requisite: MST 108 with a grade of "C" or better.
Type: C

MST 202 Intra-operative Case Management 3-4-5
This is the second of the three-course sequence providing an in-depth study of surgical technology needed throughout operative care, focusing on intra-operative processes, including pathological surgical cases. The didactic and laboratory experiences in this course will focus on surgical exposures, maintenance of the sterile field, wound management, and specimen care. Students will have an opportunity to determine and practice intra-operative procedures and processes.
Semester(s) Offered: SPR
Requisite: MST 108 with a grade of "C" or better.
Type: C

MST 204 Clinical Internship I 0-8-4
This course is the first of two clinical education experiences that provides an opportunity to practice patient care and medical surgical techniques under the supervision of a certified medical surgical technologist. Students practice procedures and techniques at a healthcare facility for 30-40 hours per week, for six weeks, for a maximum total of 240 hours to achieve a total of 120 cases throughout the program. This course provides students an opportunity to participate in first and second scrub roles as appropriate. Clinical instructors in the healthcare facilities to which the students are assigned provide student supervision.
Semester(s) Offered: SPR
Requisite: HES 152, MST 108 each with a grade of "C" or better.
Type: C

MST 206 Post-operative Case Management 5-3-4
This is the third of the three-course sequence providing an in-depth study of the final phase of surgical case management. This course includes surgical technology needs, processes, and procedures throughout operative care, focusing on post-operative care including pathological surgical cases. The didactic and laboratory experiences in this course covers dressing applications, post-operative acute care, disinfection of the surgical environment, and professional responsibilities.
Semester(s) Offered: FALL
Requisite: MST 200, MST 202, MST 204 each with a grade of "C" or better.
Type: C

MST 208 Specialty Surgical Procedures 2-0-2
This course covers specialty surgical procedures commonly occurring in healthcare facilities, including pathological surgical cases. This course includes related procedural approaches, diagnostic procedures, operative sequences, and peri-operative care based upon procedure. Students learn relevant anatomy and physiology, wound classification, and pharmacological needs.
Semester(s) Offered: FALL
Requisite: MST 200, MST 202, MST 204 each with a grade of "C" or better.
Type: C

MST 210 Clinical Internship II 6-0-12
This course is the second of two clinical education experiences that provides students an opportunity to practice patient care and medical surgical techniques under the supervision of a certified medical surgical technologist. Students practice procedures and techniques at a healthcare facility to include specialty surgical procedures. This clinical education experience includes 30-40 hours per week, for eight weeks, for a maximum total of 320 hours to achieve a total of 120 cases throughout the program. This course provides students an opportunity to participate in first and second scrub roles as appropriate. Clinical instructors in the healthcare facilities to which the students are assigned provide student supervision.
Semester(s) Offered: FALL
Requisite: MST 200, MST 202, MST 204with a grade of "C" or better and satisfactory completion of HES 152.
Type: C

Military Science - Army ROTC

MSC 101 Introduction to Military Science 1-2-2
Introduces military issues and role of the U.S. Army in national defense systems. Reviews time management, goal setting, and motivational leadership.
Semester(s) Offered: FALL
Requisite: None.
Type: T

MSC 102 Introduction to Military Operations 1-2-2
Studies the modern battlefield and its relationship to leadership, team building, and stress management. Individual communication skills and group dynamics are stressed.
Semester(s) Offered: SPRING
Requisite: None.
Type: T

MSC 201 Applied Military Skills 2-2-3
Provides detailed instruction and practical exercises in military writing, briefing, and decision-making. Extensive instruction and practice are provided in the reading and use of maps and compasses.
Semester(s) Offered: FALL
Requisite: None.
Type: T

MSC 202 Small Unit Leadership 2-2-3
Provides basic background in first aid and individual field-movement skills and instruction in the use of analytical aids in planning, organizing, and controlling a changing environment.
Semester(s) Offered: SPRING
Requisite: None.
Type: T

Music

MUS 101 Music Appreciation 3-0-3
This course presents a survey of Western music from the Middle Ages through the present. In addition to learning musical elements and orchestral instruments, students will be introduced to the compositions of the master composers and stylistic characteristics of the various musical eras. A writing component such as a concert report or research paper is required.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-F1 900

MUS 102 American Popular Music 3-0-3
This Humanities course presents a survey of American popular music. It covers the time span from 1840 to the present and will allow the student an opportunity to examine the various types, styles and influential musicians of American pop music.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-F1 904

MUS 103 Music Literature 3-0-3
This course is designed as a survey of music literature of the Western tradition from the Middle Ages to the present. Representative selections by major composers of each era are chosen to illustrate the characteristic styles, techniques, forms and performance practices of vocal and instrumental music. An emphasis is placed on guided listening and elementary score reading. Offered in spring semester only.
Semester(s) Offered: SPRING
Requisite: MUS 105.
Type: T

MUS 104 Fundamentals of Music 3-0-3
This is a beginner s course in reading music notation and understanding keys, scales and chords, including an introduction to the keyboard. The course is designed for a variety of music students: those who are beginning the study of music with little or no background; those who are prospective college music majors who must prepare for formal training in harmony and counterpoint; elementary school teachers who need a basic knowledge of music; and those students who would like a degree of music literacy. Students are expected to clap, sing and participate in class.
Requisite: None.
Type: T

MUS 105 Music Theory I 4-0-4
This course provides an introduction to fundamental melodic and harmonic principles of common practice theory. Students will learn to write, hear, play, and analyze music of all periods and styles. This course will concentrate on the development of written skills (four-part writing and analysis), aural skills (melodic, harmonic, rhythmic dictation), and singing skills (sight-singing). Offered in fall semester only. Piano proficiency or concurrent enrollment in class piano is strongly suggested.
Semester(s) Offered: FALL
Requisite: MUS 104 with a grade of "C" or better or satisfactory score on the fundamental theory skills test.
Type: T

MUS 106 Music Theory II 4-0-4
Continuation of MUS 105. This course provides an introduction to fundamental melodic and harmonic principles of common practice theory. Students will learn to write, hear, play, and analyze music of all periods and styles. This course will concentrate on the development of written skills (four-part writing and analysis), aural skills (melodic, harmonic, and rhythmic dictation), and singing skills (sight-singing). Offered in spring semester only.
Semester(s) Offered: SPRING
Requisite: MUS 105 with a grade of "C" or better.
Type: T

MUS 110 World Music 3-0-3
This course covers the basic elements of music (melody, rhythm, harmony, and form) and perceptive listening relevant to non-western music. The music culture of several non-Western societies will be examined. Completion of this course fulfills the Non-Western Culture requirement for graduation at SWIC.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T, IAI-F1 903N

MUS 111 Class Instruction in Piano I 2-0-2
This is a beginning course for students without previous piano study. Students are expected to practice daily. Required of the music major without piano background, but may be taken as an elective by the non-major.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 112 Class Instruction in Piano II 2-0-2
Continuation of MUS 111.
Semester(s) Offered: FALL SPR
Requisite: MUS 111 with a grade of "C" or better.
Type: T

INFORMATION FOR ALL PRIVATE APPLIED MUSIC FOR ENRICHMENT COURSES:

Music-Private Applied Music for Enrichment Private music lessons are offered to students desiring to improve their music skills in a variety of instruments. These courses may be repeated up to a maximum of four hours of elective credit. These courses do not meet the requirements for pursuit of a major or minor in music at the baccalaureate level.

Students enrolling in private applied courses must contact the Fine and Performing Arts Department Co-Chair Andrew Jensen, D.M.A., at 618-235-2700, ext. 5032 or andrew.jensen@swic.edu, for instructions and instructor assignment.

Students receive one half-hour lesson per week for 15 weeks of the semester.

MUS 119 Private Applied Piano for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 120 Private Applied Voice for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 121 Private Applied Trumpet for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 122 Private Applied French Horn for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 123 Private Applied Trombone for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 124 Private Applied Tuba/Euphonium for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 125 Private Applied Flute for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 126 Private Applied Clarinet for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 127 Private Applied Oboe for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 128 Private Applied Bassoon for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 129 Private Applied Saxophone for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 130 Private Applied Violin for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 131 Private Applied Viola for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 132 Private Applied Cello for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 133 Private Applied Double Bass for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 134 Private Applied Guitar for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 135 Private Applied Bass Guitar for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 136 Private Applied Percussion for Enrichment 1-0-1
Students receive one half-hour lesson per week for 15 weeks of the semester.
Semester(s) Offered: ALL
Requisite: None.
Type: T

MUS 145 Recording Studio Orientation 3-0-3
This course focuses on studio maintenance and troubleshooting techniques. Includes soldering, wiring standards, machine alignment, system architecture, Apple computer Operating System skills and troubleshooting in both hardware and software applications.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T

MUS 150 Recording Engineer Musicianship I 3-0-3
A fundamental course in music for recording arts majors. A study of the elements of musical composition including melody, rhythm, chords, chord progression, modality, and music notation/score reading. This highly specialized and accelerated course is designed to meet industry demands in the recording arts, and should only be considered by those with a strong musical background. Offered in fall semester only.
Semester(s) Offered: FALL
Requisite: MUS 104 with a grade of "C" or better or satisfactory score on the fundamental theory skills test.
Type: T

MUS 151 Recording Engineer Musicianship II 3-0-3
Continues the study of music presented in MUS 150 and includes the application of melody, rhythm, chords, chord progression, modality, and music notation/score reading. This highly specialized and accelerated course is designed to meet industry demands in the recording arts, and should only be considered by those with a strong musical background. Offered in spring semester only.
Semester(s) Offered: SPRING
Requisite: MUS 150 with a grade of "C" or better.
Type: T

MUS 152 History of the Recording Industry 3-0-3
Traces the development and growth of recording technology, the role of recording technology in the music business, the growth and development of major record labels, and a survey of the significant individuals who engineered the recordings.
Semester(s) Offered: SPRING
Requisite: Eligible for ENG 97 or higher.
Type: T

MUS 154 Survey of Music Computer Technology 3-0-3
An examination of proprietary music software/hardware and its application in current use within the recording industry. Included is the study and implementation of MIDI and digital sampling technology in the audio recording industry. Offered in fall semester only.
Semester(s) Offered: FALL
Requisite: Concurrent enrollment in or completion of MUS 111.
Type: T

MUS 155 Survey of Music Computer Technology II 3-0-3
A continuation of MUS 154, this course is an examination of sampling and sound design software programs and how they integrate into the recording studio. A further analysis of MIDI functionality and sequencing using proprietary software is also included. Offered in spring semester only.
Semester(s) Offered: SPRING
Requisite: MUS 154 with a grade of "C" or better.
Type: T

MUS 159 Concert Band I 0-3-1
The Concert Band is an ensemble dedicated to the study and performance of a wide variety of musical literature. Repertoire represents a variety of musical styles from classic to contemporary. The ensemble is open to all woodwind, brass and percussion students.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 160 Concert Band II 0-3-1
The Concert Band is an ensemble dedicated to the study and performance of a wide variety of musical literature. Repertoire represents a variety of musical styles from classic to contemporary. The ensemble is open to all woodwind, brass and percussion students.
Semester(s) Offered: FALL SPR
Requisite: MUS 159. Department consent
Type: T

MUS 161 Community Choir I 0-3-1
The Community Choir will sing choral repertoire ranging from classical to folk and popular. The choir will perform several times during the school year. Rehearsals will be dedicated to learning correct vocal production, musicianship, ear-training and sight-reading skills through vocal exercises and choral literature.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T

MUS 162 Community Choir II 0-3-1
The Community Choir will sing choral repertoire ranging from classical to folk and popular. The choir will perform several times during the school year. Rehearsals will be dedicated to learning correct vocal production,

musicianship, ear-training and sight-reading skills through vocal exercises and choral literature.
Semester(s) Offered: FALL SPR
Requisite: MUS 161.
Type: T

MUS 163 Jazz Band I 0-3-1
The Jazz Band rehearses and performs literature from the contemporary big band media. Instrumentation consists of alto, tenor and baritone saxophones, trumpets, trombones, piano, guitar, drums, and bass.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 164 Jazz Band II 0-3-1
The Jazz Band rehearses and performs literature from the contemporary big band media. Instrumentation consists of alto, tenor and baritone saxophones, trumpets, trombones, piano, guitar, drums, and bass.
Semester(s) Offered: FALL SPR
Requisite: MUS 163. Department consent
Type: T

MUS 165 Instrumental Ensemble I 0-3-1
This is an instrumental performing ensemble dedicated to the study and performance of a wide variety of musical literature. Depending on the ensemble chosen, the literature will represent the various styles found within that idiom, i.e., music of the baroque, classical, romantic, and 20th century, as well as various jazz, rock, and popular styles.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 166 Instrumental Ensemble II 0-3-1
This is an instrumental performing ensemble dedicated to the study and performance of a wide variety of musical literature. Depending on the ensemble chosen, the literature will represent the various styles found within that idiom, i.e., music of the baroque, classical, romantic, and 20th century, as well as various jazz, rock, and popular styles.
Semester(s) Offered: FALL SPR
Requisite: MUS 165. Department consent
Type: T

MUS 167 Vocal Jazz Ensemble I 0-3-1
Students in Vocal Jazz Ensemble study and perform a wide range of classic and contemporary music in the vocal jazz and pop idioms. Prospective students must contact the instructor and successfully complete an audition prior to registration. Public performances are presented throughout the fall and spring semesters.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 168 Vocal Jazz Ensemble II 0-3-1
Students in Vocal Jazz Ensemble study and perform a wide range of classic and contemporary music in the vocal jazz and pop idioms. Prospective students must contact the instructor and successfully complete an audition prior to registration. Public performances are presented throughout the fall and spring semesters.
Semester(s) Offered: FALL SPR
Requisite: MUS 167. Department consent
Type: T

MUS 175 Guitar Ensemble I 0-3-1
The guitar ensemble is a performing ensemble that rehearses and performs a wide variety of guitar ensemble literature, ranging from classical to jazz to popular music. Students will learn different rehearsal and practice techniques related to preparing a musical performance, with the goal of presenting at least one concert per semester. Students will learn many musical skills such as solo guitar, group playing, and basic improvisation.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 176 Guitar Ensemble II 0-3-1
The guitar ensemble is a performing ensemble that rehearses and performs a wide variety of guitar ensemble literature, ranging from classical to jazz to popular music. Students will learn different rehearsal and practice techniques related to preparing a musical performance, with the goal of presenting at least one concert per semester. Students will learn many musical skills such as solo guitar, group playing, and basic improvisation.
Semester(s) Offered: FALL SPR
Requisite: MUS 175. Department consent
Type: T

MUS 177 Jazz Improvisation I 0-2-1
This course is designed to foster a greater appreciation and understanding of jazz improvisation. Study will include functional jazz harmony, instrumental technique, and aural development. Students will study the music of prominent composers and performers including Miles Davis, Herbie Hancock, Horace, Silver, Duke Ellington and others. Each class session will include study through rehearsal and performance by the members of the class.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 178 Jazz Improvisation II 0-2-1
This course is designed to foster a greater appreciation and understanding of jazz improvisation. Study will include functional jazz harmony, instrumental technique, and aural development. Students will study the music of prominent composers and performers including Miles Davis, Herbie Hancock, Horace, Silver, Duke Ellington and others. Each class session will include study through rehearsal and performance by the members of the class.
Semester(s) Offered: FALL SPR
Requisite: MUS 177. Department consent
Type: T

MUS 201 The Business of Music 3-0-3
A survey of the music industry, including music copyright, publishing, performance licensing, songwriting, record markets, record production, record merchandising, recording studio management, unions and guilds, agents, artist management, concert promotion, musical theater production, music in retail, music in radio, and music in advertising.
Semester(s) Offered: SPRING
Requisite: Eligible for ENG 101.
Type: T

MUS 205 Music Theory III 4-0-4
This course will continue the study of advanced harmonic techniques including modulation, altered chords, chromatic harmony, counterpoint and introduction to contemporary harmonic principles. Students will learn to write, hear, play, and analyze music of all periods and styles. This course will concentrate on the development of written skills (four-part writing and analysis), aural skills (melodic, harmonic, and rhythmic dictation), singing skills (solfeggio and sight-singing), and keyboard skills (scales, chords, chord progressions). Special emphasis will be placed on the techniques used by 20th century composers. Must be taken in sequence. Offered in fall semester only.
Semester(s) Offered: FALL
Requisite: MUS 106 with a grade of "C" or better.
Type: T

MUS 206 Music Theory IV 4-0-4
This course will continue the study of advanced harmonic techniques including modulation, altered chords, chromatic harmony, counterpoint and introduction to contemporary harmonic principals. This course will concentrate on the development of written skills (four-part writing and analysis), aural skills (melodic, harmonic, and rhythmic dictation), singing skills (solfeggio and sight-singing), and keyboard skills (scales, chords, chord progressions). Special emphasis will be placed on the techniques used by 20th century composers. Must be taken in sequence. Offered in spring semester only. Students are strongly encouraged to continue to enroll in subsequent levels of class piano.
Semester(s) Offered: SPRING
Requisite: MUS 205 with a grade of "C" or better.
Type: T

MUS 213 Class Instruction in Piano III 2-0-2
This course is designed for the music major or minor or any student who is interested in continuing to improve piano skills.
Semester(s) Offered: FALL
Requisite: MUS 112 with a grade of "C" or better.
Type: T

MUS 214 Class Instruction in Piano IV 2-0-2
This course is designed for the music major or minor or any student who is interested in improving piano skills.
Semester(s) Offered: FALL SPR
Requisite: MUS 213 with a grade of "C" or better.
Type: T

INFORMATION FOR ALL PRIVATE MUSIC MAJOR OR MINOR APPLIED COURSES:

Private music lessons are offered to students pursuing a major or minor in music in a variety of instruments. These courses may be repeated up to a maximum of eight elective semester credits. It is expected that students will achieve satisfactory progress in order to continue to the next level of credit.

Prerequisite: Successful audition or jury examination.

NOTE: Students enrolling in private applied courses must contact the Fine and Performing Arts Department Co-Chair Andrew Jensen, D.M.A., at 618-235-2700, ext. 5032 or andrew.jensen@swic.edu, for instructions and instructor assignment.

Students receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 P.M. during several weeks of the semester.

MUS 219 Private Music Major or Minor Applied Piano 2-0-2
Students receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 220 Private Music Major or Minor Applied Voice 2-0-2
Students receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 221 Private Music Major or Minor Applied Trumpet 2-0-2
Students receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 222 Private Music Major or Minor Applied French Horn 2-0-2
Students receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 223 Private Music Major or Minor Applied Trombone 2-0-2
Students receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 224 Private Music Major or Minor Applied Tuba/ Euphonium 2-0-2
Students receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 225 Private Music Major or Minor Applied Flute 2-0-2
PStudents receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 226 Private Music Major or Minor Applied Clarinet 2-0-2
PStudents receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks

of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 227 Private Music Major or Minor Applied Oboe 2-0-2
PStudents receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 228 Private Music Major or Minor Applied Bassoon 2-0-2
PStudents receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 229 Private Music Major or Minor Applied Saxophone 2-0-2
Students receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 230 Private Music Major or Minor Applied Violin 2-0-2
Students receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 231 Private Music Major or Minor Applied Viola 2-0-2
Students receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 232 Private Music Major or Minor Applied Cello 2-0-2
Students receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 233 Private Music Major or Minor Applied Double Bass 2-0-2
PStudents receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 234 Private Music Major or Minor Applied Guitar 2-0-2
PStudents receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 235 Private Music Major or Minor Applied Bass Guitar 2-0-2
Students receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 236 Private Music Major or Minor Applied Percussion 2-0-2
PStudents receive a one-hour lesson per week for 15 weeks of the semester. Students will be expected to perform in a minimum of one performance seminar or recital per semester as well as attend all seminars. Performance seminars are held on Wednesdays from 3-3:50 p.m. during several weeks of the semester. In addition, music majors must attend a specified number of concerts each semester in accordance with Music department policy. All students perform in a final examination jury at the end of the semester.
Semester(s) Offered: FALL SPR
Requisite: Department consent
Type: T

MUS 250 Basic Digital Recording Techniques 3-0-3
A hands-on approach to gaining technical and electronic understanding of various equipment used in the basic recording studio. Subjects covered include an introduction to the physical aspects of sound, sound level measurement, introduction to microphone techniques, psychoacoustics, basic electricity, principles and practice of magnetic and digital recording, and an overview of the recording studio.
Semester(s) Offered: FALL SPR
Requisite: Concurrent enrollment in or completion of MUS 104 with a grade of "C" or better.
Type: T

MUS 251 Advanced Digital Recording 3-0-3
A continuation of MUS 250. Digital recording technology using Pro Tools is discussed and demonstrated. Topics include: recording console theory and operation, microphone design and techniques, signal processing and digital effects equipment, hard-disc recording, and reproduction.
Semester(s) Offered: FALL SPR
Requisite: MUS 250 with a grade of "C" or better.
Type: T

MUS 252 Critical Listening for the Engineer 3-0-3
A course in aural skills development for recording engineers. This class will focus on various types of music, acoustic and electronic timbres, general instrument ranges and sonic properties, blend, balance, equalization, panning, reverb, compression, limiting, and other tools used in the recording process.
Requisite: Concurrent enrollment in or completion of MUS 251; MUS 106 or MUS 151.
Type: T

MUS 255 Music Technology Practicum 1-10-3
Practical experience for advanced students in a professional recording industry setting. This course may be repeated for additional credit. Not more than six hours toward the major are allowed. Students must complete an application which can be found by going to the web address swic.edu/music and choosing the link to Music Technology. Practicum applicants are responsible for applying to one of the SWIC Music department approved practicum sites.
Semester(s) Offered: ALL
Requisite: Department consent
Type: T

MUS 259 Concert Band III 0-3-1
The Concert Band is an ensemble dedicated to the study and performance of a wide variety of musical literature. Repertoire represents a variety of musical styles from classic to contemporary. The ensemble is open to all woodwind, brass and percussion students.
Semester(s) Offered: FALL SPR
Requisite: MUS 160. Department consent
Type: T

MUS 260 Concert Band IV 0-3-1
The Concert Band is an ensemble dedicated to the study and performance of a wide variety of musical literature. Repertoire represents a variety of musical styles from classic to contemporary. The ensemble is open to all woodwind, brass and percussion students.
Semester(s) Offered: FALL SPR
Requisite: MUS 259. Department consent
Type: T

MUS 261 Community Choir III 0-3-1
The Community Choir will sing choral repertoire ranging from classical to folk and popular. The choir will perform several times during the school year. Rehearsals will be dedicated to learning correct vocal production, musicianship, ear-training and sight-reading skills through vocal exercises and choral literature.
Semester(s) Offered: FALL SPR
Requisite: MUS 162.
Type: T

MUS 262 Community Choir IV 0-3-1
The Community Choir will sing choral repertoire ranging from classical to folk and popular. The choir will perform several times during the school year. Rehearsals will be dedicated to learning correct vocal production, musicianship, ear-training and sight-reading skills through vocal exercises and choral literature.
Semester(s) Offered: FALL SPR
Requisite: MUS 261.
Type: T

MUS 263 Jazz Band III 0-3-1
The Jazz Band rehearses and performs literature from the contemporary big band media. Instrumentation consists of alto, tenor and baritone saxophones, trumpets, trombones, piano, guitar, drums, and bass.
Semester(s) Offered: FALL SPR
Requisite: MUS 164. Department consent
Type: T

MUS 264 Jazz Band IV 0-3-1
The Jazz Band rehearses and performs literature from the contemporary big band media. Instrumentation consists of alto, tenor and baritone saxophones, trumpets, trombones, piano, guitar, drums, and bass.
Semester(s) Offered: FALL SPR
Requisite: MUS 263. Department consent
Type: T

MUS 265 Instrumental Ensemble III 0-3-1
This is an instrumental performing ensemble dedicated to the study and performance of a wide variety of musical literature. Depending on the ensemble chosen, the literature will represent the various styles found within that idiom, i.e., music of the baroque, classical, romantic, and 20th century, as well as various jazz, rock, and popular styles.
Semester(s) Offered: FALL SPR
Requisite: MUS 166. Department consent
Type: T

MUS 266 Instrumental Ensemble IV 0-3-1
This is an instrumental performing ensemble dedicated to the study and performance of a wide variety of musical literature. Depending on the ensemble chosen, the literature will represent the various styles found within that idiom, i.e., music of the baroque, classical, romantic, and 20th century, as well as various jazz, rock, and popular styles.
Semester(s) Offered: FALL SPR
Requisite: MUS 265. Department consent
Type: T

MUS 267 Vocal Jazz Ensemble III 0-3-1
Students in Vocal Jazz Ensemble study and perform a wide range of classic and contemporary music in the vocal jazz and pop idioms. Prospective students must contact the instructor and successfully complete an audition prior to registration. Public performances are presented throughout the fall and spring semesters.
Semester(s) Offered: FALL SPR
Requisite: MUS 168. Department consent
Type: T

MUS 268 Vocal Jazz Ensemble IV 0-3-1
Students in Vocal Jazz Ensemble study and perform a wide range of classic and contemporary music in the vocal jazz and pop idioms. Prospective students must contact the instructor and successfully complete an audition prior to registration. Public performances are presented throughout the fall and spring semesters.
Semester(s) Offered: FALL SPR
Requisite: MUS 267. Department consent
Type: T

MUS 275 Guitar Ensemble III 0-3-1
The guitar ensemble is a performing ensemble that rehearses and performs a wide variety of guitar ensemble literature, ranging from classical to jazz to popular music. Students will learn different rehearsal and practice techniques related to preparing a musical performance, with the goal of presenting at least one concert per semester. Students will learn many musical skills such as solo guitar, group playing, and basic improvisation.
Semester(s) Offered: FALL SPR
Requisite: MUS 176. Department consent
Type: T

MUS 276 Guitar Ensemble IV 0-3-1
The guitar ensemble is a performing ensemble that rehearses and performs a wide variety of guitar ensemble literature, ranging from classical to jazz to popular music. Students will learn different rehearsal and practice techniques related to preparing a musical performance, with the goal of presenting at least one concert per semester. Students will learn many musical skills such as solo guitar, group playing, and basic improvisation.
Semester(s) Offered: FALL SPR
Requisite: MUS 275. Department consent
Type: T

MUS 277 Jazz Improvisation III 0-2-1
This course is designed to foster a greater appreciation and understanding of jazz improvisation. Study will include functional jazz harmony, instrumental technique, and aural development. Students will study the music of prominent composers and performers including Miles Davis, Herbie Hancock, Horace, Silver, Duke Ellington and others. Each class session will include study through rehearsal and performance by the members of the class.
Semester(s) Offered: FALL SPR
Requisite: MUS 178. Department consent
Type: T

MUS 278 Jazz Improvisation IV 0-2-1
This course is designed to foster a greater appreciation and understanding of jazz improvisation. Study will include functional jazz harmony, instrumental technique, and aural development. Students will study the music of prominent composers and performers including Miles Davis, Herbie Hancock, Horace, Silver, Duke Ellington and others. Each class session will include study through rehearsal and performance by the members of the class.
Semester(s) Offered: FALL SPR
Requisite: MUS 277. Department consent
Type: T

MUS 299 Special Topics in Music Variable up to (4)-0-(4)
This course is an introduction to special topics and issues in music presented through lectures, discussions, demonstrations, readings, and/or individual research. Topics vary each semester. This course may be taken more than once if different topics are covered.
Semester(s) Offered: INTERMIT
Requisite: Department consent
Type: T

Networking

NETW 101 Introduction to Networking 3-0-3
This course is an introductory course which covers the fundamentals of data communications and networking principles. Students will learn network standards, protocols, and topologies. Students will also learn network architectures of Local Area Networks and Wide Area Networks and related media, connections and components. Other topics covered include the OSI model, TCP/IP, and network security. Note: Successful students will possess basic computer skills prior to enrolling.
Semester(s) Offered: ALL
Requisite: None.
Type: C

NETW 182 Linux Operating System 3-0-3
This course introduces the fundamentals of the Linux operating system. The basics of Linux system concepts, architecture, and administration will be covered. Students will learn about the Linux file system, file processing, editors, basic shell programming, utilities, and the X Window System. Note: Students who meet the requisite through professional certification or work experience should contact the program coordinator.
Semester(s) Offered: INTERMIT
Requisite: NETW 101 or CISC 161.
Type: C

NETW 188 Windows Server I 3-0-3
This course provides students with the knowledge and skills that are required to manage and maintain the Microsoft Windows Server Environment. The course focuses on selecting server and client hardware, installing and configuring a server, setting up and managing network services, establishing remote access services, interoperating on a network, setting up Internet services, monitoring and tuning a server, and troubleshooting problems. Students will have an opportunity to apply their knowledge through hands-on projects and case study assignments. Note: Students who meet the requisite through professional certification or work experience should contact the program coordinator.
Semester(s) Offered: FALL SPR
Requisite: NETW 101 or CISC 161.
Type: C

NETW 211 Digital Forensics 3-0-3
This course deals with the preservation, identification, extraction, documentation, and interpretation of digital data. Students will learn the basic artifacts of each of today's most popular operation systems and PC applications. The course will also include an overview of communication artifacts. Topics covered include evidence handling, chain of custody, collection, preservation, identification, and recovery of digital data. This course will feature the use of today's most popular forensics tools. Note: Successful students will possess intermediate computer skills, including file management skills and knowledge of various operating systems, prior to enrolling.
Semester(s) Offered: FALL
Requisite: None.
Type: C

NETW 231 Ethical Hacking 3-0-3
Ethical Hacking introduces students to the tools and penetration testing methodologies used by ethical hackers to protect computer networks. In addition, students learn what and who an ethical hacker is and the importance of ethical hacking in protecting corporate and government data from cyber attacks. Students will use security resources to facilitate the investigation of vulnerabilities and the corresponding methods to protect networks. The course also includes federal and state computer crime laws and penalties for illegal computer hacking.
Semester(s) Offered: SPRING
Requisite: NETW 101 or CISC 161.
Type: C

NETW 261 Virtualization Technologies 3-0-3
This course focuses on installing, configuring, and managing VMware vSphere, which includes VMware ESXi and VMware vCenter Server, for the software defined data center. Topics include configuration of network functionality, creating and configuring storage devices, and the monitoring and troubleshooting of a vSphere infrastructure in an enterprise. Additional topics include high availability, redundancy and resource utilization. This course prepares students for the following certification exam: VMware Certified Professional-Data Center Virtualization (VCP-DCV).
Semester(s) Offered: INTERMIT
Requisite: CISC 163 with a grade of "C" or better.
Type: C

NETW 271 Network Security 3-0-3
This course provides an overview of information security practices and techniques. Students will become familiar with the concepts and terms associated with computer and programming security techniques, local and wide area network implementation, and network architecture. Topics will include TCP/IP, operating system best practices, application development best practices, networks and services, communications concepts, hardware, and communications media. Note: Students who meet the requisite through professional certification or work experience should contact the program coordinator.
Semester(s) Offered: FALL SPR
Requisite: NETW 101 or CISC 161.
Type: C

NETW 295 Networking Internship 0-15-3
This course requires 240 hours of supervised work experience at an approved work site. The course provides the necessary articulation between theory and the world of computer networking. Note: Students should be enrolled in the last semester of study prior to graduation.
Semester(s) Offered: INTERMIT
Requisite: Minimum GPA of 2.5. Department consent
Type: C

NETW 299 Special Topics in Networking Variable up to (4)-0-(4)
This course presents projects and topics in networking by simulated experiences, observations, discussions, conferences, readings or individual research. Current technologies related to the field of networking will be presented and discussed. Projects and topics will vary to meet individual interest and needs.
NOTE: Requisite varies by topic.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

Nursing Education

NE 101 Dosage Calculations 0.5-0-0.5
The course is designed to enable the student to advance basic mathematical concepts and systems of measure to calculate oral and parenteral dosages for selected medications. The study of drugs, actions, indications, side effects, and adverse reactions in regards to nursing care will be emphasized.
Semester(s) Offered: FALL SPR
Requisite: HRO 150, BIOL 155/157, NE 102, NE 103, NE 105 all with a grade of "C: or better, NE 104 with a grade of "P", concurrent enrollment in or completion of NE 106, NE 108, ENG 101 and BIOL 156/158 with a grade of "C' or better, NE 107 and NE 109 each with a grade of "P.".
Type: C

NE 102 Intro to Nursing Procedures 1-3-2.5
The course is designed to enable the student to perform basic nursing procedures related to the care of patients. Focus of the course is on developing a theoretical foundation for specified procedures along with practice of the procedures in a simulated setting in the classroom and laboratory. The course will prepare the student to perform basic procedures necessary to the nursing care of a patient. This course is required for selected students who are beginning their nursing career.
Semester(s) Offered: FALL SPR
Requisite: HRO 100 or HRO 120 w/a grade of "C" or better, concurrent enrollment in or completion of NE 103, NE 105, BIOL 155/157, HRO 150 each w/a grade of "C" or better, concurrent enrollment in or completion of NE 104 w/a grade of "P," or escrowed credits of CNA/LPN.
Type: C

NE 103 Fundamentals of Nursing Care 3-2-4
The course is designed to acquire the basic knowledge foundation needed to work as a nurse. The theoretical foundation for basic assessment and nursing skills is presented in relation to basic human needs and the nursing process. Students use knowledge, science, and evidence to begin to assess a patient's ability to meet Basic Needs and to implement fundamental nursing interventions.
Semester(s) Offered: FALL SPR
Requisite: If fail NE 103/104 must take series. HRO 100 or HRO 160, HRO 120 each with a grade of "C" or better, concurrent enrollment in or completion of NE 102, NE 105, BIOL 155/157, HRO 150 each with a grade of "C" or better, concurrent enrollment in NE 104 with a grade of "P" or escrowed credits for CNA/LPN.
Type: C

NE 104 Fundamentals Nursing Lab 0-2-1
The course is designed to emphasize an individual's ability to maintain health while utilizing the nursing process and developmental theories with a focus on the nursing role as a communicator, provider of care, and educator. The developmental stages of infancy through adulthood are presented in relation to Basic Needs.
Semester(s) Offered: ALL
Requisite: HRO 100, HRO 120 each with a grade of "C" or better, concurrent enrollment in or completion of NE 102 with a grade of "C" or better or escrowed credits for CNA/LPN, concurrent enrollment in or completion of NE 103, BIOL 155/157, HRO 150 each with a grade of "C" or better.
Type: C

NE 105 Human Growth and Development 2-0-2
The course is designed to emphasize the study of the developmental theories and stages of the infant, toddler, preschool, school age and adolescent are presented in relation to the human Basic Needs and the ability to maintain health.
Semester(s) Offered: SPRING
Requisite: HRO 120, HRO 100 or HRO 160. Concurrent enrollment in or completion of BIOL 157, HRO 150, NE 102, NE 103 and NE 104 each with a grade of "C" or better.
Type: C

NE 106 Maternal Health and Newborn 2-3-3.5
The course is designed to use the nursing process to provide family healthcare during the child-bearing cycle. Learning situations are provided in the classroom setting and in the reality of the hospital setting. Clinical experience is primarily in the hospital maternity setting.
Semester(s) Offered: ALL
Requisite: BIOL 155/157, HRO 150, NE 102, NE 103, each w/a grade of "C" or better, NE 104 w/a grade of "P" or escrowed credits for CNA/LPN, concurrent enrollment in or completion of NE 101, NE 105, NE 108, ENG101, BIOL156/158 each w/a grade of "C" or better, NE 107 and NE 109 each w/a grade of "P".
Type: C

NE 107 Maternal Health and Newborn Lab 0-1-0.5
The course is designed to learn and apply safe care to the family during the child-bearing cycle. Skills are performed in a safe and effective manner with a variety of equipment. Learning situations are provided in the skills laboratory and simulated sessions.
Semester(s) Offered: ALL
Requisite: None.
Type: C

NE 108 Intro to Medical Surgical Care 2-3-3.5
This course is designed to utilize the nursing process in providing care for patients with selected common nursing problems. It introduces the student to the fundamental processes of child and adult illness with an emphasis on the human Basic Needs of sexuality, comfort, rest and sleep, self-awareness and self-esteem, love and belonging, and safety. Learning situations are provided in the classroom setting and in the patient care setting. Clinical experience is primarily in the hospital setting.
Semester(s) Offered: FALL SPR
Requisite: BIOL 155/157, HRO 150, NE 102, NE 103, NE 105 each with a grade of "C" or better, NE 104 with a grade of "P" or escrowed credit for CNA/LPN; concurrent enrollment in or completion of NE 101, NE 106, ENG 101, BIOL 156/158 each with a grade of "C" or better, NE 107 and NE 109 each with a grade of "P.".
Type: C

NE 109 Intro to Medical Surgical Lab 0-1-0.5
This course is designed to learn and apply safe care to the processes of child and adult illness. Skills are performed in a safe and effective manner with a variety of equipment. Learning situations are provided in the skills laboratory and simulation sessions.
Semester(s) Offered: FALL SPR
Requisite: BIOL 155/157, HRO 150, NE 102, NE 103, NE 105 each with a grade of "C" or better, NE 104 with a grade of "P" or escrowed credit for CNA/LPN; concurrent enrollment in or completion of NE 101, NE 106, NE 108, ENG 101, BIOL 156/158 each with a grade of "C" or better, NE 107 with a grade of "P.".
Type: C

NE 206 Behavioral Health Nursing Lab 0-1-0.5
This course is designed to solidify the physical application of patient care in a laboratory skill setting. Skills are performed in a safe and effective manner with a variety of equipment and focus on behavioral health skills. Learning situations are provided in the skills laboratory, community and simulation sessions.
Semester(s) Offered: FALL SPR
Requisite: If fail NE 206/207, must retake series. ENG101, BIOL 156/158, NE 101, NE 106, NE 108 each w/C or better, NE 107 and NE 109 each with a grade of "P", or escrowed credits for CNA/LPN; concurrent enrollment in or completion of NE 207, NE 209, ENG 102, BIOL 250 each with a grade of "C" or better, NE 208 with a grade of "P"..
Type: C

NE 207 Behavioral Health Nursing 2-3-3.5
This course is designed to utilize the nursing process in providing care for patients with selected common behavioral health problems including anxiety, personality, mood and psychotic disorders, cognitive disorders in the elderly, and substance abuse. A focus on the safety, ethical, and legal issues are also considered. Emphasis is on interferences with human Basic Needs for self-awareness, self-esteem, and communication which causes alterations of behavior. Personal development of the student is emphasized as a prelude to understanding others. Learning situations are provided in the classroom setting and in-patient settings in the hospital and the community.
Semester(s) Offered: FALL SPR
Requisite: If fail NE 206/207, must retake series. ENG 101, BIOL 156/158, NE 101, NE 106, NE 108 each with a grade of "C" or better, NE 107 and NE 109 each with a grade of "P", or escrowed credits for CNA/LPN; concurrent enrollment in or completion of NE 209, ENG 102, BIOL 250 each with a grade of "C" or better, NE 206, NE 208 with a grade of "P". .
Type: C

NE 208 Medical Surgical Synthesis Lab 0-1-0.5
This course is designed to solidify the physical application of patient care in a laboratory skill setting. Skills are performed in a safe and effective manner with a variety of equipment and focus on advanced medical surgical skills. Learning situations are provided in the skills laboratory, community and simulation sessions.
Semester(s) Offered: FALL SPR
Requisite: If fail NE 208/209, must retake series. Eng 101, BIOL 156/158, NE 101, NE 106, NE 108 each with a grade of "C" or better, NE 107 and NE 109 each with a grade of "P", or escrowed credits for CNA/LPN; concurrent enrollment in or completion of NE 207, NE 209, ENG 102 and BIOL 250 each with a grade of "C" or better, NE 206 with a grade of "P". .
Type: C

NE 209 Medical-Surgical Nursing I 3.5-3.5
This course is designed to utilize the nursing process in providing care for patients with selected common health problems of the cardiac, respiratory, vascular and musculoskeletal systems including oxygenation, ventilation, perfusion, blood dyscrasias and skeletal abnormalities. Emphasis is on interferences with human Basic Needs for activity, mobility and oxygen. Learning situations are provided in the classroom setting and the hospital setting.
Semester(s) Offered: FALL SPR
Requisite: If fail NE 208/209, must retake series. ENG 101, BIOL 156/158, NE 101, NE 106, NE 108 each with a grade of "C" or better, NE 107, NE 109 each with a grade of "P", or escrowed credits for CNA/LPN; concurrent enrollment in or completion of NE 207, ENG 102, BIOL 250 each with a grade of "C" or better, NE 206, NE 208 each with a grade of "P".
Type: C

NE 210 Medical-Surgical Nursing II 3.5-0-3.5
This course is designed to utilize the nursing process in providing and coordinating nursing care for the patient experiencing common and predictable medical-surgical problems of the endocrine, upper gastrointestinal, and urinary system. An emphasis is continued on the human Basic Needs for nutrition and elimination, sensory perception, and safety. The role change from student to graduate nurse is also considered with discussion of the professional and ethical standards that are involved in nursing care. Learning situations are provided in the classroom setting and the hospital setting.
Semester(s) Offered: FALL SPR
Requisite: If fail NE 210/211/212/213, must take series. BIOL 250, ENG 102, NE 207, NE 209, each with a grade of "C" or better, NE 206 and NE 208 each with a grade of "P"; concurrent enrollment in or completion of NE 211, PSYC 151, SOC 153 each with a grade of "C" or better, NE 212 and NE 213 each with a grade of "P"..
Type: C

NE 211 Medical-Surgical Nursing III 3.5-0-3.5
This course is designed to utilize the nursing process in providing and coordinating nursing care for patients with selected common health problems including fluid and electrolyte imbalances, disorders of the skin, eye, ear, lower gastrointestinal system, neurological and neuromuscular disorders, trauma, and shock. Emphasis is on the human Basic Needs for safety and sensory perception, nutrition, and elimination. The role change from student to graduate nurse is also considered. Learning situations are provided in the classroom setting, and the hospital setting.
Semester(s) Offered: FALL SPR
Requisite: If fail NE 210/211/212/213, must take series. BIOL 250, ENG 102, NE 207, NE 209, each with a grade of "C" or better, NE 206 and NE 208 each with a grade of "P"; concurrent enrollment in or completion of NE 210, PSYC 151, SOC 153 each with a grade of "C" or better, NE 212 and NE 213 each with a grade of "P"..
Type: C

NE 212 Advanced Nursing Clinical 0-5-2.5
This course is designed to utilize the nursing process in providing and coordinating nursing care for patients with selected health problems encompassing the Basic Needs. The course synthesizes and enhances prior learned knowledge as the student applies learned information and skills to direct patient care alongside a preceptor within the hospital setting. The role changes from student to graduate nurse is also considered.
Semester(s) Offered: FALL SPR
Requisite: If fail NE 210/211/212/213 must take series. BIOL 250, ENG 102, NE 207, NE 209, each with a grade of "C" or better, NE 206 and NE 208 each with a grade of "P"; concurrent enrollment in or completion of NE 210, NE 211, PSYC 151, SOC 153 each with a grade of "C" or better, NE 213 with a grade of "P"..
Type: C

NE 213 Advanced Nursing Synthesis 1.5-0-1.5
This course is designed to synthesize utilization of the nursing process in coordination of patient care. Emphasis is on preparation for state licensure testing. Learning situations are provided in the classroom setting.
Semester(s) Offered: FALL SPR
Requisite: If fail NE 210/211/212/213 must take series. BIOL 250, ENG 102, NE 207, NE 209, each with a grade of "C" or better, NE 206 and NE 208 each with a grade of "P"; concurrent enrollment in or completion of NE 210, NE 211, PSYC 151, SOC 153 each with a grade of "C" or better, NE 212 each with a grade of "P"..
Type: C

Office Administration and Technology

OAT 121 Introduction to Office Support 3-0-3
This course addresses the concepts involved in office support technology with emphasis on its history, technology, procedures and career opportunities. Computer terminology, hardware and software, application software, and operating environments as they relate to office support are included.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

OAT 128 Microsoft Outlook 1-0-1
Microsoft Outlook, the personal information manager software included in Microsoft Office, will be covered. Features of Outlook covered will be managing and tracking appointments and tasks; maintaining a calendar; utilizing the address book; sending and receiving electronic mail; and integrating with other applications of Microsoft Office. NOTE: Knowledge of Windows recommended.
Semester(s) Offered: ALL
Requisite: None.
Type: C

OAT 130 Word Processing Basics 1-0-1
This course will cover the basics of word processing using a popular word processing program. A range of document commands will be learned to allow students to use the introductory features of the program.
NOTE: This course is designed for students who do not plan to take another course in word processing. Students desiring additional knowledge should register for OAT 180 (three semester credits) instead of OAT 130. NOTE: Keyboarding skill and Windows knowledge recommended.
Semester(s) Offered: ALL
Requisite: None.
Type: C

OAT 131 Database Basics 1-0-1
This course will cover the basics of database software using a popular database program. A range of commands will be learned to allow students to use the introductory features of the program.
NOTE: This course is designed for students who do not plan to take another course in database management. Students desiring additional knowledge should register for OAT 185 (three semester credits) instead of OAT 131. NOTE: Keyboarding skill and Windows knowledge recommended.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

OAT 132 Electronic Spreadsheet Basics 1-0-1
This course will cover the basics of electronic spreadsheets using a popular spreadsheet program. A range of commands will be learned to allow students to use the introductory features of the program.
NOTE: This course is designed for students who do not plan to take another course in electronic spreadsheets. Students desiring additional knowledge should register for OAT 175 (three semester credits) instead of OAT 132. NOTE: Keyboarding skill and Windows knowledge recommended.
Semester(s) Offered: ALL
Requisite: None.
Type: C

OAT 133 Presentation Basics 1-0-1
This course will cover the basics of presentations using a popular presentation software program. A range of commands will be learned to allow students to use the introductory features of the program.
NOTE: This course is designed for students who do not plan to take another course in presentation graphics. Students desiring additional knowledge should register for OAT 165 (two semester credits) instead of OAT 133. NOTE: Keyboarding skill and Windows knowledge recommended.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

OAT 146 Computer Applications for the Office 3-0-3
A comprehensive study of the use of computer applications and technologies for office personnel will be presented. Class topics include computer hardware, software, and operating systems as they relate to office personnel and hands-on experience using word processing, spreadsheet, and presentation software.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

OAT 155 Software Computations 3-0-3
This course covers basic fundamental business mathematics concepts. The student will solve problems dealing with simple and compound interest, discounts, depreciation, payroll, merchandising, and installment buying. Microcomputers and appropriate calculating software will be used to complete all in-class applications. NOTE: Knowledge of business math (MGMT 102) recommended.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

OAT 156 Microsoft Office Suite I 3-0-3
In this course, students will receive instruction and hands-on training on an office suite software package. Instruction will be on the various applications and how they are being integrated and used in today's office environment to increase productivity and efficiency. Topics include word processing, spreadsheet, database applications, and presentation software, as well as integration of the suite. NOTE: Knowledge of document processing and Windows recommended.
Semester(s) Offered: ALL
Requisite: None.
Type: C

OAT 164 Introduction to Keyboarding 1-0-1
This course offers basic touch keyboarding instruction for the electronic keyboard. Students needing to operate a computer keyboard can achieve basic skills which will allow them to input information into a computer efficiently using proper techniques. In addition, the student gains familiarization with symbol keys and the ten key numeric keypad. Students may receive credit for only one of the following: OAT 164 or OAT 170. NOTE: Knowledge of Windows and the internet recommended.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

OAT 165 Presentation Graphics 2-0-2
This course is designed to teach students to use a presentation graphics package. Comprehensive instruction in the major features of the application will be covered. Topics include creating and editing slides, adding animation to slides, linking and embedding, and customizing a slide show. NOTE: Keyboarding skill and Windows knowledge recommended.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

OAT 169 Automated Application/Transcription 3-0-3
The course objective is to provide a learning experience for students that will prepare them to work in an automated office environment using dictation/transcription equipment. The dictators in the dictation for transcription materials reflect contemporary and technological trends. Emphasis will be placed on proofreading, grammar, and punctuation skills. Students may specialize in general, legal, or medical applications/transcription. NOTE: Knowledge of document processing recommended.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

OAT 170 Keyboarding/Touch System 2-0-2
This course has three major purposes: (1) to enable students to develop basic touch keyboarding skills for computers, (2) to teach students to use word processing software to complete practical applications on the microcomputer, and (3) to develop good proofreading skills. The student who completes this course will be able to input alphabetic, numerical, and symbolic information on electronic keyboards. He/she will also be able to format, edit, retrieve, and save and print using word processing software. Students may receive credit for only one of the following: OAT 164 or OAT 170.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

OAT 171 Document Processing/Input Technology 3-0-3
The course is designed to enable students to learn or perfect touch keyboarding skills using correct fingering techniques. The student should improve current keyboarding speeds and develop skills necessary for entry-level employment and/or personal use. Units of instruction include business letters, memos, email, reports, tables, speech recognition, touch input, handwriting recognition, and employment documents. When the course is completed, students should key at speeds of 20 to 55 gross words per minute with a maximum of five errors on five-minute timings. Computers and word processing software will be used to complete applications. This course is designed for students who plan to continue in document processing.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

OAT 172 Advanced Information Processing 3-0-3
This course is designed to expand the subject matter of OAT 171. A further development of document production and skillbuilding will be provided. The importance of organizing work and meeting deadlines will be stressed. Units of instruction include advanced formatting of correspondence, reports, and tables as well as units on international formatting, medical and legal office documents, office forms and publications using project-based activities. When the course is completed, students should type at speeds of 30 to 65 gross words per minute with a maximum of five errors on five-minute timings. Computers and word processing software will be used to complete applications. NOTE: Document processing and keyboarding skill equivalent to OAT 171 recommended.
Semester(s) Offered: FALL SPR
Requisite: OAT 171.
Type: C

OAT 175 Electronic Spreadsheets 3-0-3
The course is designed to teach students to use an electronic spreadsheet package. Comprehensive instruction in the major features of the application will be covered. Topics include creating, editing, formatting, inserting, formulas, and preparing charts. Other topics include graphs, date, statistical, table lookup, dynamic functions, calculation order, nested conditional, file linking commands, and macros. Uses of the database query, sort, statistical functions, and fill are also covered. NOTE: Keyboarding skill and Windows knowledge recommended.
Semester(s) Offered: ALL
Requisite: None.
Type: C

OAT 180 Word Processing 3-0-3
The course is designed to teach students to use a word processing package. Comprehensive instruction in the major features of the application will be covered. Topics include creating, editing, formatting, tables, columns, headers, footers, graphics, macros, styles, templates, and forms. NOTE: Keyboarding skill and Windows knowledge recommended.
Semester(s) Offered: ALL
Requisite: None.
Type: C

OAT 185 Database Applications 3-0-3
The course is designed to teach students to use a database applications software package. Topics include identifying database terminology, designing tables and queries, printing and designing forms and reports. NOTE: Keyboarding skill and Windows knowledge recommended.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

OAT 225 Advanced Word Processing 3-0-3
Comprehensive instruction in the advanced features of word processing will be covered. Topics include merging, tables and indexes, macros, fill-in forms, graphics, templates, and integration with other applications
Semester(s) Offered: INTERMIT
Requisite: OAT 180.
Type: C

OAT 230 Advanced Electronic Spreadsheet 3-0-3
Comprehensive instruction in the advanced features of electronic spreadsheets will be covered. Topics include templates, lists, custom formatting, ranges, macros, toolbars, and charts. Analysis tools in Excel including pivot tables, reports, goal seek, solver, and auditing will be covered
Semester(s) Offered: INTERMIT
Requisite: OAT 175.
Type: C

OAT 240 Advanced Database Applications 3-0-3
Comprehensive instruction in the advanced features of database applications will be covered. Topics include building and modifying tables and forms, refining queries, defining relationships, ensuring data integrity, designing forms and reports, creating and editing macros, and linking and embedding with other applications.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

OAT 256 Office Management 3-0-3
This course provides a comprehensive study of office management as a total office support system used throughout a business firm or organization. The topics covered include communications, systems analysis, office automation, telecommunications, reprographic systems, records management, micrographics, and human resource management.
Semester(s) Offered: INTERMIT
Requisite: Sophomore standing.
Type: C

OAT 260 Administrative Office Procedures 3-0-3
The duties and responsibilities of office support personnel are emphasized in this capstone course. Students will demonstrate skills through practical, hands-on application. Topics include records management, job-seeking skills, office etiquette and ethics, telephone techniques, review of current literature, and group presentations on pertinent issues and trends. Document processing skill and Windows knowledge are recommended.
Semester(s) Offered: INTERMIT
Requisite: Sophomore standing.
Type: C

OAT 276 Current Technology for Office Support 3-0-3
This course is designed to familiarize students with the most current technology and its impact on office support. Because this is such a fast-paced field, the course will continually be updated to match the needs of the changing workplace. Topics include electronic mail, the internet and its impact on office support, current communications technologies, and current software applications including office suites, scheduling, and calendaring packages. Interpersonal skills, teamwork, communication skills, and ethical considerations applicable to today's work environment will be developed and practiced.
Recommendation: Knowledge of Windows, computer terminology, and document processing.
Semester(s) Offered: INTERMIT
Requisite: Sophomore standing.
Type: C

OAT 280 Virtual Office Technologies 3-0-3
This course will provide the student with the necessary skills to develop and successfully operate a virtual office that provides administrative support and technical services for the rapidly changing global business environment.
Requisite: Sophomore standing.
Semester(s) Offered: FALL
Type: C

OAT 285 Microsoft Office Suite II 3-0-3
This course is a continuation of Microsoft Office Suite I. Office support applications of Microsoft Office will be taught, emphasizing realistic business assignments involving document production that duplicates on-the-job performance. Integration of the various Microsoft Office applications will be an integral part of the course.
Semester(s) Offered: FALL SPR
Requisite: OAT 156.
Type: C

OAT 293 Office Admin. & Technology Internship 1-10-3
This course requires a total of 160 hours of supervised work experience at an office site. The course provides the necessary articulation between academic theory and the world of work and helps the student make a supervised transition to the career of his/her choice.
Semester(s) Offered: ALL
Requisite: Department consent
Type: C

Variable up to
OAT 299 Special Topics in Office Admin and Tech (4)-0-(4)
Presents projects and topics in business by simulated experiences, observations, discussions, conferences, readings and individual research. Projects and topics will vary to meet individual interest and needs. NOTE: Requisite varies by topic.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

Orientation

ORIE 101 College Orientation Seminar 1-0-1
The purpose of this course is to introduce students to the expectations of college, requirements for transfer, and support services available to promote success. Students will develop skills needed by transfer institutions and become oriented to the college's online learning platform.
Requisite: None.
Type: T

ORIE 102 Student Leadership Development 3-0-3
This course will teach students essential components of group leadership including foundational theories in leadership, sense of belonging, and student development. Students will develop skills in group leadership, communication, and peer mentorship while increasing their knowledge of campus resources. The primary focus of this class is to prepare students to become leaders of the First Year Orientation process as overseen by the Success Center.
Requisite: None.
Type: T

ORIE 110 College Success Strategies 3-0-3
College Success Strategies is designed to introduce the student to the college experience and help develop the attitudes, strategies, habits, relationships, and knowledge necessary for success. Emphasis will be placed on understanding student rights and responsibilities, developing note-taking strategies, time management skills, and improving study skills. Other topics include self-discovery, interpersonal skills, college survival techniques, transition to college, and transferring to other collegiate institutions. Additional exploration of personal interests/skills, learning styles, goals, and making effective career choices are interrelated skills that will be developed. Time will also be spent exploring personal pathways to career choices and successful skills for preparing to enter the workforce. Students will complete the Myers-Briggs (MBTI) personal assessment to assist in exploring personal choices and skills.
Semester(s) Offered: ALL
Requisite: None.
Type: T

Paralegal Studies

PARL 120 Introduction to Law 3-0-3
Provides a basic background in the United States legal process. This course will provide an introduction to civil and criminal processes, legal terminology, and a history of common law. Students will examine the role of the paralegal in the legal system and discuss the ethics, regulations, and professional responsibilities involved in their roles as paralegals. Basic legal concepts and legal analysis will be discussed. Students will learn to read and brief legal cases.
Semester(s) Offered: ALL
Requisite: None.
Type: C

PARL 200 Dispute Resolution Skills 3-0-3
This course will provide students with a working knowledge of the basic theories underlying a variety of methods of alternative dispute resolution including negotiation, mediation and arbitration. Students will learn the important distinguishing characteristics of these "alternative" approaches to resolving disputes, along with how to address the ethical and legal issues that may arise in pursuit of these remedies. In addition to covering current theory on these topics, much of the course will be dedicated to hypothetical scenarios and role playing. Students will practice fundamental dispute resolution skills such as active listening, reframing, summarizing, problem-solving, and creating a safe, non-threatening environment.
Semester(s) Offered: SPR
Requisite: None.
Type: C

PARL 220 Legal Research and Writing I 3-0-3
Students will examine the federal and state court systems and be introduced to case and statutory analysis. Students will learn to use a law library and the resources available there. They will examine the role of paralegals in the litigation process and will also learn to analyze and synthesize written opinions. Students will be required to complete several writing projects.
Semester(s) Offered: FALL SPR
Requisite: ENG 101, PARL 120.
Type: C

PARL 225 Legal Research and Writing II 3-0-3
Students will continue to develop their skills and working knowledge of research materials, tools, and strategies. There will be instruction on computer aided research. They will use the results of their research to complete several additional writing projects, including memoranda of law, correspondence, and briefs.
Semester(s) Offered: FALL SPR
Requisite: PARL 220.
Type: C

PARL 230 Civil Procedure 3-0-3
Students will examine the lawyers' and paralegals' roles in handling civil cases. The strategy and mechanics of civil procedure will be explored in depth with special emphasis on Illinois law and federal procedure. Students may be required to prepare various writing projects.
Semester(s) Offered: ALL
Requisite: PARL 120.
Type: C

PARL 235 E-Discovery/E-Investigation 2-0-2
This course will provide students with an overview and understanding of e-discovery issues, terms and technologies. Students will also gain an understanding of the basics of e-investigation by using social networking sites and internet search engines to discover admissible evidence about parties and witnesses in lawsuits.
Semester(s) Offered: ALL
Requisite: PARL 230.
Type: C

PARL 240 Torts 3-0-3
Students will gain an understanding of the basics of tort law and the causes of action for intentional torts, negligence and strict liability. Special topics covered will also be products liability, professional malpractice, workers compensation and other current tort topics. Students will be required to complete several writing assignments including drafting a complaint that contains all of the elements of a tort in a cause of action. Emphasis will be placed on the application of theory to fact patterns so that students can identify a tort cause of action.
Semester(s) Offered: ALL
Requisite: PARL 120.
Type: C

PARL 250 Litigation Support for Paralegals 3-0-3
Students will become acquainted with the litigation process from the client interview to preparation of documents used to institute and respond to lawsuits, discovery procedures, preparation for trial, and the trial itself. Students will learn the basic rules and laws which govern the lawsuit. Rudiments of the appellate process will be introduced to the student. The student will be required to complete several writing projects.
Semester(s) Offered: FALL SPR
Requisite: PARL 120, PARL 220, PARL 230.
Type: C

PARL 255 Law Office Management 3-0-3
This course covers the theory and practical aspects of law office management, including the functions of management, administrative procedures, basic principles of finance, facilities management, human resource management, and leadership skills.
Semester(s) Offered: FALL SPR
Requisite: PARL 120
Type: C

PARL 260 Family Law 3-0-3
Students will review the law as it relates to different aspects of domestic relations such as marriage, divorce and separation, maintenance, child custody and support, surrogacy, parentage, domestic violence, adoption, and prenuptial agreements. Special emphasis will be placed on Illinois law. Students will be required to complete writing projects.
Semester(s) Offered: ALL
Requisite: None.
Type: C

PARL 265 Wills, Probate, and Estate Planning 3-0-3
Students will study the most common forms of wills and trusts and the fundamental principles of law applicable to each including the types of property and ownership rights. This course will place emphasis on the administration of estates under the Illinois Probate Act. Students will be required to complete several writing projects.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

PARL 270 Criminal Law 3-0-3
Causes of action of criminal liability on the misdemeanor and felony level will be studied. Some constitutional law issues raised by a criminal practice will also be addressed. Students will study the procedures of the criminal system, from arrest through post-trial motions, sentencing, and appeal. Students will be required to complete several writing projects.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

PARL 274 Law Office Computer Applications 3-0-3
This course covers legal terminology, basic procedures, and document production through hands-on instruction in software programs commonly used in law offices. Students will prepare legal documents in a variety of legal areas including real estate, corporate, bankruptcy, estate planning, litigation, family law, and other areas of law found in general practice. Students will also be introduced to practical computer applications used in legal organizations.
Note: Students with work experience in lieu of the course requiste, please contact the program coordinator for department consent.
Semester(s) Offered: ALL
Requisite: OAT 180.
Type: C

PARL 275 Bankruptcy/Creditors' Rights 3-0-3
Students will become familiar with the bankruptcy system and the United States Bankruptcy Code. Students will gain an understanding and working knowledge of the different types of bankruptcies and the specific steps taken to complete the bankruptcy process, including completion of the documents required to conduct these processes. Creditors' rights will also be explored. The student will be required to complete several writing projects.
Semester(s) Offered: SPRING
Requisite: None.
Type: C

PARL 280 Copyright/Trademark/Patent Law 3-0-3
This course will provide students with an overview and understanding of the various intellectual property disciplines, including copyright, trade secret, trademark, and patent law. The course will emphasize both the theoretical and practical application of these areas of law. Students will be required to complete writing projects. Students may receive credit for only one of the following: BUS 280 or PARL 280.
Semester(s) Offered: FALL
Requisite: None.
Type: C

PARL 285 Employment Law 3-0-3
An introduction to employment law, exploring current legislation, court rulings, and state and federal government decisions in the hiring, management and firing of employees. This course provides knowledge of the fundamental concepts of human resource management including practical components and legal implications of the employment relationship. Students will also survey workplace discrimination and other emerging legal issues in human resource management and identify effective management techniques.
Semester(s) Offered: FALL
Requisite: None.
Type: C

PARL 290 Paralegal Field Project 0-15-3
Supervised on-the-job training and experience in public or private offices typically employing paralegals. Students must work at least 225 hours to receive classroom credit for the course. The course provides the necessary articulation between academic theory and the world of work and helps the student make a supervised transition to the career of his/her choice.
Semester(s) Offered: ALL
Requisite: Students must have successfully completed at least 18 credit hours in Paralegal classes which include PARL 120, PARL 220, PARL 230 and PARL 240.. Department consent
Type: C

Variable up to
PARL 299 Special Topics in Paralegal Studies (4)-0-(4)
Presents projects and topics in paralegal studies by simulated experiences, observations, discussions, conferences, readings and individual research. Projects and topics will vary to meet individual interest and needs. NOTE: Requisite varies by topic.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

Pharmacy Technician

PHAR 101 Affective Knowledge & Skills 4-1-4.5
This course provides information about the ethics, listening skills, verbal/written communication, respect, professional conduct, cultural competence, self-management (i.e. time, stress, change), interpersonal skills (i.e., negotiation, conflict resolution, customer service, teamwork), and problem-solving skills that apply to the role of a pharmacy technician.
Semester(s) Offered: FALL SPR
Requisite: Eligible for MATH 97 or higher or completion of MATH 95 with a "C" or better; Eligible for ENG 101 or successful completion of ENG 97. Concurrent enrollment in or successful completion of PHAR 110, PHAR 120, PHAR 130, PHAR 140 each with a grade of "C" or better.
Type: C

PHAR 110 Regulations & Professional Standards 3-2.5-4
This course provides information about State & Federal laws regarding processing, handling, dispensing, and assisting pharmacy in medication distribution. Topics will include: Maintaining registration/licensure, professional standards, regulatory, formulary, contractual, medication safety practices, quality assurance measures, and safety requirements. The focus will be on OSHA, MIOSH and USP requirements for Prevention and Treatment of Exposure to Hazardous Materials.
Semester(s) Offered: FALL SPR
Requisite: Eligible for MATH 97 or higher or completion of MATH 95 with a "C" or better; Eligible for ENG 101 or successful completion of ENG 97. Concurrent enrollment in or successful completion of PHAR 110, PHAR 120, PHAR 130, PHAR 140 each with a grade of "C" or better.
Type: C

PHAR 120 Clinical Practicum I 0-4-2
This course provides the foundation for the experiential application of knowledge and skills. Topics will include: interpersonal & foundational professional knowledge, regulatory, patient care, quality, and safety knowledge and skills.
Semester(s) Offered: FALL SPR
Requisite: Eligible for MATH 97 or higher or completion of MATH 95 with a "C" or better; Eligible for ENG 101 or successful completion of ENG 97. Concurrent enrollment in or successful completion of PHAR 110, PHAR 120, PHAR 130, PHAR 140 each with a grade of "C" or better.
Type: C

PHAR 130 Medication Order Processing 2-3-3.5
This course provides information about the complete processing and handling of medications and medication orders. Topics will include: recording demographic/clinical information, storing medications, prepare prescriptions, compounding both sterile and non-sterile compounds, maintaining equipment and supplies, medication recall management, use of technology to ensure safe medication dispensing, purchasing medication, inventory control, and disposal of expired medications.
Semester(s) Offered: FALL SPR
Requisite: Eligible for MATH 97 or higher or completion of MATH 95 with a "C" or better; Eligible for ENG 101 or successful completion of ENG 97. Concurrent enrollment in or successful completion of PHAR 110, PHAR 120, PHAR 130, PHAR 140 each with a grade of "C" or better.
Type: C

PHAR 140 Clinical Practicum II 0-4-2
This course provides the advanced experimental application of the knowledge and skills across the entire medication management system. This hands-on experience provided opportunities to safely collect needed information, supplies, and equipment to safely compound or dispense a premium patient-specific medication. Includes experiences utilizing best practices, pharmacy regulation compliance, medication procurement, medication disposal, and safety resources/equipment to provide the highest patient care level.
Semester(s) Offered: FALL SPR
Requisite: Eligible for MATH 97 or higher or completion of MATH 95 with a "C" or better; Eligible for ENG 101 or successful completion of ENG 97. Concurrent enrollment in or successful completion of PHAR 110, PHAR 120, PHAR 130, PHAR 140 each with a grade of "C" or better.
Type: C

Philosophy

PHIL 150 Introduction to Philosophy 3-0-3
Historically, philosophy has been many things. In the context of this course, it is largely a point of view, a way of thinking. This way of thinking approaches life by reflecting upon the ideas that we use to make sense of life. Further, since we have come to see this way of thinking in conjunction with a tradition of literature, and a tradition of concerns. Thus, the aim of an Introduction to Philosophy is to get students to first take up this point of view, and second to see something of the tradition of its literature and concerns. Students take up the point of view by reading, or reading about, specific philosophical works or concerns.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, IAI-H4 900

PHIL 151 Introductory Logic 3-0-3
Introductory Logic is a reflection on thought, discourse, and argumentation. It accomplishes this through the study of language, specifically by an examination of sentence structures, inductive and deductive logical systems, argument forms, and formal and informal fallacies. The course provides students the opportunity to apply the methods of Logic to everyday discourse.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, IAI-H4 906

PHIL 152 Ethics 3-0-3
As Aristotle says, the purpose of studying Ethics is practical. That is, it helps one aim the arrow of human action with more precision, making it more likely that one will hit the target and live well. In this regard, we look at issues connected to human relations and an ethical life. This includes an examination of the idea of the good life, of human nature, of race and ethnicity, of standards of value and their justifications, and of particular moral problems and decisions. Ethical theories are critically evaluated and used as a means to reflect upon the issues that underlie human action.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, IAI-H4 904

PHIL 155 Non-Western Philosophy 3-0-3
This course offers students an opportunity to explore modes of thought which developed in Non-Western (pre-industrial Non-European) cultures. Included in this survey may be the philosophies of Hinduism, Buddhism, Confucianism, Taoism, as well as the philosophies of Native Americans, Africans, Australo-Aborigines, et cetera.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: T, IAI-H4 903N

PHIL 156 Biomedical Ethics 3-0-3
The intent of the course is to introduce students to core issues of biomedical ethics. Ethics, in general, investigates answers to the questions of what we should value, and on what theories we might base decisions regarding how we are to live and act. Biomedical ethics looks to answer these questions within the context of medical care and its distribution. It raises questions of the rights and duties of health care providers and patients, and of the moral dilemmas that arise in context of the American medical system.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101.
Type: T

PHIL 160 Introduction to Philosophy of Religion 3-0-3
The course focuses the development of the analytical and critical skills of students, and provides opportunities of reflection about matters of theological significance. This is accomplished through the study of theological issues, concepts, arguments, and theories. Topics that may be examined include the following: the existence of God, the nature of the divine, the problem of evil, religious diversity, the question of life after death, and the meaning of religious experience.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101.
Type: T, IAI-H4 905

PHIL 299 Special Topics in Philosophy Variable up to (4)-0-(4)
Special topics and issues in philosophy presented through lectures, discussions, readings, and/or individual research. Topics vary each semester. Course may be taken more than once if different topics are covered.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101.
Type: T

Physical Therapist Assistant

PTA 100 Introduction to Physical Therapy 1-0-1
This course introduces students to the profession of physical therapy, the role of the physical therapist (PT), physical therapist assistant (PTA), and the PT technician/aide. Emphasis is placed on a strong interprofessional team approach to providing optimal care for patients in a variety of practice settings. The Guide to PT Practice terminology is introduced, along with the Vision, Principles, Purpose, and Values of the American Physical Therapy Association (APTA). Discussion of the APTA includes the benefits, rights, and privileges of voluntary membership in this professional organization representing PT/PTAs. Review of APTA Core Documents provides students with insight into professional and ethical conduct; and APTA's policies, standards, positions, and guidelines serve as the basis of discussions regarding optimal healthcare standards. A comparison of federal and state statutes are discussed, along with legal issues, health care reimbursement, quality assurance and infection control. Further discussion encompasses the purpose and importance of research in providing quality, contemporary interventions. Students learn how to assess the credibility of resources and how to read professional literature identifying validity, reliability and the level of statistical significance. Integration of evidence based practice with clinical expertise is encouraged and the development of life-long learning skills is emphasized.
Semester(s) Offered: FALL
Requisite: Program admission, concurrent enrollment in or completion of ENG 101, BIOL 105 each a with a grade of "C" or better.
Type: C

PTA 101 Physical Therapy Science & Skills 5-0-5
This course introduces students to the science and skills of physical therapy. Anatomical muscle and joint structure and function first introduced in Biology are expanded upon to provide the foundation for physical therapy related treatment. Students are introduced to physical therapy equipment and supplies necessary for providing assessments and interventions that are safe, effective, and efficient for both the patient and the clinician. Assessment of range of motion, strength, and vitals, along with an introduction to functional outcome measures prepares students for properly reporting patient status and acting as an integral member of the interprofessional health care team. Electronic Medical Records and proper documentation are introduced, along with medical terminology commonly utilized in contemporary physical therapy practice. A strong PT/PTA relationship is encouraged while students are taught to provide interventions such as range of motion, strengthening, and mobility training primarily for the patient with an orthopedic injury/condition within the PT Plan of Care. This course also includes management of medical emergencies, psychosocial issues affecting patients after injury or disease, and communication skills necessary for interaction with patients, family, caregivers, and other members of the interprofessional health care team.
Semester(s) Offered: FALL
Requisite: Program admission, concurrent enrollment in or completion of ENG 101, BIOL 105 each a with a grade of "C" or better.
Type: C

PTA 102 Patient Care Skills & Assessment 0-4-2
This course allows students to apply the foundational science and skills of contemporary physical therapy practice discussed in PTA 101 Physical Therapy Science and Skills. Case scenarios are utilized to facilitate the use of physical therapy equipment and supplies, and develop the skills necessary for providing assessments and interventions that are safe, effective and efficient as they pertain to the Plan of Care established by the PT while considering the patient perspective and environment. Additionally, case scenarios give students the opportunity to develop professional behaviors complimentary to the profession and recognize changes in skin condition and safety factors while using assistive devices and equipment. Oral and written communication skills are enhanced through patient education, documentation and communication with members of the interprofessional health care team. Students must demonstrate competency in performing the following assessment skills: goniometric and strength assessment of appendicular anatomy and vital signs; and interventions including: range of motion/strengthening, transfer and gait training (primarily for patients with an orthopedic injury/condition). Proper positioning and draping of patients are emphasized. This course also includes attainment of American Heart Association certification in CPR and AED for all ages.
Semester(s) Offered: FALL
Requisite: Program admission, concurrent enrollment in or completion of ENG 101, BIOL 105 each a with a grade of "C" or better.
Type: C

PTA 150 Theory of Physical Agents I 3-0-3
This course introduces students to manual therapy and physical agents utilized to modulate or decrease pain, reduce or eliminate edema, improve circulation, enhance connective tissue extensibility, remodel scar tissue, decrease restrictions associated with musculoskeletal injury, increase joint mobility, decrease nerve root compression and improve patients' exercise performance. Students learn to utilize manual therapy techniques such as massage, fascial release and soft tissue mobilization, and physical agents including superficial and deep heat, light, cryotherapy, hydrotherapy, compression, and traction; as an adjunct to therapeutic exercise, to achieve optimal outcomes. Appropriate tools and functional measures are discussed to assist students in reporting patient status. Classroom discussions involve theoretical and scientific background, physiological responses, indications, contraindications and precautions, clinical applications, parameter selection, documentation, discussion of current research and contemporary practice, clinical decision making, integration and sequencing within the PT Plan of Care, and reimbursement. The role of the physical therapist assistant in implementing the interventions is discussed with adherence to legal practice standards and emphasis on consistency with APTA guidelines.
Semester(s) Offered: SPRING
Requisite: ENG 101, BIOL 105, PTA 100, PTA 101, PTA 102 each with a grade of "C" or better.
Type: C

PTA 151 Application of Physical Agents I 0-3-1.5
This course allows students to experience the manual therapies and physical agents discussed in PTA 150 Theory of Physical Agents I, as well as develop entry level skill in their application. Students are taught to skillfully assess the patient, collecting data utilizing appropriate tools and measures and how to apply manual therapies and physical agents for addressing specific anatomical locations/ conditions/ diagnoses in response to visual and palpatory assessment. Students must demonstrate competency in performing manual therapies including massage, fascial release and soft tissue mobilization and physical agents such as moist heat, paraffin, ultrasound, cryotherapy, compression and traction, as it pertains to the Plan of Care established by the PT. Students must also demonstrate competency in performing girth measurements and aseptic technique with proper donning and doffing of Personal Protective Equipment (PPE). All skills must be performed in a safe, effective and efficient manner with a variety of equipment and supplies while considering the patient perspective and environment, and recognizing changes in skin condition and other safety factors. Proper positioning and draping of patients are emphasized and case scenarios are utilized for simulated practice of assessments and interventions. Oral and written communication skills are enhanced through patient education, documentation and communication with members of the interprofessional health care team. Professional behaviors, indications, contraindications, precautions, problem solving, fiscal and time management and adherence to legal standards and APTA guidelines are emphasized in the delivery of quality patient care.
Semester(s) Offered: SPRING
Requisite: ENG 101, BIOL 105, PTA 100, PTA 101, PTA 102 each with a grade of "C" or better.
Type: C

PTA 160 Kinesiology & Clinical Orthopedics 5-0-5
This course introduces students to kinesiology, the scientific study of human movement and how it pertains to contemporary physical therapy assessments and interventions of patients with orthopedic related diagnoses/conditions. The course enhances students' previous knowledge of muscle and joint structure and function, goniometry, manual muscle testing, range of motion/ strengthening and mobility training attained in PTA 101 Physical Therapy Science and Skills. As each joint of the appendicular skeleton and each region of the axial skeleton is studied individually, the students' knowledge is expanded to include a deeper understanding of anatomical structures, special tests and related orthopedic diagnoses/conditions, medical and physical therapy management including, but not limited to flexibility testing, stretching, strengthening, endurance/power training, aerobic/anaerobic conditioning, and use of contemporary orthoses. Functional outcome tools related to orthopedic injuries/conditions will be discussed and case scenarios utilized to enhance problem solving skills. Combined joints of the appendicular and axial skeleton are studied when introducing the gait cycle in preparation for gait analysis, posture assessment, and respiratory function.
Semester(s) Offered: SPRING
Requisite: ENG 101, BIOL 105, PTA 100, PTA 101, PTA 102 each with a grade of "C" or better.
Type: C

PTA 161 Orthopedic Interventions 2-0-2
This course provides students the opportunity to perform stretching and strengthening exercises discussed in PTA 160 Kinesiology & Clinical Orthopedics, while refining skills acquired in PTA 102 Patient Care Skills & Assessment. Students must demonstrate competency, as well as develop entry level skill in their performance of flexibility testing, goniometry, manual muscle testing, posture assessment, stretching and strengthening of each joint of the appendicular skeleton and each region of the axial skeleton, as it pertains to the Plan of Care established by the PT. All skills must be performed in a safe, effective, and efficient manner with a variety of equipment and supplies while considering the patient perspective and environment. Students learn to recognize changes in skin condition and safety factors while using assistive devices and equipment. Proper positioning and draping of patients are emphasized and case scenarios are utilized for simulated practice of assessments and interventions. Oral and written communication skills are enhanced through patient education, documentation and communication with members of the interprofessional health care team. Professional behaviors, problem solving skills, fiscal and time management, and adherence to legal standards and APTA guidelines are emphasized in the delivery of quality patient care.
Semester(s) Offered: SPRING
Requisite: ENG 101, BIOL 105, PTA 100, PTA 101, PTA 102 each with a grade of "C" or better.
Type: C

PTA 165 Pathology I 2-0-2
This course begins with an analysis of the factors which affect health followed by review of pathologic conditions and interventions to various body systems. It is the first of a two part course sequence in pathology which will include: etiology, incidence, risk factors, manifestations, general medical diagnosis, treatment options, and special implications for the PTA. Topics covered in this course are intended to help prepare the PTA student for his/her first summer clinical experience and includes pathologies related to the metabolic, gastrointestinal, hepatic, biliary, endocrine, renal, urologic, genital and reproductive systems, as well as management/prevention of infectious diseases, autoimmune disorders and PT interventions utilized in the acute care setting. Appropriate tools and functional measures will be discussed to assist students in reporting patient status.
Semester(s) Offered: SPRING
Requisite: ENG 101, BIOL 105, PTA 100, PTA 101, PTA 102 each with a grade of "C" or better.
Type: C

PTA 170 Clinical Experience I 0-8-4
This course allows students to enter the clinical environment under the supervision of a physical therapist or physical therapist assistant clinical instructor. Opportunities are available for students to apply skills previously simulated during didactic instruction, as well as observe and assist with other physical therapy interventions as deemed appropriate by the clinical instructor. Students will continue to develop skills in monitoring and modifying patient interventions within the PT Plan of Care while considering the patient perspective and environment, and focusing on time efficiency and communication with members of the interprofessional health care team. A comprehensive, computerized exam of all knowledge acquired in the first year of the program must be passed prior to entering the clinic. Students meet in the classroom prior to clinical experience to perform a self-assessment of abilities, develop goals/objectives for Clinical Experience I, and discuss appropriate clinical behaviors, evidence based practice, legal and ethical dilemmas, fiscal management, conflict resolution, and quality assurance. Students return to the classroom at the conclusion of Clinical Experience I to reflect on and share their experiences while comparing and contrasting the assessments, interventions and documentation practices encountered in the various health care settings. A service activity and reflection paper are also completed in order to promote future volunteerism and patient advocacy.
Semester(s) Offered: SUMMER
Requisite: HRO 100, PSYC 151, COMM 151, PTA 150, PTA 151, PTA 160, PTA 161, PTA 165 each with a grade of "C" or better.
Type: C

PTA 200 Theory of Physical Agents II 3-0-3
This course is a continuation of instruction involving physical agents previously taught in PTA 150 Theory of Physical Agents I. Electrotherapeutic modalities are introduced to modulate or decrease pain, reduce or eliminate edema, improve circulation, increase the rate of healing of open wounds and soft tissue, enhance connective tissue extensibility, decrease restrictions associated with musculoskeletal injury, increase joint mobility, decrease unwanted muscular activity, enhance neuromuscular performance, assist muscle force generation and contraction, and provide orthotic substitution during functional activities. Stages of wound healing, assessment of patients with open wounds, and clinical management are addressed. This course prepares students to utilize electrotherapeutic modalities concurrently with previously learned physical agents, when appropriate and indicated for pain, edema, tissue repair, medication delivery, impaired joint mobility, muscle disuse atrophy and orthotic substitution. Use of physical agents and electrotherapeutic modalities are discussed as an adjunct to physical therapy intervention. Appropriate tools and functional measures are discussed to assist students in reporting patient status. Classroom discussions involve theoretical and scientific background, physiological responses, indications, contraindications, precautions, clinical applications, parameter selection, documentation, discussion of current research and contemporary practice, clinical decision making, integration and sequencing within the PT Plan of Care, and reimbursement. The role of the physical therapist assistant in implementing the interventions is discussed with adherence to legal practice standards and emphasis on consistency with APTA guidelines.
Semester(s) Offered: FALL
Requisite: PSYC 210, SOC 153, PTA 170 each with a grade of "C" or better.
Type: C

PTA 201 Application of Physical Agents II 0-3-1.5
This course is a continuation of instruction involving physical agents previously performed in PTA 151 Application of Physical Agents I. Students experience the electrotherapeutic modalities discussed in PTA 200 Theory of Physical Agents II, as well as develop entry level skill in their application. Students are taught to skillfully assess the patient, collecting data utilizing appropriate tools and measures and how to apply electrotherapeutic modalities for addressing specific anatomical locations/conditions/diagnoses in response to visual and palpatory assessment. Students must demonstrate competency in performing electrical stimulation for pain, edema, tissue damage, medication delivery, impaired joint mobility, muscle disuse atrophy and orthotic substitution; as it pertains to the Plan of Care established by the PT. All skills must be performed in a safe, effective and efficient manner with a variety of equipment and supplies while considering the patient perspective and environment, and recognizing changes in skin condition and other safety factors. Proper positioning and draping of patients are emphasized and case scenarios are utilized for simulated practice of assessments and interventions. Oral and written communication skills are enhanced through patient education, documentation and communication with members of the interprofessional health care team. Professional behaviors, indications, contraindications, precautions, problem solving, fiscal and time management, and adherence to legal standards and APTA guidelines are emphasized in the delivery of quality patient care.
Semester(s) Offered: FALL
Requisite: PSYC 210, SOC 153, PTA 170 each with a grade of "C" or better.
Type: C

PTA 210 Therapeutic Exercise & Rehabilitation 5-0-5
This course introduces students to physical therapy rehabilitative techniques that assist patients in returning to a state of optimal function. The course builds upon students' previous knowledge of data collection, special tests, patient diagnoses/conditions and medical and physical therapy management acquired in PTA 160 Kinesiology & Clinical Orthopedics, and applies it to medically complex patients with numerous comorbidities and those with chronic pain associated with spinal disorders. Students are taught the neuroscience of pain and various treatment techniques including Sahrmann and McKenzie, expanding their ability to treat patients with impairments effecting the axial skeleton and those in need of core stabilization. The course is then directed towards patients requiring more extensive rehabilitation including patients with non-organic pain, spinal cord injury, neurological dysfunction, and amputation. Contemporary orthotics, prosthetics, and assistive devices are discussed for the patient with an orthopedic or neurological injury/condition. Neuroanatomy, neurodevelopment, motor control, motor performance, motor learning, and related clinical applications are presented. Neuro-rehabilitation techniques/theorists and patient management skills emphasized include PNF, NDT, Brunnstrom, and Rood. Facilitation and inhibition of abnormal tone are discussed to promote functional training, pre-gait and balance activities utilizing the appropriate stage of motor control. Students are taught to recognize and respond to cognitive, communication, sensory, visual, perceptual, and affective impairments when interacting with patients. Appropriate tools and functional measures for related orthopedic and neurological injuries/conditions are discussed to assist students in reporting patient status and function. The unique needs of special populations, such as pediatrics, and specialized clinical environments, such as work hardening and aquatics, are also discussed. Architectural barriers and accessibility regulations are analyzed, and environmental modifications for home, community and work are determined, as well as the patient's need for adaptive equipment and assistive technologies. The unique needs of special populations, such as pediatrics, and specialized clinical environments, such as work hardening and aquatics, are also discussed. Architectural barriers and accessibility regulations are analyzed and environmental modifications for home, community and work will be determined, as well as patients' need for adaptive equipment and assistive technologies.
Semester(s) Offered: FALL
Requisite: PSYC 210, SOC 153, PTA 170 each with a grade of "C" or better.
Type: C

PTA 211 Rehabilitation Techniques 0-4-2
This course allows students to apply the physical therapy rehabilitative techniques discussed in PTA 210 Therapeutic Exercise and Rehabilitation to assist patients in returning to a state of optimal function. The course enhances student's previous knowledge of data collection and interventions acquired in PTA 161 Orthopedic Interventions and applies it to medically complex patients with numerous comordibities and those with chronic pain associated with spinal disorders. Students knowledge of Sahrmann and McKenzie treatment techniques are expanded along with core stabilization exercises. As students transition from treatment of patients with orthopedic injuries/conditions to those with neurological injuries/conditions, neuro-rehabilitation techniques/theorists including PNF, NDT, Brunnstrom and Rood are emphasized. Facilitation and inhibition of abnormal tone are discussed to promote functional training/pre-gait/balance activities utilizing the appropriate stage of motor control. Transfer and gait training taught in previous semesters is enhanced highlighting proper handling techniques for patients with neurological involvement. Students must demonstrate competency in determining appropriate rehabilitative techniques to utilize, as well as performing the techniques and making necessary modifications within the Plan of Care established by the PT. All skills must be performed in a safe, effective, and efficient manner with a variety of equipment and supplies while considering the patient perspective and environment. Students learn to recognize changes in skin condition and safety factors while using assistive devices and equipment. Proper positioning and draping of patients are emphasized and case scenarios are utilized for simulated practice of assessments and interventions. Oral and written communication skills are enhanced through patient education, proper documentation and communication with members of the interprofessional health care team. Professional behaviors, problem solving skills, fiscal and time management, and adherence to legal standards and APTA guidelines are emphasized in the delivery of quality patient care.
Semester(s) Offered: FALL
Requisite: PSYC 210, SOC 153, PTA 170 each with a grade of "C" or better.
Type: C

PTA 220 Pathology II 4-0-4
This course is designed to provide the student with an overview of pathologic concepts and processes with a clinical emphasis. Components of each disease covered include: etiology, incidence, risk factors, manifestations, general medical diagnosis, treatment options, and special implications for the PTA. Appropriate tools and functional measures will again be discussed to assist students in reporting patient status. Pathologies covered include disorders of the hematologic, cardiovascular, lymphatic, pulmonary, nervous, and integumentary systems. Oncology and psychological disorders are also included, as well as co-morbidities. A general overview of laboratory tests and values are included to assist students in recognizing precautions for therapeutic interventions. Concepts on health and aging pertaining to the various systems are included to achieve a clinical awareness of life span changes.
Semester(s) Offered: FALL
Requisite: PSYC 210, SOC 153, PTA 170 each with a grade of "C" or better.
Type: C

PTA 270 Clinical Experience II 0-16-8
This course allows students to enter two separate clinical environments under the supervision of a physical therapist or physical therapist assistant clinical instructor. Opportunities are available for students to practice skills required of the physical therapist assistant and further refine their time efficiency with all aspects of clinical management, as well as their ability to monitor and progress patient treatment within the PT Plan of Care. Oral and written communication skills are enhanced through patient education, documentation and communication with members of the interprofessional health care team. Professional behaviors, problem solving, fiscal management, and adherence to ethical, legal standards and APTA guidelines are emphasized in the delivery of quality patient care while considering the patient perspective and environment. Prior to the conclusion of this course, students are required to demonstrate entry level performance for all applicable performance criteria, as evaluated by the clinical and academic faculty utilizing the APTA's Clinical Performance Instrument.
Semester(s) Offered: SPRING
Requisite: PTA 200, PTA 201, PTA 210, PTA 211, PTA 220 each with a grade of "C" or better.
Type: C

PTA 280 Clinical Seminar II 2-0-2
This course prepares students for the National Physical Therapy Examination for the PTA and entry into the workforce. Prior to entering the clinic, students are required to pass a comprehensive, computerized exam of all knowledge acquired throughout the program, perform self-assessment of abilities and develop goals/objectives for Clinical Experience II. Classroom discussions include appropriate clinical behaviors, ethical and legal issues, cultural competence, sexual harassment, patient outcomes/discharge planning, fiscal management, and the changing health care environment. Students prepare a graduate resume/cover letter and discuss contemporary interviewing and job searching skills. As the culminating experience related to evidence based practice, students give an oral presentation regarding contemporary research. Students also discuss and share their clinical experiences, discuss final preparation for the national licensure exam and review life-long learning opportunities.
Semester(s) Offered: SPRING
Requisite: PTA 200, PTA 201, PTA 210, PTA 211, PTA 220 each with a grade of "C" or better.
Type: C

PTA 285 NPTE Prep 1-0-1
This course will provide students with the opportunity for an academic review of the information required and study strategies needed to prepare for the National Physical Therapy Examination for the PTA. This class will culminate with the students completing a timed, computerized full length examination that will identify both areas of strength and weakness, as well as offer suggestion for remedial activities. Note: Permission from the PTA coordinator is required to enroll. Must be a graduate of an accredited PTA program.
Semester(s) Offered: SUMMER
Requisite: PTA 270 and PTA 280 or department consent.
Type: C

PTA 298 Post Entry-level Ed in PT Variable up to (3)-0-(3)
This course will address post entry-level topics related to physical therapy. Courses taught will allow clinicians to better market their skills in specified area or provide necessary training/re-training for a PT/PTA to develop skills in a new area of rehabilitation. Courses will assist the clinician in attaining required contact hours for licensure renewal.
Semester(s) Offered: INTERMIT
Requisite: Department consent
Type: C

PTA 299 Special Topics in Physical Therapy Variable up to (4)-(8)-(4)
Varied topics in the PT profession will be addressed in order to broaden the physical therapist assistant's knowledge base; i.e. advances in geriatric care, changing role of the PTA, enhancing job performance, PT specialty areas, etc. NOTE: Requisite varies by topic.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: C

Physics

PHYS 101 General Physical Science 3-2-4
A one-semester course offering an understanding of our physical environment. Topics from astronomy, physics, chemistry and earth science are introduced and examined from their practical viewpoints. The scientific method is stressed in understanding natural phenomena.
Semester(s) Offered: ALL
Requisite: Eligible for MATH 97 or higher or completion of or concurrent enrollment in MATH 95.
Type: T, IAI-P9 900L

PHYS 151 College Physics I 3-4-5
The principles of mechanics, heat and sound. For pre-dental and pre-medical students, nurses, majors in pharmacy and architecture, and other students whose programs require a beginning course in physics.
Semester(s) Offered: ALL
Requisite: Math placement above MATH 112 or completion of MATH 112 with a grade of "C" or better; Reading placement above ENG 97or completion of ENG 97.
Type: T, IAI-P1 900L

PHYS 152 College Physics II 3-4-5
Magnetism, electricity, light, and modern physics with some reference to the practical aspects of the principles studied.
Semester(s) Offered: SPR SUM
Requisite: PHYS 151 with a grade of "C" or better.
Type: T

PHYS 204 Physics-Mechanics 3-2-4
For students in engineering, physics, chemistry, and mathematics. This calculus-based course covers kinematics, Newton's laws, conservation laws (energy, momentum, and angular momentum), and gravity. Particles, systems of particles, rigid bodies, and fluids are discussed.
Semester(s) Offered: ALL
Requisite: MATH 203 with a grade of "C" or better; Eligible for ENG 97.
Type: T, IAI-PHY 911, IAI-P2 900L

PHYS 205 Physics-Heat, Elec, & Magnetism 3-2-4
For students in engineering, physics, chemistry, and mathematics. This calculus-based course covers electric and magnetic fields, electric potential, Gauss' law, Ampere's law, Maxwell's equations, electromagnetic waves, AC and DC circuits, temperature, heat, entropy, ideal gases, and heat engines.
Semester(s) Offered: ALL
Requisite: PHYS 204, MATH 204 each with a grade of "C" or better.
Type: T, IAI-PHY 912

PHYS 206 Physics-Light, & Modern Physics 3-2-4
For students in engineering, physics, chemistry, and mathematics. This calculus-based course covers geometric and physical optics, wave/particle duality, special relativity, quantum mechanics, and atomic and nuclear physics.
Semester(s) Offered: SUM Even
Requisite: PHYS 204, MATH 204 each with a grade of "C" or better.
Type: T, IAI-PHY 914

PHYS 299 Special Topics in PHYS Science Variable up to (6)-(12)-(6)
Special topics or current issues in physical science will be examined through the use of lectures, case studies, simulations, special projects or other problem-solving procedures.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: T

Plumbing

PLBR 101 Drainage Principles & Methods 3.5-1-4
This course is designed to cover the principles of treatment and methods of disposal of sewage, municipal and private; the principles of design, application and correct methods of installation of storm water and sanitary drainage. The course material will also cover topics such as the principles and design of vent piping systems, the use of vacuum condensate collection systems, and recycling technologies.
Requisite: None.
Type: C

PLBR 102 Water Supply Systems 3.5-1-4
This course is designed to furnish the plumber/pipefitter apprentice knowledge regarding water supply systems, which will include information on water treatments, flow calculations, designs, layouts and system components.
Requisite: None.
Type: C

PLBR 103 Ind. Pipe Drawing & Plan Reading 3.5-1-4
This course is designed to furnish the plumber/pipefitter journeyman and apprentice knowledge needed regarding drawing interpretation and plan reading. The course will focus on essential information that applies both to making and interpreting drawings and sketches used in installing piping systems.
Requisite: None.
Type: C

PLBR 104 Ind. Piping Tools & Related Science 3.5-1-4
This course is designed to furnish the plumber/pipefitter journeyman and apprentice knowledge required in the use and care of piping tools essential to the trade with emphasis on safety and safe work practices in the workplace. The course will also focus on basic science and mechanical principles used in the piping industry to provide the journeyman and apprentice with a solid understanding needed to appropriately react to any given situation while working in the piping industry.
Requisite: None.
Type: C

PLBR 105 Ind. Pipe Heritage Codes 3.5-1-4
This course is designed to furnish the plumber/pipefitter apprentice information on the history and career opportunities of the industrial pipe trades. The course will also cover in-depth code interpretation and application associated with the field of industrial piping/plumbers industry.
Requisite: None.
Type: C

PLBR 106 Gas Installations 3.5-1-4
This course is designed to furnish the plumber/pipefitter apprentice with the fundamentals on the safe use of various types of tools and equipment that are used in the installation, testing, repair, maintenance and servicing of gas piping systems and related equipment on which to build knowledge and gain insight into the gasfitting industry.
Requisite: None.
Type: C

PLBR 207 Plumbers Basic Electricity 3.5-1-4
This course is designed to furnish the plumber/pipefitter apprentice with the fundamentals of various types of tools, equipment and safety that are used in the installation, testing, repair, maintenance and servicing of electrical systems used in the plumbing/pipefitters industry.
Requisite: None.
Type: C

PLBR 208 Soldering/Brazing for Plumbers 3.5-1-4
This course is designed to furnish the plumber/pipefitter journeyman and apprentice with knowledge and skills needed regarding soldering and brazing. The course will emphasize OSHA Standards, ANSI Safety in Welding and Cutting along with proper equipment and materials to be used in performing different tasks.
Requisite: None.
Type: C

PLBR 209 Plumbers Adv Drawing Interpretation 3.5-1-4
This course is designed to furnish the plumber/pipefitter journeyman and apprentice with extended knowledge regarding drawing interpretation and plan reading. The course will focus on advanced information in building specifications that applies both to making and interpreting drawings and sketches used to set out the types of materials to be used, methods of installation, and code practices to be observed.
Requisite: None.
Type: C

PLBR 210 Plumbers Code Interpretation 3.5-1-4
This course is designed to furnish the plumber/pipefitter apprentice with knowledge and skills regarding specific construction codes, code interpretation, and applications used in the plumbing/pipefitters industry.
Requisite: None.
Type: C

PLBR 211 Plumbers Guide to Service Work 3.5-1-4
This course is designed to furnish the plumber/pipefitter journeyman and apprentice with knowledge and skills relating to human relations, salesmanship, planning service work, and troubleshooting plumbing systems which represents a high percentage of the total amount of work performed by pipe trades personnel.
Requisite: None.
Type: C

PLBR 212 Plumbers Leadership Development 3.5-1-4
This course is designed to furnish the current plumber/pipefitter foremen and journeymen who want to become foremen with knowledge and skills relating to leadership needed to be more effective on the job. Topics that will be covered are: leadership functions, commitment, people skills, communication, teamwork and organization.
Requisite: None.
Type: C

PLBR 214 IDPH Plbr Mock Testing 3.5-1-4
This course is designed to prepare the apprentice and/or journeyman for the Illinois Department of Public Health certification testing in welding and codes for pipefitters/plumbers.
Requisite: None.
Type: C

PLBR 215 Pumps & Steam Systems 3.5-1-4
This course is designed to furnish the pipefitters/plumbers journeymen and apprentices with the knowledge and essential skills that are used with various pumps and steam systems applicable in the piping industry.
Requisite: None.
Type: C

PLBR 299 Special Topics in Piping/Plumbing Variable up to (4)-(8)-(4)
This course is designed to familiarize students with special topics or problems in the pipefitting/plumbers' field, to provide them with knowledge and ability to deal effectively with those topics or problems in relation to their specific requirements.
Requisite: None.
Type: C

Political Science

POLS 125 Introduction to Political Science 3-0-3
A basic introduction and survey of the various fields of political science. Included is an overview of political philosophy, comparative politics, public policy, political research, and international relations. Emphasis is on the role of people as input agents in the various political systems and on the structure and function of the output agencies of government. This course is especially recommended for Political Science and Pre-Law students.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101.
Type: T, IAI-S5 900

POLS 150 Intro to American Government 3-0-3
A survey course of the American federal system of government. Included is a historical review of the founding of the United States and its political beginning. Emphasis is on the structure and function of the executive, legislative and judicial branches of the federal government with an overview of state and local government.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, IAI-S5 900

POLS 240 Comparative Politics 3-0-3
This course introduces the basic concepts of political analysis and applies them to a variety of countries. Countries are studied individually as well as comparatively on such issues as institutional structures, electoral systems, ideology and political values. Issues facing different political systems and how they deal with those challenges will also be explored.
Semester(s) Offered: SPRING
Requisite: Eligible for ENG 101.
Type: T, IAI-S5 905

POLS 241 Comparative Politics -Non-West 3-0-3
This course introduces the basic concepts of political analysis and applies them to a variety of non-western countries. Countries are studied individually as well as comparatively on such issues as institutional structures, electoral systems, ideology and political values. Special emphasis is paid to issues of governance, revolution and regime change, and development. Issues facing different political systems and how they deal with those challenges will also be explored. Students cannot receive credit for both POLS 240 and POLS 241.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101.
Type: T, IAI-S5 906N

POLS 262 American Government (State & Local) 3-0-3
Covers the historical development and organization of state governments; the state constitution; and structure, powers and procedures of legislative, executive and judicial departments in the state government. A detailed study of the Illinois State Constitution, state government and local government is presented.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101.
Type: T, IAI-S5 902

POLS 270 International Relations 3-0-3
A study of contemporary international relations emphasizing how and why nations formulate and implement the policies they do in relation to others, the international and domestic forces that influence foreign policy decisions, and current problems for the international system such as coping with nuclear weapons, terrorism, and trade.
Semester(s) Offered: SPR SUM
Requisite: Eligible for ENG 101.
Type: T, IAI-S5 904

POLS 280 Political Theory 3-0-3
Study of selected political philosophers from the ancient world through the modern. Major ideologies will also be examined
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101.
Type: T, IAI-PLS 913

POLS 289 Political Impact of American Films 3-0-3
One of the many ways we learn about politics is through the movies. They show us stories of war and revolution, of integrity and corruption, of heroes and villains. They teach us ethics.They help us understand policy issues from international relations to criminal justice, racism, and class conflict. They have shaped public opinion and mobilized citizens from Birth of a Nation in 1915 to The Grapes of Wrath in 1940 and Fahrenheit 911 in 2004.
This course will study the influence that American films have on public opinion and political behavior, American values and culture, American's self-image, American policy-both domestic and foreign, and the perception other countries have of America and Americans.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101.
Type: T

POLS 290 Impact of Western Films on the USA 3-0-3
A study of the influence that Western films have on American public opinion, American values and culture, American's self-image, American policy-both domestic and foreign, and the perception other countries have of America and Americans.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101.
Type: T

POLS 292 Political Impact of War Films 3-0-3
One of the many ways we learn about politics is through the movies. This course will study the influence that war films have on public opinion and political behavior, American values and culture, Americans' self-image, American policy - both domestic and foreign, and the perception other countries have of America and Americans.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101.
Type: T

POLS 299 Special Topics in Political Science Variable up to (3)-0-(3)
Designed to present problems and topics in political science by discussions, readings and individual research. Topics vary each semester. Course may be taken more than once if different topics are considered. Sophomore standing, one course in Political Science and division approval.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 101.
Type: T

Practical Nursing

PN 100 Fundamentals of Nursing I 1-2-2
This course prepares students to perform simple and basic nursing functions utilized in a variety of health care settings. It includes classroom and lab preparation for clinical application. Skills include personal care, infection control, safety measures, proper body mechanics, vital signs and patient nutrition. This course can be articulated for students who are Illinois certified nurse assistants. Course delivered in four-week module (four hours classroom, 8 hours lab per week).
Requisite: Eligible for ENG 97 or completion of ENG 94 with a "C" or better and eligible for MATH 97 or completion of MATH 95 with a "C" or better; Concurrent enrollment in or completion of PN 101, PN 140, and PN 142 each with a "C" or better; or consent of Program Coordinator.
Type: C

PN 101 Fundamentals of Nursing II 3-1-3.5
This course prepares students to perform simple and basic nursing functions utilized in a variety of health care settings. It includes classroom and lab preparation with clinical application in the community. Course content includes the nursing process, nursing interventions, meeting the patient's basic needs, PN's role in the health care setting, and medical terminology. Students must provide proof of current BLS (CPR) certification from American Heart Association on the first day of the course to remain enrolled. Course delivered in 12-week module (4 hours classroom, 1.3 lab hours per week).
Requisite: Eligible for ENG 97 or completion of ENG 94 with a "C" or better and eligible for MATH 97 or completion of MATH 95 with a "C" or better; Concurrent enrollment in or completion of PN 100, PN 140, and PN 142 each with a "C" or better; or consent of Program Coordinator.
Type: C

PN 102 Fundamentals Clinical 0-4-2
This course is the first clinical education experience that provides an opportunity for students to integrate previously learned didactic and laboratory skills in situations simulating that of a Practical Nurse. Students must provide proof of current BLS (CPR) Certification from American Heart Association on the first day of the course to remain enrolled. This clinical internship provides students with a minimum of 80 clinical contact hours, including exposure to clinical administration of medication, under direct supervision of qualified faculty.
Requisite: None.
Type: C

PN 120 Nutrition in Nursing 2-0-2
This course is designed to teach the fundamentals of nutrition and diet therapy to assist in preventing illness/disease, promoting wellness and restoring health. Nutritional needs across the life span are discussed. Course delivered in 8-week module (4 hours of lecture per week).
Requisite: Concurrent enrollment in or completion of PN 101, PN 140, and PN 142 each with a "C" or better, or consent of the Program Coordinator.
Type: C

PN 140 Human Body Structure/Function 4-0-4
Students will develop a basic understanding of human anatomy and physiology essential for practical nursing. The course covers basic structure and function of each major body system, as well as common pathologies. Principles of nursing care to assist patients in preventing disease, maintaining wellness, and restoring health are also addressed. Course delivered in 16-week module (4 hours of lecture per week).
Requisite: Eligible for ENG 97 or completion of ENG 94 with a "C" or better and eligible for MATH 97 or completion of MATH 95 with a "C" or better; Concurrent enrollment in or completion of PN 101, PN 100 and PN 142 each with a "C" or better; or consent of Program Coordinator.
Type: C

PN 142 Pharmacology and Dosage 3.5-0-3.5
This course provides an introduction into terminology, approved abbreviations, federal and state laws related to pharmacology, drug therapy, understanding correct administration of medications, and assessment of patient condition. In addition, the misuse and abuse of drugs including legal implications will be discussed. The student will learn commonly used drugs, drug classifications, action/physiological effect, interactions, side effects, generic versus brand name drugs contraindications, routes of administration, nursing implications, chemical compound of pharmacology and microbiology aspects of pharmaceuticals. Dosage calculations including PO, parenteral, intravenous, and pediatric calculations will be emphasized. Course delivered in 16-week module (3.5 hours of lecture per week).
Requisite: Eligible for ENG 97 or completion of ENG 94 with a "C" or better and eligible for MATH 97 or completion of MATH 95 with a "C" or better; Concurrent enrollment in or completion of PN 100, PN 101 and PN 140 each with a "C" or better; or consent of Program Coordinator.
Type: C

PN 152 Mental Health Nursing 2-2-3
This course prepares students for alterations in mental health, mental disorders and behaviors associated with mental health conditions. Emphasis is placed on knowledge of disease states, effective therapeutic communication, knowledge of available treatments and appropriate drug therapy. Clinical learning experiences will be completed in a lab and hospital setting. Course delivered in 8-week module (4 hours of lecture and 32 total clinical contact hours)
Requisite: Completion of PN 100, PN 101, and PN 140, and PN 142 each with a "C" or better; Concurrent enrollment in or completion of PN 120 with a grade of "C" or better; or consent of Program Coordinator.
Type: C

PN 154 Obstetric and Newborn Nursing 3-1-3.5
This course provides an integrative, family-centered approach to the care of childbearing women and newborns. The course focuses on the utilization of the nursing process and critical thinking in the care of childbearing women, newborn and family. The course begins with obstetric care in pregnancy, labor and delivery and post birth and continues through the nursing care of a newborn through first year of life. Emphasis is placed on uncomplicated pregnancies and the normal newborn. The course includes lecture, laboratory and clinical care experiences. Clinical care experiences may occur in a hospital setting, healthcare office or simulated environment. Course delivered in 8-week module (6 hours of lecture and 2 hours of lab per week)
Requisite: Completion of PN 100, PN 101, and PN 140, and PN 142 each with a "C" or better; Concurrent enrollment in or completion of PN 120 with a grade of "C" or better; or consent of Program Coordinator.
Type: C

PN 155 Pediatric Practical Nursing 2-1-2.5
This course deals with children from infancy through adolescence. Content focuses on the normal growth and development, common childhood illnesses and/or abnormalities for each major age group. It includes the impact of hospitalization on the child and family, and preventative care education. The nursing process is utilized to determine interventions in the care of the child and family. Concepts from nutrition and pharmacology are integrated. Course delivered in 8-week module (4 hours of lecture and 2 hour of lab per week)
Requisite: Completion of PN 100, PN 101, PN 120, PN 140, and PN 142 each with a "C" or better, Concurrent enrollment in or completion of PN 154, PN 160, and PN 162 each with a grade of "C" or better, or consent of Program Coordinator.
Type: C

PN 160 Medical Surgical Nursing I 3-1-3.5
This course is designed to prepare the student with the knowledge, skills, and attitude needed to care for patients with alterations in medical and surgical health. Medical Surgical Nursing I will enhance the student's ability to apply the nursing process to various disease processes and effectively communicate while safely caring for patients. In this course, the etiology, pathophysiology, signs, symptoms, treatments and nursing considerations will be discussed on the following topics: Integumentary, Sensory, Blood, Immune, Gastrointestinal, Orthopedic and Oncology. The curriculum shall prepare the LPN to start peripheral intravenous therapy through catheter insertion into a peripheral vein. Course delivered in 8-week module (6 hours of lecture and 2 hour of lab per week.)
Requisite: Completion of PN 100, PN 101, PN 120, PN 140, and PN 142 each with a "C" or better, Concurrent enrollment in or completion of PN 154, PN 155, and PN 162 each with a grade of "C" or better, or consent of Program Coordinator.
Type: C

PN 161 Med Surg Clinical I 0-4-2
This course is the second clinical education experience that provides an opportunity for students to integrate previously learned didactic, laboratory, and clinical skills in situations simulating that of a Practical Nurse. This course is focused to prepare the student with the knowledge, skills, and attitude needed to care for patients with alterations in medical and surgical health. Students will apply the nursing process to various disease processes and effectively communicate while safely caring for patients. The curriculum shall prepare the LPN to start peripheral intravenous therapy through catheter insertion into a peripheral vein. This clinical internship provides students with a minimum of 72 clinical contact hours, including intravenous therapy observation exposure: regulating infusion rates, observing site reactions, discontinuation of infusions, adding pre-mixed antibiotic solutions and monitoring blood transfusions.
Requisite: None.
Type: O

PN 162 Medical Surgical Nursing II 3-1-3.5
The Medical Surgical Nursing II course is designed to enhance the student's ability to safely care for the medical/surgical patient using the nursing process and effective communication. The student will learn how to integrate their knowledge and skills obtained from Medical Surgical Nursing I with new content that is covered in this course. Health promotion, pathophysiology, signs and symptoms, nursing considerations and treatments will be discussed in the following disease processes, neurology, respiratory, cardiovascular, renal and endocrine. Course delivered in 8-week module (6 hours of lecture and 2 hours of lab per week.
Requisite: Completion of PN 100, PN 101, PN 120, PN 140, and PN 142 with a "C" or better, Concurrent enrollment in or completion of PN 152, PN 154, PN 155, and PN 160 each with a grade of "C" or better, or consent of Program Coordinator.
Type: C

PN 163 Med Surg Clinical II 0-4-2
This course is the third clinical education experience that provides an opportunity for students to integrate previously learned didactic, laboratory, and clinical skills in situations simulating that of a Practical Nurse. This course is designed to enhance the student s ability to safely care for the medical/ surgical patient using the nursing process with professional communication. The student will integrate their knowledge and skills obtained throughout the PN program, including Medical Surgical Nursing and Clinical I. Students will practice health promotion, interpretation of pathophysiology including signs and symptoms, nursing considerations and treatments focusing on neurology, respiratory, cardiovascular, renal, and endocrine disease processes. This clinical internship provides students with a minimum of 72 clinical contact hours including intravenous therapy observation exposure: regulating infusion rates, observing site reactions, discontinuation of infusions, adding pre-mixed antibiotic solutions and monitoring blood transfusions.
Semester(s) Offered: FALL
Requisite: None.
Type: O

Precision Machining Technology

PMT 100 Precision Machining Intro 0.5-0-0.5
This course prepares students to begin a successful college career in the Precision Machining Technology program. Students will learn and understand all safety aspects for all the precision machining machinery. The course also teaches the students all the information and technology that is needed for the entire PMT program which includes work ethic expectations, clothing requirements, machinist tools, measurements, and computer uses. An understanding of the PMT program requirements and expectations will be presented in this course.
Requisite: None.
Type: C

PMT 101 Intro to the Machine Trades 1-4-3
Introduces hand tools, measuring tools, and layout procedures, then transitions into basic machine principals including safety, operation, and part set-ups for primary and secondary machining
Requisite: Concurrent enrollment in or completion of PMT 100.
Type: C

PMT 102 Intermediate Machining 1-4-3
The course continues with instruction in four machine operations (drilling, turning, milling, grinding). Thread cutting, advanced milling operations and the introduction of the surface grinder will be covered.
Requisite: Concurrent enrollment in or completion of PMT 101.
Type: C

PMT 110 Introduction to CNC Operations 1-2-2
This course starts with students learning all the safety aspects when operating a CNC machine. Students review measuring instruments used in the machining industry. The course then establishes an understanding of figuring cutting tool speeds and feed-rates used on CNC machines. Students receive instruction on positioning and jogging CNC machine tools. The course introduces students to set-up and operations of computerized numerical control machine tools, which includes the three-axis HAAS vertical machining center and two-axis HAAS lathe. Provides experience in setting work offsets, tool lengths and operating the HAAS CNC control. And full understanding of set-up and running a short production run on CNC equipment.
Requisite: Concurrent enrollment in or completion of PMT 100.
Type: C

PMT 111 CNC Milling 1-4-3
Students will learn to program, edit, and produce a finished part using a three-axis computerized numerical control vertical machining center. The course will start with basic programming methods and advance to more complex programming codes. Students will be responsible for setting-up and producing finish parts within the tolerances that are specified. The course will also prepare students to complete NIMS level 1 CNC milling certification.
Requisite: Concurrent enrollment in or completion of PMT 100, PMT 110.
Type: C

PMT 112 CNC Turning 1-2-2
Students will be provided with a blueprint and will be responsible for programming, editing, and choosing cutting tools to create a finished part on a computer numerical control turning center. Students will program, set-up and produce finished parts. The course includes HAAS conversational programming for producing fast finished parts along with all documentations needed for the parts produced. The course will also prepare students to complete NIMS level 1 CNC turning certification.
Requisite: Concurrent enrollment in or completion of PMT 100, PMT 110.
Type: C

PMT 114 Metallurgy I (Industrial) 2-0-2
This course is designed to give the student information concerning the various properties of metals. Materials will include critical temperatures, heat treatment, and alloying elements.
Requisite: None.
Type: C

PMT 124 Metrology 0.5-3-2
Metallurgy II is the second semester of a two-semester course designed to equip those persons entering the field of mechanics with a firsthand knowledge of the metals which are related to the mechanical crafts.
Requisite: None.
Type: C

PMT 201 Advanced Machining 1-4-3
The course begins with reviewing fundamental layout tools, measuring instruments, machine set-ups, and machining processes. It then transitions into advanced machining processes of complex parts which require the use of all machining equipment. Students will also learn the theory of heat treating, along with the grinding process required to manufacture a precision machine part.
Requisite: Concurrent enrollment in or completion of PMT 102.
Type: C

PMT 202 Advanced Metrology 0.5-3-2
This course begins with the introduction of carbide cutting tools, identifying, using and troubleshooting carbide cutting tools. This course also includes the use and design of jigs and fixtures used in the machine trades. Students will also learn the inspection process used in the inspection of machined parts.
Requisite: PMT 124.
Type: C

PMT 221 Intro to Master Cam 1-4-3
Using Mastercam the students will learn to draw prints with the aid of a computer. The students will learn how to dimension, edit, and modify drawings. These basic drawing skills will develop into drawing 3-D wire frame and solid model parts.
Requisite: None.
Type: C

PMT 222 Advanced Master Cam 1-4-3
Students will use Mastercam to design, draw, and produce a variety of parts using HAAS CNC equipment. This includes verifying and back plotting on the computer using Mastercam. The student will use Mastercam to develop the complex programs needed to produce a variety of parts on three-axis Haas mills and two-axis HAAS lathes.
Requisite: Concurrent enrollment in or completion of PMT 221.
Type: C

PMT 226 Geom Dim & Tolerancing (GD&T) 2-0-2
The course introduces students to GD&T dimensioning, concepts of size control and material tolerances. After defining the terminology used, geometric characteristics and symbols, the course proceeds to demonstrate how the geometric system works and applies to a machined part. Limits of size, MMC, LMC, position verification, product plans and virtual condition, along with the datum reference frame are covered during the course.
Requisite: None.
Type: C

PMT 231 Intro to Solid Works 1-4-3
Students will be introduced to Solid Works, setting up their systems, getting started using Solid Works, and customizing settings. The students will then transition to creating sketches for solid models, and finally create a finished drawing with dimensions.
Requisite: None.
Type: C

PMT 232 Advanced Solid Works 1-4-3
Students will continue using Solid Works to complete complex solid models. The students then will use their skills to create assemblies, sheet metal parts and use the advance features of Solid Works. This course also will use Solid Works to create all the paper work associated with prints needed in industry.
Requisite: PMT 231.
Type: C

PMT 234 3D Printing and Design 3-2-4
3D Printing is an ever-growing manufacturing method. This course introduces students to the two primary methods of polymer based printing currently used in industry. Upon completion, students will be able to identify styles of printers, different materials, and the appropriate applications of each. Students will use these print methods to create single parts as well as assemblies. Upon print completion, students will also finish process parts and remove support materials, as expected in an industrial setting.
Requisite: PMT 222, PMT 231, PMT 232 or PMT Associates Degree or department consent.
Type: C

PMT 240 NIMS Certification 1-4-3
This course prepares the student to take all Level One NIMS Certification tests. Starting with the basic layout procedures to creating a completed CNC machined part, this course offers the student nine certifications when completed. Students will need to create eight hands-on projects that will need to be inspected by industry and then take nine online tests to earn NIMS certification.
Requisite: Concurrent enrollment in or completion of PMT 201.
Type: C

PMT 250 Multi-Axis CNC Programming 1-4-3
This course is designed to give students an understanding of basic programming including sub-programming and set-up of multi-axis CNC machine tools. Students will learn to set up and program multi-axis computer numerical control machines, which include multiple vises, set ups, CNC tombstones, four-axis vertical mill, and five-axis vertical mill. The course includes advance set ups on CNC turning centers with bar feeding capabilities, live tooling and Y-axis capabilities. After learning set ups on all multi-axis machines, students will then write a basic CNC program to be run on the multi-axis CNC machines.
Requisite: Concurrent enrollment in or completion of PMT 110, PMT 111, PMT 112.
Type: C

PMT 262 Advanced Mastercam/Multi-Axis 1-4-3
Student will import solid models and design simple multi-axis parts into Mastercam CAD/CAM software to create programs for a variety of multi-axis CNC machine tools. The course includes creating tool paths, choosing correct cutting tools and posting a CNC program to be verified on a computer to creating a finished part on a CNC machine tool. Students will be responsible for setting-up and running CNC machines that include multi-vise set-ups, four-axis tombstone, and five-axis trunnion. Along with a CNC turning center with live tooling, Y-axis, and bar feeder. All parts produced will be programmed with Mastercam.
Requisite: Concurrent enrollment in or completion of PMT 221, PMT 222.
Type: C

PMT 268 Intro to Machining Automation 3-2-4
Automation in manufacturing is a growing component of machining, involving the use of robotics in new and exciting ways every year. This course introduces students to basic robotic features, movements, programming, and part manipulation. Students will use, program, and otherwise manipulate 6 axis robots to move, arrange, and sort objects using Fanuc and Universal Robotics (UR) equipment.
Requisite: PMT Associates Degree or department consent required.
Type: C

PMT 269 Advanced Machining Automation 3-2-4
This course builds on the knowledge gained in the intro class to produce a finished part. Students will design a part, create a CNC program that incorporated a CNC mill and CNC lathe. Once the part is programmed the students will be reasonable to design fixtures needed, gripper on the robot to move the parts. With all the parts needed to produce the part, students will then need to program the robots to produce the finish part.
Requisite: PMT 268.
Type: C

PMT 270 Introduction to Mold Making 3-2-4
This course introduces students to the theories needed in the molding industry. Students will learn the three major types of molds used in the mold industry plastics, die casting and rubber molds. Basic mold design will be introduced and all the components of a mold will be defined. Students will use a variety of machine tools to produce a basic injection mold.
Requisite: PMT Associates Degree or department consent required.
Type: C

PMT 272 Intro to Tool & Die Making 3-2-4
Students will be introduced to theories of diemaking principles covering die sets, die components, cutting and forming applications and material use. The class will be able to set up and identify different types of punch presses used in industry. After understanding the basics of stamping dies students will produce a basic single hit stamping die to produce a finished part.
Requisite: PMT Associates Degree or department consent required.
Type: C

PMT 274 Advanced Mold Making 3-2-4
This course is a continuation of the Introduction course with a focus of more advanced Mold making. Producing an advanced injection Mold will be the main focus of this course using of Mastercam CAD/CAM, CNC Machines and conventional machines to make all the components. Assembling the injection Mold and producing finished parts will be required to complete this course.
Requisite: PMT 270, PMT associates degree or department consent required..
Type: C

PMT 276 Advanced Tool and Die Making 3-2-4
Students will continue learning about more advanced stamping and forming die principles covering automatic feeds, scrap strips and part layout, compound dies, dram dies and progressive dies. Students will have a good understanding of all components in all stamping dies and be able to build all the components to produce a stamping die. The students will design and build a sample progressive stamping/forming die.
Requisite: PMT 272, PMT Associates Degree or department consent required..
Type: C

PMT 285 Advanced Multi Axis I 3-2-4
Students will continue learning about Multi Axis machining. The Class will focus on virtual setups, 3+1 programming with a focus on tombstones, 3+2 programming, tooling, and simulations to ensure successful programming of complicated parts. Students will have a better understanding of the machining workflow to machine parts in one setup dealing with difficult part features and finish quality due to resonance of the parts.
Requisite: PMT Associates Degree or department consent required.
Type: C

PMT 286 Advanced Multi Axis II 3-2-4
Students will continue learning about Multi Axis machining. The class will focus on virtual setups, fixturing, and simultaneous 5 axis machining of complicated parts. Students will have a better understanding of the machining workflow to machine parts in one setup dealing with difficult part features and finish quality due to resonance of the parts. Projects in this class will feature simultaneous 5 axis machining.
Requisite: PMT 285, PMT Associates Degree or department consent required..
Type: C

PMT 299 Problems in Precision Machining Technology Variable up to (4)-(8)-(4)
This course is designed to familiarize students with special topics or problems in the Precision Machining Technology field, and to provide them with the knowledge and ability to deal effectively with those topics or problems in relation to their specific requirements.
Requisite: None.
Type: C

Psychology

PSYC 151 General Psychology 3-0-3
General Psychology involves the study of human behavior with special emphasis on neuropsychology, learning, memory, development, psychological disorders and individual differences in personality; emphasis on the scientific nature of psychological investigations; and discussion of research methods and the relations of their results to daily life and everyday problems.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T, IAI-S6 900

PSYC 200 Applied Psychology 3-0-3
The study of the practical application of scientific, psychological principles of everyday living. Emphasis is on applying the principles of motivation, psychological measurement, mental health, consumerism, advertising, learning, management, crime and law enforcement, and stress management.
Semester(s) Offered: FALL SPR
Requisite: PSYC 151.
Type: T

PSYC 210 Life-Span Development 3-0-3
This is an introductory course that explores significant events in people's lives as they move from infancy and early childhood into adolescence, early and middle adulthood, and late adulthood. The course presents up-to-date research in the biological, cognitive, psychological, and socioemotional processes of human development. The study of life-span is intriguing because each of us, and everyone we care about, is constantly developing.
Semester(s) Offered: ALL
Requisite: PSYC 151.
Type: T, IAI-S6 902

PSYC 223 Industrial Organizational Psychology 3-0-3
This course serves as an introduction to industrial organizational psychology. Psychological theory and research relating to how humans interact with one another within the workplace will be integrated and applied to various organizational settings.
Semester(s) Offered: ALL
Requisite: PSYC 151.
Type: T

PSYC 225 Human Sexuality 3-0-3
This course examines sexuality from biological, social and psychological perspectives. Topics include the research methods for human sexuality, biological foundations of sexuality, the development of loving relationships, legal issues related to sexuality such as rape, domestic violence, incest, pornography and prostitution, health issues such as sexually transmitted infections, pregnancy, and contraception, and current societal debates related to sexual issues such as sexual orientation, gender identity, commercial sex, sex education and the implications of new reproductive technologies.
Semester(s) Offered: FALL SPR
Requisite: PSYC 151.
Type: T

PSYC 250 Child Development 3-0-3
Child development studies theoretical and practical uses of child growth from conception to age thirteen. Included are discussion of major theoretical approaches to understanding children; genetic and environmental influences; as well as physical, cognitive and social/emotional growth factors. Additional topics include parenting issues such as child-rearing techniques, school issues, and divorce.
Semester(s) Offered: ALL
Requisite: PSYC 151.
Type: T, IAI-S6 903

PSYC 251 Adolescent Development 3-0-3
A study of contemporary adolescence focusing upon biological, cognitive, social and emotional developmental characteristics and today's influences upon them. Topics will vary widely from traditional theoretical description and explanations of adolescence to discussions of media, peers, problems in adolescence, etc.
Semester(s) Offered: FALL SUM
Requisite: PSYC 151.
Type: T, IAI-S6 904

PSYC 252 Educational Psychology 3-0-3
Educational psychology is a survey course introducing students to major areas related to teaching and learning. It explores motivation, intelligence, creativity, evaluation, measurement, growth and development learning perspective. It focuses on the learning process and the impact of culture on learning styles. It may include observational experiences.
Semester(s) Offered: ALL
Requisite: PSYC 151; Eligible for ENG 101.
Type: T

PSYC 253 Adult Development and Aging 3-0-3
An introduction to the developmental and aging processes occurring during early, middle, and late adulthood. The biological, psychological, and sociological aspects of adult development and aging will be reviewed. Strong emphasis will be placed on how the developmental processes can be influenced by the individual to enhance successful aging.
Semester(s) Offered: INTERMIT
Requisite: None.
Type: T, IAI-S6 905

PSYC 254 Death and Dying 3-0-3
This course is intended to provide an investigation of issues relevant to the study of death and dying, primarily from a psychological perspective. One primary assumption in death education is confronting, learning about, and discussing death in an open forum leads to greater acceptance. The course centers on key aspects of death and dying, including living with a terminal illness, the psychological process of dying, and grief and bereavement.
Semester(s) Offered: ALL
Requisite: PSYC 151.
Type: T

PSYC 259 Abnormal Psychology 3-0-3
This course offers students the opportunity to study abnormal behavior and its place in contemporary society. The emphasis will be on human behavior ranging from the normal to the abnormal ends of the continuum. The course will be taught within a DSM-5 classification framework.
Semester(s) Offered: ALL
Requisite: PSYC 151.
Type: T, IAI-PSY 905

PSYC 265 Psychology of Women 3-0-3
This course examines sex and gender from biological, sociocultural, and psychological perspectives. A central goal is to explore social and political disadvantages resulting from the intersection of gender, race and ethnicity. Topics will include 1) research methods, 2) gender differences, biases, and stereotypes, 3) gender development, 4) mental and physical health issues for women, 5) women's role in the media and workplace, 6) the relationships, sexuality, and victimization of women.
Semester(s) Offered: FALL
Requisite: PSYC 151.
Type: T

PSYC 266 Cognitive Psychology 3-0-3
Cognitive psychology exerts a strong influence on psychology. It is the study of the human mind in all its complexity and significance. It includes the study of the human mental processes and their role in thinking, feeling, and behaving. Perception, memory, acquisition of knowledge and expertise, comprehension and production of language, problem solving, creativity, decision making, and reasoning are a few categories that are studied in cognitive psychology. Cognitive neuroscience, which is the scientific study of the relationships between cognitive psychology and neuroscience, is also studied in this course.
Semester(s) Offered: FALL
Requisite: PSYC 151.
Type: T

PSYC 270 Health Psychology 3-0-3
This course is a detailed overview of health psychology. The course will cover theoretical models of health behavior, health-compromising behaviors, patient provider relations, psychological issues in preventative health behaviors, and the psychological issues involved in the management of chronic and terminal illness.
Semester(s) Offered: INTERMIT
Requisite: PSYC 151.
Type: T

PSYC 288 Biological Psychology 3-0-3
Biological psychology is the study of the physiological, evolutionary, and developmental mechanisms of behavior and experience. Students enrolled in this course will learn about major issues as they relate to brain and behavior. Specifically, this course will cover the anatomy and functions of the brain as it relates to concepts such as genetics, drug use, intelligence, disorders of movement and brain damage and what makes one a morning person versus an evening person. This course is an excellent course for any student interested in learning about disorders such as narcolepsy, attention deficit disorder, substance abuse and addiction or psychological disorders as each relates to the brain.
Semester(s) Offered: INTERMIT
Requisite: PSYC 151.
Type: T

PSYC 295 Social Psychology 3-0-3
This course examines the ways in which people think about, influence, and relate to one another, or how the individual affects and is affected by his or her social world. A central goal of the course is to improve human relations by focusing on social and political disadvantages of race, ethnicity, gender and other issues. Overall, the course will emphasize current theory and research in social psychology, as well as the development of critical thinking skills that can be applied to both theory and research methodology.
Requisite: PSYC 151.
Type: T, IAI-PSY 908, IAI-S8 900

PSYC 299 Problems In Psychology Variable up to (3)-0-(3)
A course designed to present problems and topics in psychology through readings, individual research and discussions. Problems and topics vary each semester. In-depth study of such topics as learning, motivation and personality theories. This course may be taken more than once if different topics are considered.
Semester(s) Offered: INTERMIT
Requisite: PSYC 151.
Type: T

Radiologic Technology

RT 100 Radiologic Technology I 2.5-0-2.5
This course provides a general orientation to the radiologic technology profession in health care. Topics presented are the history of radiologic technology, department organization, medical ethics, professional conduct, patient care, radiographic terminology, contrast media administration, and professional organizations and accreditation. Emphasis is placed on anatomy, physiology and radiographic positioning of the chest, abdomen, upper and lower extremities and an introduction to cross sectional anatomy.
Semester(s) Offered: SUMMER
Requisite: Program admission, concurrent enrollment in or completion of RT 101 with a grade of "C" or better.
Type: C

RT 101 Radiographic Positioning I 3.5-0-3.5
Designed to provide the student radiographer with the opportunity to apply the principles of radiographic equipment operations, digital processing, radiation protection and radiographic image evaluation. Emphasis is placed on positioning performance of the radiographic examinations specified in RT 100, utilizing the energized lab and phantom patient.
Semester(s) Offered: SUMMER
Requisite: Program admission, concurrent enrollment in or completion of RT 100 with a grade of "C" or better.
Type: C

RT 102 RT Math Computations 1-0-1
This course is for students who will use mathematics for the calculations of physics formulas used by radiologic technology. This course covers a review of basic mathematical principles of addition, subtraction, multiplication and division of whole numbers, mixed numbers, fractions, decimals, ratio, proportion, basic principles of algebra and percentages, exponents, scientific notation, and metric conversions.
Semester(s) Offered: SUMMER
Requisite: Program admission, concurrent enrollment in or completion of RT 100 and RT 101, each with a grade of "C" or better.
Type: C

RT 110 Radiologic Technology II 3-0-3
Basic principles of radiographic anatomy and positioning procedures of the digestive, biliary and urinary systems, vertebral column and bony thorax. Supervised clinical experience is assigned at a medical facility to meet the competency requirements in radiographic principles and procedures as specified.
Semester(s) Offered: FALL
Requisite: RT 100, RT 101 each with a grade of "C" or better.
Type: C

RT 111 Radiographic Positioning II 4-0-4
Designed to provide the student radiographer with the opportunity to apply the principles of radiographic positioning of the examinations specified in RT 110, utilizing the energized lab and phantom patient.
Semester(s) Offered: FALL
Requisite: RT 100, RT 101 each with a grade of "C" or better.
Type: C

RT 112 Clinical Experience I 0-16-3
Supervised clinical experience is assigned at a medical facility to meet the competency requirements in radiographic principles and procedures as specified.
Semester(s) Offered: FALL
Requisite: RT 100, RT 101 each with a grade of "C" or better.
Type: C

RT 131 X-Ray Physics I 4-0-4
An introductory course to X-ray physics including X-ray production, basic radiation safety, radiographic technique, and quality assurance.
Semester(s) Offered: FALL
Requisite: RT 100, RT 101 each with a grade of "C" or better.
Type: C

RT 150 Radiologic Technology III 3-0-3
Basic principles of radiographic anatomy and positioning procedures of the skull and visceral cranium. Included is the introduction of special procedures, basic positioning skills, usage of specialized equipment and contrast media. Emphasis is placed upon mobile radiography, angiography, tomography, cross sectional anatomy, mammography, computer applications, and the imaging modalities of ultrasonography, CT, MRI.
Semester(s) Offered: SPRING
Requisite: RT 110 with a grade of "C" or better.
Type: C

RT 151 Radiographic Positioning III 4-0-4
Designed to provide the student with the opportunity to apply the principles of radiographic positioning of the skull, visceral cranium, utilizing the energized lab and phantom patient. Instruction and experiments demonstrating technical factors influencing radiographic quality are implemented.
Semester(s) Offered: SPRING
Requisite: RT 111 with a grade of "C" or better.
Type: C

RT 152 Clinical Experience II 0-16-3
Supervised clinical experience is assigned at a medical facility to meet competency requirements in radiographic principles and procedures of the skull and visceral cranium. Practical applications presented in RT 100, 101, 110, and 111 are included. Observation and assistance in special procedure examinations will be included.
Semester(s) Offered: SPRING
Requisite: RT 112 with a grade of "C" or better.
Type: C

RT 160 Clinical Experience III 0-16-3
Supervised clinical experience is assigned at a medical facility to meet competency requirements in radiographic principles and procedures presented in the first year. (30 clinical hours per week)
Semester(s) Offered: SUMMER
Requisite: BIOL 105, RT 150, RT 151, RT 180 each with a grade of "C" or better and completion of or concurrent enrollment in HRO 100 with a grade of "C" or better.
Type: C

RT 180 X-Ray Physics II 4-0-4
This course includes basic atomic structure, electricity, magnetism, electromagnetics, the X-ray circuit, X-ray production, and X-ray interaction with matter.
Semester(s) Offered: SPRING
Requisite: RT 131 with a grade of "C" or better.
Type: C

RT 230 Pathology for Radiographers 1-0-1
This course is designed to help student radiographers appreciate the relationship of diseases visualized on radiographs. Topics covered are pathological terminology, cross sectional anatomy, and the systems of the human body.
Semester(s) Offered: FALL
Requisite: RT 160 with a grade of "C" or better.
Type: C

RT 241 Clinical Experience IV 0-15-3
A hospital affiliated course designed to increase the students efficiency in performing routine and special procedure radiographic exams.
Semester(s) Offered: FALL
Requisite: RT 160 with a grade of "C" or better.
Type: C

RT 242 Clinical Modalities I 0-4-1
In radiation therapy, the students observe treatment planning, treatments, follow-up exams and become familiar with the equipment utilized. In nuclear medicine, the students observe preparation and administration of radiopharmaceuticals, examinations performed and become familiar with the equipment utilized. In sonography students observe the use of high-frequency sound waves to create images.
Semester(s) Offered: FALL
Requisite: RT 160 with a grade of "C" or better.
Type: C

RT 244 Radiobiology 4-0-4
A study of the principles of radiation biology, radiation protection, cellular response, systematic response, the early and late effects of radiation exposure, and the regulations regarding ionizing radiation hazards.
Semester(s) Offered: FALL
Requisite: RT 160 with a grade of "C" or better.
Type: C

RT 261 CT Anatomy & Patient Care 2.5-0-2.5
This course is the first of two which collectively meet the Structured Education Requirements for Computed Tomography of the ARRT. These courses must be completed within the 24 month period immediately prior to submission of application for certification and registration in CT. Students will identify human anatomy as seen in the cross sectional view as well as discuss the imaging characteristics seen in common pathological conditions. Review of patient care during CT examination will include: symptoms, patient history, contrast media, patient safety and protocols used in CT. Student must be RT(R) Registered.
Semester(s) Offered: FALL
Requisite: RT (R) Registered, Concurrent enrollment in RT 262 or proof of ARRT clinical exams completed.. Department consent
Type: C

RT 262 CT Experience Internship 0-7.5-1.5
Supervised CT clinical experience is assigned at a medical facility to meet competency requirements in Computed Tomography principles and procedures. The clinical portion of the Computed Tomography Program is designed to prepare students to be competent, efficient working technologists. Upon successful completion of the CT clinical course, students will work toward completing the examination requirements for the ARRT. Once all 120 hrs/125 exams are completed students will be eligible to sit for the CT post-primary certification exam. Students are responsible for completing specified competencies, logging procedures on-line and fulfilling ARRT requirements.
Semester(s) Offered: FALL
Requisite: Concurrent enrollment in or completion of RT 261..
Type: C

RT 263 CT Physics & Procedures 2.5-0-2.5
This course is the second of two which collectively meet the Structured Education Requirements for Computed Tomography of the ARRT. These courses must be completed within the 24 month period immediately prior to submission of application for certification and registration in CT. The Physics portion will provide the radiographer with knowledge of CT system operation and components, image processing and display, image quality, and artifacts. The Procedures portion will cover CT scan preparation, artifacts, contrast media, safety, positioning & protocols for the head, spine, chest, abdomen, pelvis and limbs.
Semester(s) Offered: FALL
Requisite: Completion of RT 261 with a "C" or better..
Type: C

RT 291 MRI Patient Care & Procedures
This course is the first of two which collectively meet the ARRT Structured Education Requirements for Magnetic Resonance Imaging. These courses must be completed within 24 months prior to submission of application for certification in MR. This course focuses on MRI scanning procedures, applications, sectional anatomy, and pathology. Students will learn scanning parameters and patient care techniques relevant to specific body sections. Patient Interactions and Management will be emphasized.
Requisite: Registered RT (R), Concurrent enrollment in RT 292 or proof of ARRT clinical exams completed.
Type: T

RT 292 MRI Clinical Internship 0-6-3
Supervised MRI clinical experience is assigned at a medical facility to meet competency requirements in Magnetic Resonance Imaging principles and procedures. The clinical portion of the MRI certificate is designed to prepare students to be competent, efficient working technologists. Upon successful completion of the MRI clinical course, students will work toward completing the examination requirements for the ARRT. Once all 125 repetitions are completed, students will be eligible to sit for the MRI post-primary certification exam. Students are responsible for completing specified competencies logging procedures online, and fulfilling ARRT requirements.
Requisite: RT (R) Registered, Concurrent enrollment in RT 291
Type: T

RT 293 MRI Safety & Image Production
This course is the second of two which collectively meet the ARRT Structured Education Requirements for Magnetic Resonance Imaging. These courses must be completed within 24 months prior to submission of application for certification in MRI. This course focuses on principles of magnetic resonance imaging, imaging sequences and parameters. Topics of discussion will include imaging equipment, quality assurance, safety considerations, data acquisition, instrumentation, image reconstruction, and artifacts.
Requisite: Registered RT (R), Concurrent enrollment in RT 292 or proof of ARRT clinical exams completed.
Type: C

RT 296 IT for Radiographers 1-0-1
The technology for digital imaging in health care for computed radiography and digital radiography are addressed in this class. It includes the basic concepts of image acquisition for the creation of electronic images that can be displayed, viewed, transmitted, archived and retrieved. Also addressed in this class is image quality, patient dose and radiation safety as it relates to digital imaging as well as the basics of Radiology Information Systems and PACS.
Semester(s) Offered: SPRING
Requisite: RT 230, RT 244 each with a grade of "C" or better.
Type: C

RT 297 Radiologic Technology Review 4-0-4
A continuation of theory and practice in radiographic procedures, radiation safety, image production and patient care.
Semester(s) Offered: SPRING
Requisite: RT 230, RT 244 each with a grade of "C" or better.
Type: C

RT 298 Clinical Modalities II 0-4-1
In CT, the student observes large series of two-dimensional x-rays images taken around a single axis of rotation to visualize various structures. In MRI, a student observes how imaging is performed with the use of radio frequency signals and a magnetic field. In interventional radiology, a student observes minimally invasive, targeted treatments performed using imaging for guidance.
Semester(s) Offered: SPRING
Requisite: RT 241, RT 242 each with a grade of "C" or better.
Type: C

RT 299 Clinical Experience V 0-15-3
A hospital affiliated course in which the student performs routine, advanced and special radiographic procedures.
Semester(s) Offered: SPRING
Requisite: RT 241, RT 242 each with a grade of "C" or better.
Type: C

Respiratory Care

RC 102 Cardiopulmonary Anatomy and Physiology3-0-3
This course involves an in-depth study of the anatomy and physiology of the respiratory and cardiovascular systems, including aspects of the central nervous system. Diffusion, gas transport, ventilation and perfusion are closely examined.
Semester(s) Offered: FALL
Requisite: Program admission or Program Coordinator Permission.
Type: C

RC 103 Applied Science 3-0-3
This course provides the student with a foundation in the basic sciences relevant to respiratory care. Areas covered include chemistry, physics, microbiology, computers, and mathematics/algebra concepts as related to the practice of respiratory care.
Semester(s) Offered: FALL
Requisite: Program admission or Program Coordinator Permission.
Type: C

RC 104 Practices and Procedures 3-4-5
This course provides classroom instruction and laboratory practice for the equipment used to administer general respiratory care. Classroom instruction and laboratory practice is provided for many general respiratory care procedures, as well as certification in BLS.
Semester(s) Offered: FALL
Requisite: Program admission, HRO 100, BIOL 105 each with a grade of "C" or better, concurrent enrollment in or completion of RC 105 with a grade of "C" or better.
Type: C

RC 105 Patient Assessment 2-2-3
This course provides the student with knowledge of how patient assessment procedures are performed. Information gathered from these assessments as well as from diagnostic tests, and laboratory assessment is related to the patient's health status and response to treatment. This course also includes obtaining, analyzing, and basic interpretation of blood gases as well as blood gas analyzer function and the quality assurance standards for blood gas analyzers. Note: This course requires one clinical shadow day. Date, time and location will be announced.
Semester(s) Offered: FALL
Requisite: HRO 100, BIOL 105 each with a grade of "C" or better, concurrent enrollment in or completion of RC 104 with a grade of "C" or better.
Type: C

RC 110 Cardiopulmonary Pathology 3-0-3
This course provides an overview of diseases of the cardiopulmonary and related systems requiring medical and/or surgical intervention. Each pathological process is discussed with regard to etiology, diagnosis, treatment, and prognosis. An overview of pulmonary function testing and a more in-depth discussion of acid-base balance is also provided.
Semester(s) Offered: SPRING
Requisite: RC 102 with a grade of "C" or better. Department consent
Type: C

RC 111 Respiratory Care Pharmacology 3-0-3
This course provides an introduction to the theory and use of medications, with emphasis on those used in cardiorespiratory care. Content will include weights, measures, actions, indications, contraindications and hazards of drugs. Normal physiology and pathophysiology are reviewed to clarify the role of medications in the treatment of disease processes.
Semester(s) Offered: SPRING
Requisite: RC 103 with a grade of "C" or better. Department consent
Type: C

RC 112 Adult Airway and Ventilators 3-4-5
This course provides a continuation of classroom instruction and laboratory practice for respiratory care procedures, including airway management and noninvasive positive pressure ventilation. The course concludes with an introduction to continuous mechanical ventilation and critical care procedures.
Semester(s) Offered: SPRING
Requisite: Concurrent enrollment in or completion of RC 110, RC 111, RC 113 each with a grade of "C" or better; RC 102, RC 103, RC 104, RC 105 each with a grade of "C" or better.
Type: C

RC 113 Clinical Practice I 0-8-4
This course provides under supervision: observation, practice, and application of patient assessment and general respiratory care procedures and airway management in the clinical setting, with an introduction to mechanical ventilation and critical care procedures toward the end of the course. Note: This course requires clinical practice each week. Dates, times and locations will be announced.
Semester(s) Offered: SPRING
Requisite: RC 102, RC 103, RC 104 and RC 105 each with a grade of "C" or better; concurrent enrollment in or completion of RC 110, RC 111, RC 112 each with a grade of "C" or better.
Type: C

RC 114 Advanced Ventilation & Ped RC 1.5-2-2.5
This course provides a continuation and completion of classroom instruction and laboratory practice for mechanical ventilatory support and its use in respiratory care. Specific areas of interest include improving ventilation and oxygenation of the ventilated patient, ventilator graphics, assessment of the critically ill patient, and troubleshooting the ventilator. The course will conclude with an overview of pediatric respiratory care; including assessment, monitoring, basic therapies, non-invasive ventilation, and mechanical ventilation of the pediatric patient as well as the etiology, pathophysiology, diagnosis, and management of pediatric diseases.
Semester(s) Offered: SUMMER
Requisite: RC 110, RC 111, RC 112, RC 113 each with a grade of "C" or better; concurrent enrollment in or completion of RC 115 with a grade of "C" or better.
Type: C

RC 115 Clinical Practice II 0-4-2
This course continues to provide clinical experience in the intensive care unit to gain more experience with mechanical ventilation and critical care procedures. The course will focus on advanced ventilator management including assessing the critically ill patient, adjusting the ventilator, ventilator graphics, and troubleshooting. The student will gain more experience with critical care skills such as airway management and arterial blood gas analysis. NOTE: This course requires clinical practice each week. Dates, times and locations will be announced.
Semester(s) Offered: SUMMER
Requisite: RC 110, 111, 112, 113 each with a grade of "C" or better, concurrent enrollment in or completion of RC 114 with a grade of "C" or better.
Type: C

RC 203 Adult Critical Care and NEO 3-4-5
The course begins with ACLS certification with extensive review of electrocardiogram technique and interpretation, cardiac pharmacology, as well as myocardial infarction and stroke care. The course will also include basic overview of Pediatric Advanced Life Support. The student will then be provided with a more in-depth study of pulmonary function testing in the classroom and lab. The course will conclude with information related to fetal development, neonatal assessment, and neonatal resuscitation. Information will include airway management, oxygen therapy, transcutaneous monitoring, capillary sticks, non-invasive CPAP and mechanical ventilation of the neonatal patient.
Semester(s) Offered: FALL
Requisite: RC 114, RC 115 each with a grade of "C" or better, concurrent enrollment in or completion of RC 204 with a grade of "C" or better.
Type: C

RC 204 Clinical Practice III 0-8-4
This course provides under supervision: observation, practice, and application of respiratory care procedures to critically ill adults and pediatric patients. The course includes continuous mechanical ventilation and advanced patient assessment and monitoring procedures of critically ill adult and pediatric patients as well as patients in alternate settings including bronchoscopy. NOTE: This course requires clinical practice each week. Dates, times and locations will be announced.
Semester(s) Offered: FALL
Requisite: RC 114, RC 115 each with a grade of "C" or better, concurrent enrollment in or completion of RC 203 with a grade of "C" or better.
Type: C

RC 205 Hemodynamics & RC Specialties 3-0-3
The course provides information about respiratory care in alternate sites, cardiopulmonary rehabilitation, polysomnography, patient and community education, assessment of hemodynamics, transport inside and outside of the hospital, nutrition and metabolic testing, legal and moral ethics of health care, and health care management and reimbursement. The course will also provide career assistance such as interview skills and resume design.
Semester(s) Offered: SPRING
Requisite: RC 203, RC 204 each with a grade of "C" or better; concurrent enrollment in or completion of RC 206, RC 207 each with a grade of "C" or better.
Type: C

RC 206 Clinical Practice IV 0-8-4
This course provides under supervision: observation, practice, and application of respiratory care procedures to critically ill neonatal patients, non-invasive CPAP, continuous mechanical ventilation of the new born, rehabilitation of respiratory care patients, care and testing of patient's with sleep disorders, testing of patients' pulmonary function, long term ventilator care facilities, cardiac stress testing and electrocardiography, and the care of respiratory care patients in alternate settings. Note: This course requires clinical practice each week. Dates, times and locations will be announced.
Semester(s) Offered: SPRING
Requisite: RC 203, RC 204 each with a grade of "C" or better; concurrent enrollment in or completion of RC 205, RC 207 each with a grade of "C" or better.
Type: C

RC 207 Respiratory Care In Review 4.5-0-4.5
This format allows for a variety of pertinent, current respiratory care and health care topics to be presented as needed. Set topics will include preparation for the National Board for Respiratory Care's NBRC Therapist Multiple Choice Exam and Clinical Simulation Exam, as well as exercises is critical thinking and review of clinical practice guidelines and therapist driven protocols.
Semester(s) Offered: SPRING
Requisite: RC 203, RC 204 each with a grade of "C" or better; concurrent enrollment in or completion of RC 205, RC 206 each with a grade of "C" or better.
Type: C

Russian

RUSS 101 Elementary Russian I 4-0-4
This introductory language course focuses on establishing a solid foundation in the four basic skill areas of reading, writing, listening comprehension and speaking in Russian. Students are also introduced to the history and cultures of the Russian-speaking world.
Semester(s) Offered: INTERMIT
Requisite: Eligible for ENG 97 or higher.
Type: T

RUSS 102 Elementary Russian II 4-0-4
This introductory language course is a continuation of RUSS 101 and focuses on establishing a solid foundation in the four basic skill areas of reading, writing, listening comprehension and speaking in Russian. Students are also introduced to the history and cultures of the Russian-speaking world.
Semester(s) Offered: INTERMIT
Requisite: RUSS 101.
Type: T

Sign Language Studies Interpreter

SLS 100 Non-Verbal Communication 2-0-2
This course compares and contrasts non-verbal behavior and actions to speech and signs. Facial expressions, posture, movement, gestures will be examined and how the literal use of words/signs don't always convey the meaning of the message. Students learn to use pantomime versus actual signs depending on the signing ability of the deaf or hard of hearing individual.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: C

SLS 101 American Sign Language I 5-0-5
In depth and eventual total immersion exposure to American Sign Language for the development of beginning-level communication skills used with deaf persons. Focus is on building sign vocabulary, fingerspelling, grammar and syntax rules, non-manual markers, appropriate hand shapes and movement, use of personal space and the development of sensitivity and awareness through required socialization with the deaf community. (Fall only)
Semester(s) Offered: FALL
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: C

SLS 102 American Sign Language II 5-0-5
Continued development of intermediate-level sign language communication skills as utilized in interaction by deaf persons. Emphasis given to comprehension, use of classifiers, locatives and production skills within a total immersion sign language environment. Linguistic and cultural features presented in the context of language learning experiences.
Semester(s) Offered: SPRING
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: C

SLS 103 Conversational Sign Language I 2-2-3
This course is designed to give basic conversational strategies in American Sign Language. Students will learn introductory vocabulary and key phrases. This course is targeted to students who have no prior knowledge of the language. This course is not part of the Sign Language Interpreting Program degree curriculum but serves a a great starting point in sign language learning.
Semester(s) Offered: ALL
Requisite: None.
Type: T

SLS 105 Field Experiences 1-2-2
During this course, students will be paired with/mentored by a deaf or hard of hearing individual to expose students to the daily experience of someone who is deaf or hard of hearing. Students will attend deaf socials and club events, informal coffee chats, home parties, etc. During these experiences, students will have the opportunity to develop practical sign vocabulary and increase their comfort level when interacting with individuals who are deaf or hard of hearing. A minimum of 30 hours of involvement with the deaf community is required. (Spring only)
Semester(s) Offered: SPRING
Requisite: Concurrent enrollment in or completion of SLS 102 with a grade of "C" or better.
Type: C

SLS 110 Deaf Studies/Culture 3-0-3
This course is an introduction to the studies of the language, culture and community of deaf people. Topics include deaf history, education, sociology, language, legal issues, art and literature, audism, services for the deaf, organizations, assistive technology devices, and the nature of deafhood. Several controversial issues will be analyzed such as oralism, methods of deaf education, signing systems, cochlear implants, and student protest movements.
Semester(s) Offered: FALL SPR
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: C

SLS 120 ASL Linguistics I 3-0-3
An introductory course that focuses on the study of ASL and English phonology, morphology, syntax, semantics, rules of classifier systems, ASL storytelling, and language variation, with an introduction to discourse analysis and language in context. The course is built around discussion of readings, in class exercises and video projects to allow students to apply concepts that have been discussed. (Spring only)
Semester(s) Offered: SPRING
Requisite: ENG 101 with a grade of "C" or better, concurrent enrollment in or completion of SLS 102 with a grade of "C" or better.
Type: C

SLS 125 ASL Fingerspelling and Numbers 1-0-1
This course is designed to assist students in the development of expressive and receptive fingerspelling and numbering system skills embedded with ASL conversational phrases and stories.
Semester(s) Offered: ALL
Requisite: None.
Type: C

SLS 203 American Sign Language III 4-0-4
Continued exposure to ASL, within a total immersion sign language environment, allowing further study and development of expressive and receptive communication skills. Emphasis will be on the development of sign vocabulary within expanded stories and disclosure. Linguistic and cultural features presented in the context of language learning experiences. (Fall only)
Semester(s) Offered: FALL
Requisite: SLS 102 with a grade of "C" or better.
Type: C

SLS 205 Interpreting I 3-0-3
Students develop the skill of simultaneously interpreting ASL and Contact Sign into an equivalent message in spoken English. Students will learn the basics in the sign to voice process, progressing from sentential to textual formats working with comprehension, appropriate English word choices, vocal inflection, and English structure. Coursework will consist of lecture and discussion, videotaped projects and in class exercises and activities for skill enhancement. (Spring only)
Semester(s) Offered: FALL
Requisite: SLS 105 with a grade of "C" or better; concurrent enrollment in or completion of SLS 203, SLS 210 each with a grade of "C" or better.
Type: C

SLS 206 Interpreter Principles & Practices 3-0-3
This is a survey course that is designed to introduce students to contemporary theories regarding interpretation and the world of work of interpreters. Students will become familiar with the specialized jargon used within the field of interpretation to describe various aspects of the work and the protocol that influences interpretation work in different settings. Ethical standards associated with interpretation will be introduced and applied to a variety of work situations. (Fall only)
Semester(s) Offered: FALL
Requisite: SLS 105, SLS 120 each with a grade of "C" or better; concurrent enrollment in or completion of SLS 203 with a grade of "C" or better.
Type: C

SLS 210 ASL Linguistics II 3-0-3
Students continue the study of ASL and English linguistics, building on information introduced in SLS 120, through study of semantics, pragmatics, turn-taking, discourse analysis, and language in context. The primary focus of this course is translation through discourse analysis and techniques of rephrasing and restructuring meaning in ASL and in English. Power dynamics, language in context and turn-taking in interpreted settings will also be discussed in relation to the interpreter's role. (Fall only)
Semester(s) Offered: FALL
Requisite: SLS 120 with a grade of "C" or better, concurrent enrollment in or completion of SLS 203 with a grade of "C" or better.
Type: C

SLS 220 Interpreting II 3-0-3
Students build upon skills learned in SLS 205, with a focus on simultaneous interpretation of unrehearsed texts from English to ASL. Coursework will consist of videotaped projects, in class exercises, activities and individual work for skill enhancement. (Spring only)
Semester(s) Offered: SPRING
Requisite: SLS 205 with a grade of "C" or better.
Type: C

SLS 225 Sign to Voice 3-0-3
Students develop the skill of simultaneously interpreting ASL and Contact Sign into an equivalent message in spoken English. Students will learn the basics in the sign to voice process, progressing from sentential to textual formats working with comprehension, appropriate English word choices, vocal inflection, and English structure. Coursework will consist of lecture and discussion, videotaped projects and in class exercises and activities for skill enhancement. (Spring only)
Semester(s) Offered: SPRING
Requisite: SLS 205, SLS 210 each with a grade of "C" or better; concurrent enrollment in or completion of SLS 220.
Type: C

SLS 230 Interpreting Practicum 1.5-6.5-3
Students will interpret in a variety of low-risk settings under the supervision of the instructor and/or a selected professional practitioner/mentor. Weekly seminar discussions will include review and analysis of the interpreting experiences and application of professional ethics and decision making skills. Students will prepare professional resumes and submit an interpreting log, documenting a minimum of 100 hours of interpreting experience. (Spring only)
Semester(s) Offered: SPRING
Requisite: SLS 255 with a with a grade of "C" or better; concurrent enrollment in or completion of SLS 220 and SLS 225 each with a grade of "C" or better.
Type: C

SLS 255 Transliterating 3-0-3
This is a skill development course that provides students with the opportunity to practice the skills associated with simultaneously transliterating between spoken and Contact Sign. Students will be introduced to the specialized skills and terms involved in the transliteration process. Coursework will consist of lecture and discussion, videotaped projects and in-class exercises and activities for skill enhancement. (Fall only)
Semester(s) Offered: FALL
Requisite: Concurrent enrollment in or completion of SLS 203, SLS 205, SLS 210 each with a grade of "C" or better.
Type: C

SLS 270 Educational & Special Interpreter Settings 3-0-3
Students will discuss interpreting in the school and classroom environment, as well as in specialized community settings. Professional roles and responsibilities will be examined from the perspective of working with minors, their parents/guardians, educators, and school staff. Students will learn how the role of an interpreter changes from a pre-K environment through post-secondary levels. Students will participate in role-play and live interpretation of dialogues that occur in educational, social service, employment, and other special interpreting settings. Students will learn specialized vocabulary and the general principles and protocol associated with interpreting in each setting. (Spring only)
Semester(s) Offered: SPRING
Requisite: Concurrent enrollment in or completion of SLS 206, SLS 220, SLS 225, SLS 230 each with a grade of "C" or better.
Type: C

SLS 275 Interpreting Practicum II 1-6-2
Students will interpret in a variety of low-risk settings under the supervision of the instructor and selected professional practitioners/mentors, building on the skills and experiences acquired in SLS 230. Weekly discussions will contain review and analysis of the interpreting experiences as well as individual skill development. The focus of this course will be field work (50 hours) with mentorship opportunities and skill development based on individual need. (Summer only)
Semester(s) Offered: INTERMIT
Requisite: SLS 230 with a grade of "C" or better.
Type: C

SLS 280 Performance Interpreting 3-0-3
The key to successful performance interpreting lies in conveying the characters, relationships and atmosphere of the performance. This course assists interpreters and student interpreters in transitioning from everyday interpreting to a theatre/concert interpreting setting. (Spring only)
Semester(s) Offered: SPRING
Requisite: Department consent
Type: C

SLS 290 Interpreter Certification Prep 0-4-1
This course is a vocational training course providing internship opportunities to graduates of Interpreter Training Programs who are preparing for state and national certification exams required for licensure. Interns will become more familiar with testing criteria and develop self-directed goals that work toward achieving or advancing professional certification (BEI, EIPA or NIC). Preparation for these exams may include, but is not limited to: job shadowing, internships, independent study skill development; self-assessment; mentor and peer feedback both online and face-to-face; practical work in the field; and working with beginner/intermediate students as peer reviewers and mentees.
Semester(s) Offered: ALL
Requisite: SLS 230 or graduation from an Interpreter Training Program or instructor approval.
Type: C

SLS 299 Special Topics In SLS Variable up to (4)-(8)-(4)
This course is designed to familiarize students with special topics or problems in Sign Language Studies: Interpreter field to provide them the knowledge or ability to deal effectively with those topics or problems in relation to their specific requirements. NOTE: Requisite varies by topic.
Semester(s) Offered: ALL
Requisite: SLS 230.
Type: C

Sociology

SOC 153 Introductory Sociology 3-0-3
This course is an introduction to the field of sociology – the scientific study of human social behavior. The intersection and interaction of the individual and society is emphasized. Consideration will be given to key areas of sociological research (socialization, group dynamics, social roles, social stratification, social theory, deviance and social control) and how these processes work in key social situations (such as the family, education, religion and economy). A major focus is the intersection of social class, race, ethnicity and gender. The course will focus on assisting the student to develop a Sociological Imagination.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101 or concurrent with ENG 97.
Type: T, IAI-S7 900

SOC 155 Introduction to Social Work 3-0-3
This is an introductory-level course designed to familiarize students with concepts in social work. This course is appropriate for students considering a career as social worker and will explore the profession's history, purpose, and provide a broad introduction to generalist social work practice. Students will become familiar with the profession's code of ethics, values, and current areas of focus. Students will learn about social work practice applications in micro, mezzo, and macro areas of practice.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T

SOC 203 Social Problems 3-0-3
This course will introduce the sociological study of social problems focusing on both the structural context and symbolic construction within U.S. society. Social issues such as poverty, unemployment, racism, gender inequality, pollution, war, issues in education, drugs and crime will be explored with an emphasis on the intersection of race, ethnicity, gender and social class. Research will be used to understand the nature of these problems and to explore ongoing and new solutions.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, IAI-S7 901

SOC 210 Deviance, Crime and Society 3-0-3
This course explores the nature and variety of crime and deviant behavior in American society. Violence, crime, sexual deviance, alcohol and drug use and elite deviance are examined. Various theoretical approaches will be explored and applied. Issues surrounding social control will be considered.
Semester(s) Offered: FALL
Requisite: SOC 153 or ANTH 150.
Type: T

SOC 230 Race & Ethnicity in the United States 3-0-3
This class is an introduction to the sociological study of race and ethnicity in the United States. The focus is major sociological concepts, theories and ideas related to race and ethnicity. The historical development of racial and ethnic diversity and the current social circumstances of a variety of racial and ethnic groups in the United States will be included. The development and use of a sociological perspective will be emphasized to critically examine our current situation and our future as a multicultural society, emphasizing the intersection of race and ethnicity with gender and social class.
Semester(s) Offered: SPRING
Requisite: None.
Type: T, IAI-S7 903D

SOC 255 The Family 3-0-3
This course is an examination of the origin and evolution of the human family as a social institution. Consideration will be given to traditional family types with special emphasis on the structure and function of the American family. It offers analyses of courtship patterns, marriage and the family forms, relationships and functions, and socio-cultural differences in family.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 101.
Type: T, IAI-S7 902

SOC 265 Aging and Society 3-0-3
This course is an introduction to social gerontology (the sociology of aging and the aged). It examines age, aging and the aged from a sociological perspective. Specific emphasis is placed upon theories of aging, demographic trends (past, present and speculative), the social construction of aging, the interplay of social institutions and aging, and issues of age and inequality. Particular attention will be given to applied sociological ideas, including analysis and discussion of public policy and medical sociology.
Semester(s) Offered: FALL
Requisite: SOC 153.
Type: T

SOC 299 Research Study Problems in Soc. Variable up to (3)-0-(3)
Seminar on a special topic or current issue in sociology.
Semester(s) Offered: INTERMIT
Requisite: Sophomore standing and at least one previous sociology course..
Type: T

Spanish

SPAN 101 Elementary Spanish I 4-0-4
This introductory language course focuses on establishing a solid foundation in the four basic skill areas of reading, writing, listening comprehension and speaking in Spanish. Students are also introduced to the history and cultures of the Spanish-speaking world.
Semester(s) Offered: ALL
Requisite: Eligible for ENG 97 or higher.
Type: T

SPAN 102 Elementary Spanish II 4-0-4
This introductory language course is a continuation of SPAN 101 and focuses on establishing a solid foundation in the four basic skill areas of reading, writing, listening comprehension and speaking in Spanish. Students are also introduced to the history and cultures of the Spanish-speaking world.
Semester(s) Offered: ALL
Requisite: SPAN 101.
Type: T

SPAN 201 Intermediate Spanish I 4-0-4
Continued development of listening, speaking, reading and writing skills in Spanish. Grammar review. Cultural and literary readings and compositions. Course is conducted almost entirely in Spanish.
Semester(s) Offered: FALL SPR
Requisite: SPAN 102.
Type: T

SPAN 202 Intermediate Spanish II 4-0-4
Continued development of listening, speaking, reading and writing skills in Spanish. Grammar review. Cultural and literary readings and compositions. Course is conducted almost entirely in Spanish.
Semester(s) Offered: SPRING
Requisite: SPAN 201.
Type: T, IAI-H1 900

SPAN 211 Conversational Spanish I 3-0-3
This course focuses on developing speaking competency in Spanish. Individual exercises and group discussions on general topics and everyday situations help students improve their self-expression and aural comprehension. Oral exercises also help students acquire correct pronunciation and expand their knowledge of vocabulary and idioms in Spanish.
Semester(s) Offered: INTERMIT
Requisite: SPAN 102.
Type: T

SPAN 212 Conversational Spanish II 3-0-3
A continuation of SPAN 211. This course focuses on developing speaking competency in Spanish. Individual exercises and group discussions on general topics and everyday situations help students improve their self-expression and aural comprehension. Oral exercises also help students acquire correct pronunciation and expand their knowledge of vocabulary and idioms in Spanish.
Semester(s) Offered: INTERMIT
Requisite: SPAN 211.
Type: T

SPAN 299 Special Topics in Spanish Variable up to (4)-0-(4)
An in-depth study of various areas in Spanish language and culture presented through lectures, discussions, and/or individual research and readings by the students. Topics will vary. May include travel/study activities.
Semester(s) Offered: INTERMIT
Requisite: None
Type: T

Sterile Processing Technology

SPT 103 Sterile Processing Concepts 2.5-5-5
This course covers central sterile processing concepts focusing on cleaning, decontamination, and disinfection; preparation and packaging; documentation & record maintenance; the sterilization process; sterile storage and inventory management; and patient care equipment. The course will include topics of regulatory procedures, safety, risk management, infection prevention, quality assurance, and professional practices.
Requisite: Acceptance into the Sterile Processing Technician Program.
Type: C

SPT 110 SPT Experiential Learning 0-8-4
This course focuses on experiential learning in a healthcare setting with central sterile employees. Students will perform the essential duties of a sterile processing technician and are responsible for upholding professional practices related to the professional position. Students will fulfill a minimum of 400 hands-on contact hours necessary to apply to sit for the Certified Registered Central Service Technician (CRCST) Examination.
Requisite: Acceptance into the Sterile Processing Technician Program.
Type: C

Theatre

THEA 120 Theatre Appreciation 3-0-3
A Humanities course that surveys the nature and function of theatre as a collaborative art. The foundations and basic elements, historical and contemporary forms of experience, production processes, and criteria for performance criticism of theatre will be explored using lecture, selected readings, films, demonstrations, guest speakers, and slide presentations. Some play attendance will be required.
Semester(s) Offered: ALL
Requisite: None.
Type: T, IAI-F1 907

THEA 161 Production Lab 0-3-1
This is a theatre performance class designed to instruct students in dramatic interpretation and presentation. Examining different acting, movement, and vocal techniques, students will have opportunities for developing skills by examining concepts, principles, and techniques for dramatic performance through regular rehearsal and performance.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: T

THEA 162 Production Lab 0-3-1
This is a theatre performance class designed to instruct students in dramatic interpretation and presentation. Examining different acting, movement, and vocal techniques, students will have opportunities for developing skills by examining concepts, principles, and techniques for dramatic performance through regular rehearsal and performance.
Semester(s) Offered: FALL SPR
Requisite: THEA 161.
Type: T

THEA 256 Theatre Acting 3-0-3
Theatre Acting is designed for the college student possessing little or no background in the performing arts and/or the student with some knowledge and experience. Course content includes beginning technique, theory, and the methodology needed to grasp the concept of acting. The practice of acting is explored through exercises using imagination, concentration, relaxation, intention, improvisation, spontaneity, and the reality of doing (as each applies to the craft of acting).
Semester(s) Offered: FALL
Requisite: Eligible for ENG 97 or higher.
Type: T, IAI-TA 914

THEA 261 Production Lab 0-3-1
This is a theatre performance class designed to instruct students in dramatic interpretation and presentation. Examining different acting, movement, and vocal techniques, students will have opportunities for developing skills by examining concepts, principles, and techniques for dramatic performance through regular rehearsal and performance.
Semester(s) Offered: FALL SPR
Requisite: THEA 162.
Type: T

THEA 262 Production Lab 0-3-1
This is a theatre performance class designed to instruct students in dramatic interpretation and presentation. Examining different acting, movement, and vocal techniques, students will have opportunities for developing skills by examining concepts, principles, and techniques for dramatic performance through regular rehearsal and performance.
Semester(s) Offered: FALL SPR
Requisite: THEA 261.
Type: T

Warehousing

WRH 120 Warehousing Environment 1.5-0-1.5
This course provides learners with an overview of the functional and structural composition of warehousing and distribution centers. Topics include product flow, warehousing processes, working safely in a warehousing environment, principles in running a business, workplace ethics and how employees affect the bottom line.
Requisite: None.
Type: C

WRH 121 Warehousing Workforce Skills 1.5-0-1.5
Learners will be provided with an overview of workplace practices that contribute to the success of the job. The art of effective communication, working with others, projecting a positive image, and learning interview skills will be stressed in this course.
Requisite: None.
Type: C

WRH 122 Warehousing & Distribution Process 2.5-0-2.5
This course provides learners with the knowledge and understanding of the core skills associated with warehousing and distribution. Learners will focus on the physical aspects of warehousing and distribution functions like material handling, staging and shipping. Other topics to be covered in this course include: warehousing productivity measures, inventory management, protecting materials and merchandise, palleting, handling Requisite: None.
Type: C

WRH 123 Warehousing Technology Skills 2-0-2
Warehousing technology skills are those practices important to working in a technical environment. This course covers the use of scanners and data applications along with the understanding of industrial controls and computers and automation.
Requisite: None.
Type: C

WRH 124 Representative Warehousing Skills 2.5-0-2.5
This course discusses and applies mathematical concepts used in warehousing and distribution. It also focuses on powered material handling equipment and safety requirements. Warehousing simulations provide the opportunity to participate in problem solving of both warehousing and personal performance issues.
Requisite: None.
Type: C

Welding Technology

WLDT 100 Welding Technology Orientation 0.5-0-0.5
This course prepares students for success in the Welding Technology Program. Student work expectations, required personal protective equipment (PPE) and shop safety requirements will be covered. The Welding Technology's courses, certificates, and degree requirements, as well as support services offered at the college will also be covered. This course is designed to provide students with the necessary skills to navigate the colleges' email, online learning management system, and online student portal.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

WLDT 101 Introduction to Welding 1-8-5
This entry level course is primarily spent in the weld lab and introduces students to the basic concepts of arc welding and oxy-fuel cutting. Emphasis is put in safety, working with weld shop tools and equipment, and developing skills using the Shielding Metal Arc Welding (SMAW) process with different types of welding rods to make quality surfacing and fillet welds. An introduction to the Flux Cored Arc Welding (FCAW) process and gouging of steel using the Air Carbon Arc process is also included.
Semester(s) Offered: FALL SPR
Requisite: WLDT 100 or concurrent enrollment, or program coordinator consent.
Type: C

WLDT 102 Principles of Welding 4.5-0-4.5
This course covers fundamental concepts of welding, technical terms and weld shop knowledge required for an entry level welder. Also included is an online Occupational Safety and Health segment where students can earn a 10-hour OSHA certification.
Semester(s) Offered: FALL SPR
Requisite: WLDT 100 or concurrent enrollment, or program coordinator consent.
Type: C

WLDT 106 Weld Fabrication Blueprint Reading 3-0-3
This course covers the basics of reading and understanding technical drawings (blueprints) used in the field of welding.
Semester(s) Offered: ALL
Requisite: None.
Type: C

WLDT 107 Advanced Blueprint Reading 2-0-2
This course includes a review of architectural and technical drawing fundamentals. It also includes structural shapes, detailing, shop drawings, welding symbols and sketching.
Semester(s) Offered: ALL
Requisite: WLDT 106.
Type: C

WLDT 115 Industrial Welder I 3.5-1-4
This course is designed to introduce the student to the fundamentals of arc welding. Materials covered in this course will include welding machines, equipment, and welding supplies.
Semester(s) Offered: Varies
Requisite: None.
Type: C

WLDT 125 Industrial Welder II 3.5-1-4
This course will introduce the student to arc and acetylene cutting equipment. Also introduced will be material covering special cutting procedures.
Semester(s) Offered: Varies
Requisite: None.
Type: C

WLDT 135 Industrial Welder III 3.5-1-4
This course will introduce the student to types of welding equipment and their uses. The three basic welding positions will be covered in detail. Special welding application also will be covered.
Semester(s) Offered: Varies
Requisite: None.
Type: C

WLDT 145 Industrial Welder IV 3.5-1-4
This course will introduce the student to semi-automatic and automatic welding processes; also included will be information on welding nonferrous metals using the TIG process.
Semester(s) Offered: Varies
Requisite: None.
Type: C

WLDT 152 All Position Arc Welding 1-8-5
This course continues student development in making fillet welds with the SMAW and FCAW processes. It also includes continued practice with the oxy-fuel cutting and carbon arc gouging processes as well as an introduction to the Gas Metal Arc Welding process. Emphasis is on welding in the vertical (3F), overhead (4F), and 45- degree positions.
Semester(s) Offered: FALL SPR
Requisite: WLDT 100, WLDT 101 or concurrent enrollment, or program coordinator consent.
Type: C

WLDT 201 Advanced Arc Welding 2-8-6
Provides advanced welding studens and shop welders additional experience with out-of-position arc welding. Emphasis is put on V groove welds. An A.W.S. test will be given in the vertical position from the D1.1 Code Book. Continued skill development using the Flux Cored Arc Welding (FCAW) and Gas Metal Arc Welding (GMAW) processes is also included.
Semester(s) Offered: FALL SPR
Requisite: WLDT 152 or program coordinator consent.
Type: C

WLDT 251 Structural Fabrication Welding 2-4-4
This course provides instruction on the skills and techniques required to weld structural shapes. Multiple sizes of both round and rectangular tube, beams, and other shapes will be used. Welding practices include: joint preparation and fit-up, tube to plate and tube to tube welds in various positions. An introduction to pipe welding is also included.
Semester(s) Offered: ALL
Requisite: WLDT 201 or program coordinator consent.
Type: C

WLDT 252 Pipe Welding 2-4-4
Develops skill in the technique of pipe welding. Pipe welding practices include: joint preparation and fit-up, groove welds on pipe in the 2G (fixed horizontal), 5G (fixed vertical), and 6G (fixed 45 degree) positions.
Semester(s) Offered: ALL
Requisite: WLDT 201 or program coordinator consent.
Type: C

WLDT 253 GTAW/GMAW/FCAW/PAC 2-4-4
Provides welding practice and theory in Gas Tungsten Arc Welding, Gas Metal Arc Welding, Flux Cored Arc Welding with and without gas shielding, and Plasma Arc Cutting. Welding and cutting techniques on both ferrous and nonferrous metals.
Semester(s) Offered: ALL
Requisite: WLDT 100 or concurrent enrollment, or program coordinator consent.
Type: C

WLDT 254 Testing and Inspection of Welds 3-0-3
Provides instruction in the destructive and nondestructive tests used in the welding industry. Writing welding procedures to meet welding-code specifications is also covered.
Semester(s) Offered: FALL SPR
Requisite: WLDT 102 or program coordinator consent.
Type: C

WLDT 255 Layout and Fitup for Welders 3-0-3
Provides instruction in the process of plate, structural and pipe fabrication. Students will be able to read and understand fabrication drawings and make plate, structural and pipe layouts. Layout templates needed in fabrication of tanks, including structural and pipe, will also be covered.
Semester(s) Offered: FALL SPR
Requisite: WLDT 106 or program coordinator consent.
Type: C

WLDT 256 Qual & Cert Procedures - Welding Insps 3-0-3
This covers the basic material required for a student to prepare for the American Welding Society Certification Test or to improve their knowledge of inspection of weldments and welded-products. This is a preparatory course and in no way guarantees the individual will successfully complete the certification test.
Semester(s) Offered: FALL SPR
Requisite: None.
Type: C

WLDT 260 Welding Automation 3-4-5
This course introduces the student to welding automation. It provides detailed instruction and hands on experience working with controls for welding automation and automated welding systems. The student will work with many types of equipment including an automatic voltage control, cold wire feeder, arc video camera and monitor, longitudinal seamer, sidebeam and carriage, tilt and rotate positioner, turning roll system and weld lathe.
Semester(s) Offered: FALL
Requisite: WLDT 253.
Type: C

WLDT 270 Robotic Welding & CNC Cutting 3-4-5
This is an introductory course that will introduce the student to robotic arc welding and CNC cutting. It provides detailed instruction on the safe operation of robotic arc welding and CNC plasma/oxy-fuel cutting systems. Students will be required to program and perform various robotic arc welds with the GMAW process, program CNC equipment to perform cutting operations with both the plasma cutting process and oxy-fuel process on both plate and pipe. Also covered will be the use of a CNC plate marking system.
Semester(s) Offered: SPRING
Requisite: WLDT 253.
Type: C

WLDT 299 Special Problems in Welding Variable up to (1)-(10)-(6)
Meets the needs of the experience welder. Material covered is determined on an individual basis. Each student submits an outline of the material they would like to cover. Should consist of a special project or special welding techniques.
Semester(s) Offered: ALL
Requisite: None.
Type: C