

Columbus State Community College

Catalog 2017-2018



COLUMBUS STATE
COMMUNITY COLLEGE

Accounting

ACCT 1211 - Financial Accounting (A SP SU)

3.00 credit(s)

This course covers the generally accepted accounting principles and the framework for preparing financial reports on corporations and proprietorships for external users. Recording transactions, adjusting balances, and preparing financial statements are demonstrated. The financial statements covered in this course include: Income Statement, Owner's Equity Statement, Cash Flow Statement, and Balance Sheet.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100 or equivalent

Co-requisites: none

Restrictions: none

ACCT 1212 - Managerial Accounting (A SP SU)

3.00 credit(s)

This course is a continuation of ACCT 1211 with special emphasis on the uses of financial measurements, calculations, and reports used by an organization to make a variety of management decisions. Specific uses discussed are methods for costing products and services, decision analysis, and budgeting. To be successful in this course it is recommended that students have a "C" or better in ACCT 1211.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: Placement into ENGL 1100 or equivalent

Co-requisites: none

Restrictions: none

ACCT 1400 - Accounting Systems (A SP SU)

3.00 credit(s)

ACCT 1400 studies current practices and computer technologies used to design, utilize, and manage accounting information systems. Transaction process cycles, general ledgers, and subsidiary ledgers are analyzed. Internal controls, information security, and fraud detection are also examined. Students will prepare flowcharts and practice on accounting system software.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ACCT1211

Co-requisites: none

Restrictions: none

ACCT 2211 - Cost Accounting (A SP SU)**3.00 credit(s)**

ACCT 2211 offers a study in the cost analysis of acquiring and using resources in an organization's planning and decision making.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: ACCT1212

Co-requisites: none

Restrictions: none

ACCT 2231 - State and Local Taxation (A SP SU)**3.00 credit(s)**

ACCT 2231 covers payroll and unemployment taxes (withholding and reports); current state and local tax law; and preparation of forms and reporting requirements. Also addressed are the Commercial Activity Tax, Ohio income and personal taxes, sales and use taxes, real estate taxes, and various other taxes. Multi-state taxation and pass-through entities will be discussed as well

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ACCT1211

Co-requisites: none

Restrictions: none

ACCT 2232 - Federal Taxation I (A SP SU)**3.00 credit(s)**

ACCT 2232 covers individual income taxes, forms and returns, exemptions, deductions, gains and losses, rates, adjustments, and credits. Also explores issues of proprietorship, retirement, inventories, depreciation accounting, installment and deferred sales treatment. Filing requirements, payments, refunds, claims, and tax planning techniques are discussed. Corporate and partnership taxation will also be introduced.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ACCT1211

Co-requisites: none

Restrictions: none

ACCT 2236 - Federal Taxation II (A SP)**3.00 credit(s)**

A continuation of ACCT 2232, this course deals primarily with the taxation of corporate entities, partnerships, and Sub-chapter S corporations. Specific topics include nonliquidating distributions; earning and profits; corporate complete liquidations; corporate reorganization; U.S. taxation of multinational companies; and partnership, LLC, and Sub-chapter S corporation's reporting of income, distributions, and liquidations.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ACCT2232

Co-requisites: none

Restrictions: none

ACCT 2239 - Advanced Taxation/Enrolled Agent (A)**4.00 credit(s)**

This course is a continuation of ACCT 2236, and covers federal transfer taxes; wealth planning; taxation of fiduciary and exemption entities. Topics include valuation of trusts, estates, and gifts; computation of taxable transfers; exclusions; unified credit; generation-skipping tax; public charities and private foundations; reporting requirements and special situations. In addition this course will examine and review the qualifications for the Enrolled Agent exam.

Contact Hours: Lecture 4.00

Lab Fee: \$5.00

Pre-requisites: ACCT2236

Co-requisites: none

Restrictions: none

ACCT 2240 - Tax Practice (SP)**3.00 credit(s)**

ACCT 2240 is an advanced tax course covering the administrative aspects of practice before the IRS including rules, penalties, procedures, and ethics for client representation as a CPA, EA or general tax preparer. This course discusses the requirements and processes to become a professional tax preparer. Initial classes will be instructive preparation for the VITA/CEA IRS volunteer program tax prepared examinations. Upon successful completion of these IRS exams, the students will be required to participate in the volunteer VITA program with practical experience as a tax preparer within the local community. Also covered are research techniques and understanding the structure of the Federal tax system.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ACCT2236

Co-requisites: none

Restrictions: none

ACCT 2241 - Auditing (A SP)**4.00 credit(s)**

This is a course concerned with the identification of professional qualifications and responsibilities of an auditor and the study of auditing concepts utilized in the investigation and appraisal of economic information. Students will also participate in the practical application of audit techniques. Topics will include the role of the auditor in society, auditing standards, professional liability, audit objectives, and ethics.

Contact Hours: Lecture 4.00

Lab Fee: \$2.00

Pre-requisites: ACCT2250

Co-requisites: none

Restrictions: none

ACCT 2250 - Intermediate Accounting I (A SP)**4.00 credit(s)**

This course is a continuation of ACCT 1211 that reinforces the mechanical phase of theoretical concepts enabling the accounting majors to apply double entry accounting methods toward the daily maintenance of accounting resources and the preparation of basic financial statements. Additional topics explored in an in-depth study of the accounting processes, valuation, and statement presentation will be conducted on the following accounts; cash, receivables, inventories, property, plant, & equipment, and intangibles.

Recommend: To be successful in this course it is recommended that students have a "C" or better in ACCT 1211.

Contact Hours: Lecture 4.00

Lab Fee: \$1.00

Pre-requisites: ACCT1211

Co-requisites: none

Restrictions: none

ACCT 2252 - Intermediate Accounting II (A SP)**4.00 credit(s)**

This course offers a continuation of ACCT 2250 including analysis and methods of valuation and statement presentation of the following items: current liabilities, long-term liabilities including contingent items and deferred charges, investments, stockholders equity, dilutive securities, deferred taxes, earnings per share, leases, pensions, cash flow statement, error analysis, and full disclosure in financial reporting.

Recommend: Students complete Math 1030 with a "C" or better. To be successful in this course it is recommended that students have a "C" or better in ACCT 2250.

Contact Hours: Lecture 4.00

Lab Fee: \$1.00

Pre-requisites: ACCT2250

Co-requisites: none

Restrictions: none

ACCT 2258 - Advanced Accounting (A SP SU)**3.00 credit(s)**

This course is the study of financial accounting theory and practice relating to accounting for business combinations, consolidated financial statements, partnerships, and foreign operations.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: ACCT2252

Co-requisites: none

Restrictions: none

ACCT 2266 - Public Administration/Fund Accounting (A SP SU) **3.00 credit(s)**

ACCT 2266 deals with the principles and applications of fund accounting as it relates to state and local governments. It includes budgeting, accounting, reporting, and auditing for federal government, colleges, universities and hospitals.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: ACCT2250

Co-requisites: none

Restrictions: none

ACCT 2299 - Accounting Capstone (A SP) **3.00 credit(s)**

In this course, students will apply the concepts they have learned throughout their plan of study through case studies and real world simulations. This course is designed to serve as a capstone course for graduating accounting students.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: ACCT2250

Co-requisites: none

Restrictions: Instructor Permission

ACCT 2901 - Accounting Practicum & Seminar (A SP SU) **3.00 credit(s)**

ACCT 2901 offers a structured employment situation in which the student is working in an actual accounting office for a minimum number of hours a week performing many of the accounting procedures studied in the conjunction with their other classes (i.e., bank reconciliation, payroll, journal entries, etc.). Weekly reporting is used to solve any job-related problems and to attempt to develop a sense of responsibility and a professional attitude within the student/intern. In addition to working the job, emphasis is placed upon analyzing and further understanding the student's working environment by requiring additional assignments inherent to that environment.

Contact Hours: Seminar 1.00, Practicum 14.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

Aviation Maintenance Technology**AMT 1101 - Introduction to Aviation (A SP)** **2.00 credit(s)**

In this course, students receive an introduction to aerodynamics and the physics of flight. Focus will be on principles of simple machines, sound, fluid dynamics, heat, and pressure as they pertain to fixed wing aircraft, rotary wing aircraft, aircraft powerplants, and propellers. Students will also learn the principles of primary and secondary flight controls and aircraft nomenclature.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$20.00

Pre-requisites: Placement into ENGL 1100 and MATH 1020

Co-requisites: none

Restrictions: Declared Major

AMT 1102 - Aircraft Weight & Balance (A SP)**2.00 credit(s)**

In this course, there will be an in depth look at aircraft and helicopter weight and balance. Students will study the principles of computing weight and balance, computing and correction of adverse load conditions, and the basics of computing weight and balance for transport category aircraft. Procedures for weighing aircraft and documentation of weight and balance data are emphasized.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$20.00

Pre-requisites: Placement into ENGL 1100 and MATH 1020

Co-requisites: none

Restrictions: Declared Major

AMT 1103 - Aircraft Materials (A SP)**4.00 credit(s)**

Focus is placed on usage of common hand tools and safety, making precision measurements, and proper use of torque wrenches. Identification of aircraft hardware and other materials used in the aircraft industry will also be presented, and students will receive instruction in the methods of safety wiring hardware, the principles of inspection, fabrication, repair, and replacement of hydraulic and pneumatic rigid and non-rigid lines. In addition, students will learn the basics of non-destructive inspection techniques, corrosion detection, and corrosion control. The proper use of aircraft drawings and charts will also be explored.

Contact Hours: Lecture 2.00, Lab 5.00

Lab Fee: \$30.00

Pre-requisites: Placement into ENGL 1100 and MATH 1020

Co-requisites: none

Restrictions: Declared Major

AMT 1104 - AMT Regulation and InspectionyAMT Regulation and Inspection (A SU)**3.00 credit(s)**

This course is an in-depth study of Title 14 of the Code of Federal Regulations, Aeronautics and Space, as they pertain to the Aviation Maintenance Technician. Focus will be on history of the FAR's, certification of mechanics, certification of aircraft, engines and propellers. In addition, students study the regulatory maintenance requirements of aircraft and regulatory requirements of aircraft records. The format of FAA and manufacturer's publications is studied with emphasis on aircraft technical publication research. The students will also be introduced to Human Factors in Aviation Maintenance.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$20.00

Pre-requisites: Placement into ENGL 1100 and MATH 1020

Co-requisites: none

Restrictions: Declared Major

AMT 1105 - Ground Operation and Servicing (A SU)**2.00 credit(s)**

Aircraft Maintenance cannot be safely performed unless there is a complete understanding of the hazards and handling procedures involved with aircraft in a hangar, shop, or outdoor ramp environment. In this class, students will study and engage in practices involving aircraft in these situations. Emphasis will be placed on accomplishment of tasks while preserving a safe environment for personnel as well as the equipment. Students will become proficient in performing various aircraft maintenance responsibilities that involve shop safety, tie down procedures, aircraft jacking and hoisting, and aircraft engine operation.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$30.00

Pre-requisites: Placement into ENGL 1100 and MATH 1020

Co-requisites: none

Restrictions: Declared Major

AMT 1106 - Basic Electricity for the AMT (SP SU)**6.00 credit(s)**

The aircraft that are being manufactured today have become more dependant on electronics and electrical systems. An understanding of basic electrical concepts is essential to the success of the modern aircraft maintenance technician. In this course, students will develop a fundamental understanding of basic electrical circuits with an emphasis on airborne installations. AC and DC electrical theory and practical application will be accomplished and proven through extensive experimentation and calculations. Aircraft maintenance practices as they relate to batteries, power calculations, and the relationship of voltage, current, and resistance will be examined, as well as precision measurement of these values on operational circuits.

Contact Hours: Lecture 3.00, Lab 6.00

Lab Fee: \$20.00

Pre-requisites: Placement into ENGL 1100 and MATH 1020

Co-requisites: none

Restrictions: Declared Major

AMT 2101 - Aircraft Metallic Structures (A SP)**6.00 credit(s)**

The primary structures of most aircraft today are made of some form of metal. An understanding of the techniques involved in forming and fabricating various components for metal structures is essential for the technician to maintain and repair airframes for continued service and reliability. In this course, students will study properties of aircraft metals, fabrication of aircraft repairs by complex bending, riveting, and use of structural adhesives. Students will design and layout repairs of metal aircraft. In addition, welding techniques, inspection of welds and heat-treatment of metals will be examined and applied.

Contact Hours: Lecture 3.00, Lab 6.00

Lab Fee: \$25.00

Pre-requisites: AMT1103

Co-requisites: none

Restrictions: Declared Major

AMT 2102 - Aircraft Electrical Systems (A SP)**6.00 - credit(s)**

Aircraft electrical system integrity is a major factor in the operation of complex aircraft today. The need for extensive understanding of the on-board power sources, distribution systems, and utilization equipment is essential to the technician. This course deals with complete DC and AC electrical systems overview including sources, distribution, utilization, control and monitoring systems. Troubleshooting, inspection and maintenance techniques related to these systems are put to practical use with a high level of expectation.

Contact Hours: Lecture 3.00, Lab 6.00

Lab Fee: \$0

Pre-requisites: AMT1106

Co-requisites: none

Restrictions: Declared Major

AMT 2103 - Aircraft Instruments and Fire Protection (A SU)**4.00 credit(s)**

In this course, students will study instrument systems for monitoring flight envelope, environment, and engine parameters. Analog and electronic display systems are covered. Airframe and powerplant fire detection and suppression systems will also be studied. Practical application of common troubleshooting procedures and maintenance practices associated with these devices will be accomplished with a high level of achievement expected.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$25.00

Pre-requisites: AMT1106

Co-requisites: none

Restrictions: Declared Major

AMT 2104 - Aircraft Fuel Systems (A SU)**2.00 credit(s)**

In this course, students will develop an understanding of the fuel systems for aircraft and engines. The course will cover the inspection techniques and maintenance of the aircraft fuel systems including integral tanks, bladder tanks, plumbing, and associated systems.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$30.00

Pre-requisites: AMT1105

Co-requisites: none

Restrictions: Declared Major

AMT 2105 - Aircraft Non-Metallic Structures (SP SU)**5.00 credit(s)**

This course is an introduction to aircraft structures constructed using composite materials and wood and doped fabric materials. Students will learn the basic core materials, types of material used, and repair procedures. This course will also cover maintenance practices related to windows, doors and interior furnishings. The students will become familiar with inspection and repair techniques of wood structures. Students will also study the types of aircraft fabric covering with a focus on inspection and repair of polyester based covering. The course will also cover the principles of composites aircraft structures.

Contact Hours: Lecture 3.00, Lab 5.00

Lab Fee: \$30.00

Pre-requisites: AMT1103

Co-requisites: none

Restrictions: Declared Major

AMT 2106 - Communications and Navigation Systems (A SP) **2.00 credit(s)**

This course will examine the aircraft communication, navigation, and warning systems pilots use to fly to a desired destination, in varying weather conditions, while avoiding other aircraft and contact with terrain. Students will gain practical experience in the testing, troubleshooting, and required inspections associated with these systems.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: AMT1106

Co-requisites: none

Restrictions: Declared Major

AMT 2107 - Aircraft Environmental Controls (A SP) **2.00 - credit(s)**

In this class, students discover how pilots and passengers remain comfortable through heating, air conditioning, pressurization, and supplemental oxygen systems. This course will familiarize students with anti-ice, de-ice, ice detection, and rain protections systems used on the airframe, engine, and propeller installations. A large emphasis will be placed on troubleshooting and repair of these systems and associated servicing and inspection techniques.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$0

Pre-requisites: AMT1106

Co-requisites: none

Restrictions: Declared Major

AMT 2108 - Aircraft Landing Gear & Fluid Power (A SP) **4.00 credit(s)**

This course will include heavy focus on hydraulic and pneumatic principles, inspection and repair of air/oil struts, wheels, brakes, tires, and the landing gear system in relation to the aircraft.

Contact Hours: Lecture 2.00, Lab 5.00

Lab Fee: \$30.00

Pre-requisites: AMT1103

Co-requisites: none

Restrictions: Declared Major

AMT 2109 - Airframe Inspection (A SU) **6.00 credit(s)**

Airframe Capstone course. In this course, aviation maintenance students will hone their critical inspection skills by studying the application of Federal Aviation Regulations to aircraft maintenance and the aircraft technician. With the help of aircraft maintenance forms, records, publications, and other pertinent technical data, an examination of the disposition of the required maintenance records, the use of inspection equipment and aids, and the proper procedures for returning the aircraft to service, and inspection of a complete airframe and all related systems will be accomplished.

Contact Hours: Lecture 3.00, Lab 6.00

Lab Fee: \$30.00

Pre-requisites: AMT2102 and AMT2101 and AMT2103 and AMT2104 and AMT2105

Co-requisites: none

Restrictions: Declared Major

AMT 2201 - Turbine Engine Maintenance I (SP SU)**5.00 credit(s)**

In this course, the theory and operation of aircraft turbine engines, the study of turbine engine construction and design, and principles of turbine engine maintenance, inspection, repair, and troubleshooting will be presented. Application of procedures to remove, install, rig, and operationally test turbine engines will be accomplished along with the identification and repair or lubrication systems and components.

Contact Hours: Lecture 3.00, Lab 5.00

Lab Fee: \$30.00

Pre-requisites: AMT1103

Co-requisites: none

Restrictions: Declared Major

AMT 2202 - Turbine Engine Maintenance II (A SP SU)**5.00 credit(s)**

This course deals with the study of electrical principles of turbine engine ignition systems, principles of operating turbine engine electrical and pneumatic starting systems, and the theory of operation of turbine engine fuel systems, fuel metering systems, and subsystems. A study of applied techniques to inspect, maintain, troubleshoot, repair and adjust the respective systems including airflow, temperature control, and thrust reverser systems will be undertaken. Principles of unducted fan systems will be examined as well.

Contact Hours: Lecture 3.00, Lab 5.00

Lab Fee: \$30.00

Pre-requisites: AMT1103

Co-requisites: none

Restrictions: Declared Major

AMT 2203 - Reciprocating Engine Maintenance I (A SP)**5.00 credit(s)**

The focus of this course is the horizontally opposed reciprocating aircraft engine. Areas studied include theory of operation, engine construction features, maintenance and overhaul. Radial engine design, inspection and repair are also addressed. Reciprocating engine lubrication system design and maintenance for both radial and opposed engine are examined. Students learn the proper techniques for ground operational checks of reciprocating engines

Contact Hours: Lecture 3.00, Lab 5.00

Lab Fee: \$30.00

Pre-requisites: AMT1103

Co-requisites: none

Restrictions: Declared Major

AMT 2204 - Reciprocating Engine Maintenance II (A SU)**5.00 credit(s)**

This course covers the reciprocating engine ignition, fuel metering and induction systems. Students study magnetos, float carburetors, fuel injections systems, supercharging and turbo-supercharging. Emphasis is placed on the theory of operation, inspection, maintenance practices, and troubleshooting of each system.

Contact Hours: Lecture 3.00, Lab 5.00

Lab Fee: \$30.00

Pre-requisites: AMT1103

Co-requisites: none

Restrictions: Declared Major

AMT 2205 - Propellers (SP SU)**2.00 credit(s)**

In this course, the principles of operation, governing systems, and ice control will be covered for all types of aircraft propellers. Focus will be placed on propeller inspection, lubrication, service, repair, removal, and installation.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$30.00

Pre-requisites: AMT1103

Co-requisites: none

Restrictions: Declared Major

AMT 2206 - Powerplant Inspection (A SP SU)**4.00 credit(s)**

Powerplant Capstone course. In this course, aviation maintenance students will hone their critical inspection skills by studying the application of Federal Aviation Regulations to aircraft maintenance and the aircraft technician. With the help of aircraft maintenance forms, records, publications, and other pertinent technical data, an examination of the disposition of the required maintenance records, the use of inspection equipment and aids, and the proper procedures for returning the aircraft to service, and inspection of a complete powerplant and all related systems will be accomplished.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$30.00

Pre-requisites: AMT2201 AMT2202 AMT2203

Co-requisites: none

Restrictions: Declared Major

Anthropology

Students who enroll in Anthropology courses must have placed in ENGL 1100 and are encouraged either to have completed ENGL 1100 or to be enrolled in that course when scheduling an Anthropology course. Online/Distance Learning (DL) versions of several ANTH courses are available. Students taking the Web-based version of these courses must be familiar with computers, have an email address, and access to the Internet. Course content is identical to that presented in a traditional classroom setting. Examinations for online/distance learning courses are administered at the Testing Center.

ANTH 2193 - Independent Study in Anthropology (On Demand)**1.00 - 3.00 credit(s)**

An individual student-structured course that examines a selected topic in Anthropology through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program.

Contact Hours: Lecture 1.00

Lab Fee: \$3.00

Pre-requisites: Instructor permission required

Co-requisites: none

Restrictions: Instructor Permission

ANTH 2200 - Introduction to Biological Anthropology (A SP SU) **3.00 credit(s)**

This course introduces students to the basic concepts of biological anthropology. It discusses anthropology's relationship with other biological and social sciences, surveys nonhuman primates, covers topics in current human biological diversity, and looks at human evolutionary history.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: Placement into ENGL 1100 or equivalent

Co-requisites: none

Restrictions: none

ANTH 2201 - World Prehistory (A SP SU) **3.00 credit(s)**

This course is an overview of world prehistory. Since the majority of human existence occurred long before written records and historical documents were available, this course introduces students to the fundamentals of prehistoric archaeology. The course surveys human origins, investigates the emergence of domestication and agriculture, and explores the rise of settlements and civilization. A global perspective is taken in the study of the prehistoric human past.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: Placement into ENGL 1100 or equivalent

Co-requisites: none

Restrictions: none

ANTH 2202 - Peoples & Culture (A SP SU) **3.00 credit(s)**

This course focuses on understanding cultural diversity, using research techniques such as participant observation to explore the lifeways of groups. Topics include cross-cultural treatments of social systems, general theories of cultural interpretation, and change in a broad geographical context. Students apply concepts and complete a "mini-project" using anthropological research techniques.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: Placement into ENGL 1100 or equivalent

Co-requisites: none

Restrictions: none

ANTH 2235 - Introduction to Forensic Anthropology (A SP) **3.00 credit(s)**

This course introduces students to the field of forensic anthropology. Students examine the development, the theoretical and methodological bases, and current applications in forensic anthropology. These methods are used in the investigation and detection of crime, the processing of mass disasters, the recovery of war dead and missing persons, and in international human rights investigations.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: Placement into ENGL 1100 or equivalent or ANTH2200 or BIO2300 or CRJ2001

Co-requisites: none

Restrictions: none

Arab

ARAB 1101 - Beginning Arabic I (A SP SU)

4.00 credit(s)

ARAB 1101 presents an introduction to the fundamentals of the Arabic language with practice in listening, reading, speaking and writing. Course includes studies in Arabic culture. ARAB 1101 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: Placement into ENGL 1100 or equivalent

Co-requisites: none

Restrictions: none

ARAB 1102 - Beginning Arabic II (A SP SU)

4.00 credit(s)

ARAB 1102 is a continuation of ARAB 1101 with further development of listening, reading, speaking and writing skills and further study of Arabic culture. ARAB 1102 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: ARAB1101 with a minimum grade of "C"

Co-requisites: none

Restrictions: none

Architecture

ARCH 1100 - Visual Communications I (A SP SU)

1.00 credit(s)

This course presents basic concepts and fundamentals of rapid visualization through sketching especially for the building construction industry and covers the use of conceptual hand drawing, drawing instruments, lettering practices, basic line work, dimension procedures and an introduction to orthographic projection & basic 3D geometry.

Contact Hours: Lecture 0.50, Lab 1.50

Lab Fee: \$25.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ARCH 1115 - MicroStation 2D (A SU)**2.00 credit(s)**

This course is to provide training in the use of basic display, drawing, manipulation, dimensioning, text, cell, reference files and plotting commands required to the elementary use of Bentley MicroStation. After mastering system basics, students will be given individual projects.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$25.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ARCH 1120 - Architectural CAD I (A SP SU)**1.00 credit(s)**

This course is an introduction to the basic features of AutoCAD. Emphasis is placed on the basic display, drawing, editing, dimensioning, and text commands required for the elementary use of AutoCAD. Lectures, in-class demonstrations, and hands on work sessions are employed as teaching tools during the course. The course uses the current release of AutoCAD.

Contact Hours: Lecture 0.50, Lab 1.50

Lab Fee: \$25.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ARCH 1130 - Architectural CAD II (A SP)**3.00 credit(s)**

This course introduces students to the advanced features of AutoCAD and builds upon the basics learned in ARCH 1120. Emphasis is placed on advanced dimensioning features, hatching, attributes, external references and paper/model space. Several small projects will be created utilizing these features. Lectures, in-class demonstrations, and hands-on work sessions are employed as teaching tools during the course. The course uses current release of AutoCAD.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$25.00

Pre-requisites: ARCH1120

Co-requisites: none

Restrictions: none

ARCH 1200 - Visual Communications II (A SP)**3.00 credit(s)**

This course is intended to develop the skills of drawing especially for building construction and covers the use of lettering practices, line quality and weights, dimension procedures, orthographic projection, and the drawing of plans, sections and elevations. Rapid visualization will be emphasized & so will other Visual Communication skillsets... The art of sketching 3D objects such as isometrics, axonometrics, obliques, and perspectives will also be incorporated into the lesson plan for this course.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$25.00

Pre-requisites: ARCH1100

Co-requisites: none

Restrictions: none

ARCH 1232 - Building Codes (SP SU)**2.00 credit(s)**

This course introduces the application of Codes to building design. Using a case study program, both site and building are designed to meeting the Columbus Zoning Code and the Ohio Building Code. Labs are used to present specific code issues and allows the "word of the code" to be interpreted into the site planning and building design process. Specifications organization and writing are introduced. Professional practice material informs students about professional agencies and organizations, as well as licensing requirements. Code interaction with Sustainable Architectural principles will also be discussed.

Contact Hours: Lecture 1.00, Lab 3.00**Lab Fee: \$15.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

ARCH 1250 - Enclosure Materials (SP SU)**2.00 credit(s)**

This course is will study how different building materials are combined to form the building shell. The course focuses on the separation between exterior and interior environments. Topics covered include roofing, glass, windows and doors, walls, foundations, and interior finishes, vertical transportation and acoustics.

Contact Hours: Lecture 1.00, Lab 3.00**Lab Fee: \$15.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

ARCH 1274 - Revit I (A SP SU)**2.00 credit(s)**

Revit Architecture focuses on the first fully parametric architectural design software, Revit, which allows buildings to be designed and drawn "virtually", instead of being developed with conventional 2D drawings. Users examine their designs from any direction in order to better visualize them. Once created, the Building Information Model (BIM) can be tested, analyzed, and quantified. Basic concepts of REVIT Architecture will be explored in this course to design, change, and document a Commercial building using this revolutionary new parametric building modeler software.

Contact Hours: Lecture 1.00, Lab 3.00**Lab Fee: \$15.00**

Pre-requisites: ARCH1120

Co-requisites: none

Restrictions: none

ARCH 1276 - SketchUp (A SP SU)**3.00 credit(s)**

To introduce the student to SketchUp (Current version), a software package developed for the conceptual stages of design. SketchUp is a deceptively simple, amazingly powerful tool for creating, viewing, and modifying 3D ideas quickly and easily. SketchUp was developed to combine the elegance and spontaneity of pencil sketching and the flexibility of today's digital media.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$30.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ARCH 2100 - History of Architecture (A SP SU)**3.00 credit(s)**

This course studies the fundamental elements of architecture, its development, and its meaning to various cultures throughout western history. Architecture is viewed from the perspectives of form, function, interior and exterior space, technological development, and landscape. ARCH 2100 meets elective requirements in the Associate of Arts and Associate of Science degree programs.

Contact Hours: Lecture 3.00

Lab Fee: \$9.00

Pre-requisites: ENGL1100 or ENGL1101

Co-requisites: none

Restrictions: none

ARCH 2221 - Design Studio I (A SP)**3.00 credit(s)**

This course is built around the design process and design logic and will also include an emphasis on working either alone or as part of a team. The design theme may include emphasis on sustainable architecture as the primary design goal. When sustainable architecture is the framework of the course, lectures and research assignments will include lessons on solar energy, conservation practices, building materials, and other aspects of sustainability.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$35.00

Pre-requisites: ARCH1130 and ARCH1200

Co-requisites: none

Restrictions: none

ARCH 2223 - Design Studio II (A SP)**3.00 credit(s)**

This course is built on the foundations laid by ARCH 2221 and includes discussions of design principles. Students will develop a work on various design projects including a small and complex architectural project.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$35.00

Pre-requisites: ARCH2221

Co-requisites: none

Restrictions: none

ARCH 2230 - MEP Systems (A SP)**2.00 credit(s)**

This course studies the electrical code, electrical systems, standards, conventional symbols, nomenclature, layouts and fixture and equipment schedules. Coordination of mechanical, electrical, & plumbing work with the elements of the building is emphasized. This course also deals with the fundamentals of lighting within buildings. The appropriate quantity of lighting is calculated and the appropriate selection and placement of lighting within a space is studied. Sustainable Architectural MEP and Alternate Engineering systems will also be a part of this course.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$25.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ARCH 2237 - Structures (A SP)**3.00 credit(s)**

This course presents basic conceptual and practical structural design concepts. Included is the study of essential topics in Static and Strength of Materials. Steel and concrete structures are studied and evaluated mathematically. The student will learn how to evaluate and design beams and columns in both steel and concrete. Other topics include bearing plate/base plate design, bolted and welded connections, concrete and masonry wall design. Drafting projects require the use of CAD and will focus on structural elements.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$25.00

Pre-requisites: ARCH1120

Co-requisites: none

Restrictions: none

ARCH 2240 - Architectural CAD III (SU)**2.00 credit(s)**

This course is an introduction to presentation drawing techniques using computer applications. The course will focus on three-dimensional modeling, rendering and other applications useful to the profession.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$25.00

Pre-requisites: ARCH1120

Co-requisites: none

Restrictions: none

ARCH 2242 - 3D Visualization I (A)**3.00 credit(s)**

This course is an introduction to three-dimensional computer modeling using current modeling software. Basic modeling functions, lighting, material applications and rendering will be studied. This course focuses on techniques and methods applicable to architects, interior designers and other building related professions.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$30.00

Pre-requisites: ARCH1120

Co-requisites: none

Restrictions: none

ARCH 2243 - 3D Visualization II (SP)**3.00 credit(s)**

This course continues the study of three-dimensional computer modeling using current modeling software. Basic modeling functions, lighting, material applications and rendering will be studied. The fundamentals of architectural animation will also be studied. This course focuses on techniques and methods applicable to architects, interior designers and other building related professions.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$30.00

Pre-requisites: ARCH1120

Co-requisites: none

Restrictions: none

ARCH 2266 - Construction Documents (A SP)**3.00 credit(s)**

This course introduces the student to the practice of creating construction documents. Knowledge learned in prior architectural courses is integrated into the course. Part of the course focuses on individual tasks, such as the generation of details, schedules, and plans, while another part of the course will focus on work generated in a group setting, simulating a team effort common to a modern architectural office.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$30.00

Pre-requisites: ARCH1130 and ARCH1200

Co-requisites: none

Restrictions: none

ARCH 2270 - Professional Practice (A SP)**3.00 credit(s)**

Students learn about planning projects, defining project scope and translating physical needs into building area, developing alternative solutions, preparing schedules and estimates, coordinating work efforts, and other practical factors. The student must consider physical constraints, code implications, costs, bidding, construction sequencing and practices, design goals, and working with consultants.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$25.00

Pre-requisites: ARCH1232 and ARCH1250

Co-requisites: none

Restrictions: none

ARCH 2275 - Revit II (A SP SU)**2.00 credit(s)**

Advanced concepts of REVIT will be explored in this course to design, change, and document a Residential building using this revolutionary new parametric building modeler software.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$20.00

Pre-requisites: ARCH1120

Co-requisites: none

Restrictions: none

ARCH 2282 - Sustainable Design (A)**2.00 credit(s)**

ARCH 282 will introduce the student to the issues and concepts related to sustainable design. The impact of the building's site, energy efficiency, the use of renewable forms of energy, including solar energy, will be studied as it relates to building design. Projects will be assigned on a regular basis and will be adaptable to the varied backgrounds of students.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$16.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ARCH 2283 - Sustainable Energy (SP)**2.00 credit(s)**

Students become familiar with the concept of thermal transfer, the energy characteristics of various building energy systems and components, and learn how to compare the projected performance characteristics of one building model against another. The object is to learn an approach that enables well-informed decisions to be made that will affect sustainability.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ARCH 2291 - ARCH Field Experience (On Demand)**1.00 - 3.00 credit(s)**

Off-campus work experience in architecture, consulting engineering, or construction-related paid employment that augments formal education received in the technology, with actual work conditions and job experience. "N" credit will not be allowed for this course.

Contact Hours: Field Experience/Internship 12.00

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

Art**ART 1205 - Beginning Drawing (A SP SU)****3.00 credit(s)**

ART 1205 is an introduction to the basic techniques of freehand drawing. Emphasis is on media, concepts, drawing from observation and development of technique. Course meets elective requirements in the Associate of Arts degree program and distributive transfer requirements in the Arts.

Contact Hours: Lab 6.00

Lab Fee: \$5.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ART 1206 - Two-Dimensional Design (A SP SU)**3.00 credit(s)**

"ART 1206 is an introduction to the basic concepts of two-dimensional design: line, shape, space, hue, value and texture. Course covers the use of various media in a variety of problem-solving projects leading toward an awareness of the principles of visual organization.

Contact Hours: Lab 6.00**Lab Fee: \$5.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

ART 1207 - Three-Dimensional Design (SP)**3.00 credit(s)**

ART 1207 is aimed at developing the student's basic understanding of three-dimensional visual communication through the exploration of three-dimensional principles. Students learn through the process of solving visual art problems. Solutions to these problems are achieved through the fabrication of three-dimensional art objects. Various techniques and media that are common to this area of study are systematically addressed.

Contact Hours: Lab 6.00**Lab Fee: \$2.00**

Pre-requisites: ART1206

Co-requisites: none

Restrictions: none

ART 2221 - Life Drawing (SP)**3.00 credit(s)**

Art 2221 emphasizes figure drawing with a foundation in anatomical study. The student will concentrate on proportion and design to further their understanding of the human figure as a complicated three-dimensional form and its metaphoric or literal interpretation through various drawing media. In addition, students will be able to develop a more advanced and informed interpretation of life drawing within historic and cultural contexts.

Contact Hours: Lecture 1.00, Lab 4.00**Lab Fee: \$20.00**

Pre-requisites: ART1205

Co-requisites: none

Restrictions: none

ART 2230 - Color Composition (SP)**3.00 credit(s)**

ART 2230 examines the theory and artistic application of basic color principles through student projects and lecture. Topics such as color mixing, interaction and organization are presented.

Contact Hours: Lab 6.00**Lab Fee: \$2.00**

Pre-requisites: ART1206

Co-requisites: none

Restrictions: none

ART 2275 - Beginning Painting (SP)**3.00 credit(s)**

ART 2275 introduces studio painting fundamentals utilizing varied subject matter and media.

Contact Hours: Lab 6.00

Lab Fee: \$7.00

Pre-requisites: ART1205 and ART1206 or ART2230

Co-requisites: none

Restrictions: none

Arts and Sciences

ASC 1190 - Critical Thinking in Arts & Sciences (A SP SU)**1.00 credit(s)**

This course is designed to familiarize first time Arts and Science students at Columbus State with the academic environment. The course is designed to enhance critical reading and thinking skills and other general education abilities through selected reading of primary materials and activities.

Contact Hours: Lecture 1.00

Lab Fee: \$3.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

American Sign Language

ASL 1100 - Introduction to the Deaf Community (A SP SU)**2.00 credit(s)**

This course is designed to provide students with an overview of the Deaf community, its culture and language (ASL). Students will examine the following areas related to deafness: social, cultural, linguistic and educational experiences, Deaf history, and medical topics. This course also examines the employment trend and local programs and services available to the community.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$15.00

Pre-requisites: Placement into ENGL 1100 or equivalent

Co-requisites: none

Restrictions: none

ASL 1101 - Beginning ASL I (A SP SU)**3.00 credit(s)**

This course introduces the fundamental elements of American Sign Language within a cultural context. It focuses on everyday interactions and brief monologues in ASL. Grammar and vocabulary are presented in context, using ASL as the language of instruction. Additional information about the Deaf community and culture is introduced.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$15.00

Pre-requisites: Placement into ENGL 1100 or equivalent

Co-requisites: none

Restrictions: none

ASL 1102 - Beginning ASL II (A SP SU)**3.00 credit(s)**

This course is a continuation of ASL 1101 Beginning ASL I. Students further acquire the fundamental elements of American Sign Language grammar and vocabulary in context through interactions and short monologues. ASL production and comprehension skills continue to develop, with an emphasis on comprehension of ASL. Knowledge and application of cultural norms and values continue to develop. ASL is the language of instruction for this course.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$15.00

Pre-requisites: ASL1101 ASL 1101 with a minimum grade of "C"

Co-requisites: none

Restrictions: none

ASL 1103 - Intermediate American Sign Language I (A SP SU)**2.00 credit(s)**

This course is a continuation of Beginning ASL II. Students further acquire the fundamental elements of American Sign Language grammar and vocabulary in context through interactions and short monologues. ASL production and comprehension of skills continue to develop and are given equal attention. Knowledge and application of cultural norms and values continue to develop. ASL is the language of instruction for this course.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$15.00

Pre-requisites: ASL1102 ASL 1102 with a minimum grade of "C"

Co-requisites: none

Restrictions: none

ASL 1104 - Intermediate American Sign Language II (A SP SU)**2.00 credit(s)**

This course is a continuation of ASL 1103 Intermediate ASL I. Students continue to develop more complex elements of American Sign Language grammar and vocabulary in context through interactions, monologues, and presentations. ASL production and comprehension skills continue to develop, with an emphasis on production of ASL. Knowledge and application of cultural norms and values continue to develop. ASL is the language of instruction for this course.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$5.00

Pre-requisites: ASL1103 ASL 1103 with a minimum grade of "C"

Co-requisites: none

Restrictions: none

ASL 1105 - Advanced ASL I (A SP)**2.00 credit(s)**

This course is a continuation of ASL 1104 Intermediate ASL II. Students continue to develop more complex elements of American Sign Language grammar and vocabulary in context through interactions, monologues, and presentations. ASL/English meaning equivalence is stressed. ASL production and comprehension skills continue to develop, with an emphasis on production of more complex ASL linguistic features. Knowledge and application of cultural norms and values continue to develop. ASL is the language of instruction for this course.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$5.00

Pre-requisites: ASL1104 ASL 1104 with a minimum grade of "C"

Co-requisites: none

Restrictions: none

ASL 1150 - Linguistics of ASL & English (A SP SU)**3.00 credit(s)**

This course offers an introduction to general linguistics, and provides an in-depth analysis of the major grammatical features and structure of ASL, and a comparison of ASL and English structure. Major topics also include language acquisition, language variation, and sociolinguistics. Specific linguistic considerations for interpreters are examined.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ASL1101 ASL 1101 required with grade of "C" or better

Co-requisites: ASL1103

Restrictions: none

ASL 1801 - Fingerspelling and Numbers in ASL (On Demand)**1.00 credit(s)**

This course offers students the opportunity to work on producing and comprehending fingerspelling and numbers in ASL. The emphasis of this course is on using fingerspelling and numbers in context. Opportunities are provided for the students to work with taped materials as well as live models.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: ASL1101

Co-requisites: ASL1102

Restrictions: none

ASL 1802 - History of the Deaf Community (On Demand)**1.00 credit(s)**

This course provides an in-depth look at the history of the Deaf community and how it has impacted the linguistic and cultural development of that community. Student will see how Deaf history around the world influences ASL, literature and education of the Deaf.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: ASL1101 Completion of ASL 1101 with a "C" or better.

Co-requisites: ASL1102

Restrictions: none

ASL 2801 - Classifier Use in ASL (On Demand) **1.00 credit(s)**

This course provides an in-depth look at the classifiers in ASL. This includes more intensive development of production and comprehension of classifiers. Students will analyze videos of native ASL users and continue to expand their use of classifiers.

Contact Hours: Lab 2.00

Lab Fee: \$0.00

Pre-requisites: ASL1103 ASL 1103 with a minimum grade of "C"

Co-requisites: none

Restrictions: none

ASL 2802 - ASL Literature (On Demand) **1.00 credit(s)**

This course provides an in-depth look at the classifiers in ASL. This includes more intensive development of production and comprehension of classifiers. Students will analyze videos of native ASL users and continue to expand their use of classifiers.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: ASL1103 ASL 1103 with a minimum grade of "C"

Co-requisites: none

Restrictions: none

Astronomy

ASTR 1141 - Life in the Universe (A SP SU) **3.00 credit(s)**

This course covers the potential for life elsewhere in the universe based on the discovery of extra-solar planets and the nature of life on Earth.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

ASTR 1161 - The Solar System (A SP SU) **3.00 credit(s)**

This course offers an introduction to astronomy focusing on the solar system. Topics include the night sky, seasons, phases, eclipses; gravity, light and telescopes; solar system origins; planets, moons, rings, asteroids, comets, and exoplanets. This course may require additional time outside of scheduled class hours.

Contact Hours: Lecture 3.00

Lab Fee: \$7.00

Pre-requisites: MATH1075 or higher and Placement into ENGL 1100

Co-requisites: none

Restrictions: none

ASTR 1162 - Stars and Galaxies (A SP SU)**3.00 credit(s)**

This course explores stars, galaxies, and cosmology. Topics include gravity and light; the Sun; stellar properties, structure, and evolution; star formation and star death; black holes, white dwarfs, and neutron stars; galaxies and galaxy formation; structure, history, and future of the universe. This course may require additional time outside of scheduled class hours.

Contact Hours: Lecture 3.00

Lab Fee: \$7.00

Pre-requisites: MATH1075 or higher and Placement into ENGL 1100

Co-requisites: none

Restrictions: none

ASTR 1400 - Astronomy Laboratory (A SP SU)**1.00 credit(s)**

Laboratory investigations of light and matter, Earth's astronomical environment, and analysis of astronomical data.

Contact Hours: Lab 2.00

Lab Fee: \$6.00

Pre-requisites: MATH1075 or higher and ASTR1161 or ASTR1162

Co-requisites: ASTR1161 or ASTR1162

Restrictions: none

Automotive Technology**AUTO 1001 - Autocare (A SP SU)****2.00 credit(s)**

This course is designed for the nonautomotive student who is interested in becoming familiar with the fundamentals of automotive systems and preventative maintenance. This course also provides information on choosing a repair shop, tips and techniques for dealing with minor breakdowns, and the vehicle purchase process.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

AUTO 1101 - Basic Auto Systems (A SP SU)**2.00 credit(s)**

This introductory automotive course covers the basic components and systems of the automobile. Included in this course are automotive terminology and mechanical, hydraulic, and electrical theories as they apply to automobiles and light trucks. Students are strongly encouraged to take AUTO-1106 the same semester. See plan of study or Automotive Advisor for recommended course sequence.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$10.00

Pre-requisites: Placement into DEV 0114 or higher and Placement into DEV 0155 or higher AUTO1106 and AUTO1160

Co-requisites: AUTO1106 and AUTO1160

Restrictions: none

AUTO 1106 - Auto Shop Orientation and Service (A SP SU) **2.00 credit(s)**

This introductory automotive course covers the operation of an automotive shop, the proper use of hand tools, power tools, and basic maintenance operations on cars and light trucks. Student must have credit for or be concurrently enrolled in AUTO 1101. See plan of study or an Automotive Advisor for recommended course sequence.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$30.00

Pre-requisites: Placement into DEV 0114 or higher and Placement into DEV 0155 or higher. AUTO1101 and AUTO1160

Co-requisites: AUTO1101 and AUTO1160

Restrictions: none

AUTO 1110 - Engines: Theory and Operations (A SP SU) **2.00 credit(s)**

This course presents automotive engine design, theory, and operation. All engine mechanical systems are explored during teardown and reassembly of an automotive engine. Students will diagnose engine concerns and determine needed repairs. Student must have satisfactorily completed AUTO 1101 and AUTO 1106.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$25.00

Pre-requisites: AUTO1101 and AUTO1106

Co-requisites: none

Restrictions: none

AUTO 1140 - Suspension and Steering: Theory and Oper (A SP SU) **2.00 credit(s)**

This class examines the theory, operation, and basic procedures needed to service and repair wheels, tires, wheel bearings, and suspension and steering components. Basic wheel alignment theory and service are also emphasized. Student must have satisfactorily completed AUTO 1101 and AUTO 1106. See plan of study or an Automotive Advisor for recommended course sequence.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$40.00

Pre-requisites: AUTO1101 and AUTO1106

Co-requisites: none

Restrictions: none

AUTO 1150 - Brake and Systems: Theory and Operation (A SP SU) **2.00 credit(s)**

This course presents the theory, operation, service, and repair of drum brakes, disc brakes, hydraulic components, brake lines, and power brakes. Student must have satisfactorily completed AUTO 1101 and AUTO 1106. See plan of study or an Automotive Advisor for recommended course sequence.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$35.00

Pre-requisites: AUTO1101 and AUTO1106

Co-requisites: none

Restrictions: none

AUTO 1160 - Electrical Syst: Theory and Operation I (A SP SU) **2.00 credit(s)**

This course presents basic circuit theory, meter usage and interpreting wiring diagrams. Basic circuit troubleshooting is also explored. Student must have satisfactorily completed or be concurrently enrolled in AUTO 1101 and AUTO 1106. See plan of study or an Automotive Advisor for recommended course sequence.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$25.00

Pre-requisites: Placement into DEV 0114 or higher and Placement into DEV 0155 or higher

Co-requisites: none

Restrictions: none

AUTO 1170 - Heating & Air Condition Theory & Oper (A SP SU) **2.00 credit(s)**

This course presents the theory, operation and service procedures of refrigeration and engine cooling and heating. Students learn proper use of recovery, recycling, charging, testing, and component evaluation equipment. Student must have satisfactorily completed AUTO 1101 and AUTO 1106. See plan of study or an Automotive Advisor for recommended course sequence.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$40.00

Pre-requisites: AUTO1101 and AUTO1106

Co-requisites: none

Restrictions: none

AUTO 1180 - Engine Performance: Theory and Ops I (A SP) **2.00 credit(s)**

This course presents the fundamentals of engine performance. It includes basic testing and diagnosis of the ignition and fuel systems. Basic engine mechanical testing is also covered. Student must have satisfactorily completed AUTO 1101, AUTO 1106 and AUTO 1160.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$25.00

Pre-requisites: AUTO1101 and AUTO1106 and AUTO1160

Co-requisites: none

Restrictions: none

AUTO 1210 - Powertrain Systems Service (A SP SU) **2.00 credit(s)**

This course presents the procedures for the removal and replacement of various components of the powertrain system including engine assemblies, transaxles, transmissions and differentials. Student must have satisfactorily completed AUTO 1101 and AUTO 1106.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$40.00

Pre-requisites: AUTO1101 and AUTO1106

Co-requisites: none

Restrictions: none

AUTO 1240 - Suspension & Steering Diagnosis & Repair (A SP) **2.00 credit(s)**

This course builds on the fundamentals covered in AUTO 1140 and examines the essential procedures and routines needed for diagnosis and repair of modern suspension and steering systems. It will also cover advanced alignment diagnostic angles and techniques. Student must have satisfactorily completed AUTO 1101, AUTO 1106 and AUTO 1140. Must have credit for or be concurrently enrolled in AUTO 1160.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$45.00

Pre-requisites: AUTO1101 and AUTO1106 and AUTO1140

Co-requisites: AUTO1160

Restrictions: none

AUTO 1250 - Brake Systems: Diagnosis & Repair (A SP) **2.00 credit(s)**

This course builds on the fundamentals covered in AUTO 1150. Brake system diagnosis, live-car servicing, power booster service, antilock brake systems, and brake lathe operation are explored. Student must have satisfactorily completed AUTO 1101, AUTO 1106, AUTO 1150, and AUTO 1160.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$40.00

Pre-requisites: AUTO1101 and AUTO1106 and AUTO1150 and AUTO1160

Co-requisites: none

Restrictions: none

AUTO 1260 - Electrical Systems Theory & Operation II (A SP) **2.00 credit(s)**

This course builds on the fundamentals covered in AUTO 1160. Diagnosis and repair of the battery, starting, charging, lighting and accessory circuits are emphasized. Student must have satisfactorily completed AUTO 1101, AUTO-1106 and AUTO 1160.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$30.00

Pre-requisites: AUTO1101 and AUTO1106 and AUTO1160

Co-requisites: none

Restrictions: none

AUTO 2101 - Auto Business Management (A SP SU) **2.00 credit(s)**

This course is an introduction to automotive management principals and practices. Topics covered include: a systems approach to management, management styles, financial measures, management by objective and quality, time management, customer and employee relations, marketing and the legal environment.

Contact Hours: Lab 1.00, Lecture 1.50

Lab Fee: \$2.00

Pre-requisites: AUTO1101

Co-requisites: none

Restrictions: none

AUTO 2120 - Auto Transmissions: Theory & Operations (A) **2.00 credit(s)**

This course presents automatic transmissions and transaxle theory and operation. Hydraulic, mechanical and electrical systems are explored during teardown and reassembly of an automatic transmission. Student must have satisfactorily completed AUTO 1101, AUTO 1106 and AUTO 1160.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$25.00

Pre-requisites: AUTO1101 and AUTO1106 and AUTO1160

Co-requisites: none

Restrictions: none

AUTO 2130 - Manual Trans: Theory and Operation (SP) **2.00 credit(s)**

This course presents theory and operation of manual transmissions, transaxles, and differentials. Lecture and lab activities also cover proper teardown and reassembly procedures. Students must have satisfactorily completed AUTO 1101 and AUTO 1106.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$25.00

Pre-requisites: AUTO1101 and AUTO1106

Co-requisites: none

Restrictions: none

AUTO 2190 - Hybrid Vehicles: Theory and Operation (On Demand) **2.00 credit(s)**

This course presents the theory and operation of hybrid vehicles. This is an informative course designed to provide a general overview of various hybrid vehicle systems. Proper safety precautions and procedures needed to service the basic systems of hybrid vehicles will be discussed. Student must have satisfactorily completed AUTO 1101 and AUTO 1106.

Contact Hours: Lab 1.00, Lecture 1.50

Lab Fee: \$10.00

Pre-requisites: AUTO1101 and AUTO1106

Co-requisites: none

Restrictions: none

AUTO 2193 - Ind Studies in Automotive Technology (On Demand) **1.00 credit(s)**

AUTO 2193 is an individual, student-structured course that examines a selected topic in the automotive industry through intensive reading and research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: AUTO1101 and AUTO1106

Co-requisites: none

Restrictions: Instructor Permission

AUTO 2201 - Service Advising (On Demand) **2.00 credit(s)**

This course covers the primary responsibilities of a service advisor. This includes writing a proper repair order, scheduling, selling maintenance and customer relations. Estimating, repair order tracking and time management are also presented. Must have credit for AUTO 2101.

Contact Hours: Lab 1.00, Lecture 1.50

Lab Fee: \$2.00

Pre-requisites: AUTO2101

Co-requisites: none

Restrictions: none

AUTO 2220 - Automatic Trans: Diagnosis & Car Repair (On Demand) **2.00 credit(s)**

This course builds on the fundamentals covered in AUTO 2120. Emphasis is placed on in-car automatic transmission and transaxle service, diagnosis, and repair. Student must have satisfactorily completed AUTO 1101 AUTO 1106 and AUTO 2120.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$25.00

Pre-requisites: AUTO1101 and AUTO1106 and AUTO2120

Co-requisites: none

Restrictions: none

AUTO 2230 - Manual Trans: Diagnosis & In-Car Repair (On Demand) **2.00 credit(s)**

This course builds on the fundamentals covered in AUTO 2130. The topics of clutch, transfer case, drive shaft, drive axles and 4WD hub diagnosis and repair are explored through lecture, teardown, and reassembly. Student must have satisfactorily completed AUTO 1101, AUTO 1106, and AUTO 2130.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$35.00

Pre-requisites: AUTO1101 and AUTO1106 and AUTO2130

Co-requisites: none

Restrictions: none

AUTO 2270 - Heat & Air Condition Diagnosis & Repair (A SP SU) **2.00 credit(s)**

This course builds on the fundamentals covered in AUTO 1170. System diagnosis, electrical troubleshooting, air distribution, manual and automatic temperature control systems are explored through lecture and lab activities. Student must have satisfactorily completed AUTO 1101, AUTO 1106, and AUTO 1170.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$45.00

Pre-requisites: AUTO1101 and AUTO1106 and AUTO1160 and AUTO1170

Co-requisites: none

Restrictions: none

AUTO 2280 - Engine Performance Theory & Operation II (A SP) **2.00 credit(s)**

This course builds on the fundamentals covered in AUTO 1180. Emphasis is on exhaust gas analysis, scan tool use, emission control systems and the fundamentals of OBDII. Student must have satisfactorily completed AUTO 1101, AUTO 1106 and AUTO 1180.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$30.00

Pre-requisites: AUTO1180

Co-requisites: none

Restrictions: none

AUTO 2293 - Independent Studies in Auto Technology (On Demand) **2.00 credit(s)**

AUTO 2293 is an individual, student-structured course that examines a selected topic in the automotive industry through intensive reading and research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. Instructor consent is required.

Contact Hours:

Lab Fee: \$2.00

Pre-requisites: AUTO1101 and AUTO1106

Co-requisites: none

Restrictions: none

AUTO 2301 - Auto Service Management (On Demand) **2.00 credit(s)**

This course covers the variety of duties of the service manager. Principles presented in AUTO 2101 are further developed along with practical implementation strategies. Facilities and equipment planning, management and financial management and analysis are covered. Student must have credit for AUTO 2101.

Contact Hours: Lab 1.00, Lecture 1.50

Lab Fee: \$2.00

Pre-requisites: AUTO2101

Co-requisites: none

Restrictions: none

AUTO 2310 - Engines: Diagnosis & In-Car Repair (On Demand) **2.00 credit(s)**

This course builds on the fundamentals covered in AUTO 1110. Engine mechanical systems diagnosis and proper component replacement procedures are emphasized. Student must have satisfactorily completed AUTO 1101, AUTO 1106, and AUTO 1110.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$40.00

Pre-requisites: AUTO1110

Co-requisites: none

Restrictions: none

AUTO 2360 - Adv Electrical System Diagnosis & Repair (On Demand) **3.00 credit(s)**

This course continues the study of automotive electrical systems building on information and skills obtained in AUTO 1160 and AUTO 1260. Accessory system diagnosis, live-car servicing, supplemental restraints systems, and various body control computer systems will be emphasized. Student must have credit for AUTO 1260 or FORD 1260.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$25.00

Pre-requisites: AUTO1260 or FORD1260

Co-requisites: none

Restrictions: none

AUTO 2380 - Adv Engine Perform Diagnosis & Repair (On Demand) **3.00 credit(s)**

This course continues the study of automotive engine performance systems building on information and skills obtained in AUTO 1180 and AUTO 2280. System diagnosis, live-car servicing, and various manufacturer's computer control systems will also be explored through lecture and lab activities. Student must have credit for AUTO 2280.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$25.00

Pre-requisites: AUTO2280

Co-requisites: none

Restrictions: none

AUTO 2393 - Independent Studies: Auto Technology (On Demand) **3.00 credit(s)**

AUTO 2393 is an individual, student-structured course that examines a selected topic in the automotive industry through intensive reading and research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program

Contact Hours:

Lab Fee: \$2.00

Pre-requisites: AUTO1101 and AUTO1106

Co-requisites: none

Restrictions: none

AUTO 2399 - Maint & Light Repair Shop Experience (A SP) **2.00 credit(s)**

This course includes instruction and assessment of skills and knowledge required by Maintenance and Light Repair technicians. Skills are measured in a shop setting with the students performing inspection, diagnosis, and repairs. This course is designed to improve students' hand skills and working knowledge of the daily shop environment. Preparation for ASE's G-1 Certification test is also emphasized.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$35.00

Pre-requisites: AUTO1101 and AUTO1106 and AUTO1140 and AUTO1150 and AUTO1160 and AUTO1170 and AUTO1240 and AUTO1250 or FORD1250 and FORD1240 or AUTO1260 or FORD1260

Co-requisites: none

Restrictions: none

AUTO 2401 - Auto Parts: Management (On Demand)**2.00 credit(s)**

This course addresses the management duties of a parts department manager. Pricing, inventory control, merchandising, forecasting and purchasing are discussed.

Contact Hours: Lab 1.00, Lecture 1.50

Lab Fee: \$2.00

Pre-requisites: AUTO2101

Co-requisites: none

Restrictions: none

Biology

A mandatory safety lesson (normally given in the laboratory) must be completed before the student is admitted to certain biology laboratory sessions. Approved safety glasses are required for some laboratory sessions and may be purchased through the Columbus State Bookstore. Attendance during the first week of class is mandatory and may affect a student's continuation in these classes. Students must complete a minimum of 60% of the laboratories in a course to receive credit (see course syllabus for specific requirements). Courses in this area may require additional hours outside of the scheduled class times. Students enrolled in distance versions of these courses may be required to come to campus for an orientation meeting, completion of certain exams, and laboratories (see course syllabus for specific requirements). Courses taught at a distance (DL) have higher student costs. In addition to the textbook, home lab kits are required for web sections of BIO 1111, BIO 1112, and BIO 1127. Visit bookstore.csc.edu to review the additional costs required for home lab kits.

BIO 0100 - Foundations of Biology (A SP SU)**3.00 credit(s)**

A general biology course where basic principles such as the characteristics of life, basic biochemistry, cell structure and function, mitosis, meiosis, Mendelian genetics, diversity of life and ecology are explored.

Contact Hours: Lecture 3.00

Lab Fee: \$4.00

Pre-requisites: Placement into ENGL 0190

Co-requisites: none

Restrictions: none

BIO 1101 - Fundamentals Human Anatomy & Physiology (A SP SU)**3.00 credit(s)**

The fundamentals of normal human anatomy and physiology including terminology, homeostasis, membrane transport, tissues, integumentary, musculoskeletal, neuroendocrine, hemic-lymphatic, cardiopulmonary, urogenital, digestive systems, and acid-based balance including on-line review of basic cell biology and biological chemistry. Case studies relate normal anatomy and physiology to specific disorders. Hybrid and web students are required to take exams at a proctored testing facility.

Contact Hours: Lecture 3.00

Lab Fee: \$4.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BIO 1107 - Human Biology (A SP SU)**4.00 credit(s)**

This course introduces the study of human biology for the non-major student. Lessons include a detailed and topical study of the human body systems for skeletal, muscular and endocrine to learning about the brain, heart, lung, kidney, reproduction and the digestive system. Development, genetics, human populations and evolution, immunology and cancer as each impacts on humans will also be covered. This

course includes a hands-on laboratory experience which emphasizes select lecture topics.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$20.00

Pre-requisites: BIO0100 or higher or placement equivalent and Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BIO 1111 - Intro to Biology (A SP SU)**4.00 credit(s)**

A general biology course for the non-major designed to introduce the student to major concepts in these subject areas: cell biology, metabolism, genetics, evolution, diversity of life, and ecology. Sections of this course are H-designated Honors classes.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$20.00

Pre-requisites: BIO0100 or higher or placement equivalent and Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BIO 1113 - Biological Sciences I (A SP SU)**4.00 credit(s)**

The first half of a two-course sequence designed to give students majoring in the sciences an intensive introduction to the Biological sciences. Subjects covered in the course include biochemistry, cell biology, cell metabolism, genetics, gene technology, animal development and defense mechanism of the body. Sections of this course are H-designated Honors classes.

Contact Hours: Lecture 3.00, Lab 3.00

Lab Fee: \$27.00

Pre-requisites: BIO0100 or higher or placement equivalent and Placement into ENGL 1100

Co-requisites: CHEM1171

Restrictions: none

BIO 1114 - Biological Sciences II (A SP SU)**4.00 credit(s)**

The second half of a two-course sequence designed to give students majoring in the sciences an intensive introduction to the biological sciences. Topics covered in this course include evolution, taxonomy, anatomy and physiology of plants and animals, behavior and ecology.

Contact Hours: Lecture 3.00, Lab 3.00

Lab Fee: \$26.00

Pre-requisites: BIO1113

Co-requisites: none

Restrictions: none

BIO 1121 - Anatomy & Physiology I (A SP SU)**4.00 credit(s)**

An integrated organ-systems approach to normal anatomy, physiology with medical applications of disease. An on-line review of cell biology and biological chemistry is included in this course. Topics include terminology, homeostasis, membrane transport, tissues, integumentary, skeletal, muscular, nervous, and endocrine systems. Study of prosected cadavers, animal organ dissection, and collectiong physiological data from human subjects are required in laboratory. Hybrid students are required to take exams at a proctored testing facility.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$31.00

Pre-requisites: BIO0100 or higher or placement equivalent and Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BIO 1122 - Anatomy & Physiology II (A SP SU) **4.00 credit(s)**

A continuation of BIO 1121 using an integrated organ-systems approach to normal anatomy, and physiology and with medical applications of disease including an on-line review of objectives from the previous semester. Topics include glucose and electrolyte homeostasis, blood, lymphatic, cardiovascular, respiratory, and urinary systems, acid-base balance, digestive system, metabolism, thermoregulation, reproductive systems, genetics, human development, and life span physiology. Study of prosected cadavers, animal organ dissection, and collecting physiological data from human subjects are required in the laboratory. Hybrid students are required to take exams at a proctored testing facility.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$31.00

Pre-requisites: BIO1121

Co-requisites: none

Restrictions: none

BIO 1125 - Plant Biology (A SP SU) **4.00 credit(s)**

This course covers the biology of major plant groups. Topics include diversity, physiology, reproduction, anatomy, ecology, and the economic significance of plants.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$19.00

Pre-requisites: BIO0100 or higher or placement equivalent and Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BIO 1127 - Introduction to Environmental Science (A SP SU) **4.00 credit(s)**

This course is concerned with the study and analysis of the interrelationship between humans and their environment and finding rational solutions to current environmental problems. Students are exposed to the scientific method of inquiry and will gain an appreciation for the relationship between environmental science and other natural sciences.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$20.00

Pre-requisites: BIO 0100 or CHEM 0100 or placement equivalent, or any college science course Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BIO 2215 - Introduction to Microbiology (A SP SU) **4.00 credit(s)**

BIO 2215 is a general microbiology course for non microbiology majors. Topics covered include: microbial taxonomy, morphology, staining, culture techniques, metabolism and physical and chemical methods for microbial control. General concepts in immunology, including host defense mechanisms, hypersensitivity and specific microbial diseases are also covered. Micro-related laboratory is required, including identification of unknown bacteria.

Contact Hours: Lecture 3.00, Lab 3.00

Lab Fee: \$27.00

Pre-requisites: Placement into ENGL 1100 and BIO0100 or higher or placement equivalent and CHEM0100 or higher or placement equivalent

Co-requisites: none

Restrictions: none

BIO 2293 - Independent Study in Biology (On Demand) **1.00 - 3.00 credit(s)**

This independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program.

Contact Hours: Lecture 1.00 - 3.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

BIO 2300 - Human Anatomy (A SP SU) **4.00 credit(s)**

The gross anatomy of the entire body is presented in detail. The human cadaver will be used to study the regions of the body (Back, lower limb, upper limb, head and neck, thorax, abdomen and pelvis.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$27.00

Pre-requisites: BIO0100 or higher or placement equivalent and Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BIO 2301 - Human Physiology (A SP SU) **4.00 credit(s)**

An introductory course in human physiology designed to cover the normal physiology of all organ systems.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$14.00

Pre-requisites: BIO2300 and CHEM0100 or higher or placement equivalent

Co-requisites: none

Restrictions: none

BIO 2302 - Human Pathophysiology (A SP SU) **3.00 credit(s)**

The etiology, pathogenesis, morphology, local effects, systemic manifestations, clinical significance, predisposition, and prevention of cell injury, teratology, cancer, and disorders of the hematological, immune, circulatory, nervous, endocrine, urinary, respiratory, gastrointestinal, reproductive and musculoskeletal systems. This course includes on-line reviews of cell biology, biological chemistry, anatomy, physiology, and terminology related to pathophysiological processes of the body. Case studies are used to interpret clinical information, diagnostic tests, signs, and symptoms relating to mechanisms of disease.

Contact Hours: Lecture 3.00

Lab Fee: \$4.00

Pre-requisites: BIO2301 or BIO1114 and CHEM1112 or CHEM1113 or BIO1122 or CHEM1200

Co-requisites: none

Restrictions: none

BIO 2500 - General Genetics (A SP SU)**3.00 credit(s)**

The principles of genetics including molecular genetics, transmission genetics of prokaryotes and eukaryotes, developmental and non chromosomal genetics and the genetics and evolution of populations.

Contact Hours: Lecture 3.00

Lab Fee: \$6.00

Pre-requisites: BIO1113 and 3 additional semester credit hours in biological sciences above BIO 1113

Co-requisites: none

Restrictions: none

Bioscience Technology

(See also Quality Assurance Technology)

BISI 1101 - Bioscience Tech I (A)**4.00 credit(s)**

This applied course covers learning objectives found in the Bio Science industry and includes the following topics: Pressure, Flow, Level, Temperature, introduction to FDA regulations, and related units. Additional topics include temperature and pH.

Contact Hours: Lecture 3.00, Lab 3.00

Lab Fee: \$36.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

BISI 1103 - Bioscience Tech II (SP)**4.00 credit(s)**

This second course in the sequence covers Compounding, Sterile Filling, pH, Pilot Plant System, Aseptic Practices/Technologies, FDA Regulations, and operating in a regulatory Biomanufacturing Environment. Competency in key knowledge and skill areas for bioprocess control and GMP are evaluated as part of a capstone project.

Contact Hours: Lecture 3.00, Lab 3.00

Lab Fee: \$42.00

Pre-requisites: BISI1101

Co-requisites: none

Restrictions: none

Business Management

BMGT 1008 - 21st Century Workplace Skills (On Demand)**2.00 credit(s)**

In this fundamental course, students learn basic skills needed to gain entry to and thrive in a rapidly changing workplace environment. This course is not recommended for business majors.

Contact Hours: Lecture 2.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

BMGT 1101 - Principles of Business (A SP SU) **3.00 credit(s)**

This course provides an overview of the various functions and activities of business enterprises. Marketing, human resources, accounting and finance, and operations are examined. Additionally, the topics of globalization and economics are covered. Students will learn important business terms and definitions. It is recommended that students complete COLS 1100 concurrently with this course.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 0190

Co-requisites: Placement into ENGL 0190

Restrictions: none

BMGT 1102 - Interpersonal Skills (A SP SU) **2.00 credit(s)**

This course provides opportunities for students to begin to understand their personal style via a battery of personal assessments that measure areas such as communication, listening, personality, and team building styles. Students will have the opportunity to apply this knowledge and adapt to other styles, which are critical to become an effective manager. A team project is required. Web conferencing may be required. Students may complete COLS 1100 concurrently with this course.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 0190

Co-requisites: none

Restrictions: Other

BMGT 1111 - Management (A SP SU) **3.00 credit(s)**

The basic management functions of planning, organizing, leading, controlling and staffing business organizations are covered. This course also provides an introduction to fundamental concepts and applications of individual, group, and organizational behavior in the workplace. The organization is viewed as a system of interdependent parts which interacts with the outside environment. Topics include management theory, global business trends, leadership, motivation, communication and problem solving, foundations of organizational behavior, perception and individual decision making, values, attitudes, and the foundations of group behavior. It is recommended that the student complete COLS 1100 before enrolling in this course.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

BMGT 1798 - Study Abroad Global Business Mgt (A SP SU)**3.00 credit(s)**

This course provides students with an overview of various topics with a global focus on management, trade, economics, industries, customers, competitors, etc. The course provides a unique opportunity for students to travel to the destination(s) they have been exploring during the semester. Each year, one semester trip will be traveling abroad and the other semester trip will travel within North America to globally significant destinations, thus providing an affordable experience. All students interested in the program will have an opportunity to submit a competitive application to attend the course. It is expected the student travel to the target location is a requirement for succeeding in this course.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BMGT 2211 - Organizational Behavior (A SP SU)**3.00 credit(s)**

This course provides an introduction to fundamental concepts and applications of individual, group, and organizational behavior in the workplace. Topics include foundations of organizational behavior, perception and individual decision making, values, attitudes, the foundations of group behavior, understanding work teams, and organizational dynamics.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

BMGT 2216 - Business Ethics (A SP SU)**3.00 credit(s)**

This course introduces students to contemporary ethical issues in business, ethical decision making strategies, and the laws which shape the ethical behavior of business organizations and their employees. Critical thinking and the application of ethical principles in the workplace are emphasized. This course has a heavy writing component. Students may be required to work in groups. Web conferencing may be required for Distance Learning sections. It is recommended that the student complete COLS 1100 before enrolling in this course.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

BMGT 2231 - Fundamentals of Entrepreneurship (A SP SU) **3.00 credit(s)**

This course introduces the fundamental considerations in starting a new small business venture. Additionally the course focuses on selected critical aspects of a feasibility study and business plan. Areas include: market research and analysis, identifying sources of revenue, location analysis, pricing, and determining the feasibility of an opportunity. Web conferencing may be required for Distance Learning sections.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BMGT 2232 - Entrepreneurship: Business Plan Develop (A SP SU) **3.00 credit(s)**

Topics covered in this course include various operational areas of entrepreneurship. Emphasis is given to implementing a marketing plan, detailed financial forecasting, cash flows and sources of financing. Special attention will be given to improving presentation skills by presenting a final business plan at the end of the semester.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100 and BMGT2231

Co-requisites: none

Restrictions: none

BMGT 2245 - Introduction to Non-Profit Management (A) **3.00 credit(s)**

This course traces the history, philosophy, and societal role of nonprofits in the United States, and how social sector organizations today compare organizationally to public and private sector organizations. Additionally, this course explores the characteristics of effective and ethical management and leadership in nonprofit organizations. Finally, this course examines the roles of the executive director, the board, staff and volunteers. It is recommended that students complete COLS 1100 before enrolling in this course.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BMGT 2247 - Legal/Financl Issues in Non-Profit Mgmt (SP) **3.00 credit(s)**

This course introduces the legal and financial issues relevant to managing a 501 (c) (3) nonprofit organization. Issues to be addressed include organizing the entity, qualifying for and maintaining nonprofit status, principles of fundraising, and strategic marketing. Financial areas covered include the principles of fiscal responsibility for nonprofits, as well as cost accounting, budgeting, the presentation of financial statements, proposed development, and in-kind resources. It is recommended that the student complete COLS 1100 before enrolling in this course.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: BMGT2245 and Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BMGT 2250 - Project Management Principles (A SP SU)**3.00 credit(s)**

This course is the first in a series leading to the Project Management Certificate. It introduces basic project management concepts and the PMI Talent Triangle which includes the ideal skill set for successful Project Managers today. Students will learn key technical project management skills as well as the broader scope of Project Management in leadership and strategic business management. Specific PM skills will focus on defining the scope of a project; establishing goals; defining dependency networks; communicating project plans; scheduling projects tasks; assigning resources; and using project evaluation techniques. Web conferencing may be required for Distance Learning sections. Recommended: Student should complete COLS 1100 before enrolling in this course.

Contact Hours: Lecture 2.00, Lab 2.00**Lab Fee: \$2.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

BMGT 2251 - Project Management Techniques (A SP)**3.00 credit(s)**

This course builds upon the foundation of project management knowledge acquired in BMGT2250 and continues the series required to earn the Project Management Certificate. Students will focus on project leadership, working with stakeholders, building a high performing team, managing risk, monitoring project processes, and international, Agile and SCRUM project management practices. In particular students will hone techniques for developing and crashing a network diagram, time and cost estimating, and resource allocations. Completion of the series of Project Management courses will assist students to prepare for industry certification such as a Certified Associate in Project Manager (CAPM) or the Project Management Professional (PMP). Web conferencing may be required for Distance Learning sections. It is recommended that students complete COLS 1100 before enrolling in this course.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: BMGT2250

Co-requisites: none

Restrictions: none

BMGT 2253 - Conflict Management (A SP SU)**3.00 credit(s)**

This course provides students with a basis and a context for effectively managing conflict. The course covers advanced concepts of emotional intelligence and emotional intelligence competencies, a critical thinking model, various models of conflict management, dealing with disruptive and antagonistic behaviors, and the nine elements of effective conflict management. The course focuses on theory and practical application and is designed to equip managers with both the basic theoretical knowledge and initial practical experience needed to manage conflict effectively. A team project is required. Web conferencing may be required for Distance Learning sections.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

BMGT 2254 - Negotiation (A SP)**3.00 credit(s)**

This course provides students with an overview of several negotiation skills and techniques used in business as well as other endeavors. Topics include a review of basic and advanced game theory, negotiation preparation, skill analysis, verbal/non-verbal communication, conflict of interest ethics, negotiating change, international/cross cultural considerations, and evaluating final outcome of negotiations. Students will become familiar with the application of tools, techniques, and methodologies that enhance strategies best suited for each situation. A team project is required. Web conferencing may be required for Distance Learning sections.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

BMGT 2258 - Operations Management (A SP SU)**3.00 credit(s)**

This course provides students with a review of operations, including service and manufacturing. It includes a review of tools, techniques, and methodologies that enhance organizational problem-solving, planning, and process analysis and improvement. Students will become familiar with application of these tools and learn which is best suited to a particular organizational challenge. Web conferences may be required for distance learning sections.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: STAT1400 Required or MATH1030/MATH1020 or MATH1050 may be used instead of STAT1400 Placement into ENG1100

Co-requisites: Placement into ENG1100

Restrictions: none

BMGT 2280 - Professional Development (A SP)**1.00 credit(s)**

In this course, each student will examine their individual career development in their selected program of study and build a professional electronic portfolio displaying course projects that demonstrate their knowledge, skills, and abilities. Course activities will include assessing their program competencies, analyzing social capital, conducting informational interviews, learning proper business etiquette, and completing related job search activities such as developing a professional resume and honing interviewing and networking skills. Web conferencing may be required for Distance Learning sections.

Contact Hours: Lab 2.00

Lab Fee: \$8.00

Pre-requisites: Completion of 24 credit hours or permission of instructor.

Co-requisites: none

Restrictions: Instructor Permission Other

BMGT 2299 - Case Studies in Strategic Management (A SP SU) **3.00 credit(s)**

This course is a capstone course for graduating Business Management, Entrepreneurship, Marketing, Finance, and Accounting students. It provides students an in-depth examination of corporate strategic planning. The course focuses on the application and reinforcement of the various functional disciplines and concepts of preceding business coursework. A framework for competitive company and industry analysis is provided. Students will apply decision-making, problem-solving, and accounting and financial analysis in reviewing contemporary businesses and industries, thereby strengthening business acumen. A team project through simulation or investigation of a real industry is required. Web conferencing is required for distance learning sections.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$16.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

BMGT 2599 - Project Management Capstone (A SP) **3.00 credit(s)**

This capstone course is the final sequence for the Project Management Certification program. Students will apply PM concepts covered in BMGT 2250 and BMGT2251 to manage at least one comprehensive project from initiation to closure. Projects may be real, simulated, or a case study. Completion of the series of Project Management courses will assist students to prepare for industry certification such as a Certified Associate in Project Manager (CAPM) or the Project Management Professional (PMP). Web conferencing may be required for Distance Learning sections.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: BMGT2250 and BMGT2251

Co-requisites: none

Restrictions: none

BMGT 2901 - Business Seminar/Practicum (A SP) **3.00 credit(s)**

In the practicum, students will work in an advisor-approved position to reinforce and apply the knowledge and skills acquired in their Business Management coursework. This practicum will involve the workplace supervisor under the guidance of a Business Management faculty member. The seminar will assist students in integrating and applying their business knowledge and skills during their work experience. Web conferencing may be required for Distance Learning sections.

Contact Hours: Seminar 1.00, Practicum 14.00

Lab Fee: \$0.00

Pre-requisites: Completion of 30 credit hours and Instructor permission required.

Co-requisites: none

Restrictions: Instructor Permission Other

BMGT 2902 - Entrepreneurship Seminar/Practicum (A SP) **3.00 credit(s)**

The practicum provides a supervised, cooperative work experience with on-the-job application of knowledge and skills acquired in the classroom. The seminar allows students to report on management knowledge gained in specific areas of the practicum.

Contact Hours: Seminar 1.00, Practicum 14.00

Lab Fee: \$0.00

Pre-requisites: BMGT2232

Co-requisites: none

Restrictions: Instructor Permission

Business Office Administration

BOA 1101 - Word I (A SP SU) **2.00 credit(s)**

This course focuses on the features and functions of Microsoft Word software used in a business environment. Students will learn to create and customize documents using editing functions, formatting features, graphics, images, tables, and charts.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BOA 1102 - Excel I (A SP SU) **2.00 credit(s)**

This course explores Excel features and functions used in business and accounting applications. Students will learn to create and modify worksheets, insert formulas, create charts, enhance the appearance of workbooks, and manage files and folders.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100 and Placement into MATH 1104 or higher

Co-requisites: none

Restrictions: none

BOA 1103 - Powerpoint (A SP SU) **2.00 credit(s)**

Students will learn to plan, create, and revise PowerPoint presentations. Emphasis will be placed on presentation skills and design standards.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$60.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BOA 1104 - Access (A SP SU)**2.00 credit(s)**

This course includes features and functions of Microsoft Access database software used in a business environment. Topics include creating and modifying databases and tables, creating and manipulating queries, forms, and reports.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100 and Placement into MATH 1104 or higher

Co-requisites: none

Restrictions: none

BOA 1111 - Bookkeeping (A SP SU)**3.00 credit(s)**

This course covers the accounting cycle for a service business including analysis of business transactions, journalizing, posting, adjusting and closing entries, and financial statement preparation. Special journals that are used in a merchandising business are also covered. Transactions involving payroll accounting, bank accounts, and cash funds are also covered.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: BOA1102

Co-requisites: none

Restrictions: none

BOA 1117 - Payroll (A SP SU)**1.00 credit(s)**

This course examines federal and state wage-hour laws, paying employees, obtaining required payroll data, completing state withholding and federal reporting forms, and how to record journal entries for wages and deductions, and withholding and remitting taxes.

Contact Hours: Lecture 1.00

Lab Fee: \$3.00

Pre-requisites: BOA1111 or ACCT1211

Co-requisites: none

Restrictions: none

BOA 1122 - QuickBooks (A SP SU)**2.00 credit(s)**

This course covers how to set up a company in Quickbooks, how to perform all bookkeeping and accounting functions of the software, and how to manage business functions such as inventory and budgeting. Integrating Quickbooks with other programs and customizing Quickbooks to a company's specific needs are also covered.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$58.00

Pre-requisites: BOA1111 or ACCT1211 or ACCT1212

Co-requisites: none

Restrictions: none

BOA 1131 - Keyboarding & Document Formatting (A SP SU) **2.00 credit(s)**

This course emphasizes beginning touch-typing skills/proper keyboarding techniques, and document formatting using word processing software. Basic business documents such as letters, memos, and tables are included. Drill practice is integrated to develop speed, accuracy, and correct finger placement.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$3.00

Pre-requisites: Placement into ENGL 1100 and Placement into MATH 1104 or higher

Co-requisites: none

Restrictions: none

BOA 1132 - Advanced Document Formatting (A SP SU) **2.00 credit(s)**

Students will develop a mastery of formatting skills and intermediate word processing functions required to complete sophisticated business correspondence. Along with these skills, students will continue to build keyboarding speed and accuracy rates.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$3.00

Pre-requisites: BOA1131

Co-requisites: none

Restrictions: none

BOA 1150 - Office Procedures I (A SP) **2.00 credit(s)**

This course introduces the student to the skills needed for success as an administrative professional. The main responsibilities, the soft skills and knowledge, and the required technical skills necessary for success in the 21st century office are emphasized. Students will begin developing an electronic portfolio that is used throughout the program.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$5.00

Pre-requisites: Placement into ENGL 1100 and Placement into MATH 1104 or higher

Co-requisites: none

Restrictions: none

BOA 1151 - Office Procedures II (A SP) **3.00 credit(s)**

As a continuation of BOA 1150 Office Procedures I, this course covers additional topics essential to the success of an office professional and continues to provide continuity and integration with all BOA courses and curriculum. Topics include preparing and delivering presentations, teamwork in the workplace, planning and advancing your career, and professional development.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$5.00

Pre-requisites: BOA1150

Co-requisites: none

Restrictions: none

BOA 1172 - Excel II (A SP SU)**2.00 credit(s)**

This course uses intermediate and advanced features and functions of Microsoft Excel spreadsheet software. Students will learn advanced formatting techniques, work with templates, and use advanced features for financial, math, statistical, and logical functions to analyze and solve problems in a business environment. Students will test for the Microsoft Office Specialist certification for Excel at the end of this course.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$60.00

Pre-requisites: BOA1102

Co-requisites: none

Restrictions: none

BOA 1191 - Word II (A SP SU)**2.00 credit(s)**

This course focuses on the intermediate features and functions of Microsoft Word software used in a business environment. Students will learn to create and customize documents using advanced formatting features, create specialized tables, charts, and templates. Students will test for the Microsoft Office Specialist certification for Word at the end of this course.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$60.00

Pre-requisites: BOA1101

Co-requisites: none

Restrictions: none

BOA 1200 - Business Language (A SP SU)**2.00 credit(s)**

This course is the study of business grammar and language fundamentals needed to communicate effectively in today's business environment. Topics include grammar usage, punctuation, capitalization, number styles, vocabulary, and spelling.

Contact Hours: Lecture 1.50, Lab 1.50

Lab Fee: \$3.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

BOA 1300 - Business Applications (A SP SU)**2.00 credit(s)**

This course prepares students to solve business problems using computer software as a tool. Covers intermediate business applications pertaining to all communication methods used in a business environment.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$3.00

Pre-requisites: CSCI1101 or BOA1101 and BOA1102 and BOA1103

Co-requisites: none

Restrictions: none

BOA 2950 - BOA Practicum & Seminar (A SP SU)**3.00 credit(s)**

This practicum is a professional field experience program designed to provide the student with an opportunity to work in a professional office environment. This opportunity allows students to integrate the theory and knowledge of course content with the application of principles and practices in a work environment. The seminar provides opportunities for discussion and activities related to a business office environment.

Contact Hours: Seminar 1.00, Practicum 14.00

Lab Fee: \$3.00

Pre-requisites: BOA1132 and BOA1151

Co-requisites: none

Restrictions: none

BOA 2999 - BOA Capstone (A SP)**3.00 credit(s)**

This BOA capstone course provides a hands-on application environment where students work in teams to plan, develop, implement, and present automated business office applications. Students will also complete an electronic portfolio and participate in a community service project related to the program of study.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$5.00

Pre-requisites: BOA1132 and BOA1151

Co-requisites: none

Restrictions: none

Chemistry

A mandatory safety lesson must be completed before the student is admitted to any chemistry laboratory sessions. Approved Chemical Splash Resistant goggles are required and may be purchased through the Columbus State Bookstore. Certain clothing restrictions exist and will be explained by the instructor. Attendance during the first week of class is mandatory and may affect a student's continued enrollment in these classes. Students must earn at least 60% of the total laboratory points in a course to receive a passing grade for the course. Courses in this area may require additional hours outside of scheduled class times.

CHEM 0100 - Intro to Chemistry (A SP SU)**4.00 credit(s)**

This is a preparatory chemistry course covering the basic concepts of chemistry with emphasis on the physical and chemical properties of matter, problem solving and an introduction to chemical reactions. Related laboratory work and demonstrations are included. Safety training and goggles are required for laboratory sessions. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting and completion of certain exams and laboratories.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$14.00

Pre-requisites: MATH1025 or higher or placement equivalent or Placement into ENGL 1100 and STAT1350 or placement equivalent

Co-requisites: none

Restrictions: none

CHEM 1100 - Chemistry and Society (A SP SU)**5.00 credit(s)**

This is a course for nonscience majors intended to a) acquaint students with the science of chemistry as it relates to modern technological society, and b) help students learn about chemistry in the context of their everyday lives. This course will help students realize the interconnection between chemistry and other disciplines in the natural sciences. The material in the course focuses on the practical significance of basic chemistry in the context of social, political and economic issues that affect our world.

Contact Hours: Lecture 5.00**Lab Fee: \$20.00**

Pre-requisites: MATH1025 or Placement into ENGL 1100 and MATH1050

Co-requisites: none

Restrictions: none

CHEM 1111 - Elementary Chemistry I (A SP SU)**4.00 credit(s)**

This is an introductory course in fundamental chemical concepts and laboratory techniques. Topics include atomic structure, periodic classification of elements, stoichiometry, solutions, acids and bases, pH and buffers, the gas laws, chemical equilibrium, and nuclear chemistry. Safety training and goggles are required for laboratory sessions. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting and completion of certain exams and laboratories.

Contact Hours: Lab 2.00, Lecture 3.00**Lab Fee: \$20.00**

Pre-requisites: MATH1025 or higher or placement equivalent or STAT1350 or placement equivalent and Placement into ENGL 1100 CHEM0100 or higher or placement equivalent

Co-requisites: none

Restrictions: none

CHEM 1112 - Elementary Chemistry II (A SP SU)**4.00 credit(s)**

This is an introductory course in fundamental organic chemistry, biochemistry and laboratory techniques. Course covers the study of carbon compounds organized according to functional groups, including carbohydrates, lipids, proteins, enzymes and nucleic acids. Safety training and goggles are required for laboratory sessions. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting and completion of certain exams and laboratories.

Contact Hours: Lab 2.00, Lecture 3.00**Lab Fee: \$20.00**

Pre-requisites: CHEM1111 or CHEM1171

Co-requisites: none

Restrictions: none

CHEM 1113 - Elements of Organic/Biochemistry (A SP SU) **4.00 credit(s)**

This is a course in elementary chemical concepts designed primarily for allied health students. It includes the study of basic organic chemistry, especially related to functional groups, and biochemistry including carbohydrates, lipids, proteins, enzymes, nucleic acids and metabolism. Safety training and goggles are required for the laboratory session. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting and completion of certain exams and laboratories.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$20.00

Pre-requisites: CHEM0100 or higher or placement equivalent and Placement into ENGL 1100 and MATH1025 or higher or placement equivalent or STAT1350 or higher or placement equivalent

Co-requisites: none

Restrictions: none

CHEM 1171 - General Chemistry I (A SP SU) **5.00 credit(s)**

This is a course in fundamental chemical principles. Topics include measurement, atomic structure, periodic classification, the mole concept, mass relationships in chemical reactions, the behavior of gases, the behavior of liquids, the behavior of solids, thermochemistry, quantum theory and electron configurations, chemical bonding, and molecular geometry. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting and completion of certain exams and laboratories. This is the first of a two-semester sequence designed for students entering a scientific field.

Contact Hours: Lab 3.00, Lecture 4.00

Lab Fee: \$29.50

Pre-requisites: Placement into ENGL 1100 and MATH1148 or higher or placement equivalent and CHEM0100 or higher or placement equivalent

Co-requisites: none

Restrictions: none

CHEM 1172 - General Chemistry II (A SP SU) **5.00 credit(s)**

This is a course in fundamental chemical principles. Topics include intermolecular forces, phase changes, the properties of solutions kinetics, equilibrium, acid-base chemistry and buffers, solubility equilibria, atmospheric chemistry, entropy and free energy, electrochemistry, the chemistry of metals and nonmetals, coordination complexes, and nuclear chemistry. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting and completion of certain exams and laboratories. This is the second of a two-semester sequence designed for students entering a scientific field.

Contact Hours: Lab 3.00, Lecture 4.00

Lab Fee: \$29.50

Pre-requisites: CHEM1171

Co-requisites: none

Restrictions: none

CHEM 1200 - Intro to General & Organic Chemistry (A SP SU) **5.00 credit(s)**

This is an introductory course in general chemistry, organic chemistry, biochemistry, and laboratory techniques. Topics include atomic structure, periodic classification of elements, stoichiometry, solutions, acids and bases, pH and buffers, the study of carbon compounds organized according to functional groups, carbohydrates, lipids, proteins, enzymes and nucleic acids. Safety training and goggles are required for laboratory sessions. Students enrolled in distance versions of this course will be required to come to campus for an orientation meeting and completion of certain exams and laboratories.

Contact Hours: Lab 3.00, Lecture 4.00

Lab Fee: \$20.00

Pre-requisites: MATH 1020 or higher or STAT 1350 or placement equivalent Placement into ENGL 1100
CHEM 0100 or higher or placement equivalent

Co-requisites: none

Restrictions: none

CHEM 2251 - Organic Chemistry I (A SP SU) **5.00 credit(s)**

This is the first course in a two-course sequence in organic chemistry. This course includes the study of nomenclature, structure, bonding, and physical and chemical properties of alkanes, alkenes, alkynes, alkyl halides, alcohols, ethers, epoxides, aldehydes, and ketones. This course will also cover mass spectrometry, infrared spectroscopy, and ¹H and ¹³C nuclear magnetic resonance spectroscopy.

Contact Hours: Lecture 5.00

Lab Fee: \$10.00

Pre-requisites: CHEM1172

Co-requisites: none

Restrictions: none

CHEM 2252 - Organic Chemistry II (A SP SU) **5.00 credit(s)**

This is the second course in a two-course sequence in organic chemistry. This course includes the study of the nomenclature, structure, bonding, and physical and chemical properties of conjugated systems, aromatic compounds, carboxylic acids and carboxylic acid derivatives, amines, carbonyl condensation reactions, carbohydrates, amino acids, peptides, lipids, radicals and polymers.

Contact Hours: Lecture 5.00

Lab Fee: \$10.00

Pre-requisites: CHEM2251

Co-requisites: none

Restrictions: none

CHEM 2254 - Organic Chemistry Lab I (A SP SU)**3.00 credit(s)**

This is the first course in a two course sequence in organic chemistry laboratory. This course introduces the students to laboratory techniques of organic chemistry including synthesis, isolation, purification and identification of organic compounds. Spectroscopic techniques will be addressed as well.

Contact Hours: Lecture 1.00, Lab 5.00

Lab Fee: \$40.00

Pre-requisites: CHEM2251

Co-requisites: none

Restrictions: none

CHEM 2255 - Organic Chemistry Lab II (A SP SU)**3.00 credit(s)**

The second course in a two-course sequence in organic chemistry laboratory. This course includes further study of organic laboratory techniques including synthesis, isolation, purification and identification of organic compounds. Students will be required to participate in a laboratory research experience.

Contact Hours: Lecture 1.00, Lab 5.00

Lab Fee: \$40.00

Pre-requisites: CHEM2254

Co-requisites: CHEM2252

Restrictions: none

CHEM 2261 - General Biochemistry (A SP SU)**4.00 credit(s)**

This is an introductory course in biochemistry dealing with the molecular basis of structure and metabolism of plants, animals and microorganisms.

Contact Hours: Lecture 4.00

Lab Fee: \$7.00

Pre-requisites: CHEM2252 and BIO1101

Co-requisites: none

Restrictions: none

CHEM 2293 - Independent Study in Chemistry (On Demand)**1.00 - 3.00 credit(s)**

This course is an individual, student-structured course that examines a selected topic in chemistry through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. A combination of lecture and lab hours may be required.

Contact Hours: Lecture 1.00 - 3.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

Chinese

CHIN 1101 - Beginning Chinese I (A SP SU)

4.00 credit(s)

This course offers an introduction to the fundamentals of the Mandarin Chinese language with practice in listening, speaking and simplified Chinese characters. It also includes selected studies in Chinese culture. CHIN 1101 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00**Lab Fee: \$10.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

CHIN 1102 - Beginning Chinese II (A SP SU)

4.00 credit(s)

CHIN 1102 is a continuation of CHIN 1101 with further development of listening and speaking skills. Course also focuses on writing skills and further study of Chinese culture. CHIN 1102 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00**Lab Fee: \$10.00**

Pre-requisites: CHIN1101 with minimum grade of "C"

Co-requisites: none

Restrictions: none

CHIN 1103 - Beginning Chinese III (A SP SU)

4.00 credit(s)

CHIN 1103 is a continuation of CHIN 1102 with further development of listening and speaking skills. Some focus also is given to writing skills and further study of Chinese culture. CHIN 1103 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00**Lab Fee: \$10.00**

Pre-requisites: CHIN1102 with minimum grade of "C"

Co-requisites: none

Restrictions: none

CHIN 1193 - Independent Study in Chinese (On Demand) **1.00 - 3.00 credit(s)**

CHIN 1193 provides individual study opportunities for special topics in Chinese. Independent Study courses are offered to meet the special needs or interests of an individual student and to pilot new courses.

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: CHIN1103 or Instructor permission

Co-requisites: none

Restrictions: none

Civil Engineering Technology

CIVL 1120 - Construction Materials Science (A SP SU) **3.00 credit(s)**

A comprehensive study of the properties, construction applications, standards, specifications and elementary material testing methods of soils, aggregates, asphalts, Portland cement concrete, masonry, metals and woods. Laboratory exercises include fundamental common construction industry materials testing procedures and comparison of results to industry standards and specifications. The laboratory exercises also provide preparation for the American Concrete Institute (ACI) Grade 1 Concrete Field Technician exam. Preparation in the ACI Grade 1 Concrete Field Technician test is a course requirement.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$155.00

Pre-requisites: MATH1075 or higher

Co-requisites: none

Restrictions: none

CIVL 1121 - Highway Plan Reading (A SU) **1.00 credit(s)**

The study of traffic engineering analysis and application of design, operations and maintenance of traffic of surface transportation modes such as roads, parking lots and bike paths. The student will collect data, analyze it and recommend solutions in the areas of signalization, pavement markings, signage, maintenance of traffic and safety. Students will be introduced to government and industry standards, codes, and specifications.

Contact Hours: Lecture 0.50, Lab 1.50

Lab Fee: \$30.00

Pre-requisites: MATH1075 or higher

Co-requisites: none

Restrictions: none

CIVL 1230 - Heavy Construction Estimating (SP)**3.00 credit(s)**

This course is a comprehensive study of the topics associated with, and unique to, heavy/highway construction estimating. The major focus of the course will involve determining the cost factors of the equipment-intensive operations associated with heavy/highway construction. The secondary focus will be relating the equipment selection and cost factors to the labor requirements, materials' price extensions, and time requirements as utilized in the model crew method of estimating.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$23.00

Pre-requisites: MATH1075

Co-requisites: none

Restrictions: none

CIVL 1320 - Statics and Strengths of Materials (A SP)**3.00 credit(s)**

The study of static forces and equilibrium and the resultant stress, strain, deformation, failure and strength analysis of structures under loads, as well as understanding the concepts of torsion, modulus of elasticity, shear, bending, centroids and moments of inertia.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: CIVL1120 and MATH1075

Co-requisites: none

Restrictions: none

CIVL 2210 - Principles of Hydraulics (A SP)**2.00 credit(s)**

This course is a study of liquids at rest and in motion in enclosed conduits and open channels. The effects of static head, velocity, pressure and friction in enclosed piping systems are analyzed. Principles of pump systems, pump station design and detailing are emphasized. Fundamentals of open channel flow, quantification of rainfall runoff and culvert design are introduced. System analysis is performed using traditional methods and the use of AutoDesk Civil 3-D.

Contact Hours: Lecture 2.00

Lab Fee: \$23.00

Pre-requisites: MATH1075

Co-requisites: none

Restrictions: none

CIVL 2230 - Public Utility Systems (A SP)**2.00 credit(s)**

This course is a study of the principles of public utility theory, planning, design and detailing. Emphasis is placed on applying current design standards and local and state regulations to the planning, design and plan preparation for sanitary collection systems, storm water management systems and water distribution systems (network analysis). Detail plan preparation using AutoDesk Civil 3-D systems is also emphasized.

Contact Hours: Lecture 2.00

Lab Fee: \$30.00

Pre-requisites: CIVL2210

Co-requisites: none

Restrictions: none

CIVL 2430 - Roadway Location & Design (SP) **3.00 credit(s)**

This course involves the elements of route location, construction materials, methods and procedures using local, state and federal standards. Relation of design standards to topography and prospective traffic, earthwork measurement, physical design standards, and financing are also explored. Both manual and computer operations are used in developing transportation solutions.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$23.00

Pre-requisites: SURV1460 and SURV2410

Co-requisites: SURV1460

Restrictions: none

CIVL 2440 - Traffic Engineering & Safety (A SP) **3.00 credit(s)**

The study of traffic engineering analysis and application of design, operations and maintenance of traffic of surface transportation modes such as roads, parking lots and bike paths. The student will collect data, analyze it and recommend solutions in the areas of signalization, pavement markings, signage, maintenance of traffic and safety. Students will be introduced to government and industry standards, codes and specifications.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: CIVL1121 and MATH1075

Co-requisites: none

Restrictions: none

CIVL 2910 - Field Experience (On Demand) **3.00 credit(s)**

Field Experience offers real-world, off-campus job/work experience in civil engineering, consulting engineering, or the surveying industry that augments formal education received in the technology. "N" credit will not be allowed for this course.

Contact Hours: Field Experience/Internship 40.00

Lab Fee: \$0.00

Pre-requisites: completion of 40 semester credit hours

Co-requisites: none

Restrictions: Instructor Permission

CIVL 2994 - Special Topics in Civil Engineering (On Demand) **1.00 - 3.00 credit(s)**

The study of special topics in civil engineering technology industry designed to meet specific needs.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

Classics

CLAS 1222 - Classical Mythology (A SP SU)

3.00 credit(s)

This course is an introduction to the world of mythology through the study of myths from Greece and Rome. The course explores some of the religious ideas, traditions and values that distinguish one civilization from another, while also indicating universally shared themes. Attention will be given to cultural expression of mythical themes in literature and art.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

CLAS 1224 - Classical Civilization: Greece (A SP SU)

3.00 credit(s)

This course is a survey of the culture and ideas of Ancient Greece. Emphasis is on the literature, history, ideas, art, and theater of the Ancient Greeks.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

CLAS 1225 - Classical Civilization:Rome (A SP SU)

3.00 credit(s)

This course is a survey of the culture and ideas of Ancient Rome. Emphasis is on the literature, history, ideas, art, and theater of the Ancient Romans.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

CLAS 1226 - Classical Civilization: Byzantium (SP)

3.00 credit(s)

This course is a survey of the cultural legacy of the Byzantines. Emphasis is on Byzantine popular culture, court life, religion, art, and literature.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

Construction Management

CMGT 1105 - Construction Documents (A SP SU)

3.00 credit(s)

A study of construction industry documents as they relate to a construction project. Emphasis is placed upon legal aspects of documents; roles of design professionals, contractors, and owners; utilization and effects of construction documents; procurement of construction services; assembly of a project manual and bid proposal; specifications formatting; drawing and specifications coordination; submittals and project closeout. Standard forms, ethics, bonding, CSI MasterFormat, and credentialing will also be examined. This course will also prepare the student to take the Construction Specifications Institute (CSI) Construction Documents Technologist (CDI) exam, which replaces the final exam to be attempted towards the end of the course.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$126.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CMGT 1115 - Construction Methods (A SP SU)

3.00 credit(s)

The course will present the technical operations, methods of constructing and operational sequences used in constructing commercial buildings and related infrastructure. The content will be presented in a sequential nature so as to enhance the understanding of the students as to the responsibilities of a Construction Manager/ Supervisor on a construction site.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$21.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CMGT 1121 - Construction Drawings (A SP SU)

3.00 - credit(s)

A study of reading and interpreting construction working drawings and project manuals, as related to residential, commercial, industrial and heavy highway construction. Emphasis is placed upon: drawing organization; relationship of plan, section, and elevation; coordination of the drawings and specifications; shop drawings and submittals, graphic symbols and interpretation skills; and construction mathematics required for the use of building drawings.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CMGT 1131 - Quantity Survey (A SP SU)**3.00 credit(s)**

This course is an explanation and application of the use of construction math relative to linear, area and volumetric measures of common construction materials. The computation and organization of basic material quantities used in a typical building construction project including site preparation work utilizing appropriate equipment, tools and calculators. The course will integrate information regarding requirements of Codes, Permits, and Inspections into the Quantity take off process, as it will impact each job somewhat differently.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$23.00

Pre-requisites: CMGT1121

Co-requisites: none

Restrictions: none

CMGT 1135 - Safety & Loss Prevention (A SP)**2.00 credit(s)**

This course introduces the students to materials covering the expanding concerns of construction safety and loss prevention. Students will learn to identify work hazards and unsafe practices, and to utilize supervisory safety and loss prevention techniques to minimize loss in productivity and resources. Student will also learn how to utilize OSHA and Ohio BWC resources as well as to prepare a safety and loss prevention plan of action, conduct a jobsite safety analysis, and to promote an ethical and pro-active safety culture in the construction workplace through exploration of topics such as safety theories, direct and indirect costs, and safety behavior modification.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$14.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CMGT 1141 - Construction Estimating (A SP SU)**3.00 credit(s)**

A study of the current manual practices of estimating skills and methods utilized to create project estimates. Emphasis will be placed upon: preparation of estimates for typical commercial building projects; incorporation of drawing and document interpretation, quantity survey, and construction methods. An overview of planning and scheduling; cost control; and project management skills is included.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$21.00

Pre-requisites: CMGT1131

Co-requisites: none

Restrictions: none

CMGT 1153 - Residential Construction Management (A SU) **3.00 credit(s)**

This course is an overview of residential construction using hands on experiences. Emphasis is placed upon: safety, methods, financing, real estate legalities, field supervision, design elements, terminology, sequencing, materials/tools and equipment and management strategies. The lab portion utilizes tools and materials to afford students an opportunity to design and construct various portions of a residential building.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CMGT 1171 - Sustainability Management (A SU) **3.00 credit(s)**

This course is an introduction to sustainable building science, methods and challenges for technicians and entry level managers. The course focuses on resources, alternative products and methods, and cradle-to-cradle approaches to buildings and their functions. Career skills development, investigation of preparation for certifications from ASHRAE, RESNET, BPI, LEED, GBI and other organizations, and opportunities to utilize thermal imaging, weatherization and tools to conduct a home or business energy audit. Emphasis is on whole structure and systems approaches to managing sustainability in the built environment.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CMGT 1173 - Sustainability Applications (A SP SU) **3.00 credit(s)**

The course will instruct students on the methods and techniques of conducting auditing and commissioning relating to sustainable construction, BIM, and SmartGridr for new and existing buildings. Students will learn techniques and applications of geothermal, wind, and solar PV energy strategies and incentives to affect a positive return on investment for building energy consumption and generation. Preparation strategies and content for certifications from RESNET, BPI, LEED, GBI and other organizations will be presented. Emphasis is on whole structure and systems approaches to applying sustainability in the built environment. This course builds upon the foundations and principle of CMGT 1171 Sustainability Management.

Contact Hours: Lecture 3.00

Lab Fee: \$10.00

Pre-requisites: CMGT1171

Co-requisites: none

Restrictions: none

CMGT 2215 - Intro to Bldg Information Modeling (A SP) **3.00 credit(s)**

This course provides students with an overview of building information modeling (BIM). Emphasis will be placed upon: providing an introduction to BIM technologies, developing an understanding of the business, organizational and supervisory issues associated with the implementation of building information modeling and promoting an awareness of the substantial impacts on the building process that utilization of BIM practices can provide to all members of a project team.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CMGT 2216 - BIM Applications (SP SU) **3.00 credit(s)**

This course is an exploration of means and methods for implementing building information modeling (BIM) on a construction project. Emphasis will be placed upon: strategies for implementing BIM, identifying challenges and opportunities in the application of BIM technologies on the construction worksite, evaluating BIM as a tool for overseeing the entire building lifecycle, examining the challenges associated with sharing data among members of the project team, and sharing best practices as they pertain to the routine utilization of BIM technologies with construction projects.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$15.00

Pre-requisites: CMGT2215

Co-requisites: none

Restrictions: none

CMGT 2221 - Management & Professional Development (SP SU) **3.00 credit(s)**

This applications-based course introduces the students to an overview to the operations, management and professional development in a technical career. Topics include: business organization, financial matters, sales and marketing, entrepreneurship, ethics, human resources, and creating a sound business plan to increase opportunities for manufacturing, design, construction, and service industries will be presented.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$21.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CMGT 2231 - Commerical Computer Estimating (SP SU) **3.00 credit(s)**

A comprehensive study of the skills required to quantify and price the amount and type of materials from a set of construction plans in an orderly manner and arrive at a final price utilizing computer software. The course will develop the general background information and bidding strategies to be used for bidding a commercial construction project. Discussion of code related items and how they could/will impact cost of construction.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: CMGT2231

Co-requisites: none

Restrictions: none

CMGT 2241 - Planning and Scheduling (A SU) **3.00 credit(s)**

This course is a study of the management and coordination of construction projects utilizing systematic planning and scheduling. Local and global construction industry methods and techniques will be reviewed and practiced in simulated projects. Topics include: WBS (Work Breakdown Structure), PDM (precedence diagram method), also the manual calculations involved with CPM (Critical Path Method) scheduling. The course will stress fundamental skills to develop, analyze and manage construction projects utilizing several scheduling methods. The course will include discussion of code related items and required inspections as to how they could /will impact the construction schedule. Fundamental scheduling will be supplemented with the use of Primavera Project Planner (P3) software.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: CMGT1115 and CMGT1131

Co-requisites: none

Restrictions: none

CMGT 2281 - Residential Computer Estimating (A SP) **3.00 credit(s)**

A comprehensive study of and application of the skills required to "take-off" the amount of materials from a set of residential construction plans in an orderly and effective manner and arrive at a cost for construction. The course will develop the general background information for the purpose of bidding/pricing a residential construction project utilizing estimating software. Information regarding Codes, Permits and Inspections will be integrated into the estimate cost as it will impact the cost of each project just a little differently.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: CMGT1131

Co-requisites: none

Restrictions: none

CMGT 2282 - Sustainable Construction (SP SU)**2.00 credit(s)**

This course introduces students to sustainability as it applies to managing construction projects, implementing design strategies, materials and methods selection and executing contracts to comply with contract requirements and LEED and other commissioning entities for energy efficient buildings and related infrastructure.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$14.00

Pre-requisites: ESSH2282 or Permission of Instructor

Co-requisites: none

Restrictions: none

CMGT 2699 - Project Management (SP)**3.00 credit(s)**

This Capstone Experience provides student the opportunity to demonstrate, present, and simulate methods and techniques used to obtain and manage a construction project. The methods and techniques studied include project marketing, obtaining financing, start-up, schedule development, control structures, organizational forms, subcontractor and vendor coordination, schedule adjustment, shop drawing coordination, move-out/shut-down phase, along with correspondence and tracking techniques. Some computer simulations will be used to demonstrate project management activities and processes. Student teams are selected jointly by the students and approved by the instructor to prepare for and simulate the process of obtaining financing, marketing/sales, management and some field operational concerns by the project management teams. This information shall be organized by the teams and presented as if making a presentation to a potential customer as a final exercise for the course.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$15.00

Pre-requisites: CMGT2241 or CMGT 2251

Co-requisites: none

Restrictions: none

CMGT 2910 - Construction Field Experience (A SP SU)**3.00 credit(s)**

This is a work study/internship course design to have student work at a construction industry related company, complying with OBOR requirement for hours worked as assessment submitted and evaluated by student and employer.

Contact Hours: Field Experience/Internship 36.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

CMGT 2994 - Special Topics in Construction Mgmt (A SP SU) **1.00 - 4.00 credit(s)**

This is a course set aside to introduce students to new topics and technologies in a timely manner, to respond to community needs and to take advantage of market opportunities.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

College Success

COLS 1100 - First Year Experience Seminar (A SP SU) **1.00 credit(s)**

First Year Success Seminar provides students with an introduction to the college. It emphasizes skills and resources necessary to be successful in their personal, academic and career-related pursuits. The course includes an orientation to College resources, policies, and processes. Sections of this course are H-designated Honors classes.

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: This is a required course within the first 15 credits hours at CSCC

Co-requisites: This is a required course within the first 15 credits hours at CSCC

Restrictions: none

COLS 1101 - College Success Skills (A SP SU) **1.00 credit(s)**

College Success Skills emphasizes skills and resources necessary for students to be successful in their personal, academic and career-related pursuits. Required for student placing into two or more DEV courses. Required course within the first 15 hours at CSCC.

Contact Hours: Lecture 0.50, Lab 1.50

Lab Fee: \$3.00

Pre-requisites: This is a required course for students placing into two or more DEV courses

Co-requisites: This is a required course for students placing into two or more DEV courses

Restrictions: none

Communication

(Also see Theatre)

Note: Courses taught online through distance learning (DL) may have a higher lab fee than traditionally taught courses.

COMM 1105 - Oral Communication (A SP SU) **3.00 credit(s)**

Emphasis placed on nonverbal and verbal communication in public contexts.

Contact Hours: Lecture 3.00

Lab Fee: \$2.50

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

COMM 1110 - Small Group Communication (A SP SU)**3.00 credit(s)**

Principles and practice of group communication and dynamics.

Contact Hours: Lecture 3.00

Lab Fee: \$2.50

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

COMM 1150 - Video Art Production (On Demand)**3.00 credit(s)**

Introduction to the art of independent film and video through analysis of short films and production of digital video shorts.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$25.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

COMM 2200 - Business Communication (A SP SU)**3.00 credit(s)**

Principles of and practice in effective written and oral communication in the business context. Plan, edit, and revise using appropriate formats for internal, external, and job search communications. Develop a problem-solving report based on primary and secondary research. Design and deliver an oral presentation. Student is to complete 10 credit hours before enrolling in this course.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

COMM 2201 - Intro to Communication Theory (A SP SU)**3.00 credit(s)**

COMM 2201 presents an overview of major theories, perspectives, and approaches guiding the understanding of communication in various contexts.

Contact Hours: Lecture 3.00

Lab Fee: \$2.50

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

COMM 2204 - Technical Writing (A SP SU)**3.00 credit(s)**

Principles of and practice in common forms of technical writing including technical reports, instructions, and descriptions. Design and deliver an oral presentation and prepare job search documents.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

COMM 2207 - Writing for the Web (A SP SU)**3.00 credit(s)**

Web communication requires specific skills. This course presents the stylistic and rhetorical principles of web writing, media selection, design, and usability based on analysis of audience and purpose.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

COMM 2208 - Communications for the Mass Media (A SP)**3.00 credit(s)**

The course prepares students to communicate effectively with the mass media including newspapers, magazines, radio and television through press conferences, news releases, feature stories, research reports and statements.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

COMM 2220 - Introduction to Mass Communication (A SP SU)**3.00 credit(s)**

Study and discussion of the history, roles and impact of mass media in American society.

Contact Hours: Lecture 3.00

Lab Fee: \$2.50

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

COMM 2221 - Public Relations Writing & Media Techniq (A SP) **3.00 credit(s)**

This course explains and develops professional level writing techniques expected of public relations practitioners. It covers role of the PR practitioner, different approaches required for a variety of audiences and media, and ethical and legal issues in the public relations field.

Contact Hours: Lecture 3.00

Lab Fee: \$2.50

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

COMM 2232 - Interpersonal Communication (A SP SU) **3.00 credit(s)**

Analysis of communication in formal and informal face-to-face settings.

Contact Hours: Lecture 3.00

Lab Fee: \$2.50

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

COMM 2241 - News Writing & Editing (A SP) **3.00 credit(s)**

Prepares students to write and edit news articles that conform to established and emerging ethical guidelines, and to emerging publication styles. Introduction to the history of journalism in the United States.

Contact Hours: Lecture 3.00

Lab Fee: \$2.50

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

COMM 2245 - Introduction to Film (A SP SU) **3.00 credit(s)**

Introduction to film by analyzing elements of film technique: literature, story, drama, editing, movement, acting, sound, photography, staging and theory.

Contact Hours: Lecture 3.00

Lab Fee: \$4.50

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

COMM 2268 - Intercultural Communication (A SP)**3.00 credit(s)**

Explores role of communication in understanding, appreciating and interacting with individuals across diverse cultures.

Contact Hours: Lecture 3.00

Lab Fee: \$2.50

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

Criminal Justice

CRJ 1101 - Introduction to Criminal Justice (A SP SU)**3.00 credit(s)**

This course examines the development of law and the systems and procedures developed by society for dealing with law violations. Emphasis will be placed on the three major components of the system: the police, courts, and corrections.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 1110 - Policing (A SP SU)**3.00 credit(s)**

This course will describe the evolution of policing in the United States while introducing different styles of policing. Ethics and police discretion are also large topic areas in the course.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 1115 - Criminal Procedure (A SP SU)**3.00 credit(s)**

This course presents a study of the rules of criminal procedure as they apply to criminal cases and how they affect the ability of the Criminal Justice practitioner to have the evidence he/she collects or prepares presented in court.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 1116 - Government and the Law (A SP SU) **3.00 credit(s)**

The role of local government in the community, its structure, organization, and responsibility are covered. Local government politics and the community also are reviewed. Urban, suburban, rural, and community structure will be discussed in relationship to delivery of services.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 1135 - Terrorism (A SP SU) **3.00 credit(s)**

This course will examine the underlying issues of the terrorist threat, including an overview of terrorism goals, methods of attack, weapons of mass destruction, and how law enforcement can assess and deal with threats.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 1140 - Corrections (A SP SU) **3.00 credit(s)**

This course offers an introduction to the field of corrections. The history and goals of corrections will be explored, and students will receive an overview of the processing of offenders from arrest through final release.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 1145 - Juveniles and the CRJ System (A SP SU) **3.00 credit(s)**

This course details how the Criminal Justice System is different for juveniles including their rehabilitative potential, relevant case law, and the procedures for coordinating their passage through the system.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 1150 - Intro Homeland Security (A)**3.00 credit(s)**

This course will introduce students to the vocabulary and important components of Homeland Security. We will discuss the importance of the agencies associated with Homeland Security and their interrelated duties and relationships. We will examine historical events that impact Homeland Security. We will explore state, national, and international laws impacting Homeland Security. We will examine the most critical threats confronting Homeland Security.

Contact Hours: Lecture 3.00**Lab Fee: \$0.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 1151 - Intelligence Analysis & Security Mgmt (SP)**3.00 credit(s)**

This course examines intelligence analysis and its indispensable relationship to the security management of terrorist attacks, man-made disasters and natural disasters. It also explores vulnerabilities of our national defense and private sectors, as well as the threats posed to these institutions by terrorists, man-made disasters, and natural disasters. Students will discuss substantive issues regarding intelligence support of homeland security measures implemented by the United States and explore how the intelligence community operates.

Contact Hours: Lecture 3.00**Lab Fee: \$0.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 1152 - Transportation & Border Security (SU)**3.00 credit(s)**

This course provides an overview of modern border and transportation security challenges, as well as different methods employed to address these challenges. The course covers a time period from post 9-11 to the present. The course explores topics associated with border security and security for transportation infrastructure, to include: seaports, ships, aircraft, airports, trains, train stations, trucks, highways, bridges, rail lines, pipelines, and buses. The course will include an exploration of technological solutions employed to enhance security of borders and transportation systems. Students will be required to discuss the legal, economic, political, and cultural concerns and impacts associated with transportation and border security. The course provides students with a knowledge level understanding of the variety of challenges inherent in transportation and border security.

Contact Hours: Lecture 3.00**Lab Fee: \$0.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2001 - Crime Scene Investigation I (A)**3.00 credit(s)**

This course serves as an introduction to criminalistics laboratory techniques, including the recognition, collection, and preservation of evidence and its preparation for court presentation. An introduction to fingerprint comparison also is presented.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$75.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2002 - Crime Scene Investigation II (SP)**3.00 credit(s)**

This course advances the study of crime scene techniques to include examination techniques for blood, hair and fiber, firearms identification, toolmark comparison, latent fingerprints, questioned document examination, and trace evidence.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$75.00

Pre-requisites: CRJ2001

Co-requisites: none

Restrictions: none

CRJ 2003 - Crime Scene Investigation III (SU)**3.00 credit(s)**

This course is an advanced course designed for students interested in pursuing jobs in the crime scene processing or latent print field. Topical areas are expanded upon from the introductory and intermediate courses and students are asked to put all of the information together in hands-on activities that simulate real world crime scene scenarios.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$75.00

Pre-requisites: CRJ2002

Co-requisites: none

Restrictions: none

CRJ 2006 - Ethics in Law Enforcement (A)**3.00 credit(s)**

Ethical considerations within a law enforcement context will be examined both from a theoretical perspective and a practical perspective. Case studies of ethical situations will be covered.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2007 - Law Enforcement Promotion (SP)**3.00 credit(s)**

The promotion process within law enforcement will be examined in detail to include resume building, test taking, and panel interviewing.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2008 - Applied Leadership CRJ Professions (SP)**3.00 credit(s)**

Theoretical leadership will be covered along with practical scenario based leadership analysis. The course is designed for current or aspiring law enforcement leaders.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2011 - Crisis Intervention (A SP SU)**3.00 credit(s)**

This course provides the student with intervention strategies for dealing with persons in crisis. The areas of domestic disputes, suicide prevention, and special problems of crime victims will be emphasized.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2020 - Constitutional Law (A SP SU)**3.00 credit(s)**

This course is a study of federal constitutional law, the Bill of Rights, and its application to the states, with emphasis on due process of law, equal protection of the law, jury trial, and assistance of counsel. The course will review interpretations of the Constitution by the U. S. Supreme Court as given in their decisions.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2021 - Introduction to Cyberlaw (A SP SU)**3.00 credit(s)**

The technological advancements associated with computers and the World Wide Web have led to increased criminal activity involving such technology. In addition, laws regulating computer usage, the Web, and intellectual property issues, have become very complex. This course examines these issues and the difficulties associated with investigating such activities.

Contact Hours: Lecture 3.00

Lab Fee: \$20.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2024 - Community Relations (A)**3.00 credit(s)**

This course examines the complex relationship between the police and the public they serve. Areas of potential problems will be discussed and programs and procedures for enhancing the relationship will be presented. Students will critically examine the effectiveness of various Community Policing programs particularly in terms of limited budget and funding availability and whether such programming should continue to be a part of modern law enforcement agencies priorities.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2030 - Criminal Investigation I (A SP SU)**3.00 credit(s)**

This course details the steps important to all criminal investigations. It also goes into detail on different aspects of common types of criminal investigations conducted by law enforcement investigators.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2031 - Interviewing Techniques (A SP SU)**3.00 credit(s)**

This course is an advanced analysis of the nuances of witness and suspect interviews. The legal parameters and the best practices of interviewing will be covered.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: CRJ2030

Co-requisites: none

Restrictions: none

CRJ 2041 - Special Category of Offenders (A SP SU)**3.00 credit(s)**

This course will focus on six subject areas: treatment of sex offenders, mentally disordered offenders, mentally retarded offenders, inmates with AIDS, inmates with disabilities and the substance abuse offender. Further attention will be directed to correctional personnel, impact of political influences, perceptions, training, problems and corrective actions.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2042 - Community Based Corrections (A SP SU)**3.00 credit(s)**

This course will investigate alternative models for corrections. Various alternatives to incarceration or institutionalization, and the benefits that derive from placing the offender back in the community, will be discussed.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2043 - Institutional Corrections (A SP SU)**3.00 credit(s)**

This course explores the development and purposes of correctional institutions. Emphasis will be placed on major correctional facilities at the state and federal levels. Operation of such facilities and the care and treatment of prisoners will be examined.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2044 - Counseling: Probation & Parole (A SP SU)**3.00 credit(s)**

This course will provide students with an overview of the probation, parole, and supervision component within the criminal justice system. Focus areas will include the goals and objectives of supervision, the duties of parole or probation officers various treatment needs, revocations processes, investigative report writing and sentencing structures.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CRJ 2075 - Peace Officer Academy I (A)**6.00 credit(s)**

This course contains student performance objectives required by the Ohio Peace Officer Training Academy for Law Enforcement Officer Certification in the State of Ohio. This course is Part 1 of a 4 part series where all four parts must be completed to obtain the law enforcement certification. Strict entrance and attendance requirements are governed by the State of Ohio.

Contact Hours: Lecture 4.00, Lab 6.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: CRJ2076

Restrictions: Instructor Permission

CRJ 2076 - Peace Officer Academy II (A)**6.00 credit(s)**

This course contains student performance objectives required by the Ohio Peace Officer Training Academy for Law Enforcement Officer Certification in the State of Ohio. This course is Part 2 of a four-part series where all four parts must be completed to obtain the law enforcement certification. Strict entrance and attendance requirements are governed by the State of Ohio.

Contact Hours: Lecture 4.00, Lab 6.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: CRJ2075

Restrictions: Instructor Permission

CRJ 2077 - Peace Officer Academy III (SP)**6.00 credit(s)**

This course contains student performance objectives required by the Ohio Peace Officer Training Academy for Law Enforcement Officer Certification in the State of Ohio. This course is Part 3 of a 4 part series where all four parts must be completed to obtain the law enforcement certification. Strict entrance and attendance requirements are governed by the State of Ohio.

Contact Hours: Lecture 4.00, Lab 6.00

Lab Fee: \$85.00

Pre-requisites: CRJ2075 and CRJ2076

Co-requisites: CRJ2078

Restrictions: Instructor Permission

CRJ 2078 - Peace Officer Academy IV (SP)**6.00 credit(s)**

This course contains student performance objectives required by the Ohio Peace Officer Training Academy for Law Enforcement Officer Certification in the State of Ohio. This course is Part 4 of a 4 part series where all four parts must be completed to obtain the law enforcement certification. Strict entrance and attendance requirements are governed by the State of Ohio.

Contact Hours: Lecture 3.00, Lab 6.00

Lab Fee: \$30.00

Pre-requisites: CRJ2075 and CRJ2076

Co-requisites: CRJ2077

Restrictions: Instructor Permission

CRJ 2901 - Practicum & Seminar Criminal Justice (A SP SU)**3.00 credit(s)**

This course offers an opportunity for on-the-job training as the student works in a Criminal Justice agency or other related functional area. Activities will vary widely depending on the type and function of the Criminal Justice or Criminal Justice related area.

Contact Hours: Seminar 1.00, Practicum 14.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

Computer Science

CSCI 1001 - Computer Fundamentals (A SP SU)**2.00 credit(s)**

CSCI 1001 introduces the inexperienced user of computers to fundamentals of computer terminology, hardware, software, windows operating system, directories, folders, files, copy paste functions, naming conventions and setting passwords. Additional topics covered include the World Wide Web, the internet, search engines and Blackboard.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$6.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CSCI 1100 - Essential Computer Topics (SP)**1.00 credit(s)**

For students without an IT background, provides a basic overview of computer architecture; networking and data communication; the Internet and WWW; computer security; social impact of computing. Basic terminology of computing is covered.

Contact Hours: Lab 2.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CSCI 1101 - Computer Concepts & Apps (A SP SU)**3.00 credit(s)**

CSCI 1101 is designed to provide students with a working knowledge of computer concepts and essential skills necessary for work and communication in today's society. Topics include, social networking, computer security, safety, ethics, privacy, operating systems and utility programs, communications and networks, input, output, system units, storage, word processing, spreadsheets, databases and presentation software.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$6.00

Pre-requisites: ENGL0190 or Placement into ENGL 1100

Co-requisites: none

Restrictions: none

CSCI 1102 - Intermediate Excel and Access (SP)**3.00 credit(s)**

CSCI 1102 is a continuation of CSCI 1101, incorporating Intermediate concepts and techniques used in spreadsheets and database software. Examples: financial functions, data tables, amortization schedules, working with multiple worksheets, macros, database queries, reports, switchboards, pivot tables and charts, and using SQL. Project management and HTML concepts will be introduced. Students will learn how to use these tools for analysis and decision making.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: CSCI1101

Co-requisites: none

Restrictions: none

CSCI 1103 - Intro to Programming Logic (A SP SU)**3.00 credit(s)**

CSCI 1103 introduces concepts of programming logic through algorithmic solutions applied to problem-domain scenarios and examples of these scenarios are Computer Science disciplines such as: programming languages, networking, operating systems, databases, and other ones. The course covers the basic units of logic: sequence, selection, and loop. Students repair faulty algorithmic solutions. The course also uses basic UML (Unified Modeling Language) notation to model problem-domain objects, via classes.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$27.00

Pre-requisites: MATH 1030 or ITST1101 and ITST1102

Co-requisites: none

Restrictions: none

CSCI 1143 - Introduction to HTML (SP)**1.00 credit(s)**

Learn the most important topics of HTML, including creating an HTML document; viewing an HTML file in a Web browser; working with tag text elements; inserting special characters, lines, and graphics; creating hypertext links; working with color and images; creating text and graphical tables; using tables to enhance page design; creating and working with frames; and, controlling the behavior of hyperlinks on a page with frames.

Contact Hours: Lab 2.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CSCI 1145 - HTML (A SP)**3.00 credit(s)**

CSCI 1145 will teach students the dynamics of the Web environment while pursuing an in-depth study of the most recent version of both Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS). Throughout the course, students will create a real website using HTML and CSS on a live server environment. Students will learn other important topics such as FTP, TCP/IP, and HTTP.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$4.00

Pre-requisites: CSCI1103

Co-requisites: none

Restrictions: none

CSCI 1150 - Networking Terminology (A SP SU)**1.00 credit(s)**

This course is designed to provide students a solid understanding of computer networking terminology and the technologies in the field of computer networking. Students will learn and gain an in-depth analysis of data mobility including the hardware infrastructure (wires, wireless, and devices supporting them), the ISO Open Systems Interconnection (OSI) stack, standards, Internet protocols, enterprise architecture models, OSI model, privacy, confidentiality, network security, topologies, and other technologies associated with computer networking. Note: Computer Science (CSCI) students will not be given credit for this course towards their required Computer Science (CSCI) degree.

Contact Hours: Lab 2.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CSCI 1152 - Networking Concepts (Network+) (A SP SU)**3.00 credit(s)**

CSCI 1152 is designed for students to learn popular networking and security concepts using Windows and Linux in a hands on lab environment. Students will learn concepts geared towards an industry certification. Students will complete a series of assignments and be able to demonstrate network administration for both wired and wireless networks in a LAN environment using hardware, software, and virtualization.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$3.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CSCI 1275 - System Analysis with Agile Development Frameworks (A SU) **3.00 credit(s)**

CSCI 1275 is an introduction to the fundamentals of traditional and object systems analysis, design, and project management. Emphasis will be placed on the Systems Development Life Cycle (SDLC), various flow diagrams, system requirements, project scheduling and managing analysis, and design activities. In addition, students will produce various flow diagrams, project schedules, and timetables. They will also explore object-oriented design and unified modeling language (UML) in this class. Students will work in teams to learn to prepare and present a systems proposal and how to implement and complete a software project.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$4.00

Pre-requisites: CSCI1103

Co-requisites: none

Restrictions: none

CSCI 1320 - Database Fundamentals (A) **2.00 credit(s)**

This course introduces the student to the fundamental concepts and techniques of relational database management, database technology, structured query language (SQL), database design, database management, web database applications and big data. Students perform hands-on labs with commercial software and databases provided for real-world scenarios.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$10.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CSCI 1445 - Content Management & Integration (SP) **3.00 credit(s)**

The internet contains a massive amount of data which is constantly being served all over the world. Managing this data server-side is no small task. In CSCI 1445, students will explore methods and techniques to managing large amounts of information and learn ways to organize and deliver this information in a meaningful manner. In addition to implementing several examples as projects, students will also learn about the ethics and inherent security concerns of online content.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI1103 and CSCI1145

Co-requisites: none

Restrictions: none

CSCI 1511 - Python Programming (A SP SU)**3.00 credit(s)**

CSCI 1511 introduces basic concepts of game design and programming. Students learn the Python programming language constructs to write programs that integrate classes, class methods, and class instances, built upon basic structures such as: input method handling, 2D sprite manipulation and animation, collision detection, game physics and basic artificial intelligence.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI1103

Co-requisites: none

Restrictions: none

CSCI 1551 - Concepts of 3D Games Engines (SP SU)**3.00 credit(s)**

CSCI 1551 is an introductory course in how a 3D, multiplayer, networked game engine would build platforms and control game logic. The game engine is Panda3D, developed by Disney. Panda3D is a framework for 3D rendering and game development for Python and C++ programs. Panda3D is Open Source and free for any purpose. Game development with Panda3D will consist of writing a Python program that controls the Panda3D library. Computer lab projects will provide hands-on experience investigating the various components of a network game.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI1511

Co-requisites: none

Restrictions: none

CSCI 1610 - Object Oriented Analysis & UML (A SP)**3.00 credit(s)**

CSCI 1610 is an introduction to object oriented programming concepts and techniques, and system modeling using Unified Modeling Language. It teaches all of the major UML diagram types and the basic notation involved in creating and deciphering them. Students will learn to read, draw, and use visual modeling language to create clear and effective blueprints for software development projects.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI1103

Co-requisites: none

Restrictions: none

CSCI 1620 - Visual Basic I (A SP)**3.00 credit(s)**

CSCI 1620 emphasizes the essential aspects of creating the graphical user interface of a Visual Basic Windows program. The student also will learn fundamental aspects of coding a VB.NET program, along with more advanced topics such as manipulating MS Access databases, sequential file processing, error handling, and data validation. Software is provided to students.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI1103

Co-requisites: none

Restrictions: none

CSCI 1630 - C# Programming I (A SP SU)**4.00 credit(s)**

CSCI 1630 uses the Visual C# programming language as the programming tool for learning principles of object-oriented programming. The course covers implementation of classes that support static and instance methods, concrete vs. abstract classes, class inheritance, polymorphism, exception handling, and object serialization. The course demonstrates the implementation of event handler methods through GUI form containers. Students apply debugging techniques to repair faulty Visual C# code.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$4.00

Pre-requisites: CSCI1630

Co-requisites: none

Restrictions: none

CSCI 1772 - Networking I (SP)**3.00 credit(s)**

CSCI 1772 is designed for students to learn advanced computer networking concepts and how they can be applied to support enterprise-wide information management of a large organization. The student will learn to install and configure network servers.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI1152

Co-requisites: none

Restrictions: none

CSCI 2325 - Expert Access (A SP SU)**3.00 credit(s)**

CSCI 2325 covers advanced features of Microsoft Access database application software and the skill set required for Microsoft certification.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$10.00

Pre-requisites: CSCI1102

Co-requisites: none

Restrictions: none

CSCI 2330 - Project Mgt Fund & Case Studies (A)**4.00 - credit(s)**

CSCI 2330 teaches the genesis of project management and its importance to improving the success of information technology projects. The student will demonstrate knowledge of project management terms and techniques such as the triple constraint of project management and the project life cycle using project management industry tools and techniques. Further, through the use of case studies, students will analyze and implement the concepts and techniques using appropriate project management documentation. This course satisfies PMI's 35-hour education requirement to sit for the Project Management Professional (PMP) Exam.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$4.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CSCI 2370 - Database Systems Programming (A SU) **3.00 credit(s)**

CSCI 2370 presents database systems theory and application. Including functional dependencies, normalization, data modeling and entity relationship model, entity relationship diagrams and structured query language. Students will design, build databases and write database programs.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$4.00

Pre-requisites: CSCI1103

Co-requisites: none

Restrictions: none

CSCI 2371 - Database Administration & Data Mining (SP SU) **4.00 credit(s)**

CSCI 2371 provides the background, knowledge and skills necessary to identify and perform tasks involved in the administration and management of a database system. Topics include user rights and responsibilities, concurrency security, reliability, backup and recovery. The second part of this course will cover data design, data extraction and transformation, data quality, OLAP processing, processing for business intelligence, reporting systems, data mining applications, data warehouses and data marts.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$4.00

Pre-requisites: CSCI1103 or CSCI1320 or CSCI2325

Co-requisites: none

Restrictions: none

CSCI 2380 - Business Intelligence Fundamentals (A) **3.00 credit(s)**

Business Intelligence Fundamentals introduces the student to the collection of computer technologies and techniques that support managerial decision making. The course concentrates on the theoretical and conceptual foundations of business intelligence for decision support. Concepts covered are data warehousing, business performance management, data mining, text and web mining, integration, and emerging trends. Students perform hands-on labs with commercial software and large databases provided by real-world corporations.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$10.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

CSCI 2385 - Business Intelligence Data Analytics/Report (SP) **3.00 credit(s)**

Business Intelligence (BI) Reporting focuses on the tools and techniques for the output of reports for Business Intelligence. The latest tools for producing visual reports is covered including SQL Reporting Services and PowerPivot. A review of BI data marts and database concepts is provided as it relates to the use of Microsoft SQL Server Reporting Services. Students write their own queries prior to learning to use the Query Wizard in Microsoft reporting services. Students use Microsoft's Report Designer in hands-on labs to create reports using actual databases in Microsoft Reporting Services. Microsoft PowerPivot is used in hands-on labs as students create their own reports using multiple tables with millions of rows. Students learn how to deploy their reports for Web access.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$10.00

Pre-requisites: CSCI2380

Co-requisites: none

Restrictions: none

CSCI 2412 - Web Database Development (A SP)**4.00 credit(s)**

Databases are now an integral part of the Internet and many web sites use databases in the background to control their content. This course shows how to design and use databases for the Web using MySQL and PHP. No previous knowledge of MySQL or PHP is required. The focal point of the class is a semester-long web site development project. The student will design an e-commerce site from the ground up, focusing on not only the technical issues but the business aspects, as well.

Contact Hours: Lecture 2.00, Lab 4.00**Lab Fee: \$4.00**

Pre-requisites: CSCI1145

Co-requisites: none

Restrictions: none

CSCI 2447 - JavaScript Fundamentals (A)**3.00 credit(s)**

CSCI 2447 provides an in-depth study of scripting languages that add interactivity to websites. Scripting languages such as JavaScript and PHP work with Hypertext Markup Language (HTML) to extend its functionality. In recent years, several libraries have been created to reduce development time. Students will be introduced to the several scripting languages and use them to complete multiple real-world tasks. Students will also learn how to work with several popular libraries and through multiple exercises.

Contact Hours: Lecture 2.00, Lab 3.00**Lab Fee: \$2.00**

Pre-requisites: CSCI1145

Co-requisites: none

Restrictions: none

CSCI 2467 - Java Programming I (A SP)**3.00 credit(s)**

CSCI 2467 is an introduction to the art of computer programming in Java. Included are features needed to construct Java Applets, Windows and Frames, and Dialog boxes. Students will learn to program in an object-oriented environment, using classes, objects, interfaces and listeners. This first course will concentrate on data manipulation, decision making, loops and arrays, and action and item events. Students will learn how to write, compile and debug programs in in-class (solo and group) and take home labs.

Contact Hours: Lecture 2.00, Lab 3.00**Lab Fee: \$2.00**

Pre-requisites: CSCI1103 Completion of CSCI 1103 with a C or better

Co-requisites: none

Restrictions: none

CSCI 2469 - Java Programming II (A SP)**3.00 credit(s)**

CSCI 2469 is a continuation of Java Programming 1. More advanced work in Java applets, applications, structures, methods, and arrays will be included. In addition, students will learn the Java Database Connectivity (JDBC) environment using MySQL and Access as the background database. They will also create servlets using Apache TomCat. Program debugging will continue to be emphasized.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI2467

Co-requisites: none

Restrictions: none

CSCI 2479 - Advanced Web Programming (SP)**3.00 credit(s)**

CSCI 2479 is an introduction to advanced programming techniques for web sites and web site management. Students will explore scripting/compiled languages, as well as integrate popular preexisting libraries and extensions into web sites they create. Several projects will be given throughout the semester which will focus on combining local and internet-based technologies to create a seamless, functional end product.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI1145 and CSCI2447

Co-requisites: none

Restrictions: none

CSCI 2489 - Mobile Software Development (SP)**3.00 credit(s)**

CSCI 2489 is an introduction to developing software for mobile platforms, such as smart phones and other mobile devices. Students will learn the basics of developing software for popular platforms through multiple in-class lab exercises. Topics include an overview of popular platforms, developing applications with graphical user interfaces and 2D/3D interactive graphics.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI2467

Co-requisites: none

Restrictions: none

CSCI 2521 - C++ Programming (A SP)**3.00 credit(s)**

CSCI 2521 uses the C++ programming language as the programming tool for learning principles of object-oriented programming. The course covers implementation of classes that support static and instance methods, method and operator overloading, concrete vs. abstract classes, class inheritance, polymorphism, exception handling, and function templates. The course demonstrates storing of objects in data files. Students apply debugging techniques to repair faulty C++ code.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$4.00

Pre-requisites: CSCI1103

Co-requisites: none

Restrictions: none

CSCI 2541 - Foundations of 2-D Game Programming (A) **3.00 credit(s)**

CSCI 2541 provides students with an introduction to and many opportunities for applied game prototyping. Students learn about the theory and methods of creating game prototypes for design and development of original game concepts. Topics covered include: breakthrough game design, proof of concept and iterative prototyping, and prototype QA testing and documentation. Lab activities are designed to foster critical thinking and problem solving skills through the development of an understanding of the development process as well as interactive programming techniques through the creation of working interactive programs in a high-level programming language.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$4.00

Pre-requisites: CSCI1511 and CSCI2447

Co-requisites: none

Restrictions: none

CSCI 2551 - Graphics in 3-D Game Engines (A) **4.00 credit(s)**

CSCI 2551 is a study in the basic elements of a 3D network game. The material will cover environments and terrain, character animation, texture mapping, modeling, physical dynamics, particles and other selected topics. Students will include these issues while investigating the development of a level for one of the current, popular, game engines.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$4.00

Pre-requisites: CSCI1551

Co-requisites: none

Restrictions: none

CSCI 2556 - 3-D Game Project (SP) **3.00 credit(s)**

CSCI 2556 will address the issue of developing a level for an existing multi-player, network game. Students, individually or in groups, will design their own levels for a game that has an open design. Concepts introduced in the prerequisite course, CSCI 2551, will be continued in the design phase of this course. Students will develop their own assets, as well as adopt assets from a public library, and dynamics. The course will continue discussions concerning networking.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$4.00

Pre-requisites: CSCI2551

Co-requisites: none

Restrictions: none

CSCI 2620 - Visual Basic II (On Demand)**4.00 credit(s)**

CSCI 2620 is a continuation of CSCI 1620. Emphasizes advanced topics in VB.NET such as object-oriented programming, database programming, including SQL and Active X controls, and multi-tiered approach to applications. Advanced topics include deploying Web forms that utilize a database. Advanced features of Visual Studio.NET are explored and applied as they relate to connectivity with SQL Server, Oracle, and other databases.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$4.00

Pre-requisites: CSCI1620

Co-requisites: none

Restrictions: none

CSCI 2630 - C# Programming II (SP)**3.00 credit(s)**

CSCI 2630 is a continuation of C# Programming I (CSCI 1630), and offers an additional level of specialization in the Visual C# programming language. The course covers generics (generic methods), LINQ to SQL database access (retrieve, insert, update, and delete operations) in an n-tier application, Web applications with ASP .NET, and collections.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$4.00

Pre-requisites: CSCI1630 and CSCI2370

Co-requisites: none

Restrictions: none

CSCI 2750 - Introduction to CISCO Networks (A)**3.00 credit(s)**

CSCI 2750 introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. This is a 1st term course.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: ENGL1100

Restrictions: none

CSCI 2752 - CISCO Routing & Switching Essentials (SP)**3.00 credit(s)**

CSCI 2752 describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$20.00

Pre-requisites: CSCI2750

Co-requisites: none

Restrictions: none

CSCI 2754 - Scaling CISCO Networks (A)**3.00 credit(s)**

CSCI 2754 describes the architecture, components, and operations of routers and switches in a large and complex network. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement DHCP and DNS operations in a network.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$20.00

Pre-requisites: CSCI2752

Co-requisites: none

Restrictions: none

CSCI 2756 - Connecting CISCO Networks (A)**3.00 credit(s)**

CSCI 2756 discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students also develop the knowledge and skills needed to implement IPsec and virtual private network (VPN) operations in a complex network.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$20.00

Pre-requisites: CSCI2754

Co-requisites: none

Restrictions: none

CSCI 2760 - CCNA Voice (On Demand)**3.00 credit(s)**

CSCI 2760 covers basic IP telephony installation, configuration, and maintenance skills. Students will implement and configure small- to medium sized IP Telephony solutions using Cisco Unified Communications Manager Express, Cisco Unity Express, and the UC500 Smart Business Communications System solutions.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI2756

Co-requisites: none

Restrictions: none

CSCI 2762 - CCNA Security (On Demand)**3.00 credit(s)**

CSCI 2762 equips students with the knowledge and skills needed to prepare for entry-level security specialist careers. This course is a hands-on, career-oriented e-learning solution that emphasizes practical experience. CCNA Security is a blended curriculum with both online and classroom learning.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI2756

Co-requisites: none

Restrictions: none

CSCI 2770 - Network Communication & TCP/IP (A)**3.00 credit(s)**

CSCI 2770 is designed for students to learn data communications, basic communication theory as applied to digital, analog, wireless, and voice networks and the OSI layered network model. The concepts of TCP/IP are thoroughly covered in this course such as TCP/IP history, security, protocols, IP addressing, bridging, and routing/DHCP, sub-netting, Windows domains and name services and Linux.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$4.00

Pre-requisites: CSCI1772

Co-requisites: none

Restrictions: none

CSCI 2774 - Networking II (A)**3.00 credit(s)**

CSCI 2774 is designed for students to learn advanced concepts of the Microsoft Windows Server environment to support small and enterprise-wide information management systems. Students will learn and apply management of data storage, design and develop a security needs analysis, and administer Windows security. Students will apply client/server technologies used in designing and implementing Web services such as network address translators, proxy servers, firewalls, and Internet Information Services. Students will complete a series of laboratory assignments using the Windows Server environment.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$4.00

Pre-requisites: CSCI2770

Co-requisites: none

Restrictions: none

CSCI 2776 - Network & Cybersecurity (A SP)**3.00 credit(s)**

CSCI 2776 will introduce network security theory and practice in areas of cryptography, security architecture, firewalls, VPNs, IP Security. Intranet/Internet security vulnerabilities and methods of protection will also be introduced.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$6.00

Pre-requisites: CSCI1152 or CSCI2752 or ITST1123

Co-requisites: none

Restrictions: none

CSCI 2778 - Wireless, Voice, & Mobile Comm (A SP)**3.00 credit(s)**

CSCI 2778 is designed to provide students and network administrators with an in-depth knowledge of the risk of threats to security and the need to secure wireless, voice over IP (VoIP), and mobile communication networks. Students will learn to configure and install wireless networks, design mixed networks to carry voice, video, and data traffic and define policies to secure mobile networks. Students will learn and apply the concepts of IEEE 802.11, Wi-Fi, Bluetooth, WiMax technologies, encryption techniques, site surveys, securing wireless, VoIP, and mobile networks, troubleshooting, monitoring, and managing these networks, while preparing the students for an industry certification.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$20.00

Pre-requisites: CSCI2770 and MATH1151

Co-requisites: none

Restrictions: none

CSCI 2780 - Computer Forensics (A)**3.00 credit(s)**

CSCI 2780 is designed for students and systems administrators involved in responding to security incidents and applying computer forensics skills. This course focuses on the latest technologies in computer forensics techniques in order to recognize and respond to security threats.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI2776

Co-requisites: none

Restrictions: none

CSCI 2782 - Information Security Audit (On Demand)**3.00 credit(s)**

CSCI 2782 is designed for students, web developers, and network administrators who want to gain knowledge related to information and database security focusing on the areas of security, auditing, and implementation.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI2776

Co-requisites: none

Restrictions: none

CSCI 2784 - Business Continuity & Disaster Recovery (On Demand)**3.00 credit(s)**

CSCI 2784 is designed for students and network administrators who need to obtain knowledge and experience for disaster recovery. This course will provide methods used to identify vulnerabilities and take appropriate countermeasures to prevent and mitigate failure risks for an organization. This course takes an enterprise-wide approach to developing a disaster recovery plan.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: CSCI2782

Co-requisites: none

Restrictions: none

CSCI 2786 - Security Practice & Mgt (SP SU)**3.00 - credit(s)**

CSCI 2786 is designed to introduce students to introduce practical security applications including penetration testing and modern attack methods such as social engineering. The student will also be expected to understand a management perspective of security including the ten domains identified by (ISC)2.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$0

Pre-requisites: CSCI2780

Co-requisites: none

Restrictions: none

CSCI 2790 - Linux Administration (Linux+) (A SU)**3.00 credit(s)**

CSCI 2790 is designed to provide students with the knowledge and skills required to build, and manage and Linux servers. Students will apply and demonstrate hands-on administration to install, configure and support Linux servers for reliability, functionality and performance. Students will also configure file, print and network services for both Linux and Windows clients. Students will create, edit and search Linux files, control permissions and ownership, process and format text data, and use learn to write shell scripts to automate routine tasks.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$1.00

Pre-requisites: CSCI1772 or CSCI2752

Co-requisites: none

Restrictions: none

CSCI 2792 - Virtualization (SP)**2.00 credit(s)**

CSCI 2792 is designed to teach students the knowledge and skills required to install, configure and manage virtual servers and workstations. Students will learn how to use VMware and Microsoft virtual machine (VM) technologies, migrate from physical to virtual machines, combine Windows and Linux workstations and servers on a single platform, and manage virtual machines using VMWare and Microsoft Hyper-V.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$4.00

Pre-requisites: CSCI2790

Co-requisites: none

Restrictions: none

CSCI 2802 - CSCI Seminar (On Demand)**1.00 credit(s)**

CSCI 2802 seminar offers an opportunity for supervised, on-the-job application of knowledge and skills acquired in the classroom. Student must be a Computer Science major who has completed 12 hours in the technology and has permission of the instructor

Contact Hours: Seminar 1.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: CSCI2902

Restrictions: Instructor Permission

CSCI 2902 - CSCI Practicum (On Demand)**3.00 credit(s)**

CSCI 2902 practicum offers an opportunity for supervised, on-the-job application of knowledge and skills acquired in the classroom. Student must be a Computer Science major who has completed 12 hours in the technology and has permission of the instructor

Contact Hours: Practicum 21.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: CSCI2902

Restrictions: Instructor Permission

CSCI 2994 - CSCI Current Topics (On Demand)**1.00 - 3.00 credit(s)**

CSCI 2994 course is a detailed examination of a selected current topic in Computer Science. This course can be repeated.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

CSCI 2999 - CSCI Capstone (SP)**3.00 credit(s)**

CSCI majors will work in groups to create a computer based integrated solution for a business organization. Students will apply and demonstrate technical expertise in the areas of software application programming, network administration, computer systems support, web technologies and network security . Students will formally present their project results to faculty and management. Student must be a Computer Science major who has completed 12 hours in the technology and has permission of the instructor.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$4.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

Dance

DANC 1110 - Dance Appreciation (A SP)**2.00 credit(s)**

This class explores dance as ritual, tradition, educational tool, popular entertainment and art form as a reflection of culture. Includes teaching of proper body warm-up, flexibility and strength and movement. This course is on demand.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DANC 1131 - Beginning Jazz I (A SP)**1.00 credit(s)**

Jazz dance techniques at the beginning level, combining classic Broadway theatre dance with contemporary styles.

Contact Hours: Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DANC 1132 - Beginning Jazz II (SP)**1.00 credit(s)**

This course demonstrates additional jazz techniques including more complex movements and combinations. This course is on demand.

Contact Hours: Lab 2.00

Lab Fee: \$2.00

Pre-requisites: DANC1131

Co-requisites: none

Restrictions: none

DANC 1140 - Modern Dance I (A SP)**2.00 credit(s)**

A beginning course in the movement and vocabulary, both physical and linguistic, of modern dance.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DANC 1201 - Classical Ballet I (A SP)**2.00 credit(s)**

Students study the basics of this form of art. Class covers fundamentals of ballet technique, coordination, strength and flexibility with an emphasis on proper execution and comprehension.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DANC 1202 - Classical Ballet II (SP)**2.00 credit(s)**

Continuation of Classical Ballet I. This course is on demand.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: DANC1201

Co-requisites: none

Restrictions: none

DANC 1203 - Beginning Tap I (A SP)**1.00 credit(s)**

Introduction to basic level tap dance techniques, emphasizing precession in sound, rhythm, movement, gesture and expression.

Contact Hours: Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DANC 1204 - Beginning Tap II (On Demand)**1.00 credit(s)**

Continuation of Beginning Tap I. This course is on demand.

Contact Hours: Lab 2.00

Lab Fee: \$2.00

Pre-requisites: DANC1203

Co-requisites: none

Restrictions: none

DANC 1294 - SPT: Dance (On Demand)**1.00 - 3.00 credit(s)**

Students explore special topics in Dance designed to meet specific needs. This course is on demand.

Contact Hours: Lecture 1.00 - 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

Digital Design and Graphic

DDG 1100 - Introduction to Computer Design (A SP SU)**3.00 credit(s)**

DDG 1100 introduces the student to the computer software program most widely used in the digital design & graphics field. A basic working knowledge of Adobe Photoshop, Adobe Illustrator, and Adobe InDesign is the primary goal of this course. Students will also be introduced to electronic publishing, specifically InDesign with typographical command sequences and manipulation applications. Special emphasis is placed on its use to generate and create professional quality publications, such as advertisements and newsletters.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$18.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DDG 1101 - Survey of Digital Design (A SP SU)**3.00 credit(s)**

DDG 1101 provides an overview of the Digital Design & Graphics industry. The student will be introduced to various areas and job opportunities in this field. A basic overview of the printing industry, graphic design, advertising, marketing communications, packaging design, digital painting, logo and corporate identity development, traditional and vector illustration, digital photography, typography, and brand identity will be discussed.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DDG 1200 - Color Mgt/Business of Design (A SP)**3.00 credit(s)**

DDG 1200 is an introduction to color and how color is perceived and managed across different devices and outputs. Techniques will be used to identify, examine, and measure color to ensure color quality. Students will develop an understanding and application of color theory, color perception, and color management for a color's final destination. Students are also introduced to the business and marketing practices needed, and commonly found, in professional design firms and in freelance design work. Emphasis will be placed on developing professional, interpersonal, and ethical practices particular to design.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DDG 1525 - Storyboarding (A SP)**3.00 credit(s)**

DDG 1525 provides students with basic drawing techniques, including proportion of the human figure, perspective, composition, line, and contrast. An in-depth look at line drawings-how to produce them, how to understand their varieties and how this relates to animation and storyboarding. Marketing strategy and research are used to develop an original character and storyboard to provide a visual concept for the client. Verbal and written skills will also be developed for project presentations.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DDG 1555 - Adobe Photoshop I/A (A SP)**3.00 credit(s)**

DDG 1555 provides the student with basic and intermediate level knowledge of Adobe Photoshop software. This software will enable the student to design multi layer digital images. Intermediate to advanced level projects are used for evaluation.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$23.00

Pre-requisites: DDG1100

Co-requisites: none

Restrictions: none

DDG 1565 - Interactive Adobe InDesign (SP SU)**3.00 credit(s)**

DDG 1565 expands and introduces students to how Adobe InDesign is interactive. Emphasis will be placed on using master pages to add interactivity, object styles for interactive elements, creating hyperlink destinations, nesting master pages for centralized interactivity, working with imported video and creating navigation points for video, multi-state object animation, and adding artwork for built-in interactivity within the document. The student will learn these skills through project development.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$10.00

Pre-requisites: DDG1100

Co-requisites: none

Restrictions: none

DDG 1860 - 2D Animation (SP)**3.00 credit(s)**

DDG 1860 will teach students about the process of traditional animation. Students will learn the fundamental skills of traditional animation, and animated storytelling, through the creation of pencil tests.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$8.00

Pre-requisites: DDG1525

Co-requisites: none

Restrictions: none

DDG 1870 - Fundamentals of Design for Animation (SP)**3.00 credit(s)**

DDG 1870 is an appendage to the 2D animation course. Students will learn about shape, gesture, anatomy, shading, and design through the study of the human figure. It will also help the student to further develop their drawing skills, and in understanding basic form and structure in all other disciplines.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$10.00

Pre-requisites: DDG1525

Co-requisites: none

Restrictions: none

DDG 2550 - Typography/Advertising Design (A SU)**3.00 credit(s)**

DDG 2550 will focus on the importance of type selection and structure in relation to graphic design and advertising. Case studies in applied problem solving will demonstrate knowledge of typographic forms and communications. Designing unique typography for specific products and business applications will be developed.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$9.00

Pre-requisites: DDG1100 and DDG1101

Co-requisites: none

Restrictions: none

DDG 2650 - Digital Painting (A SU)**3.00 credit(s)**

DDG 2650 will introduce the students to Digital Painting. With the use of various digital painting software programs in conjunction with use of the Wacom tablet. The student will be exposed to digital painting on the computer that will expand the creative thinking of the student. The student will also learn how to apply a variety of effects to their creative drawings. This study will give the appearance of oil painting on canvas. We will study the ideas behind creatively interpreting color, shape, movement and techniques that can be useful in graphic design, photography, art and illustration.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$26.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DDG 2750 - Adobe Illustrator I/A (A SP SU)**3.00 credit(s)**

DDG 2750 provides the student with a comprehensive knowledge of Adobe Illustrator. It will cover two-dimensional technical illustration. This software will enable the student to design simple and complex illustrations. Intermediate and advanced level projects are used for evaluation.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$23.00

Pre-requisites: DDG1100

Co-requisites: none

Restrictions: none

DDG 2802 - Digital Design & Graphics Seminar (SP)**1.00 credit(s)**

DDG 2802 offers an opportunity for supervised application of digital design and graphics knowledge to the specific area of internship. Student must be a Digital Design & Graphics major who has completed 12 hours in the technology and has permission of the instructor

Contact Hours: Seminar 1.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: DDG2902

Restrictions: none

DDG 2902 - Digital Design & Graphics Practicum (SP)**2.00 credit(s)**

DDG 2902 Supervised on-the-job application of knowledge and skills acquired in the classroom. Student must be a Digital Design & Graphics major who has completed 12 hours in the technology and has permission of the instructor.

Contact Hours: Practicum 14.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: DDG2802

Restrictions: Instructor Permission

DDG 2975 - Ad Agency/Portfolio Development (On Demand)**3.00 credit(s)**

DDG 2975 is a capstone course for the graphic designer. The student will understand graphic design techniques and portfolio presentation practices. The student will learn how to produce advertising campaigns in two and three dimensional form and working in a simulated advertising agency environment, from design concepts to visual applications. In the second half of the course: the student will develop and prepare a traditional portfolio and a portfolio on CD. Creative projects will be selected to create this portfolio. The student will learn how to prepare and maintain a professional portfolio and how to present this portfolio to a prospective employer.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$19.00

Pre-requisites: DDG2550

Co-requisites: none

Restrictions: none

Developmental Education

DEV 0105 - Basic Mathematics (A SP SU)**2.00 credit(s)**

This term class will introduce students to whole numbers, fractions, and decimals; study skill activities will build student skills in math study techniques, overcoming math anxiety, time management, calculator usage, and other topics to assist students overcome barriers to success in math. The course will also included managed small group study time and practice designed to improve understanding of math and communication skills. A scientific calculator is required for the last chapter of the course and the final exam. Not open to students with credit for DEV-0115 or higher. Enrollment into this course requires a placement exam.

Contact Hours: Lecture 2.00

Lab Fee: \$4.00

Pre-requisites: By Placement exam

Co-requisites: none

Restrictions: none

DEV 0114 - Basic Math and Pre-Algebra (A SP SU) **4.00 credit(s)**

This course will include integers, expressions, linear equations, percents, proportions, geometry, application problems, rational expressions, and graphing basic linear equations. A scientific calculator is required. [Concurrent enrollment in DEV 0116 strongly suggested for students unfamiliar with algebra.] Not open to students with credit for MATH-1020 or higher.

Contact Hours: Lecture 4.00

Lab Fee: \$5.00

Pre-requisites: DEV0105 Minimum grade of "C" or By placement exam

Co-requisites: none

Restrictions: none

DEV 0135 - Vocabulary Development (A SP SU) **2.00 credit(s)**

This course is designed to improve vocabulary and related spelling skills through memorization, word analysis, and the application of rules.

Contact Hours: Lecture 2.00

Lab Fee: \$3.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DEV 0140 - Intermediate Reading (A SP SU) **3.00 credit(s)**

This course focuses on developing students' basic reading skills. Elements explored include vocabulary in context, implied and stated main ideas, supporting details, patterns of organization, inferences, and argument. Students will practice strategies for improving reading rate and comprehension. Critical reading skills will be introduced through reading and responding to essays, writing journals, and completing workbook activities. Not open to students with credit for DEV-0145.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: By placement exam

Co-requisites: none

Restrictions: none

DEV 0145 - Advanced Reading (A SP SU) **3.00 credit(s)**

This course focuses on refining students' critical reading skills. The curriculum includes the study of vocabulary in context, implied and stated main ideas, supporting details, patterns of organization, facts and opinions, fallacies, inferences, purpose and tone, and argument. Students will complete projects, read and respond to various essays, compose journals, and complete workbook activities.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: DEV0140 Minimum grade of "C" or By placement exam

Co-requisites: none

Restrictions: none

DEV 0151 - Basic Grammar (A SP SU)**1.00 credit(s)**

This course covers the identification of basic parts of speech, the identification and correction of verb errors (tense, form, and agreement), the identification and correction of sentence structure errors (fragments, run-ons, and comma splices), and the correct structure and punctuation of compound and complex sentences.

Contact Hours: Lecture 1.00

Lab Fee: \$3.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DEV 0152 - Basic Punctuation (A SP SU)**1.00 credit(s)**

This course covers punctuation skills, including the correct use of commas, semicolons, quotation marks, apostrophes, end marks, and the conventions of capitalization.

Contact Hours: Lecture 1.00

Lab Fee: \$3.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DEV 0155 - Basic Composition (A SP SU)**4.00 credit(s)**

This course focuses on the processes and principles of writing clear, coherent, and well-developed paragraphs and short essays. Additional topics include the conventions of grammar, usage, and mechanics, as well as the comprehension, summary, and analysis of various types of texts. Not open to students with credit for ENGL-0190 or higher.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$7.00

Pre-requisites: By placement exam

Co-requisites: none

Restrictions: none

Dental Hygiene**DHY 1100 - Introduction to Dental Hygiene (A)****3.00 credit(s)**

This course is designed to acquaint the dental hygiene student with the role of the dental hygienist and to provide background knowledge, information and the necessary foundation required for clinical dental hygiene care.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$110.00

Pre-requisites: none

Co-requisites: DHY1130 and DHY1140 and DHY1200 and DHY1210 and DHY1260

Restrictions: Program Admission

DHY 1130 - Dental Radiography (A)**3.00 credit(s)**

This course introduces the student to radiographic theory and techniques with emphasis on its nature and properties, safety precautions, and uses of the x-ray in dentistry. Laboratory experience provides opportunity for practice in film placement, tube angulation, exposure, processing and mounting.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$75.00

Pre-requisites: none

Co-requisites: DHY1100 and DHY1140 and DHY1200 and DHY1210 and DHY1260

Restrictions: Program Admission

DHY 1140 - Dental Anatomy & Histology (A)**3.00 credit(s)**

This course provides the study of head and neck anatomy as well as anatomy of the oral cavity including tooth morphology. The student will also study the tissues comprising the oral cavity, along with the embryonic development of these tissues and facial structures.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$100.00

Pre-requisites: none

Co-requisites: DHY1100 and DHY1130 and DHY1200 and DHY1210 and DHY1260

Restrictions: Program Admission

DHY 1200 - Dental Hygiene Pre-Clinic (A)**3.00 credit(s)**

This laboratory course is designed to prepare students for the clinical practice of dental hygiene. The necessary techniques and skills will be presented to perform an oral prophylaxis and related procedures.

Contact Hours: Lab 9.00

Lab Fee: \$300.00

Pre-requisites: none

Co-requisites: DHY1100 and DHY1130 and DHY1140 and DHY1210 and DHY1260

Restrictions: Program Admission

DHY 1210 - Preventive Concepts (A)**1.00 credit(s)**

This didactic course is designed to prepare the students for the clinical practice of dental hygiene. The necessary techniques and skills will be presented to perform an oral prophylaxis and related procedures.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: DHY1100 and DHY1130 and DHY1140 and DHY1200 and DHY1260

Restrictions: Program Admission

DHY 1250 - Oral Pathology (SP)**1.00 credit(s)**

This course provides the study of oral pathology with emphasis placed upon the recognition of normal and abnormal conditions.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: DHY1100

Co-requisites: DHY1261 and DHY1300 and DHY1861

Restrictions: none

DHY 1260 - Periodontology I (A)**1.00 credit(s)**

This course studies periodontal disease including current concepts pertaining to etiology, pathogenesis and assessment.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: DHY1100 and DHY1130 and DHY1140 and DHY1200 and DHY1210

Restrictions: Program Admission

DHY 1261 - Periodontology II (SP)**1.00 credit(s)**

This course continues the study of periodontal diseases with emphasis on treatment and planning dental hygiene care for the periodontally involved patient.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: DHY1100

Co-requisites: DHY1250 and DHY1300 and DHY1861

Restrictions: none

DHY 1300 - Community Health Concepts (SP)**1.00 credit(s)**

This course introduces the dental hygiene student to public health concepts and principles. The student will be introduced to their roles and responsibilities as a community health educator. The student will also study biostatistics, dental indices, and research methods in dentistry.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: DHY1100

Co-requisites: DHY1250 and DHY1261 and DHY1861

Restrictions: none

DHY 1861 - Clinic I (SP)**2.00 credit(s)**

This directed practice course continues the clinical experience of total patient care and radiographic techniques. Topics covered in this directed practice course includes theory of planning dental hygiene care based on individuals needs, study of tobacco cessation program, dental appliances, implants, topical anesthetics and special needs of geriatric, pregnant and child patients.

Contact Hours: Directed Practice 10.00

Lab Fee: \$355.00

Pre-requisites: DHY1100

Co-requisites: DHY1250 and DHY1261 and DHY1300

Restrictions: none

DHY 2200 - Pain Management (SU)**1.50 credit(s)**

The course provides the basic concepts of local anesthesia and pain control.

Contact Hours: Lecture 0.50, Lab 2.00

Lab Fee: \$200.00

Pre-requisites: DHY1250

Co-requisites: DHY2240 and DHY2862

Restrictions: none

DHY 2240 - Dental Materials (SU)**1.00 credit(s)**

This course is designed to study the chemical, physical and biological properties of materials used in dentistry. Emphasis will be placed on the manipulation and utilization of materials that have application to the dental hygienist.

Contact Hours: Lecture 0.50, Lab 1.50

Lab Fee: \$150.00

Pre-requisites: DHY1250

Co-requisites: DHY2200 and DHY2862

Restrictions: none

DHY 2275 - Dental Hygiene Case & Concept Review (SP)**1.00 credit(s)**

This comprehensive review of dental hygiene aids the student in preparation for both clinical and written examinations for licensure. During the course, each student will present a capstone project of a completed patient case study based on the assessment, plan, implementation and evaluation of the case.

Contact Hours: Lab 2.00

Lab Fee: \$100.00

Pre-requisites: DHY2400

Co-requisites: DHY2864

Restrictions: none

DHY 2294 - SPT: Dental Hygiene (On Demand)**1.00 - 4.00 credit(s)**

Provides a variety of topics to meet the current needs of the community and the industry.

Contact Hours: Lecture 1.00 - 4.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

DHY 2300 - Community Health (A)**2.00 credit(s)**

This course provides the dental hygiene student with the opportunity to apply the principles of community dental health in a practical setting. The practicum involves development, implementation and evaluation of public health dental programs.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$40.00

Pre-requisites: DHY2200

Co-requisites: DHY2863 and DHY2400

Restrictions: none

DHY 2400 - Pharmacology for the Dental Hygienist (A)**1.50 credit(s)**

This course surveys the drugs commonly used in the dental office.

Contact Hours: Lecture 1.50

Lab Fee: \$0.00

Pre-requisites: DHY2200

Co-requisites: DHY2863 and DHY2300

Restrictions: none

DHY 2862 - Clinic II (SU)**2.00 credit(s)**

This directed practice course continues the clinical experience of total patient care and radiographic techniques. Topics covered in this directed practice course includes introduction of practical aspects of nutritional needs of the dental patient and nutritional counseling, clinical techniques of root planing, sequencing of instrumentation, advanced instrumentation, hypersensitivity and dental sealants. This is an S-designated Service-Learning course.

Contact Hours: Directed Practice 10.00

Lab Fee: \$355.00

Pre-requisites: DHY1250

Co-requisites: DHY2240 and DHY2200

Restrictions: none

DHY 2863 - Clinic III (A)**2.50 credit(s)**

This directed practice course continues the clinical experience of total patient care and radiographic techniques. In addition, this course is designed to provide knowledge and understanding regarding the dental hygiene care and management for patients with special needs. This is an S-designated Service-Learning course.

Contact Hours: Directed Practice 13.00**Lab Fee: \$355.00**

Pre-requisites: DHY2200

Co-requisites: DHY2300 and DHY2400

Restrictions: none

DHY 2864 - Clinic IV (SP)**2.50 credit(s)**

This course is the final course in the dental hygiene clinical sequence. This course will also provide the student with knowledge of professional and ethical issues, legal responsibilities, the role of organized dentistry, and securing employment. The student will create a Dental Hygiene Portfolio including preparing resume. This is an S-designated Service-Learning course.

Contact Hours: Directed Practice 13.00**Lab Fee: \$355.00**

Pre-requisites: DHY2400

Co-requisites: DHY2275

Restrictions: none

Early Childhood Development and Education**ECDE 1100 - Introduction to CDA (A SP SU)****2.00 credit(s)**

This course is for students seeking the Childhood Development Associate Credential (CDA). The content will include an overview of the CDA program requirements. Emphasis will focus on the competency statements, building the professional portfolio, preparing for the classroom observation and the required final exam. In addition, professionalism, ethics and child care licensing regulations will be explored.

Contact Hours: Lecture 2.00**Lab Fee: \$14.00**

Pre-requisites: ECDE1101 and ECDE1105

Co-requisites: none

Restrictions: Instructor Permission

ECDE 1101 - Early Childhood Curriculum (A SP SU)**4.00 credit(s)**

This course presents an overview of observations and curriculum planning in early childhood development and education. Emphasis will be placed on appropriate objective methods for observing and recording children's behavior in group setting. Strategies for observing while fulfilling the role of the teacher will be addressed. This course will also discuss skills necessary to plan a developmentally appropriate curriculum, including organizing space and time, facilitating daily routines and transitions, creating structured group time experiences, and planning for diverse early childhood classrooms. Students will be introduced to Ohio's Early Learning and Development standards and Ohio's Early Childhood Core Knowledge and Competencies.

Contact Hours: Lecture 4.00

Lab Fee: \$22.00

Pre-requisites: Placement into ENGL 1100 and placement into No Reading Required or college transcript with previous ENGL course work

Co-requisites: none

Restrictions: none

ECDE 1103 - Guidance & Curriculum for Early Childhood Aide (A)**2.00 credit(s)**

This course, meant for the Early Childhood Aides, presents an overview of the early childhood curriculum. Emphasis will be placed on skills necessary to plan a developmentally appropriate curriculum, including organizing space and time, facilitating daily routines and transitions, creating structured group time experiences, and planning for diverse early childhood classrooms. Attention will be given to implementing positive guidance techniques, effective classroom management, preventative strategies, and the importance of a holistic approach to understanding children's behavior.

Contact Hours: Lecture 2.00

Lab Fee: \$14.00

Pre-requisites: SAHS1120

Co-requisites: ECDE1106 and ECDE2840

Restrictions: none

ECDE 1104 - Soc Emotional Dev Early Childhood Aide (SP)**2.00 credit(s)**

This course, meant for Early Childhood Aides, examines the teacher's role as facilitator of social emotional development, including practices that help children develop positive self-image, self esteem and competence. The impact of a teacher's self-image, values, and attitudes will be discussed. The major components of social development are addressed: family patterns and traditions, gender identity and sex roles, moral reasoning of young children, play theories and programming for classroom play, multicultural practices and diversity, and social studies for young children.

Contact Hours: Lecture 2.00

Lab Fee: \$14.00

Pre-requisites: ECDE1106

Co-requisites: ECDE2841

Restrictions: none

ECDE 1105 - Social Emotional Dev Curriculum (A SP SU)**3.00 credit(s)**

This course examines the teacher's role as facilitator of social emotional development, including practices that help children develop positive self-image, self esteem and competence. The impact of a teacher's own self-image, values, and attitudes will be discussed. The major components of social development are addressed: theories related to social emotional development, positive communication, gender identity and sex roles, moral reasoning of young children, play theories and programming for classroom play, and multiculturalism and diversity. Attention will be given to ideas for implementing positive guidance techniques, effective classroom management, preventative strategies, and the importance of a holistic approach to understanding children's behavior. Ohio's Early Learning and Development Standards are discussed.

Contact Hours: Lecture 3.00**Lab Fee: \$22.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

ECDE 1106 - Language & Literacy Exp Early Childhood (A)**1.00 credit(s)**

This course focuses on early language and literacy development in children birth through age five. Emphasis will be placed on the teacher's role in facilitating communication and literacy skills, and on selecting and using literature to enhance language development. The Ohio Department of Education Early Learning Standards, English Language Arts will also be covered.

Contact Hours: Lecture 1.00**Lab Fee: \$9.00**

Pre-requisites: ECDE2294 and SAHS1120

Co-requisites: ECDE1103 and ECDE2840

Restrictions: none

ECDE 1108 - Creative Curriculum (A SP SU)**3.00 credit(s)**

This course deals with the principles of creativity and its importance in the life of the young child. Focus is on the sequence of development in the child's use of creative material. Techniques for creative arts, movement and music will be explored, demonstrated and implemented. Environments that support and encourage creativity will be discussed. Also, students will have the opportunity to explore ways to take these creative ideas outdoors with young children in addition to developing and evaluate materials, objectives and activities in these areas.

Contact Hours: Lecture 3.00**Lab Fee: \$28.00**

Pre-requisites: ECDE1101 and ECDE1105

Co-requisites: none

Restrictions: none

ECDE 1109 - Language & Literacy Experiences (A SP SU) **3.00 credit(s)**

This course focuses on theories of language development, the sequence of speech and language development and differentiating between normal and atypical speech. Emphasis will also be placed on the teacher's role in facilitating communication and literacy skills, on planning and implementing appropriate language and literacy activities, on selecting and using literature to enhance language development, and on supporting children and families whose first language is not English. The Ohio Department of Education Early Learning and Development Standards, English Language Arts will also be covered.

Contact Hours: Lecture 3.00

Lab Fee: \$28.00

Pre-requisites: ECDE1101

Co-requisites: none

Restrictions: none

ECDE 2010 - Infant Toddler Curriculum (A SP SU) **3.00 credit(s)**

This course presents an overview of care giving for infants and toddlers in group settings. Developmentally appropriate programming for infants and toddlers is emphasized across developmental areas through routines, environment, and experiences with a focus on language and brain development. The role of staff and parent relationships is explored as well as Ohio's Rules for Licensed Child Care Centers. Implementation of Ohio's Early Learning and Development Standards is also addressed.

Contact Hours: Lecture 3.00

Lab Fee: \$15.00

Pre-requisites: ECDE1108 and ECDE1109

Co-requisites: ECDE2910

Restrictions: none

ECDE 2012 - Families, Communities & Schools (A SP SU) **3.00 credit(s)**

Throughout the course, students will gain an understanding of the ecology of the child through an exploration of the intersection of family, educational settings, communities, and the impact on child development. Students will be able to demonstrate an ability to plan experiences that involve families and communities and foster reciprocal relationships. Emphasis will be given to developing sensitivity regarding the uniqueness of family structures and social and cultural backgrounds, identities, and customs to create foundations for learning.

Contact Hours: Lecture 3.00

Lab Fee: \$7.00

Pre-requisites: ECDE1108 and ECDE1109

Co-requisites: none

Restrictions: none

ECDE 2014 - Cognitive Curriculum (A SP SU)**3.00 credit(s)**

This course explores the theoretical foundations behind a child's cognitive development. Techniques for promoting concept development as well as focus on science, technology, engineering and math activities for young children are part of this course. Active learning and learning through play are discussed and demonstrated. Young children's brain development is reviewed. Emphasis is on planning activities which encourage questioning, probing and problem-solving skills. The course also includes studying the effects and use of media and technology, block play, simple machines, healthy nutrition and cooking with children. Ohio's Early Learning Content Standards are discussed and applied to planning for young children.

Contact Hours: Lecture 3.00

Lab Fee: \$22.00

Pre-requisites: ECDE1108

Co-requisites: none

Restrictions: none

ECDE 2021 - Org/Prof Leadership in EC Programs (A SP SU)**3.00 credit(s)**

This course takes an in-depth look at the operations of a quality early childhood program. The administrator and staff roles will be explored as well as their interactions with children and families. The administrator and staff roles will be explored as well as their interactions with children and families. Personnel rights, ethical implications of teaching, and team functioning, professional growth and development. Also, the legal requirements and responsibilities of Ohio Child Day Care Licensing procedures will be reviewed.

Contact Hours: Lecture 3.00

Lab Fee: \$6.00

Pre-requisites: ECDE1109 and ECDE2014

Co-requisites: none

Restrictions: none

ECDE 2099 - ECDE Capstone (On Demand)**1.00 credit(s)**

In this capstone, students will assemble, edit, and present a professional portfolio. Professionalism, ethics, and current trends in Early Childhood will be discussed.

Contact Hours: Lecture 1.00

Lab Fee: \$4.00

Pre-requisites: ECDE2920

Co-requisites: ECDE2930

Restrictions: Instructor Permission

ECDE 2105 - Best Practice Inclusive Early Childhood (On Demand) **1.00 credit(s)**

This course focuses on best practices for the inclusive early childhood classroom. Topics include adapting the curriculum, environment and teaching strategies to meet the needs of young children with special needs. Individual Family Service Plans, Individual Education Plans, community resources, supporting parents and providing advocacy for children and families will also be covered.

Contact Hours: Lecture 1.00

Lab Fee: \$6.00

Pre-requisites: ECDE1108 and ECDE1109

Co-requisites: none

Restrictions: none

ECDE 2107 - Media Resources (A SP SU) **1.00 credit(s)**

This course will provide opportunities to create, implement and evaluate appropriate materials and learning activities for children. Emphasis will be placed on extensions of appropriate classroom activities through the use of media materials. Students will have the opportunity to create safe and economical classroom resources as well as have opportunities to practice appropriate skills in creative ways.

Contact Hours: Lecture 1.00

Lab Fee: \$20.00

Pre-requisites: ECDE1101

Co-requisites: none

Restrictions: none

ECDE 2109 - Phonics & the Structure of Language (On Demand) **4.00 credit(s)**

This course is designed to introduce students to teaching of phonics and grammar in the context of reading, writing, and spelling. Students will learn basic terminology, will apply this terminology to instruction, and will develop an understanding of and an appreciation for the structure and function of language elements. Students will also learn how to assess and teach phonics in the context of a comprehensive literacy program.

Contact Hours: Lecture 4.00

Lab Fee: \$24.00

Pre-requisites: ECDE1108 and ECDE1109

Co-requisites: none

Restrictions: none

ECDE 2111 - Playing with the Arts (A SP SU) **1.00 credit(s)**

This course will focus on integrating the arts (music, dance, creative movement, poetry, story telling and drama) into all early childhood curriculum areas. Students will be actively involved in planning and sharing developmentally appropriate activities. Emphasis will be placed on the importance of arts in the lives of young children.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ECDE 2294 - ECDE Contemporary Issues (On Demand)**1.00 - 5.00 credit(s)**

These courses will facilitate offerings of special topics related to ECDE on an annual basis. Topics may include Children's Literature, Diversity and Young Children, Intergenerational Care, Music and Movement, Fitness for Children, Nutrition, Sign Language, Leadership, Advocacy, etc. These topics may be for new students in ECDE or meet requirements for Pre-K Associate Licenses teachers for renewal purposes.

Contact Hours: Lecture 1.00**Lab Fee: \$0.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

ECDE 2840 - Early Childhood Practicum & Seminar I (A)**4.00 credit(s)**

This practicum experience allows students to work directly with young children in an early childhood classroom. Students will plan and implement activities for the children and assist the mentor teacher with daily classroom tasks. Seminar will be an opportunity for students to discuss and reflect on their experience in the early childhood classroom. Students will be supported and evaluated by their mentor teacher and their Columbus state faculty observer. Successful completion with a "C" or better is required as a prerequisite to the next seminar.

Contact Hours: Practicum 14.00, Seminar 2.00**Lab Fee: \$31.00**

Pre-requisites: SAHS1120

Co-requisites: ECDE1103 and ECDE1106

Restrictions: none

ECDE 2841 - Early Childhood Practicum & Seminar II (SP)**4.00 credit(s)**

This second level practicum experience allows students to work directly with young children in an early childhood classroom. Students will plan and implement activities for the children and assist the mentor teacher with daily classroom tasks. Seminar will be an opportunity for students to discuss and reflect on their experience in the early childhood classroom. Students will be supported and evaluated by their mentor teacher and their Columbus state faculty observer. Successful completion with a "C" or better is required as a prerequisite to the next seminar.

Contact Hours: Practicum 14.00, Seminar 2.00**Lab Fee: \$31.00**

Pre-requisites: ECDE2840

Co-requisites: ECDE1104

Restrictions: none

ECDE 2910 - Seminar Practicum I: Infants & Toddlers (A SP SU) **2.00 credit(s)**

This course is an integral part of the ECDE program and includes both a seminar and practicum experience. The course includes integration of theory and practice, with focus on observing and recording children's play and interactions, basic principles of guidance, and application of knowledge. Students observe and directly interact with young children. Students plan developmentally appropriate activities for young children that will be implemented in the classroom placement. Students are observed in the classroom setting three times during the semester by an assigned ECDE faculty member. Successful completion with a "C" or better is required as a prerequisite to the next seminar practicum experience in the series.

Contact Hours: Seminar 1.00, Practicum 7.00

Lab Fee: \$22.00

Pre-requisites: ECDE1108 and ECDE1109 and ECDE2010 ECDE2014

Co-requisites: ECDE2014

Restrictions: none

ECDE 2920 - Seminar/Practicum II: Preschool (A SP SU) **2.00 credit(s)**

This course is an integral part of the ECDE program and includes both a seminar and practicum experience. The course includes integration of theory and practice, with focus on observing and recording children's play and interactions, basic principles of guidance, and application of knowledge. Students observe and directly interact with young children. Students plan developmentally appropriate activities for young children that will be implemented in the classroom placement. Students are observed in the classroom setting three times during the semester by an assigned ECDE faculty member. Successful completion with a "C" or better is required as a prerequisite to the next seminar practicum experience in the series.

Contact Hours: Seminar 1.00, Practicum 7.00

Lab Fee: \$25.00

Pre-requisites: ECDE2910 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ECDE 2930 - Seminar/Practicum III: Preschool (A SP SU) **2.00 credit(s)**

This course is an integral part of the ECDE program and includes both a seminar and practicum experience. The course includes integration of theory and practice, with focus on observing and recording children's play and interactions, basic principles of guidance, and application of knowledge. Students observe and directly interact with young children. Students plan developmentally appropriate activities for young children that will be implemented in the classroom placement. Students are observed in the classroom setting three times during the semester by an assigned ECDE faculty member. Successful completion with a "C" or better is required as a prerequisite to the next seminar practicum experience in the series.

Contact Hours: Seminar 1.00, Practicum 7.00

Lab Fee: \$25.00

Pre-requisites: ECDE2920 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ECDE 2932 - Seminar/Practicum III: Administration (A SP SU) **2.00 credit(s)**

This practicum experience allows students to work directly with administrators in an early childhood setting. Students will plan and implement a mock staff interview and center tour. The student will also assist the mentor administrator with daily center tasks. Seminar will be an opportunity for students to discuss and reflect on their experience in the early childhood program. Students will be supported and evaluated by their mentor administrator and their Columbus State faculty observer. Successful completion with a "C" or better is required as a prerequisite to the next seminar.

Contact Hours: Seminar 1.00, Practicum 7.00

Lab Fee: \$0.00

Pre-requisites: ECDE2920

Co-requisites: none

Restrictions: none

ECDE 2933 - Seminar/Practicum III: Community Setting (A SP SU) **2.00 credit(s)**

This practicum experience allows students to work directly with young children in the community setting. Students will work with families and young children as directed by the community settings mentor (camps, tours, family programming, workshops, etc.). Seminar will be an opportunity for students to discuss and reflect on their experience at the various community settings. Students will be supported and evaluated by their mentor teacher and their Columbus State faculty observer. Successful completion with a "C" or better is required for this course.

Contact Hours: Seminar 1.00, Practicum 7.00

Lab Fee: \$6.00

Pre-requisites: ECDE2920 Minimum grade of "C"

Co-requisites: none

Restrictions: none

Economics

ECON 1110 - Intro to Economics (A SP SU) **3.00 credit(s)**

This course is an issues- based introduction to basic economic concepts. Students will relate principles such as scarcity, opportunity cost, and markets to current events.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: MATH1050 Minimum grade of "C" and Placement into ENGL 1100

Co-requisites: none

Restrictions: none

ECON 2193 - Independent Study in Economics (On Demand) **1.00 - 3.00 credit(s)**

An individual, student-structured course that examines a selected topic in Economics through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program.

Contact Hours: Lecture 1.00

Lab Fee: \$3.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

ECON 2200 - Principles of Microeconomics (A SP SU) **3.00 credit(s)**

This course introduces students to the economic decision making of individuals and firms. Topics include: scarcity; opportunity cost; supply and demand, consumer choice, elasticity, market structure, profit maximization, resource markets, and international trade.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: MATH1050 Minimum grade of "C" or STAT1350 Minimum grade of "C" or STAT1400

Minimum grade of "C" Placement into ENGL 1100

Co-requisites: none

Restrictions: none

ECON 2201 - Principles of Macroeconomics (A SP SU) **3.00 credit(s)**

This course introduces students to economic decision-making at the aggregate level. Topics include national income analysis, the business cycle, inflation, unemployment, fiscal and monetary policies and objectives.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: ECON2200 Minimum grade of "C"

Co-requisites: none

Restrictions: none

Education

EDUC 2210 - Introduction to Education (A SP) **3.00 credit(s)**

This course provides an introduction to the teaching profession. Candidates will learn how the historical, philosophical and sociological foundations of education as well as current cultural, economic and political forces impact schools through class discussion, inquiry, and field experiences. Focusing on understanding themselves, understanding their students, and understanding the teaching profession, candidates work in community and school settings and critically reflect on their values, experiences, and observations. Specifically, students will gain an understanding of educational policy and practice in preschool, elementary, middle and high school settings

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

EDUC 2220 - Educational Technology (A SP)**3.00 credit(s)**

This course provides those entering the teaching profession with an understanding of how to effectively enhance modern education with various types of technology. Students will explore the benefits and challenges of using technology and develop the skills to choose and implement technologies that will improve learner understanding and retention. Teaching and learning topics include basic hardware configurations and troubleshooting, operating systems, file types, spreadsheets, presentation software, databases, word processing, audio-visual technologies, and online and distance-learning technologies. Students will be able to find reliable educational resources online and to understand intellectual property and copyright laws.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

Electronic Engineering Technology**EET 1105 - Basic DC Electronic Systems (A SP SU)****3.00 credit(s)**

Every electrical or electronic device operates using either Direct Current (DC) or Alternating Current (AC) or both. This course is an introduction to DC and AC fundamentals, the systems that use them, and the basic sources of DC and AC electricity.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$12.00

Pre-requisites: ENGL0190 Minimum grade of "C" and MATH1050 or higher, with a minimum grade of "C"

Co-requisites: none

Restrictions: none

EET 1115 - Basic Digital Systems (A SP SU)**3.00 credit(s)**

A digital system is one that uses a precise sequence of discrete voltages, representing numbers, non-numeric symbols or commands for input, processing, transmission, storage, or display. The fundamental electronic concepts for wireless, mobile devices are introduced.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$35.00

Pre-requisites: EET1105

Co-requisites: none

Restrictions: none

EET 1125 - Basic AC Electronic Systems (A SP SU)**3.00 credit(s)**

Every electrical or electronic device operates using either Direct Current (DC) or Alternating Current (AC) or both. This course is an introduction to AC fundamentals, the systems that use them, and the basic sources of AC electricity.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$35.00

Pre-requisites: EET1105

Co-requisites: none

Restrictions: none

EET 1135 - Electronic Switching & Amplifier Systems (A SP SU)**3.00 credit(s)**

"This course introduces the basic concepts of operational amplifiers and practical applications of electronic switching systems including AC-to-DC rectification, DC-to-DC voltage conversion; AC-to-AC conversion and DC-to-AC inversion. "

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$30.00

Pre-requisites: EET1125

Co-requisites: none

Restrictions: none

EET 1145 - Data Communication Systems (A SP SU)**3.00 credit(s)**

This course introduces the fundamental concepts of electronic communications systems, data communications and networks. Topics include wireless and wired communications systems, basic data communications systems and local area networks. This course describes how the electronics of these systems work, it does not include the software applications required to operate the networks.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$30.00

Pre-requisites: EET1115

Co-requisites: none

Restrictions: none

EET 2215 - Adv Digital Systems (FPGA) Programming (A SP SU)**3.00 credit(s)**

This course will provide the ideal vehicle for learning about digital logic, microcontroller organization, and Field Programmable Gate Arrays (FPGA). Students will use state-of-the-art technology in both hardware and schematic capture tools over a wide range of topics. The Altera DE2 Development and Education board will be used in a laboratory environment to offer a rich set of features that make it suitable for a variety of design projects.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$42.00

Pre-requisites: EET1115 and ITST1101

Co-requisites: none

Restrictions: none

EET 2225 - Embedded Microcontroller Systems (A SP SU) **3.00 credit(s)**

Microcontrollers are used in automatically controlled products and devices, such as automobile engine control systems, remote controls, office machines, peripherals for computer systems, appliances, power tools, and toys. By reducing size, cost, and power consumption, microcontrollers make it economical to electronically control many more processes. In the laboratory setting, students will learn how to interface with embedded systems, which typically have no keyboard, screen, disks, printers, or other recognizable computer I/O devices, and may lack human interaction devices of any kind.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$42.00

Pre-requisites: EET1115

Co-requisites: none

Restrictions: none

EET 2235 - Data Acquisition Systems (A SP SU) **3.00 credit(s)**

This course will focus on electronic systems that extract data from their surroundings for statistical analysis. The digital data is catalogued, stored and sometimes utilized to make improvements on the object being measured. Through a combination of external hardware and/or software, such systems facilitate the collection of data in biomedical applications, aerospace products, automation processes, and robotics. "Human Machine Interface" (HMI), "Distributed Control Systems" (DCS) and "Supervisory Control and Data Acquisition"(SCADA) systems will be studied.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$42.00

Pre-requisites: EET1125

Co-requisites: none

Restrictions: none

EET 2599 - Capstone Experience in EET (A SP) **3.00 credit(s)**

Designed to be the final course in the degree program, students will master skills related to the design, development, fabrication, troubleshooting, implementation and documentation of a system or systems relevant to emerging technologies. The course requirements include preparation of system requirements specifications, proposals, prototyping, troubleshooting, testing, and functional demonstration of a core project. The specific student core project will be based on currently emerging technology.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$20.00

Pre-requisites: Completion of 15 credit hours of EET credit COMM1110 and COMM2204

Co-requisites: COMM1110 and COMM2204

Restrictions: none

EET 2994 - SPT Electronic Engineering Technology (On Demand) 1.00 - 5.00 credit(s)

none provided

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

Electro-mechanical Engineering Technology**EMEC 1250 - Motors and Control Logic (A SP SU)** 4.00 credit(s)

This course covers AC motors, generators, transformers, and the basic components used to control them. Students will learn how to generate ladder and wiring diagrams as well as gain competency in wiring power and control circuits to meet a given set of criteria. They will also learn how to troubleshoot using digital multi-meters.

Contact Hours: Lecture 3.00, Lab 3.00

Lab Fee: \$36.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

EMEC 1251 - Control Logic and PLC's (A SP SU) 4.00 credit(s)

The course covers advanced control circuits, advanced design of ladder and wiring diagrams to meet a given set of criteria and basic PLC programming of Allen Bradley PLCs using RS Logix and Control Logix software.

Contact Hours: Lecture 3.00, Lab 3.00

Lab Fee: \$36.00

Pre-requisites: EMEC1250

Co-requisites: none

Restrictions: none

Emergency Medical Services**EMS 1002 - Paramedic Preparation Course (A SP SU)** 4.00 credit(s)

This is the course pre-requisite for the paramedic certification program. Content will cover anatomy, physiology, and pathophysiology relevant to providing advanced level emergency care.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$25.00

Pre-requisites: EMS1860

Co-requisites: none

Restrictions: none

EMS 1107 - Search & Rescue-Wilderness EMT (A) **5.00 credit(s)**

This course will prepare the student to function in many search and rescue situations and improve missing person incident interoperability. The course will focus on responses to urban, rural, and wilderness environments. In addition to response, the student will be instructed in wilderness emergency care and will receive a Wilderness EMT upgrade certification if currently holding an EMT or Paramedic certification. Those not holding an EMT certification will receive a Wilderness First Responder certification. The course is taught over and above the minimum requirements of NASAR (National Association of Search and Rescue) for the SAR Technician-Level III certification and students can challenge the NASAR on-line exam upon completion of the course.

Contact Hours: Lecture 3.60, Lab 4.40

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

EMS 1108 - Weapons Mass Destruct Emergency Services (SU) **2.00 credit(s)**

The course includes basic safety issues for emergency responders and focuses on medical care of people exposed to weapons of mass destruction. Content reflects Department of Homeland Security mandatory training for emergency personnel.

Contact Hours: Lecture 2.00

Lab Fee: \$30.00

Pre-requisites: EMS1860

Co-requisites: none

Restrictions: none

EMS 1109 - Emergency Pyschiatric Intervention (SP) **2.00 credit(s)**

This course deals with the pre-hospital approach to people exhibiting abnormal behavior and provides an in-depth look into methods of evaluation and management of people experiencing behavioral crises.

Contact Hours: Lecture 2.00

Lab Fee: \$20.00

Pre-requisites: EMS1860 or equivalent Ohio EMT certification

Co-requisites: none

Restrictions: none

EMS 1860 - Emergency Medical Technician (EMT)yEmergency Medical Technician (emt) (A SP SU) **7.00 credit(s)**

This course covers all the knowledge and skills required for the state certification examination for Emergency Medical Technician (EMT). Course includes a minimum of 24 clock hours of clinical experience.

Contact Hours: Clinical 1.60, Lecture 4.70, Lab 6.70

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 0190

Co-requisites: none

Restrictions: Health Code

EMS 1861 - Paramedic I (A SP SU)**8.00 credit(s)**

This is part one of a five part course sequence covering all the knowledge and skills required for the state certification examination for Paramedic. Course includes weekly clinical and field experiences.

Contact Hours: Lab 3.00, Clinical 3.00, Lecture 5.00

Lab Fee: \$240.00

Pre-requisites: EMS1860 and EMS1002 and Current State of Ohio EMT certification

Co-requisites: none

Restrictions: Health Code Other

EMS 1862 - Paramedic II (A SP SU)**4.00 credit(s)**

This is part two of a five part course sequence covering all the knowledge and skills required for the state certification examination for Paramedic. Course includes weekly clinical and field experiences.

Contact Hours: Lab 1.50, Clinical 1.50, Lecture 2.50

Lab Fee: \$250.00

Pre-requisites: EMS1861

Co-requisites: none

Restrictions: none

EMS 1863 - Paramedic III (A SP SU)**8.00 credit(s)**

This is part three of a five course sequence covering all the knowledge and skills required for the state certification examination for Paramedic. Course includes weekly clinical and field experiences.

Contact Hours: Lab 3.00, Clinical 3.00, Lecture 5.00

Lab Fee: \$245.00

Pre-requisites: EMS1862

Co-requisites: none

Restrictions: none

EMS 1864 - Paramedic IV (A SP SU)**4.00 credit(s)**

This is part four of a five course sequence covering all the knowledge and skills required for the state certification examination for Paramedic. Course includes weekly clinical and field experiences.

Contact Hours: Lab 1.50, Clinical 1.50, Lecture 2.50

Lab Fee: \$30.00

Pre-requisites: EMS1863

Co-requisites: none

Restrictions: none

EMS 1865 - Paramedic V (A SP SU) **6.00 credit(s)**

This is part five of a five course sequence covering all the knowledge and skills required for the state certification examination for Paramedic. Course includes weekly clinical and field experiences.

Contact Hours: Lecture 1.50, Clinical 3.00, Lab 6.00

Lab Fee: \$155.00

Pre-requisites: EMS1864

Co-requisites: none

Restrictions: none

EMS 1866 - RN to Paramedic Bridge (A) **6.00 credit(s)**

This course is designed for Registered Nurses with previous experience to obtain education necessary for them to challenge the National Registry Exam for Paramedics.

Contact Hours: Lab 3.00, Lecture 4.00

Lab Fee: \$250.00

Pre-requisites: EMS1860 and EMS2006 and EMS2007 and 2 years RN experience

Co-requisites: none

Restrictions: none

EMS 2000 - EMS Management (A) **3.00 credit(s)**

This course is an introduction to management of an EMS system. Students will review different types of EMS systems and explore recruitment, training, and oversight of EMS staffing.

Contact Hours: Lecture 3.00

Lab Fee: \$15.00

Pre-requisites: EMS1860

Co-requisites: none

Restrictions: none

EMS 2001 - Disaster Plan & Incident Comm System (A) **2.00 credit(s)**

This course will give pre-hospital providers an introduction to disaster planning. Students will look at the history and types of disasters, both natural and man made. For course completion each student will be developing an actual disaster plan.

Contact Hours: Lecture 2.00

Lab Fee: \$15.00

Pre-requisites: EMS1860

Co-requisites: none

Restrictions: none

EMS 2002 - 12 Lead EKG Interpret & Adv Cardiac (SP) **2.00 credit(s)**

This course will teach students to perform and interpret 12 lead EKGs. Students will also learn to integrate advanced cardiac assessment and 12 lead EKG into treatment plans for critical patients.

Contact Hours: Lecture 2.00

Lab Fee: \$75.00

Pre-requisites: ACLS certification or equivalent

Co-requisites: none

Restrictions: Instructor Permission

EMS 2004 - Emergency Medical Tech Refresher (SU) **1.00 credit(s)**

This is the Ohio curriculum for an Emergency Medical Technician Refresher

Contact Hours: Lecture 0.60, Lab 1.40

Lab Fee: \$15.00

Pre-requisites: EMS1860 or equivalent State of Ohio EMT certification

Co-requisites: none

Restrictions: none

EMS 2005 - Paramedic Refresher (A) **2.00 credit(s)**

This is the Ohio curriculum for a Paramedic Refresher

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$25.00

Pre-requisites: EMS1863 or equivalent State of Ohio Paramedic Certification

Co-requisites: none

Restrictions: none

EMS 2006 - Pre-hospital Trauma Care (A SP SU) **1.00 credit(s)**

This course is lecture and hands on skills in caring for patients of all ages who have sustained life threatening traumatic injuries. Students will earn an International Trauma Life Support (ITLS) credential or equivalent upon successful completion of this training. Course is typically required for medical personnel including paramedics, nurses, and physicians.

Contact Hours: Lab 0.60, Lecture 0.80

Lab Fee: \$9.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

EMS 2007 - Pre-hospital Cardiac Care (A SP SU) **1.00 credit(s)**

This course is lecture and hands on skills in caring for patients of all ages who have sustained life threatening cardiac emergencies. Students will earn an American Heart Association; Advanced Cardiac Life Support credential or equivalent upon successful completion of this training. Course is typically required for medical personnel including paramedics, nurses, respiratory therapists, and physicians.

Contact Hours: Lab 0.60, Lecture 0.80

Lab Fee: \$28.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

EMS 2101 - Critical Care Transport (On Demand) **6.00 credit(s)**

This course deals with the special needs of critical patients during transport, including the use of advanced equipment and procedures. This course is designed to prepare paramedics and nurses to function as members of a critical care transport team. This is the UMBC CCEMT-P course.

Contact Hours: Lab 3.00, Lecture 5.00

Lab Fee: \$310.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

EMS 2102 - Public Safety Service Instructor (On Demand) **5.00 credit(s)**

This course is the Ohio curriculum required for current firefighters, EMS providers, and Registered Nurses who wish to teach in Fire/EMS programs.

Contact Hours: Lecture 5.00

Lab Fee: \$30.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

English

ENGL 0190 - Introduction to Composition (A SP SU) **3.00 credit(s)**

ENGL 0190 is a writing-intensive course that focuses on development and improvement of reading and writing skills in preparation for English 1100. Using a process writing method, students develop compositions for multiple purposes and with a multi-modal focus. Sections of this course are S-designated Service-Learning classes.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: DEV0155 Minimum grade of "C", or COMPASS writing score of 31-54

Co-requisites: none

Restrictions: none

ENGL 1100 - Composition I (A SP SU)**3.00 credit(s)**

English 1100 is a beginning composition course that develops processes for critically reading, writing, and responding to a variety of texts in order to compose clear, concise expository essays. The course facilitates an awareness of purpose, audience, content, structure, and style, while also introducing research and documentation methods. Course reading and writing assignments may be thematically organized. Sections of this course are S-designated Service-Learning classes. Sections of this course are H-designated Honors classes.

Contact Hours: Lecture 3.00**Lab Fee: \$5.00**

Pre-requisites: ENGL0190 Minimum grade of "C", or COMPASS writing score of 69-99

Co-requisites: none

Restrictions: none

ENGL 1101 - Composition 1W: Composition Workshop (A SP SU)**3.00 credit(s)**

English 1101 is a beginning composition course, for students who can benefit from additional independent small-group or tutor/teacher-directed work, that develops processes for critically reading, writing, and responding to a variety of texts in order to compose clear, concise expository essays. The course facilitates an awareness of the interplay among purpose, audience, content, structure, and style, while also introducing research and documentation methods. Course reading and writing assignments may be thematically organized. Completion of English 1101 is equivalent to completion of English 1100.

Contact Hours: Lecture 2.00, Lab 2.00**Lab Fee: \$5.00**

Pre-requisites: COMPASS writing score of 55-68

Co-requisites: none

Restrictions: none

ENGL 2201 - British Literature I (A SP SU)**3.00 credit(s)**

This course is a survey of canonical British literary works written before 1789. The course activities include readings, class discussions and writing assignments.

Contact Hours: Lecture 3.00**Lab Fee: \$5.00**

Pre-requisites: ENGL1100 Minimum grade of "B" ENGL2367 Minimum grade of "C" or ENGL2567 Minimum grade of "C" or ENGL2667 Minimum grade of "C" or ENGL2767 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2202 - British Literature II (A SP SU)**3.00 credit(s)**

Students will study selected master works of 19th and 20th century British Literature. Course activities include readings, discussion, and writing assignments.

Contact Hours: Lecture 3.00**Lab Fee: \$5.00**

Pre-requisites: ENGL1100 Minimum grade of "B" ENGL2367 Minimum grade of "C" or ENGL2567 Minimum grade of "C" or ENGL2667 Minimum grade of "C" or ENGL2767 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2210 - Creative Writing (A SP SU)**2.00 credit(s)**

Students are introduced to the fundamental techniques of creative writing. Using peer group analysis and workshop techniques, students will develop short pieces in fiction, nonfiction, and poetry.

Contact Hours: Lecture 2.00

Lab Fee: \$5.00

Pre-requisites: ENGL1100 Minimum grade "C"

Co-requisites: none

Restrictions: none

ENGL 2215 - Magazine Publication I (A SP SU)**2.00 credit(s)**

Through hands-on practice with Spring Street, students learn the processes and techniques involved in the production of a literary magazine.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL1100 Minimum grade "C"

Co-requisites: none

Restrictions: none

ENGL 2216 - Magazine Publication II (A SP SU)**2.00 credit(s)**

Students who have satisfactorily completed ENGL 2215, or who have comparable training and experience from another context, learn magazine production techniques using Spring Street or another college publication as a production laboratory. This practicum may be repeated once and is normally taken immediately after completing ENGL 2215.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL2215 Minimum grade "C"

Co-requisites: none

Restrictions: none

ENGL 2217 - Writing to Publish (SP SU)**3.00 credit(s)**

This course introduces students to procedures for preparing a manuscript for marketing and publication. Students select works for publication from a particular genre, submit to a series of peer reviews, revise and edit their work, and prepare the ancillary materials that go with a publish read manuscript.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL2265 Minimum grade "C" or ENGL2266 Minimum grade "C" or ENGL2268 Minimum grade "C" or THEA2283 Minimum grade "C"

Co-requisites: none

Restrictions: none

ENGL 2220 - Introduction to Shakespeare (A SP SU) **3.00 credit(s)**

This course will examine representative works of Shakespeare, concentrating on a critical/analytical approach to the plays. Emphasis will also be placed upon Renaissance/Elizabethan dramaturgy and conventions; language and style; and the human experience represented in Shakespeare's histories, comedies, romances, and tragedies.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL1100 Minimum grade of "B" ENGL2367 Minimum grade of "C" or ENGL2567 Minimum grade of "C" or ENGL2667 Minimum grade of "C" or ENGL2767 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2240 - Introduction to Science Fiction (A SP SU) **3.00 credit(s)**

The historical roots and literary forms of science fiction are introduced. From their readings and viewing of films, students will write critiques, reports and research papers about science fiction as a literary genre.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL1100 Minimum grade of "B" ENGL2367 Minimum grade of "C" or ENGL2567 Minimum grade of "C" or ENGL2667 Minimum grade of "C" or ENGL2767 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2260 - Introduction to Poetry (A SP SU) **3.00 - credit(s)**

This course will introduce students to the critical process of reading and responding to poetry from historical, cultural and gender-based perspectives. Emphasis will be upon traditional and nontraditional forms, as well as mainstream and marginalized writers. Students will become familiar with appropriate terminology; however, they also will learn to encounter the poem as a whole piece of written discourse between poet and reader. Students will, therefore, conduct an ongoing oral and written dialogue with the poet (Who is the speaker? Who is the audience? What is the purpose?) and the poem (What is the message?). Students will articulate, orally and in writing, their own ideas of interpretation based upon a close reading of the text and an informed perspective concerning the historical and cultural circumstances of its origin.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

ENGL 2261 - Introduction to Fiction (SP SU)**3.00 credit(s)**

The course is an intensive study of selected short stories and a novel. Through critical reading, discussion and writing, students will become familiar with important themes and methodologies of fiction. In both short stories and novels, emphasis will be placed upon identifying and analyzing authors' particular uses of the traditional elements of fiction (structure, setting, point of view, etc.) to develop plot and character.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL1100 Minimum grade of "B" ENGL2367 Minimum grade of "C" or ENGL2567 Minimum grade of "C" or ENGL2667 Minimum grade of "C" or ENGL2767 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2265 - Writing Fiction (A SP SU)**3.00 credit(s)**

This course introduces students to the art and craft of writing fiction. Emphasis is on the student's own work; however, students will also be required to study the works and writing processes of established writers, male and female, traditional and nontraditional, ancient and modern, and from diverse cultures. Students will keep a writer's journal, respond critically to the works of other students, create and revise a final long work (or combination of shorter works) of at least 4,000 words by the end of the term. In addition, students will be required to attend (virtually or in person) the public visual/auditory presentation of student fiction. Course is repeatable to 6 credits.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL1100 Minimum grade "C"

Co-requisites: none

Restrictions: none

ENGL 2266 - Writing Poetry (A SP SU)**3.00 credit(s)**

This course introduces students to the art and craft of writing poetry. Emphasis is on the student's own work; however, students will also be required to study the works, writing processes, critical commentary on, and oral delivery of established poets, male and female, traditional and nontraditional, ancient and modern, and from diverse cultures. Students will keep a writer's journal, respond critically to the works of other students, and create and revise a chapbook of 8-10 finished poems (12-20) pages by the end of the semester. Students will present selected poems from the chapbook at a public reading. Course is repeatable to 6 credits.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL2210 Minimum grade "C" or ENGL2266 Minimum grade "C"

Co-requisites: none

Restrictions: none

ENGL 2268 - Writing Creative Non Fiction (A SP SU)**3.00 credit(s)**

This course introduces students to the art and craft of writing creative nonfiction (feature writing, travel writing, memoirs, personal profiles, biographies, public relations, etc.). Emphasis is on the student's own work; however, students will also be required to study the works, writing processes, critical commentary on, and oral delivery of established nonfiction writers, male and female, traditional and nontraditional, ancient and modern, and from diverse cultures. Students will keep a writer's journal, respond critically to the works of other students, create and revise a complete longer work (or a combination of shorter pieces) of at least 3,000-4,000 words by the end of the semester. Students will present a public reading of their work during the semester. Course is repeatable to 6 credits.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL1100 Minimum grade "C"

Co-requisites: none

Restrictions: none

ENGL 2270 - Introduction to Folklore (A SP SU)**3.00 credit(s)**

This course looks at 1) oral folklore, e.g. folk music, proverbs, myths, legends, folktales; 2) customary folklore, e.g. superstitions, folk religion, folk festivals, folk customs; and 3) material and folk traditions, e.g. carving, quilting, architecture food ways, costumes. Activities include fieldwork, reading and writing assignments, group work and a special project.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL1100 Minimum grade of "B" ENGL2367 Minimum grade of "C" or ENGL2567 Minimum grade of "C" or ENGL2667 Minimum grade of "C" or ENGL2767 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2274 - Introduction to Nonwestern Literature (SP SU)**3.00 credit(s)**

This course introduces students to selected classic and modern literature of the non-Western world, including Asia, Africa, the Middle East and Latin America. Through several literary approaches, students will gain an understanding of the authors, the periods, and the cultures they represent and the various ways they have handled literary themes.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL2367 Minimum grade of "C" or ENGL1100 Minimum grade of "B" ENGL2567 Minimum grade of "C" or ENGL2667 Minimum grade of "C" or ENGL2767 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2276 - Women in Literature (A SP SU)**3.00 credit(s)**

This course will explore the history and literature by and about women. The course uses a comparative approach to see how women have worked within the genres of fiction, nonfiction, poetry, and drama. Discussions will consider the literature from the perspectives of gender, history, politics, and culture. Writing assignments will include response journals, documented critical papers, and essay exams.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL1100 Minimum grade of "B" ENGL2367 Minimum grade of "C" or ENGL2567 Minimum grade of "C" or ENGL2667 Minimum grade of "C" or ENGL2767 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2280 - The English Bible As Literature (A SP SU)**3.00 credit(s)**

This course offers a literary approach to the Bible in English. Students read, in a modern English translation, much of the Old Testament and the New Testament, as well as parts of the Apocrypha. This is not a course in religion. The approach is literary, historical and cultural. The Bible is read as an anthology of writings composed, compiled, translated and edited over several centuries, by many individuals, and as a book that has had an enormous effect on our culture, art and civilization.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL1100 Minimum grade of "B" ENGL2367 Minimum grade of "C" or ENGL2567 Minimum grade of "C" or ENGL2667 Minimum grade of "C" or ENGL2767 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2281 - African American Literature (A SP SU)**3.00 credit(s)**

This course is a survey of African-American Literature from 18th century beginnings to the present. It includes a study of slave narratives, folklore, drama, poetry and short fiction. Discussions will consider the literature from the perspectives of gender, history, politics, and culture. Intensive reading and writing assignments will include response journals, documented critical papers, and essay exams. Activities may include peer review and collaborations, presentations (oral and visual), and guest speaker appearances.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL1100 Minimum grade of "B" ENGL2367 Minimum grade of "C" or ENGL2567 Minimum grade of "C" or ENGL2667 Minimum grade of "C" or ENGL2767 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2290 - U.S. Literature I (A SP SU)**3.00 credit(s)**

This course will examine the works of major writers in U.S. literature from the pre-colonial period to 1865 with attention to revision of the canon. Genres include essays, short fiction, drama, poetry and the novel. This course will consider works from literary, social, historical, and philosophical perspectives. Course activities include reading, class discussion and writing assignments.

Contact Hours: Lecture 3.00**Lab Fee: \$5.00**

Pre-requisites: ENGL1100 Minimum grade of "B" ENGL2367 Minimum grade of "C" or ENGL2567 Minimum grade of "C" or ENGL2667 Minimum grade of "C" or ENGL2767 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2291 - U.S. Literature II (A SP SU)**3.00 credit(s)**

This course examines the works of major writers in U.S. literature from 1865, the end of the Civil War, to the present with attention to revision of the canon. Genres include essays, fiction, drama, poetry, and the novel. This course will consider works from literary, social, historical, and philosophical perspectives. Course activities include reading, class discussion and writing assignments.

Contact Hours: Lecture 3.00**Lab Fee: \$5.00**

Pre-requisites: ENGL1100 Minimum grade "B" ENGL2367 Minimum grade "C" or ENGL2567 Minimum grade "C" or ENGL2667 Minimum grade "C" or ENGL2767 Minimum grade "C"

Co-requisites: none

Restrictions: none

ENGL 2367 - Composition II (A SP SU)**3.00 credit(s)**

ENGL 2367 is an intermediate composition course that extends and refines skills in expository and argumentative writing, critical reading, and critical thinking. This course also refines skills in researching a topic, documenting sources, and working collaboratively. Course reading and writing assignments are organized around the diversity of those who comprise the identities. Sections of this course are S-designated Service-Learning classes. Sections of this course are H-designated Honors classes.

Contact Hours: Lecture 3.00**Lab Fee: \$5.00**

Pre-requisites: ENGL1100 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2567 - Comp II Writing about Gender & Identity (SP)**3.00 credit(s)**

ENGL 2567 is an intermediate composition course that extends and refines skills in expository and argumentative writing, critical reading, and critical thinking. This course also refines skills in researching a topic, documenting sources, and working collaboratively. Course reading and writing assignments may be thematically organized. This course focuses on issues of gender and identity.

Contact Hours: Lecture 3.00**Lab Fee: \$3.00**

Pre-requisites: ENGL1100 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2667 - Comp II American Working-Class Identity (A) **3.00 credit(s)**

ENGL 2667 is an intermediate composition course that extends and refines skills in expository and argumentative writing, critical reading, and critical thinking. This course also refines skills in researching a topic, documenting sources, and working collaboratively. Course reading and writing assignments may be thematically organized. This section focuses on the American working-class identity.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: ENGL1100 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ENGL 2767 - Comp II Writing About Science/Technology (SU) **3.00 credit(s)**

ENGL 2767 WRITING ABOUT SCIENCE AND TECHNOLOGY is an intermediate composition course that extends and refines skills in expository and argumentative writing, critical reading, and critical thinking. This course also refines skills in researching a topic, documenting sources, and working collaboratively. Course reading and writing assignments will be thematically organized to focus on science and technology in American culture. Students learn the conventions of the professional and academic discourse in the science through the use of formatting and documentation guidelines from the Council of Science Editors (CSE). Through reading and writing, this course covers issues of race, class, and ethics in American society that influence and shape science and technology. Students will enhance their communication skills and content mastery with writing assignments and oral presentation that engage course material within the STEM disciplines.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: ENGL1100 Minimum grade of "C"

Co-requisites: none

Restrictions: none

Engineering

ENGR 1181 - Fundamentals of Engineering I (A SP SU) **3.00 - credit(s)**

This first course in the Fundamentals of Engineering sequence introduces the student to engineering career areas and hands-on skills related to engineering applications: systems, modeling and data analysis; the use of Excel and MATLAB for problem solving; effective teamwork; communication and ethics. Students are strongly advised to complete MATH 1150 prior to enrollment in ENGR 1181 or concurrently with ENGR 1181.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

ENGR 1182 - Fundamentals of Engineering II (A SP SU) **3.00 - credit(s)**

An introduction to 3D modeling and CAD integrated with the engineering design-build process. hands-on experience, teamwork, and project management are emphasized as well as written, oral and visual communications. Students are strongly advised to complete MATH 1151 prior to enrollment in ENGR 1182 or concurrently with ENGR 1182.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

ENGR 2030 - Dynamics (A SP SU) **4.00 - credit(s)**

This course will introduce fundamental concepts of vector mechanics of particles and rigid bodies in motion. Newton's laws of translational and rotational motion and relationships between forces acting on a body and its motion.

Contact Hours: Lecture 4.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

ENGR 2040 - Statics & Intro Mechanics of Materials (A SP SU) **4.00 - credit(s)**

This course will introduce fundamental concepts of vector mechanics of particles and rigid bodies at rest, fundamental concepts of reactions of external supports of bodies in equilibrium, common engineering structures such as trusses, frames, and machines, geometric and inertial properties of solid bodies, stress distributions under various loadings including pure shear, axial, torsion, and bending loadings.

Contact Hours: Lecture 4.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

ENGR 2350 - Engineering Thermal Sciences (A SP SU) **4.00 - credit(s)**

This is a required course for 4-year Mechanical Engineering degree at OSU and Systems Engineering degree at Otterbein. This course will introduce fundamental concepts of energy and laws of thermodynamics, entropy, Carnot and gas power cycles, fundamental concepts of fluid statics, Bernoulli's theorem, fundamental concepts of heat transfer.

Contact Hours: Lecture 4.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

Engineering Technologies

ENGT 1115 - Engineering Graphics (A SP SU)

3.00 credit(s)

This course covers basic blueprint reading, sketching, drafting, and beginning AutoCAD. It is the pre-requisite to MECH 1145 (2D CAD).

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$22.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ENGT 1115A - Engineering Graphics A (A)

1.00 credit(s)

This course covers basic blueprint reading, sketching, drafting, and beginning AutoCAD. It is the pre-requisite to MECH 1145 (2D CAD). * Note: Both ENGT 1115A and ENGT 1115B must be completed in order to received credit for ENGT 1115.

Contact Hours: Lecture 0.50, Lab 1.00

Lab Fee: \$8.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ENGT 1115B - Engineering Graphics B (A)

2.00 credit(s)

This course covers basic blueprint reading, sketching, drafting, and beginning AutoCAD. This course completes the requirement for ENGT 1115. * Note: Both ENGT 1115A and ENGT 1115B must be completed in order to received credit for ENGT 1115.

Contact Hours: Lecture 0.50, Lab 3.00

Lab Fee: \$14.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ENGT 1200 - Intro Industrial & Systems Engineering (A SP)

3.00 credit(s)

This course in an introduction to the basic principles of Industrial Engineering and the efficiencies derived from their application in a host of industries.

Contact Hours: Lecture 3.00

Lab Fee: \$10.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ENGT 1300 - Intro Electric Motors, Controls, PLC's (A SP) **4.00 credit(s)**

This course is designed to provide a general overview of electric motors, motor controls, and rudimentary PLC programming for non-Electro-Mechanical majors.

Contact Hours: Lecture 3.00, Lab 3.00

Lab Fee: \$36.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ENGT 2260 - Basic Mechanisms and Drives (A SP SU) **4.00 credit(s)**

This course will cover the kinematic motion of machines and basic machine mechanisms (gears, belts, sprockets, bearings, clutches, couplings, springs, etc). It will also examine the basic drives of such mechanisms (electric motors and hydraulic & pneumatic actuators).

Contact Hours: Lecture 3.00, Lab 3.00

Lab Fee: \$33.00

Pre-requisites: ENGT1115

Co-requisites: none

Restrictions: none

English as Second Language

ESL 0159 - Public Speaking for Non-Native Speakers (A SP SU) **3.00 credit(s)**

ESL 0159 prepares students whose academic language is not English to participate effectively in classroom and career public speaking. Students will study and practice public speaking elements and techniques. Conduct some research in preparation for informative and persuasive speeches, which are presented individually and in groups. Students receive feedback from the instructor and classmates and are video-taped for self-analysis. Credit does not count toward graduation in any degree program.

Contact Hours: Lecture 3.00

Lab Fee: \$11.00

Pre-requisites: ESL0189 Minimum grade "C" or Placement into ESL 0190

Co-requisites: none

Restrictions: none

ESL 0165 - Navigating College in the US (A SP SU) **2.00 credit(s)**

ESL 0165 introduces the non-native college student to the expectations of college life and the specific campus of CSCC. Students explore topics such as student/teacher relationships, study skills, GPAs, and Blackboard.

Contact Hours: Lecture 2.00

Lab Fee: \$2.00

Pre-requisites: Placement into ESL 0188 or higher

Co-requisites: none

Restrictions: none

ESL 0168 - Critical Reading Skills (A SP SU)**4.00 credit(s)**

Critical Reading Skills is designed to help students master higher-order reading skills which will enable them to become effective and efficient academic readers. Through fiction and non-fiction readings, students will build skills in critical analysis, inferring, note taking and test-taking strategies, and vocabulary building.

Contact Hours: Lecture 4.00

Lab Fee: \$11.00

Pre-requisites: Placement into ESL 0188 or higher

Co-requisites: none

Restrictions: none

ESL 0169 - College Read: Non-Fiction (A SP SU)**4.00 credit(s)**

College Reading: Non-Fiction helps students gain confidence in comprehending, discussing and writing about freshman- and sophomore-level academic texts. Students are exposed to a variety of college readings in different disciplines.

Contact Hours: Lecture 4.00

Lab Fee: \$11.00

Pre-requisites: ESL0188 Minimum grade "C" or Placement into ESL 0189

Co-requisites: none

Restrictions: none

ESL 0170 - College Reading: Fiction (A SP SU)**4.00 credit(s)**

This course gives ESL students an opportunity to read various authentic (unedited) literary works in English including short stories, plays and short novels. Students will explore the plot, settings, structures and character development. Students will build vocabulary as well as analyze cultural settings. Analysis will come through journals, presentations, group discussions and class discussions.

Contact Hours: Lecture 4.00

Lab Fee: \$11.00

Pre-requisites: ESL0188 Minimum grade "C" or Placement into ESL 0190

Co-requisites: none

Restrictions: none

ESL 0177 - Spelling Skills (A SP SU)**2.00 credit(s)**

ESL Spelling Skills introduces non-native students to techniques which increase basic spelling skills in English. Students will practice spelling rules and patterns, word divisions, prefixes, roots and suffixes.

Contact Hours: Lecture 2.00

Lab Fee: \$7.00

Pre-requisites: Placement into ESL 0188 or higher

Co-requisites: none

Restrictions: none

ESL 0178 - College Vocabulary I (A SP SU)**2.00 credit(s)**

ESL 0178 is the first of two courses based on the Academic Word List. Students read text containing the target vocabulary and work with the vocabulary through various oral and written exercises.

Contact Hours: Lecture 2.00

Lab Fee: \$7.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESL 0179 - College Vocabulary II (A SP SU)**2.00 credit(s)**

ESL 0179 is the second of two courses based on the Academic Word List. Students read text containing the target vocabulary and work with the vocabulary through various oral and written exercises. ESL 0179 may be taken first, though reading and vocabulary difficulty is greater than in ESL 0178.

Contact Hours: Lecture 2.00

Lab Fee: \$7.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESL 0188 - Academic Grammar and Writing I (A SP SU)**6.00 credit(s)**

ESL 0188 is the first of three academic English preparation classes. It focuses on high intermediate grammar instruction to increase reading and writing proficiency. Students work at the paragraph level.

Contact Hours: Lecture 6.00

Lab Fee: \$13.00

Pre-requisites: Placement into ESL 0188

Co-requisites: none

Restrictions: none

ESL 0189 - Academic Grammar and Writing 2 (A SP SU)**6.00 credit(s)**

ESL 0189 is the second of three academic English preparation classes. It focuses on advanced grammar instruction to increase reading and writing proficiency. Students write both paragraphs and essays.

Contact Hours: Lecture 6.00

Lab Fee: \$13.00

Pre-requisites: ESL0188 Minimum grade "C" or Placement into ESL 0189

Co-requisites: none

Restrictions: none

ESL 0190 - Introduction to College Composition (A SP SU) **4.00 credit(s)**

ESL 0190 is the last of academic English preparation classes. It focuses on essay writing.

Contact Hours: Lecture 4.00

Lab Fee: \$11.00

Pre-requisites: ESL0189 or Placement into ESL 0190

Co-requisites: none

Restrictions: none

ESL 0193 - Independent Study: ESL (On Demand) **1.00 - 4.00 credit(s)**

ESL 0193 provides individual study opportunities for special topics in English for non-native speakers.

Contact Hours:

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

Environmental Science, Safety, and Health

ESSH 1101 - Intro to Environ Science, Safety, Health (A SP SU) **3.00 credit(s)**

This course provides an overview of environmental science, with an emphasis on environmental issues and solutions to environmental problems. Topics include ecological concerns, human health effects from toxic exposures, energy use, air, water and soil pollution, solid and hazardous waste issues, and occupational safety and health.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

ESSH 1130 - Environmental Laws & Regulations (A) **3.00 credit(s)**

This course presents a study of American political institutions and the evolution of environmental laws, as well as a study of federal, state and local codes and regulations as they apply to the protection of the environment.

Contact Hours: Lecture 3.00

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 1140 - Industrial/Municipal Pollution Control (SP) **3.00 credit(s)**

This course is an overview of the management, treatment and disposal practices utilized for pollution control. It addresses the nature of pollution and provides an introduction to air pollution control devices, wastewater treatment techniques, solid and hazardous waste management, treatment and disposal, recycling and pollution prevention.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$18.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 1160 - OSHA 10 Hr Construction Safety & Health (A SP SU) **1.00 credit(s)**

This course covers the approved Occupational Safety and Health Administration (OSHA) curriculum for the 10-hour Outreach Training Program for Construction Industry Safety and Health. Topics include introduction to OSHA, electrical safety, fall protection, personal protective and lifesaving equipment, materials handling, storage, use and disposal, equipment safety, excavation, stairways and ladder safety and other applicable OSHA standards. Course completion cards will be issued to individuals successfully completing the class.

Contact Hours: Lecture 1.00

Lab Fee: \$33.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 1170 - OSHA 10Hr Gen Ind Safety & Health (On Demand) **1.00 credit(s)**

This course covers the approved OSHA curriculum for the 10-hour Outreach Training Program for General Industry Safety and Health. Topics include introduction to OSHA, walking and working surfaces, exit routes, emergency action plans, fire prevention plans, fire protection, fall protection, electrical safety, and other applicable safety topics as recommended by OSHA. Course completion cards will be issued to individuals successfully completing the class.

Contact Hours: Lecture 1.00

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 1580 - Environmental Site Assessment (A SP) **2.00 credit(s)**

This course explores environmental site assessments, including Phase I ESAs for real estate transactions. Environmental regulations and standard practices will be applied in the analysis of a site-specific project. Additional property assessment issues addressed in this class include Environmental Impact Statements, wetlands, asbestos, lead, mold and radon.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 1650 - OSHA 30 Hr Construction Safety & Health (A SP SU) **2.00 credit(s)**

This course covers the approved Occupational Safety and Health Administration (OSHA) curriculum for the 30-hour Outreach Training Program for the Construction Industry Safety and Health. Topics include an introduction to OSHA, safety and fall protection, health hazards, material handling, equipment safety, concrete and masonry construction, welding and cutting, excavation, stairways and ladder safety and other applicable OSHA standards. Course completion cards will be issued to individuals successfully completing the class.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 1700 - OSHA30 Hr General Ind Safety & Health (A) **2.00 credit(s)**

This course covers the approved OSHA curriculum for the 30-hour Outreach Training Program for General Industry Safety & Health. Topics include an introduction to OSHA, hazardous materials, walking and working surfaces, fire protection, personal protective equipment, confined space, lockout/tagout, machine guarding, welding and brazing safety, electrical safety, industrial hygiene and other applicable OSHA standards. Course completion cards will be issued to individuals successfully completing the class.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 2111 - Hazardous Materials Management (A SP) **3.00 credit(s)**

This course presents an overview of the management practices for hazardous materials and hazardous waste. The properties of hazardous materials are covered. An emphasis will be placed on DOT, OSHA and EPA regulatory requirements.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$38.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 2120 - Environmental Aspects of Soil (A SP SU) **3.00 credit(s)**

This course offers a multi-disciplinary overview of soil science. Topics include soil formation and development, classification systems, soil mechanics, soil chemistry, soil hydrology, soil nutrients, soil erosion, soil physics, soil contamination and soil remediation methods. Soil characteristics will be explored by means of laboratory examination and soil testing techniques.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$18.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 2220 - Drinking Water Treatment (SU) **2.00 credit(s)**

This course provides an overview of drinking water treatment, and is designed to assist in the preparation of the State of Ohio Class I Water Operator exam. The course will emphasize water quality, methods of water treatment and laboratory processes. Water treatment theory and the math involved in taking the state exam will be emphasized.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$20.00

Pre-requisites: CHEM 0100 or high school chemistry; Placement into MATH 1020 or higher

Co-requisites: none

Restrictions: none

ESSH 2230 - Wastewater Treatment Techniques (SU) **2.00 credit(s)**

This course provides an overview of the treatment of municipal wastewater, and is designed to assist in the preparation of the State of Ohio Class I Wastewater Operator exam. The course will emphasize wastewater treatment processes and equipment, as well as an understanding of sewer systems and laboratory processes. The wastewater treatment theory and the math involved in taking the state exam will be emphasized.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$20.00

Pre-requisites: CHEM 0100 or high school chemistry; placement into MATH 1020 or higher

Co-requisites: none

Restrictions: none

ESSH 2240 - Environmental Hydrology (A) **3.00 credit(s)**

This course addressed the occurrence, movement, and behavior of water in the hydrologic cycle. The concepts covered include atmospheric processes, surface water and ground water, and the ways in which water resources are utilized and/or contaminated.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$23.00

Pre-requisites: MATH 1020 or higher

Co-requisites: none

Restrictions: none

ESSH 2282 - Sustainable Bldg Strategies (A SP) **2.00 credit(s)**

This course is an introduction to the field of environmentally-friendly construction. Sustainable architecture and building site principles will be presented, including strategies for energy-efficient heating and cooling, "green" building materials and methods, alternative energy sources, water efficiency and waste management. Topics include the need for sustainability, energy efficient design, construction and controls, site selection, passive solar heating and cooling, "green" building materials and methods, alternative energy sources and water efficiency and waste management.

Contact Hours: Lecture 2.00

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 2283 - Ecological Residential Construction (On Demand) **2.00 credit(s)**

This course addresses the important aspects of building green homes. The topics include environmentally friendly design, the use of alternative materials, and the utilization of sustainable systems.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 2400 - Environmental Analytical Methods (SP) **2.00 credit(s)**

This course provides an overview of the qualitative and quantitative analysis of environmental samples. An explanation of laboratory techniques will be provided. The emphasis will be on the application of certain analytical methods commonly used in the environmental industry.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: CHEM0100 or CHEM1111 MATH 1020 or higher

Co-requisites: none

Restrictions: none

ESSH 2440 - Environmental Chemistry (On Demand) **3.00 credit(s)**

This course provides an understanding of the chemical processes that occur in the environment, including water, earth and atmospheric chemistry. There is an emphasis on the transport and fate of pollutants in the environment. Related laboratory exercises are performed.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$18.00

Pre-requisites: CHEM1111

Co-requisites: none

Restrictions: none

ESSH 2500 - Environmental Sampling (A) **3.00 credit(s)**

Environmental sampling covers the techniques and methods used in sampling of environmental media, especially for field investigations. Emphasized is the sampling of air, surface water, ground water, soil and waste. Topics include the regulatory framework, background research, project coordination, drilling techniques, monitoring well installation, the utilization of field instruments, decontamination, and supplemental investigative techniques.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$20.00

Pre-requisites: ESSH2520

Co-requisites: none

Restrictions: none

ESSH 2520 - Hlth/Safety Training for Haz Waste Ops (A SP SU) **2.00 credit(s)**

This course satisfies the OSHA training requirement in 29 CFR 1910.120(e), commonly referred to as the 40 Hour HAZWOPER training. This is a health and safety training course for individuals who may be involved in the investigation, remediation and operation of hazardous waste sites. Students that successfully complete the course will receive a certificate. Topics include hazardous materials chemistry, toxicology, air monitoring, respiratory protection, protective clothing, decontamination and appropriate hands-on activities. Students enrolled in the distance-learning version of this course will be required to come to campus for the completion of hands-on activities, and for the final exam.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$100.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 2530 - Applied Environmental Engineering (SP) **2.00 credit(s)**

This course introduces engineered environmental systems and practical applications of their operation and maintenance. Topics include flow diagrams, schematics, plumbing and piping, pumps, blowers, electrical systems, instrumentation, flow measurements, process control, troubleshooting and safety for engineered systems.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 2540 - Environmental Restoration (SP) **3.00 credit(s)**

This course addresses the ways in which environmental systems are restored, emphasizing subsurface remediation techniques. Course topics include the regulatory framework, clean-up goals, contaminant chemistry and transport, soil and groundwater remediation techniques, water and air treatment technologies, and risk assessment.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$20.00

Pre-requisites: ESSH2500

Co-requisites: none

Restrictions: none

ESSH 2550 - Air Pollution and Monitoring (SP) **3.00 credit(s)**

This course covers the fundamentals of air pollution, such as sources, important atmospheric aspects and the effects of air pollutants. It also focuses on EPA methods for stack and ambient sampling of various air contaminants. Other topics include continuous emission monitoring, air pollution control options, and applicable permitting and reporting requirements.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$35.00

Pre-requisites: CHEM1111

Co-requisites: none

Restrictions: none

ESSH 2560 - Hazardous Materials Refresher Training (SU) **0.50 credit(s)**

This course provides the refresher training for hazardous waste site workers and emergency responders who have completed the 24- or 40-hour HAZWOPER courses and complies with the 29 CFR 1910.120 refresher training requirements. Emphasis is placed on a review of the standard and on relevant changes in OSHA requirements. This is a repeatable course.

Contact Hours: Lecture 0.50

Lab Fee: \$50.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

ESSH 2750 - Industrial Hygiene (A) **3.00 credit(s)**

This course is an overview of the science of industrial hygiene and describes the process of investigating and examining workplace hazards and how those hazards are abated. The laboratory will emphasize the use of instrumentation and important calculations. Topics include introduction to industrial hygiene, principles of toxicology, occupational safety and health standards, occupational skin and noise disorders, indoor air quality, ergonomics, engineering and administrative controls, and personal protective equipment.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$18.00

Pre-requisites: CHEM1111

Co-requisites: none

Restrictions: none

ESSH 2900 - ESSH Field Experience (SU) **2.00 credit(s)**

The Field Experience course requires an off-campus work experience in the environmental or safety services industry. This augments the formal education received in the degree program with actual work conditions and job experience. "N" credit will not be allowed for this course.

Contact Hours: Field Experience/Internship 24.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

Fire Science

FIRE 1100 - Principles of Emergency Services (A SP SU) **3.00 credit(s)**

This course provides an overview to fire protection and emergency services; career opportunities in the fire protection and related fields; culture and history of the emergency services; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protections systems; introduction to fire strategy and tactics; life safety initiatives.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

FIRE 1102 - Hazardous Material Awareness & Operation (A SP) **3.00 credit(s)**

This course provides basic chemistry relating to the categories of hazardous materials including recognition, identification, reactivity and health hazards encountered by emergency services.

Contact Hours: Lecture 3.00

Lab Fee: \$8.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

FIRE 1103 - Hazardous Materials Technician Level (A) **3.00 credit(s)**

This course is designed to build upon the training and knowledge that you have obtained from participating in the "Ohio HAZMAT & WMD Technician" courses. It is divided into two modules: Module I will address the standards established in NFPA 472 Chapter 7 "Competencies for Hazardous Materials Technicians" and will meet all the competencies as established by the Occupational Safety and Health Administration (OSHA 29 CFR 1910.120) and the US Environmental Protection Agency (EPA 40 CFR part 311). Module 2 will address the Performance Level B (Technician) guidelines for law enforcement and fire service personnel and guidelines for hazardous materials technicians as found in the Emergency Responder Guidelines published by the Office of Domestic Preparedness (ODP), and give advanced info about CBRNE weapons.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$150.00

Pre-requisites: FIRE1102

Co-requisites: none

Restrictions: none

FIRE 1104 - Principles Fire & Emer Safety & Survival (A SP) **2.00 credit(s)**

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: FIRE1121 or documentation of certification or equivalency and FIRE1122 or documentation of certification or equivalency

Co-requisites: none

Restrictions: none

FIRE 1105 - Strategies and Tactics (A SP) **3.00 credit(s)**

This course provides the principles of fire ground control through utilization of personnel, equipment, and extinguishing agent.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: FIRE1121 or documentation of certification or equivalency and FIRE1122 or documentation of certification or equivalency

Co-requisites: none

Restrictions: none

FIRE 1106 - Fire Behavior & Combustion (A SP)**2.00 credit(s)**

This course explores the theories and fundamentals of how and why fires start, spread and are controlled.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: FIRE1121 or documentation of certification or equivalency and FIRE1122 or documentation of certification or equivalency

Co-requisites: none

Restrictions: none

FIRE 1107 - Fire Protection Hydraulics/Water Supply (SU)**3.00 credit(s)**

This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$20.00

Pre-requisites: FIRE1121 or documentation of certification or equivalency and FIRE1122 or documentation of certification or equivalency

Co-requisites: none

Restrictions: none

FIRE 1108 - Fire Prevention (A SP)**3.00 credit(s)**

This course provides fundamental knowledge relating to the field of fire prevention. Topics include the following: history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use and application of codes and standards, plans review, fire inspections, fire and life safety education, and fire investigation.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: FIRE1121 or documentation of certification or equivalency and FIRE1122 or documentation of certification or equivalency

Co-requisites: none

Restrictions: none

FIRE 1109 - Bldg Construct Fire Service Protection (A SP)**3.00 credit(s)**

This course provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: FIRE1121 FIRE 1121 & 1122 or Documentation of Certification or Equivalency and FIRE1122 FIRE 1121 & 1122 or Documentation of Certification or Equivalency

Co-requisites: none

Restrictions: none

FIRE 1110 - Fire Protection Systems (A SP)**2.00 credit(s)**

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.

Contact Hours: Lecture 2.00**Lab Fee: \$0**

Pre-requisites: FIRE1121 or documentation of certification or equivalency and FIRE1122 or documentation of certification or equivalency

Co-requisites: none

Restrictions: none

FIRE 1112 - Customer Service for Emergency Services (A SP)**3.00 credit(s)**

This course studies the psychology of relations between public service employees and the general population. It presents the policies and practices of community relations as they apply to public service agencies. Current national and local community problems are explored.

Contact Hours: Lecture 3.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

FIRE 1121 - Firefighter I (A SP SU)**7.00 credit(s)**

This course covers all of the basic performance and knowledge objectives in the current NFPA Standard 1001 for Firefighter I and prepares individuals to perform duties while wearing required protective equipment. These duties include but are not limited to: fire department operations, firefighting equipment operation and maintenance, principles of combustion and fire behavior safety, recognition of types of fires and applying the correct methods for extinguishment, personal protective equipment, ventilation, forcible entry, loss prevention, operations level HAZMAT, fire and life safety initiatives, fire prevention and public relations. Completion of a Health Record is required PRIOR TO registration. Registration for FIRE 1121 requires co-registration for FIRE 1122 which runs concurrently. Successful completion of FIRE 1121 & FIRE 1122 meets the eligibility requirements to take the State of Ohio certification exam for Firefighter I & II.

Contact Hours: Lab 12.00, Lecture 3.00**Lab Fee: \$300.00**

Pre-requisites: FIRE1122

Co-requisites: FIRE1122

Restrictions: Health Code

FIRE 1122 - Firefighter II (A SP SU)**5.00 credit(s)**

This course covers all of the basic performance and knowledge objectives in the current NFPA Standard 1001 for Firefighter II, including but not limited to: fire department organization, safety, fire alarms, fire behavior, extinguishment, ropes, ladders, hose streams, fire control and rescue. Completion of a Health Record is require PRIOR TO registration. Registration for FIRE 1122 requires registration for FIRE 1121 which runs concurrently. Successful completion of FIRE 1121 & FIRE 1122 meets the eligibility requirements to take the State of Ohio certification exam for employment as a firefighter in the State of Ohio.

Contact Hours: Lecture 1.00, Lab 8.00

Lab Fee: \$0

Pre-requisites: FIRE1121

Co-requisites: none

Restrictions: none

FIRE 1201 - Introduction to Rescue (A SP SU)**3.00 credit(s)**

This course includes coverage of the awareness level requirements found in the 2009 Edition of NFPA 1670, Standard on Operations and Training for Technical search and Rescue Incidents, as well as some of the general job performance requirements found in the 2008 Edition of NFPA 1006, Standard for Technical Rescuer Professional Qualifications. Introduction to Rescue presents in-depth coverage of structural collapse, confined space and trench rescue, vehicle rescue, and water and wilderness rescue, allowing the student to approach any rescue situation safely and confidently. The student will learn to effectively manage the initial stages of a rescue incident without becoming a victim themselves.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

FIRE 1202 - Rope Rescue Technician (A SP)**3.00 credit(s)**

This course meets Awareness, Operations and Technician level requirements outlined in NFPA 1670, Standard Operations and Training for Technical Search and Rescue Incidents, as well as Chapters 5 and 6 of NFPA 1006, Standard for Rescue Technician Professional Qualifications Level II. The student will work as a team member while designing and executing multiple rope rescue systems for accessing and transporting a patient in the vertical environment.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$40.00

Pre-requisites: FIRE1201

Co-requisites: none

Restrictions: none

FIRE 1203 - Surface & Ice Rescue Technician (SP)**2.00 credit(s)**

The student will understand the 3 NFPA training compliance guidelines and know the limitations of each. Incident Command System knowledge will be covered. Hypothermia card, Patient handling, Throw Bag techniques, Self-Rescue Skills and proper use of Specialized Ice Rescue Equipment are all critical components of this training, as well. This course is intended to further develop skills covered in the Level I class. Sub-Surface Recovery, Multiple Victim Rescue, Scene Assessment and Application Skills for Multiple Scenarios are covered in great detail. Each student is faced with potential rescue situations including "live victims" and allowed to handle the scene. Meets NFPA 1006 - Standard for Technical Rescuer Professional Qualifications Level II and NFPA 1670 - Standard on Operations and Training for Technical Search and Rescue Incidents Level II and the Ohio Boating Safety Course. Successful completion of FIRE 1202 to the Operations Level is contingent upon a combined score of 70%. To receive certification at the Technician Level in FIRE 1202, the student shall attain a combined score of 75% and successfully complete, prior to the final exam, a swim test as follows: swim 500 yards without stopping, swim 700 yards using mask and snorkel, swim 100 yards towing an inert mannequin, tread water for 15 minutes and retrieve a 10 pound brick from the bottom of the deep end of the pool.

Contact Hours: Lecture 1.00, Lab 2.00**Lab Fee: \$1.00**

Pre-requisites: FIRE1201 and FIRE1202

Co-requisites: none

Restrictions: none

FIRE 1204 - Swift Water Rescue Technician (SU)**2.00 credit(s)**

This course will prepare emergency response personnel to perform rescue operations in moving water emergencies. Topics will include planning, personal protective equipment, search parameters, incident action plans, surface rescue techniques, advanced rope systems, and use of watercraft and helicopters in water rescue operations. Students will participate in moving water exercises to demonstrate proficiency in appropriate skills. This course meets Chapter 9, Technician Level, of NFPA 1670, Standards on Operations and Training for Technical Search and Rescue Incidents (2004), as well as Chapter 7, Surface Water Rescue, of NFPA 1006, Rescue Technician Professional Qualifications (2003) and the Ohio Boating Safety Course. Successful completion of FIRE 1202 is contingent upon a combined score of 70%. To receive certification at the Technician Level, the student shall attain a combined score of 75% and successfully complete, prior to the final exam, a swim test as follows: swim 500 yards without stopping, swim 700 yards using mask and snorkel, swim 100 yards towing an inert mannequin, tread water for 15 minutes and retrieve a 10 pound brick from the bottom of the deep end of the pool.

Contact Hours: Lecture 2.00, Lab 2.00**Lab Fee: \$40.00**

Pre-requisites: FIRE1201 and FIRE1202

Co-requisites: none

Restrictions: none

FIRE 1205 - Confined Space Rescue Technician (SP)**2.00 credit(s)**

This course meets 29 CFR 1910.146 requirements, NFPA 1670, Standard for Operations and Training for Technical Search and Rescue Incidents and NFPA 1006, Standard for Rescue Technician Professional Qualifications Level II. The student will review the federal and state regulations for confined space, high angle, and hazardous materials incidents, the use of specialized equipment for atmospheric monitoring, and commercial and rescuer constructed retrieval systems. This course includes simulated rescue evolutions requiring mixture of all three disciplines, challenging the responder to deal with rescuing the rescuer in a contaminated atmosphere. Special emphasis is given to rescuer safety, patient care, decontamination, and the construction and operation of retrieval systems.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$30.00

Pre-requisites: FIRE1201 and FIRE1202

Co-requisites: none

Restrictions: none

FIRE 1206 - Trench Rescue Technician (SP)**2.00 credit(s)**

This course will prepare emergency response personnel to perform rescue operations in trench and excavation emergencies of depths greater than 8 feet. The following topics will be covered: identifying the construction, application, limitations, and removal of supplemental sheeting and shoring systems; manufactured trench boxes and isolation devices; adjusting protective systems based on digging operations and environmental conditions; evaluating existing and potential conditions; coordinating the use of heavy equipment; and patient management. The course meets the requirements of 29 CFR 1926 Subpart P, as well as Chapter 11.4, Technician Level, of NFPA 1670, Standard on Operations and Training for Technical Search and Rescue Incidents Levels I & II and Chapter 11, Trench Rescue, of NFPA 1006, Standard for Rescue Technician Professional Qualifications Level II.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$40.00

Pre-requisites: FIRE1201 and FIRE1202

Co-requisites: none

Restrictions: none

FIRE 1207 - Structural Collapse Rescue Technician (A)**2.00 credit(s)**

This course will prepare emergency response personnel to perform rescue operations in structural collapse emergencies. The following topics will be covered: determination of potential victim location; development of an incident action plan; search methods; coordination and use of heavy equipment; and patient management. Students will participate in structure stabilization methods, search of collapsed structures, and breaching of structural components. This course meets Chapter 5.4, Technician Level I & II of NFPA 1670, Standard on Operations and Training for Technical Search and Rescue Incidents (2004) as well as Chapter 10, Structural Collapse Rescue, of NFPA 1006, Rescue Technician Professional Qualifications (2003) Levels I & II.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: FIRE1201 and FIRE1202

Co-requisites: none

Restrictions: none

FIRE 1208 - Vehicle and Machinery Rescue Technician (A SP) **2.00 credit(s)**

This course presents the student with opportunities to develop specific rescue skills applicable to common passenger vehicles and simple small machines (Level I) as well as rescue skills applicable to commercial or heavy vehicles, incidents involving complex extrication processes or multiple uncommon concurrent hazards, and incidents involving heavy machinery (Level II). Specific rescue skills include planning for a vehicle or machinery incident, performing on-going incident size-up, establishing scene safety zones, establishing fire protection, stabilizing vehicles or machines, isolating potentially harmful energy sources, determining access and egress points, creating access and egress openings, disentangling victims, removing packaged victims, and terminating vehicle or machinery rescue incidents. This course meets Sections 6.4.1 and 6.4.2 of NFPA 1001: Chapter 4, Chapter 5 (Sections 5.1 through 5.5), and Chapter 10 of NFPA 1006 Standard for Technical Rescuer Professional Qualifications Level II and Chapters 4, 8, and 12 of NFPA 1670 Standard Operations and Training for Technical Search and Rescue Incidents Levels I & II.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: FIRE1201 and FIRE1202

Co-requisites: none

Restrictions: none

FIRE 1209 - Farm Rescue Technician (A) **2.00 credit(s)**

This course addresses the unique hazards and complicated extrication of victims trapped in farm machinery and/or structures. The course includes detailed study of the classifications and incidents, proper procedures for stabilizing farm machinery, and gaining access to and extrication of farm machinery incidents. Participants will be provided opportunities to use these techniques in practical applications. This course meets NFPA 1006, Standard for Technical Rescuer Professional Qualifications Level II.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: FIRE1202 and FIRE1208

Co-requisites: none

Restrictions: none

FIRE 2001 - Fire Service Company Officer (A) **3.00 credit(s)**

Introduces supervisory techniques as applied to public service personnel. Course covers the need for job descriptions and job procedures, reports, oral and written directions, work evaluation, meetings, discipline, and conference leaders.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: FIRE1121 or documentation of certification or equivalency and FIRE1122 or documentation of certification or equivalency

Co-requisites: none

Restrictions: none

FIRE 2002 - Fire Safety Inspector (SU)**3.00 credit(s)**

Participant will gain an understanding of the fire inspector's role in code enforcement, general fire prevention practices, fire safety requirements related to HAZ MAT, electrical systems and fire protections systems. The student will learn the skills necessary to conduct fire safety inspections. This class meets certification requirements established by the Ohio Department of Public Safety and NFPA 1031, Fire Inspector Professional Qualifications.

Contact Hours: Lecture 3.00

Lab Fee: \$10.00

Pre-requisites: FIRE1121 or documentation of certification or equivalency and FIRE1122 or documentation of certification or equivalency

Co-requisites: none

Restrictions: none

FIRE 2003 - Fire Cause and Origin Investigation (A SP)**3.00 credit(s)**

This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives, and types of fire causes.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: FIRE1121 or documentation of certification or equivalency and FIRE1122 or documentation of certification or equivalency

Co-requisites: none

Restrictions: none

FIRE 2005 - Principles of Fire Scene Command (A)**3.00 credit(s)**

This course presents NFPA Incident Management System curriculum concepts. The course content is tailored to the person looking to begin a career in firefighting, and the person at the FF level who has no direct command responsibility, but must understand the principles of incident command.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: FIRE1121 or documentation of certification or equivalency and FIRE1122 or documentation of certification or equivalency

Co-requisites: none

Restrictions: none

FIRE 2006 - Legal Aspects of Emergency Services (A SP)**3.00 credit(s)**

This course will address the Federal, State, and local laws that regulate emergency services and include a review of national standards, regulations, and consensus standards.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

FIRE 2094 - SPT: Emergency Services (On Demand) **0.50 - 7.00 credit(s)**

Topics or areas of professional interest within the fire science field will be explored. These offerings will introduce students to new topics and technologies supporting current trends, the needs of the students and the community, and future development of the program.

Contact Hours: Lecture 0.50

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

FIRE 2105 - Adv Bldg Const/Collapse Prof Firefighter (A SP) **3.00 credit(s)**

This course provides an introduction to the present and the past practices of building construction as it relates to firefighting. Discusses the various hazards of building collapse and how to recognize warning signs of impending disaster. Looks at building construction from the Company Officer and Incident Commander's perspective.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: FIRE1121 or documentation of certification or equivalency and FIRE1122 or documentation of certification or equivalency

Co-requisites: none

Restrictions: none

Finance Technology

FMGT 1101 - Personal Finance (A SP SU) **3.00 credit(s)**

This course presents a lifetime program of money management for the individual. Topics such as budgets, savings, job search, buying a house, insurance, mutual funds, stock market, real estate investments, taxes, and estate planning are covered. Students will be able to write a basic personal financial plan.

Contact Hours: Lecture 3.00

Lab Fee: \$4.00

Pre-requisites: Placement into DEV 0114 or higher

Co-requisites: none

Restrictions: none

FMGT 1211 - Investments (A SP SU) **3.00 credit(s)**

This course examines investments for the individual with emphasis on the securities markets. Topics presented include risk and return tradeoffs, sources of investment information, stocks, bonds, mutual funds, options and tax considerations. Prior completion of FMGT 1101 is recommended.

Contact Hours: Lecture 3.00

Lab Fee: \$4.00

Pre-requisites: Placement into DEV 0114 or higher

Co-requisites: none

Restrictions: none

FMGT 2201 - Corporate Finance (A SP SU)**3.00 credit(s)**

Course is an introduction to the principles of financial management of private business firms. Topics covered include financial analysis, financial planning, working capital management, financial leverage, sources of financing, capital budgeting and capital markets. Prior completion of ACCT 1211 with a grade of "C" or better is recommended.

Contact Hours: Lecture 3.00

Lab Fee: \$4.00

Pre-requisites: ACCT1211

Co-requisites: none

Restrictions: none

FMGT 2202 - Money and Banking (A SU)**3.00 credit(s)**

A study of the operation, organization, and economics of U.S. monetary and banking systems. Current trends, the monetary policy process, and the regulation of financial markets also are covered. Prior completion of ECON 2200 with a grade of "C" or better is recommended.

Contact Hours: Lecture 3.00

Lab Fee: \$4.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

FMGT 2232 - Principles of Insurance (SP)**3.00 credit(s)**

This course introduces the principles of insurance and risk management, including terminology and definitions as used in the industry. The foundations, applications and selection of personal, life, health, and commercial insurance and liability are explored. Students must pass this course with a 'C' or better.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: FMGT1101 or BMGT1101

Co-requisites: none

Restrictions: none

FMGT 2242 - International Finance (A SP)**3.00 credit(s)**

This course covers the multinational firm, globalization, balance of payments, market for foreign exchange, international monetary system, and global capital markets. Also covered is the study of global debt and equity markets to optimize a firm's financial structure while minimizing foreign exchange exposure.

Contact Hours: Lecture 3.00

Lab Fee: \$4.00

Pre-requisites: FMGT1101

Co-requisites: none

Restrictions: none

FMGT 2299 - Finance Capstone (A SP)**3.00 credit(s)**

The student receives exposure to current developments in finance and economics through projects and research papers. FMGT 2299 is designed to serve as a capstone course for graduating students. It is recommended that all prerequisite courses be completed with a grade of "C" or better.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: FMGT1101 and FMGT1211 and FMGT2201 and FMGT2202

Co-requisites: none

Restrictions: none

FMGT 2901 - Finance Practicum/Seminar (A SP SU)**3.00 credit(s)**

This course offers a practical work experience in which the student is expected to perform various financial procedures. Emphasis is placed upon analyzing and understanding the work environment, industry and nature of the employing organization

Contact Hours: Seminar 1.00, Practicum 14.00

Lab Fee: \$0

Pre-requisites: FMGT1101 and FMGT1211 and FMGT2201 and FMGT2202

Co-requisites: none

Restrictions: none

Ford Asset**FORD 1110 - Engines: Diagnosis & Repair (On Demand)****3.00 credit(s)**

This course presents the operation and diagnosis of Ford engines with emphasis on disassembly and reassembly, performing diagnostic tests, measuring components for diagnostic purposes, and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$35.00

Pre-requisites: FORD1360

Co-requisites: none

Restrictions: none

FORD 1240 - Steering & Suspension: Diag & Repair (SP)**2.00 credit(s)**

This course presents the operation and diagnosis of Ford steering and suspension systems including wheel alignment and Noise Vibration and Harshness (NVH) diagnosis. Emphasis is placed on diagnosis and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET or Ford Maintenance and Light Repair Certificate students only.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$30.00

Pre-requisites: AUTO1140 FORD1260

Co-requisites: FORD1250

Restrictions: none

FORD 1250 - Brake Systems: Diagnosis & Repair (SP) **2.00 credit(s)**

This course presents the operation and diagnosis of Ford braking systems including Antilock Brake Systems (ABS). Emphasis is placed on diagnosis and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET or Ford Maintenance and Light Repair Certificate students only.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$25.00

Pre-requisites: AUTO1150

Co-requisites: FORD1240 and FORD1260

Restrictions: none

FORD 1260 - Electrical Systems: Diagnosis & Repair (SP) **2.00 credit(s)**

This course presents the operation and diagnosis of Ford basic electrical systems including starting and charging systems. Wiring diagrams are emphasized in the diagnostic process. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET or Ford Maintenance and Light Repair Certificate students only.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$30.00

Pre-requisites: AUTO1160

Co-requisites: FORD1240 and FORD1250

Restrictions: none

FORD 1270 - Heating & AC: Diagnosis & Repair (On Demand) **2.00 credit(s)**

This course presents the operation and diagnosis of Ford heating and air conditioning systems including automatic temperature control systems with emphasis on performing diagnostic tests, and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$35.00

Pre-requisites: AUTO1170

Co-requisites: FORD1360

Restrictions: none

FORD 1360 - Electronic Systems: Diagnosis & Repair (On Demand) **3.00 credit(s)**

This course presents the operation and diagnosis of Ford electronic systems including networks, multifunction modules, chassis systems, safety and security systems and convenience features. Emphasis is placed on performing diagnostic tests and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$30.00

Pre-requisites: FORD1260

Co-requisites: FORD1270

Restrictions: none

FORD 2120 - Automatic Trans: Diagnosis & Repair (On Demand) **3.00 credit(s)**

This course presents the operation and diagnosis of Ford ignition, fuel, and emission systems with emphasis on performing diagnostic tests and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$25.00

Pre-requisites: FORD1360

Co-requisites: none

Restrictions: none

FORD 2130 - Man Trans/Driveline: Diag & Repair (On Demand) **3.00 credit(s)**

This course presents the operation and diagnosis of Ford manual transmissions, clutches, differentials, and four-wheel drive systems with emphasis on disassembly and reassembly, performing diagnostic tests, measuring components for diagnostic purposes, and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$25.00

Pre-requisites: FORD1360

Co-requisites: none

Restrictions: none

FORD 2180 - Engine Performance: Ops & Diagnosis (On Demand) **3.00 credit(s)**

This course presents the operation and diagnosis of Ford ignition, fuel, and emission systems with emphasis on performing diagnostic tests and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$25.00

Pre-requisites: FORD2180

Co-requisites: none

Restrictions: none

FORD 2280 - Adv Eng Performance: Diagnosis & Testing (On Demand) **2.00 credit(s)**

This course presents the advanced diagnosis of Ford ignition, fuel, and emission systems with emphasis on performing diagnostic tests and determining repair strategies. OBDII strategies are discussed and diagnosis of non-DTC concerns and intermittent concerns are practiced. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$25.00

Pre-requisites: FORD2180

Co-requisites: none

Restrictions: none

FORD 2380 - Diesel Engine Perf: Diagnosis & Repair (On Demand) **2.00 credit(s)**

This course presents the operation and diagnosis of Ford diesel engines and necessary support systems with emphasis on performing diagnostic tests and determining repair strategies. Ford STST certification is granted to students who successfully complete the course and achieve the evaluation criteria set forth by Ford Motor Company. Available to Ford ASSET students only.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$35.00

Pre-requisites: FORD1360

Co-requisites: none

Restrictions: none

FORD 2951 - Cooperative Work Experience/Seminar I (On Demand) **2.00 credit(s)**

The Cooperative Work Experience allows students to diagnose and repair Ford vehicles in a real world setting. The student works in a sponsoring Ford or Lincoln dealership to perform tasks under the supervision of a mentor technician. The student is required to work a specified number of hours and is compensated by the dealership. The student is required to attend a weekly on-campus seminar during the co-op period. Available to Ford ASSET students only.

Contact Hours: Seminar 0.50, Field Experience/Internship 15.00

Lab Fee: \$0

Pre-requisites: FORD1360

Co-requisites: none

Restrictions: none

FORD 2952 - Cooperative Work Experience/Seminar II (On Demand) **2.00 credit(s)**

The Cooperative Work Experience allows students to diagnose and repair Ford vehicles in a real world setting. The student works in a sponsoring Ford or Lincoln dealership to perform tasks under the supervision of a mentor technician. The student is required to work a specified number of hours and is compensated by the dealership. The student is required to attend a weekly on-campus seminar during the co-op period. Available to Ford ASSET students only.

Contact Hours: Seminar 0.50, Field Experience/Internship 15.00

Lab Fee: \$0

Pre-requisites: FORD1360

Co-requisites: none

Restrictions: none

FORD 2953 - Coop Work Exp/Seminar III Cooperative Work Experience/Seminar III (On Demand) **2.00 credit(s)**

The Cooperative Work Experience allows students to diagnose and repair Ford vehicles in a real world setting. The student works in a sponsoring Ford or Lincoln dealership to perform tasks under the supervision of a mentor technician. The student is required to work a specified number of hours and is compensated by the dealership. The student is required to attend a weekly on-campus seminar during the co-op period. Available to Ford ASSET students only.

Contact Hours: Lecture 0.50, Field Experience/Internship 15.00

Lab Fee: \$0

Pre-requisites: FORD1360

Co-requisites: none

Restrictions: none

FORD 2954 - Cooperative Work Experience/Seminar IV (On Demand) **2.00 credit(s)**

The Cooperative Work Experience allows students to diagnose and repair Ford vehicles in a real world setting. The student works in a sponsoring Ford or Lincoln dealership to perform tasks under the supervision of a mentor technician. The student is required to work a specified number of hours and is compensated by the dealership. The student is required to attend a weekly on-campus seminar during the co-op period. Available to Ford ASSET students only.

Contact Hours: Lecture 0.50, Field Experience/Internship 15.00

Lab Fee: \$0

Pre-requisites: FORD1360

Co-requisites: none

Restrictions: none

Digital Photography

FOTO 1100 - Black & White Photography (A) **3.00 credit(s)**

FOTO 1100 introduces students to the basic principles of continuous-tone photography, emphasizing a balance of technical, aesthetic, and business concerns including composition and lighting, as well as manipulative functions, operative settings, exposure, and focus control of cameras and enlargers. Students will also learn to develop film and produce industry acceptable contact sheets and prints. A 35 mm SLR film camera with manual setting capabilities is needed. This course is film-based.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$10.00

Pre-requisites: none

Co-requisites: none

Restrictions: Other

FOTO 1120 - Photoshop for Photographers (A SP SU)**3.00 credit(s)**

FOTO 1120 familiarizes students with basic Photoshop post-production techniques and its relationship with digital photography as a business, design, and communication tool. The goal of this industry-based approach is to facilitate the integration of technical ability and visual problem solving skills in order to strengthen visual communication with the medium of digital photography.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$22.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

FOTO 1130 - Corel Painter for Photographers (On Demand)**3.00 credit(s)**

FOTO 1130 is focused on the principles and applications of Painter X as it relates to digital photography. Students will learn Painter 11 techniques by completing a series of skill-based projects and quizzes. Topics covered include; digital painting theory, image size and resolution, basic image editing control, tonal and color correction, retouching, digital painting, sharpening, blurring, filtering and other manipulation, as well as additional special effects techniques related to the digital photography industry. To develop a student's technical ability and visual problem solving skills.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$26.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

FOTO 1140 - Intro to Digital Photography (A SP SU)**3.00 credit(s)**

FOTO 1140 introduces students to the basic principles and applications of digital photography as a medium, a skill-set, and an integral part of today's digital literacy needs. Topics covered include capturing images using digital cameras while emphasizing the manipulation of camera controls, exposure, lighting, on-and-off camera flash, essential imaging tactics, digital workflow for photography, print, web and image storage and archival. Students are required to have a digital camera (point and shoot or DSLR).

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

FOTO 1150 - Digital Photography & Design (SP SU)**3.00 credit(s)**

FOTO 1150 introduces students to the basic to advanced principles of design as they relate to digital photography as a business, design and communication tool. The goal of this industry-based approach is to facilitate the integration of aesthetics and technical ability and visual problem solving skills in order to strengthen visual design and communication with the medium of digital photography. Students are required to have a digital camera (point and shoot or DSLR).

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0.00

Pre-requisites: FOTO1140

Co-requisites: none

Restrictions: none

FOTO 1170 - Digital Panoramic Photography (On Demand)**2.00 credit(s)**

FOTO 1170 covers the basic and advanced principles of digital panoramic photography. Students will learn the latest technological advances in panoramic digital photography. Students will learn how to control exposure, focus, and white balance when taking 5 to 30 pictures of a single scene (e.g., landscape, building, room interior) that will be stitched together digitally in a current image-editing software. Focus will be on visual communications of natural and urban landscapes in the context of commercial utilization for marketing or advertising material. Students are required to have a digital camera (point and shoot or DSLR).

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$5.00

Pre-requisites: FOTO1140

Co-requisites: none

Restrictions: none

FOTO 1190 - Digital Infrared Photography (SU)**2.00 credit(s)**

FOTO 1190 introduces students to the basic principles of digital infrared photography as it is used for contemporary wedding portraiture and landscapes for client products, magazine ads and Web sites. This course covers all the techniques, skills and equipment students needed to use their existing digital camera to photograph infrared radiation. Students are required to have a digital camera (point and shoot or DSLR).

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$7.00

Pre-requisites: FOTO1140

Co-requisites: none

Restrictions: none

FOTO 1200 - Underwater Photography (On Demand)**3.00 credit(s)**

This course affords you further opportunity to refine and extend the skills of photography begun in other FOTO courses. This course provides an in-depth look into Underwater Photography. Topics covered are best practices, lighting, macro concerns and exposure/color correction issues in camera and in post-production. This class will require students to enter a pool or ocean (depending on the time of year offered) so all students will need to know how to swim and be comfortable staying submerged in the water. Scuba training will be provided if needed (depending on location of the course/time of year offered).

Contact Hours: Lecture 2.00, Lab 2.00**Lab Fee: \$10.00**

Pre-requisites: FOTO1140

Co-requisites: none

Restrictions: none

FOTO 1210 - HDR Photography (SU)**2.00 credit(s)**

FOTO 1210 affords you further opportunity to refine and extend the skills of photography begun in other FOTO courses. This course provides an in-depth look into High Dynamic Range Imaging which is a method to digitally capture and edit all light in a scene. It represents a quantum leap in imaging technology, as revolutionary as the leap from Black & White to Color imaging. A huge variety of subjects can now be photographed for the first time ever.

Contact Hours: Lecture 1.00, Lab 2.00**Lab Fee: \$8.00**

Pre-requisites: FOTO1140

Co-requisites: none

Restrictions: none

FOTO 1250 - Night Photography (SP)**2.00 credit(s)**

FOTO 1250 introduces students to the principles of night photography using digital camera equipment. Students will learn effective motion control techniques, architectural documentation, light painting, and multiple exposure techniques commonly used in today's commercial advertisements and promotional materials. Students will learn how to effectively use the law of reciprocity to create exposures that last up to a half an hour with minimal digital noise. Also covered will be many post-production alternatives which can refine the night-time digital capture. Students are required to have a digital camera (point and shoot or DSLR) and a tripod.

Contact Hours: Lecture 1.00, Lab 2.00**Lab Fee: \$0.00**

Pre-requisites: FOTO1140

Co-requisites: none

Restrictions: none

FOTO 1300 - Macro & Close-Up Photography (On Demand) **2.00 credit(s)**

FOTO 1300 introduces students to all the concepts, equipment and techniques related to macro and close-up photography as it relates to commercial photography applications such as advertisements and promotions for both print and Web. Students will learn the technical considerations involved in using their DSLR to capture the smallest details. Students will implement the core design and exposure theories in digital photography to capture the details of a smaller world. Working with close-up filters, extension tubes and bellows, students will achieve professional macro-photographed subjects.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: FOTO1140

Co-requisites: none

Restrictions: none

FOTO 1500 - Off-Camera Flash (A) **2.00 credit(s)**

FOTO 1500 introduces students to the basic principles and applications of off-camera flash as a medium, a skill-set, and an integral part of today's digital photography needs. Topics covered include capturing images using off camera flashes while emphasizing the manipulation of camera controls, exposure, lighting, wireless and wired triggering alternatives, essential lighting modifiers, and shooting tethered. Students are required to have a digital camera (point and shoot or DSLR) with an external speed light, light stand, trigger system and light modifier (an umbrella, softbox, etc.).

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

FOTO 1600 - Advanced Off-Camera Flash (SP) **2.00 credit(s)**

FOTO 1600 introduces students to the advanced principles and applications of off-camera flash as a medium, a skill-set, and an integral part of today's digital photography needs. Topics covered include capturing images using off camera flashes while emphasizing the manipulation of camera controls, exposure, lighting, wireless and wired triggering alternatives, essential lighting modifiers, and shooting tethered. Students are required to have a digital camera (point and shoot or DSLR) with an external speed light, light stand, trigger system and light modifier (an umbrella, softbox, etc.).

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$0.00

Pre-requisites: FOTO1500

Co-requisites: none

Restrictions: none

FOTO 1780 - Photo Lab (A SP SU)**1.00 credit(s)**

FOTO 1780 lab provides students currently enrolled in other photography courses the opportunity to enhance their film processing and printing technique skills. This course may be repeated.

Contact Hours: Lab 2.00

Lab Fee: \$5.00

Pre-requisites: FOTO1100

Co-requisites: none

Restrictions: none

FOTO 2100 - Adv Digital Photography (SP SU)**3.00 credit(s)**

FOTO 2100 provides an in-depth look at the digital single lens reflex camera (DSLR), advanced digital shooting techniques in different lighting conditions, and digital workflow solutions with image editing software for taking full advantage of the DSLR's range of capabilities. This course focuses on high resolution JPEG and RAW capture for photo-industry specific venues and outputs. A continuation of aesthetic and technical camera controls will be covered. This course assumes that the student has an understanding of basic digital photography and has access to a DSLR camera with at least 10 meg. capture.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$5.00

Pre-requisites: FOTO1120 and FOTO1140

Co-requisites: none

Restrictions: none

FOTO 2120 - Adv Photoshop for Photographers (SP)**3.00 credit(s)**

FOTO 2120 introduces students to advanced principles of Photoshop as they relate to digital image editing and digital workflow. The goal of this course is to continue the integration of technical ability and creative visual problem-solving skills in order to strengthen visual communication and digital workflow skills. Students will need access to a version of Photoshop that best suits their needs.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$8.00

Pre-requisites: FOTO1120

Co-requisites: none

Restrictions: none

FOTO 2130 - Photoshop for Retouching (SP)**3.00 credit(s)**

FOTO 2130 is focused on the principles using Photoshop for professional retouching as it relates to digital photography. Students will learn Photoshop retouching techniques by completing a series of skill-based projects and quizzes that cover basic to advanced topics of: digital imaging, image editing, tonal and color correction, retouching, glamour, single and multiple portraits, batch retouching, collage techniques, as well as additional special effects techniques related to the digital photography industry. The goal of this approach is to facilitate the integration of technical ability and visual problem solving skills with today's industry recognized post-production program, Photoshop, to strengthen visual communication.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$16.00

Pre-requisites: FOTO1120

Co-requisites: none

Restrictions: none

FOTO 2140 - Photoshop for Compositing (On Demand)**3.00 credit(s)**

FOTO 2140 is specially designed for photography students to introduce them into using Photoshop as a compositing tool. The goal of the course is to build a foundational skill set that can benefit any photographer as well as apply for those who pursue photography or retouching jobs. The course will focus on the use of DSLR cameras that shot HD video. Editing will be done in Photoshop CS6 or CC2014.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

FOTO 2150 - Photoshop for Video (On Demand)**2.00 credit(s)**

FOTO 2150 is specially designed for photography students to introduce them into video shooting and editing. The goal of the course is to build a foundational skill set that can benefit any photographer as well as apply for those who pursue video careers. The course will focus on the use of DSLR cameras that shoot HD Video. Editing will be done in Photoshop CS6 or CC2014. The theories taught both in shooting and editing are not limited to these tools, rather they apply to shooting and editing in any system.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

FOTO 2200 - Studio Lighting (SP SU)**3.00 credit(s)**

FOTO 2200 has an emphasis on lighting problem solving in relation to indoor studio lighting techniques and equipment for product photography. This course exposes the student to more extensive use of product lighting, lighting techniques and the Zone System of exposure with the use of digital camera systems. This course will introduce the concepts of lighting required for basic commercial product photography with emphasis on lighting products based upon surface qualities and shape. Additional emphasis will be on designing sets and advertising arrangements for print and Web.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$3.00

Pre-requisites: FOTO2100

Co-requisites: none

Restrictions: none

FOTO 2500 - View Camera (SP)**3.00 credit(s)**

FOTO 2500 is an advanced photography class dealing with large format photography. The student, using college-provided 4x5 equipment, explores the techniques used in large format film exposure, development, and printing. The emphasis is on discovering all of the benefits associated with a view camera in various aspects of the photographic field. Studio work outside of regular class time is required.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$10.00

Pre-requisites: FOTO1100

Co-requisites: FOTO1780

Restrictions: none

FOTO 2600 - Studio & Environmental Portraiture (SP SU)**3.00 credit(s)**

FOTO 2600 focus in this class will be upon advanced posing, lighting and background creation of the single subject and multiple-subject portraiture for "studio work" and "environmental location work". Basic-to-advanced studio portrait lighting techniques and on-location (indoor and outdoor) portrait lighting techniques will be covered, in addition to on and off camera flash fill techniques and portable strobe use. This course assumes that the student has an understanding of advanced digital photography and has access to a DSLR camera and a hand-held incident meter (analog or digital).

Contact Hours: Lab 2.00, Lecture 2.00

Lab Fee: \$7.00

Pre-requisites: FOTO2100

Co-requisites: none

Restrictions: none

FOTO 2650 - Photojournalism (A)**3.00 credit(s)**

FOTO 2650 provided an introduction to the principles and theories of photojournalism in the digital era and will increase technical understanding of digital photography as a medium, enabling the student to document newsworthy events with accuracy. The latest digital photographic techniques and technology will be employed throughout and the digital work output should be suitable for publication in newspapers, mags, Web sites, company publications, brochures, pamphlets, announcements, circulars, folders, handouts, leaflets, throwaways, tracts, and digital slide-show presentations. This course will also cover media ethics, legal issues and the evolving technological impact of photojournalism. Student must have access to a DSLR camera.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0.00

Pre-requisites: FOTO2100

Co-requisites: none

Restrictions: none

FOTO 2802 - Digital Photo Seminar (On Demand)**1.00 credit(s)**

FOTO 2802 seminar offers an opportunity for supervised, on-the-job application of knowledge and skills acquired in the classroom. Student must be a Digital Photography major who has completed 12 hours in the technology and has permission of the instructor.

Contact Hours: Seminar 1.00**Lab Fee: \$0.00**

Pre-requisites: FOTO1140

Co-requisites: FOTO2902

Restrictions: Instructor Permission

FOTO 2902 - Digital Photo Practicum (On Demand)**3.00 credit(s)**

FOTO 2902 practicum offers an opportunity for supervised, on-the-job application of knowledge and skills acquired in the classroom. Student must be a Digital Photography major who has completed 12 hours in the technology and has permission of the instructor.

Contact Hours: Practicum 21.00**Lab Fee: \$0.00**

Pre-requisites: FOTO2100

Co-requisites: FOTO2802

Restrictions: Instructor Permission

FOTO 2960 - Business Photography (A SP)**2.00 credit(s)**

FOTO 2960 course introduces students to the business and marketing practices common in a professional photography business or in freelance photography work. Emphasis will be placed on developing professional objectives based upon careful consideration of the financial, legal, organizational, promotional, interpersonal and ethical practices particular to photography. This course is a research and business-planning course. No camera is needed.

Contact Hours: Lecture 1.00, Lab 2.00**Lab Fee: \$2.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

FOTO 2970 - FOTO Field Studies (On Demand)**1.00 - 4.00 credit(s)**

FOTO 2970 hands-on course introduces students to a range of field trips to the local zoo to foreign lands. Students learn ways of visualizing and capturing outside subjects. Course topics include studying equipment, portable digital storage devices, and other materials necessary to create the best digital photographs in a field environment. Students go on field trips lasting a day or several days depending on the location and topic to be covered. Students are responsible for the cost of any entrance fees, travel and lodging (if needed) and meal expenses TBA. This course can be repeated.

Contact Hours: Lecture 1.00**Lab Fee: \$7.00**

Pre-requisites: FOTO1140

Co-requisites: none

Restrictions: none

FOTO 2975 - Digital Portfolio Development (SP)**3.00 credit(s)**

FOTO 2975 course is designed for digital photography majors to gain knowledge of photography portfolio book design and production as well as Web-hosted portfolio production as it relates to self-promotion for future clients, job placement, or pursuit of photo-education at a four year university. Since the course is focused on the printed page and Web-posted portfolio to enhance the multi-medium delivery of any visual information, its potential applications are almost limitless. This course can provide groundwork for continued study and/or a career in digital photography or related industries.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites:

Co-requisites: none

Restrictions: none

FOTO 2994 - Current Topics in FOTO (A SP)**1.00 - 3.00 credit(s)**

FOTO 2994 course is a detailed examination of a selected current topic in Digital Photography. This course can be repeated.

Contact Hours: Lecture 1.00 - 3.00, Lab 1.00 - 3.00**Lab Fee: \$30.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

French**FREN 1101 - Beginning French I (A SP SU)****4.00 credit(s)**

FREN 1101 presents an introduction to the fundamentals of the French language with practice in listening, reading, speaking and writing. Course also includes selected studies in French culture. FREN 1101 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature

Contact Hours: Lecture 4.00**Lab Fee: \$10.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

FREN 1102 - Beginning French II (A SP SU)**4.00 credit(s)**

This course is a continuation of FREN 1101, with further development of listening, reading, speaking and writing skills and further study of French culture. FREN 1102 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: FREN1101 Minimum grade of "C"

Co-requisites: none

Restrictions: none

FREN 1103 - Intermediate French (A SP SU)**4.00 credit(s)**

FREN 1103 focuses on the reading and discussion of French short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of French culture. FREN 1103 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: FREN1102

Co-requisites: none

Restrictions: none

FREN 1193 - Independent Study in French (On Demand)**1.00 - 3.00 credit(s)**

FREN 1193 offers students an individual based detailed examination of selected topics in French. Independent study courses are offered to meet the special needs or interests of an individual student and to pilot new courses.

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: FREN1103 or Instructor Permission

Co-requisites: none

Restrictions: Instructor Permission

Geography

GEOG 1900 - Introduction to Weather & Climate (A SP SU)**4.00 credit(s)**

This course serves as an introduction to the study of weather and climate. Students will become familiar with the basic concepts and processes associated with weather (atmospheric and oceanic circulation, temperature, moisture, pressure, winds, weather systems), as well as become familiar with climate types, climate variability and the impact of human activity on weather and climate found throughout the world today.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$21.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

GEOG 2193 - Independent Study in Geography (On Demand) **1.00 - 3.00 credit(s)**

An individual, student-structured course that examines a selected topic in Geography through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program.

Contact Hours: Lecture 1.00

Lab Fee: \$3.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

GEOG 2300 - Introduction to Physical Geography (A SP) **3.00 credit(s)**

This course serves as an introduction to the basic concepts and processes associated with the study of physical geography. Students will become familiar with the primary elements associated with physical geography to include the Earth's global energy balance, atmospheric and oceanic circulation, weather systems and climates, plate tectonics, landform formation and classification, erosion processes, and soil formation.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

GEOG 2400 - Economic & Social Geography (A SP SU) **3.00 credit(s)**

This course serves as an introduction to the study of economic and social phenomena from a geographic perspective. Students will be introduced to basic concepts in geography, economics, and development and will explore various elements associated with economic and social phenomena that illustrate the variability of development found throughout the world.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

GEOG 2750 - World Regional Geography (A SP SU) **3.00 credit(s)**

This course serves as an introduction to the study of regional geography at the global scale. Students will become familiar with the basic concepts in geography, the topic of uneven development, and the factors that affect uneven development within and among all the world's major regions.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

GEOG 2900 - Elements of Cartography (A SP) **3.00 credit(s)**

This course serves as an introduction to the basic concepts and methods associated with cartography. Students will also become familiar with the basics associated with cartographic design and visualization.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$3.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

Geology

GEOL 1101 - Introduction to Earth Science (A SP SU) **4.00 credit(s)**

This course serves as an introduction to the processes working on our planet. Topics include internal and surficial processes, the water cycle, and energy resources. Related laboratory and demonstrations.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$22.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

GEOL 1105 - Geology and the National Parks (A SP SU) **3.00 credit(s)**

This course examines the geologic processes, materials, and history revealed in the geologic settings of the National Parks.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

GEOL 1121 - Physical Geology (A SP SU) **4.00 credit(s)**

This course offers a detailed understanding of the processes and the materials that shape the Earth . Topics include the origin of minerals and rocks, development of landforms and structural features, and environmental changes associated with these processes. Related laboratory and demonstrations.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$21.00

Pre-requisites: Placement into MATH 1050 or higher and Placement into ENGL 1100

Co-requisites: none

Restrictions: none

GEOL 1122 - Historical Geology (A SP SU)**4.00 credit(s)**

This course covers the history of the Earth and its inhabitants throughout geologic time. Topics include important historical figures, the concepts they proposed, and the evolution of life through time. Related laboratory and demonstrations.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$27.00

Pre-requisites: GEOL1121

Co-requisites: none

Restrictions: none

GEOL 1151 - Natural Disasters (A SP SU)**3.00 credit(s)**

This course covers the occurrence and causes of earthquakes, volcanoes, and related hazards, and their impact on climate, society, and history.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

GEOL 2293 - Independent Study in Geology (On Demand)**1.00 - 3.00 credit(s)**

This course is an individual, student-structured course that examines a selected topic in geology through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program. A combination of lecture and lab may be required.

Contact Hours:

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

German

GERM 1101 - Beginning German I (A SP SU)**4.00 credit(s)**

GERM 1101 is an introduction to the fundamentals of the German language with practice in listening, reading, speaking and writing. It also includes selected studies in German culture. GERM 1101 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

GERM 1102 - Beginning German II (A SP SU) **4.00 credit(s)**

This course is a continuation of GERM 1101 with further development of listening, reading, speaking, and writing skills and further study of German culture. GERM 1102 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: GERM1101 Minimum grade of "C"

Co-requisites: none

Restrictions: none

GERM 1103 - Intermediate German (A SP SU) **4.00 credit(s)**

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: GERM1102

Co-requisites: none

Restrictions: none

GERM 1105 - German Conversation & Composition (A SP SU) **1.00 credit(s)**

GERM 1105 is conversation course designed to provide students completing the 1103 level an opportunity to continue practicing the language. Students discuss current events and personal experiences in the target language. Readings are taken from literary texts, journals, magazines, and newspapers.

Contact Hours: Lecture 1.00

Lab Fee: \$10.00

Pre-requisites: GERM1103 Minimum grade of "C"

Co-requisites: none

Restrictions: none

GERM 1193 - Independent Study German (On Demand) **1.00 - 4.00 credit(s)**

Designed to give the student an opportunity for a detailed study of topics of interest in German not otherwise offered.

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

Geographic Information Systems

GIS 1100 - Introduction to GIS (A SP SU)

3.00 credit(s)

The course introduces the fundamentals of Geographic Information Systems (GIS) including basic cartographic principles, map scales coordinate systems and map projections. Specific topics addressed include GIS terminology, raster and vector structures, data sources, data accuracy, methods of data conversion and input, requirements for metadata, an introductory look into working and interfacing with spatial databases and an introductory look into spatial analysis. These topics will be reinforced in hands-on lab exercises. There will be several tests for this course that are administered in the Testing Center.

Contact Hours: Lecture 2.00, Lab 3.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

GIS 1101 - Acquiring GIS Data (A SP SU)

2.00 credit(s)

This course introduces students to acquiring geographic data and to learning to recognize and understand different data types used in the GIS applications. This course is designed for the beginning student who has limited knowledge in accessing existing databases. Students also develop skills for participating in distance learning courses and submitting class projects using the Internet.

Contact Hours: Lecture 1.00, Lab 3.00**Lab Fee: \$20.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

GIS 1102 - Mapping for Everyone (A SP SU)

2.00 credit(s)

This course is designed as an introduction to the use of GIS in various industries. Students will be introduced to uses, techniques, and processes in various industries as they relate to geospatial technologies. Students will work with GIS tools related to each industry, testing their understanding of the materials through hands-on exercises, real-world examples and case studies, as well as quizzes and projects.

Contact Hours: Lecture 1.00, Lab 3.00**Lab Fee: \$15.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

GIS 1200 - GIS Software I (A SP)**2.00 credit(s)**

This course is the first in a two-part series of specific application software usage training using Esri's ArcGIS Desktop. The students will learn the basics of ArcMap and ArcCatalog and explore how these applications inter-relate in a complete GIS software solution. This course covers the fundamental GIS concepts as well as how to create, edit and work with spatial data. Students will manipulate, query, present data in maps and make decisions from the presented information.

Contact Hours: Lecture 1.00, Lab 3.00**Lab Fee: \$30.00**

Pre-requisites: GIS1100

Co-requisites: none

Restrictions: none

GIS 1201 - GIS Software II (A SP)**2.00 credit(s)**

This course is second in a two-part series of specific application software usage training using Esri's ArcGIS Desktop. The students will learn the basics of ArcMap and ArcCatalog and explore how these applications interrelate in a complete GIS software solution. This course covers the advanced applications of the software and reinforces the important concepts and functionality for successfully working with ArcGIS Desktop.

Contact Hours: Lecture 1.00, Lab 3.00**Lab Fee: \$20.00**

Pre-requisites: GIS1200

Co-requisites: none

Restrictions: none

GIS 1202 - Planning and Implementing GIS (SP)**2.00 credit(s)**

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 & data sources, evaluating various methodologies, testing, hardware and software planning, cost benefit analysis/ROI, system implementation and project lifecycle.

Contact Hours: Lecture 1.00, Lab 3.00**Lab Fee: \$20.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

GIS 2100 - Introduction to GIS Databases (A)**3.00 credit(s)**

This course focuses on the design, use and maintenance of a GIS database. Students will be introduced to structured query language (SQL) and SQL server as they relate to GIS databases. The course covers ArcGIS personal geodatabases and includes concept of ArcSDE software. Student should have some familiarity with ArcGIS Desktop before taking this course..

Contact Hours: Lecture 1.00, Lab 4.00**Lab Fee: \$30.00**

Pre-requisites: GIS1200

Co-requisites: none

Restrictions: none

GIS 2110 - Introduction to Spatial Analysis (A)**3.00 credit(s)**

This course explores a range of spatial and analytical techniques and their implementation in GIS software. Students will apply different spatial techniques with the software and become familiar with the essential methodological and practical issues involved in spatial analysis. It is recommended that the student take GIS-1201 concurrently.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$30.00

Pre-requisites: GIS1200

Co-requisites: none

Restrictions: none

GIS 2120 - Introduction to GIS Programming (A)**3.00 credit(s)**

This course introduces GIS programming techniques using Esri's ArcGIS Desktop. The students will learn basic and advanced customization, scripting, and automation strategies. This course covers the basic python scripting language as well as how it relates to the ArcGIS Desktop environment. Students will learn how to customize the ArcMap user interface, read and write GIS scripts, model geoprocessing work flows, and create Add-In commands.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$30.00

Pre-requisites: GIS1200

Co-requisites: none

Restrictions: none

GIS 2130 - Georeferencing and Editing (A)**2.00 credit(s)**

This course explores georeferencing existing GIS data so that it can be properly spatially referenced within your current GIS system. Students will also discover different methods of editing and creating GIS data. Students will understand different georeferencing and editing methods and errors associated with each method.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: GIS1200

Co-requisites: none

Restrictions: none

GIS 2200 - Image Management and Analysis (SP)**4.00 credit(s)**

This course focuses on concepts of imagery use in GIS. The course will include topics in photogrammetry and remote sensing as well as using the most current imagery management and analysis tools and techniques. Students will examine ways of obtaining photographic data, finding points and performing measurements on aerial photographs, and understanding the limitations and applications.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$45.00

Pre-requisites: GIS1201

Co-requisites: none

Restrictions: none

GIS 2299 - Advanced GIS Applications (SP)**4.00 credit(s)**

This is a capstone course utilizing the skills and knowledge learned throughout the curriculum. Students perform research, identify issues, find data and develop a solution to a problem or project in a specific industry or area.

Contact Hours: Lecture 2.00, Lab 6.00

Lab Fee: \$30.00

Pre-requisites: GIS1201

Co-requisites: none

Restrictions: none

GIS 2510 - Advanced Spatial Analysis (SP)**2.00 credit(s)**

This course explores advanced spatial and analytical techniques and their implementation. Students will further the knowledge they gained in the Introduction to Spatial Analysis course by exploring tools and concepts further and they will conclude with an independent project that applies some of the advanced techniques learned throughout the quarter.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$20.00

Pre-requisites: GIS2110

Co-requisites: none

Restrictions: none

GIS 2520 - Advanced GIS Programming (SP)**2.00 credit(s)**

This course focuses on object-oriented programming and the unique issues relating to spatial objects, customization and syntax. Students learn how to use, find and modify scripts for use in ArcGIS. Students should have some familiarity with ArcGIS Desktop and the concepts of programming.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: GIS2520

Co-requisites: none

Restrictions: none

GIS 2530 - Introduction to ArcGIS Server (SP)**2.00 credit(s)**

This course provides specific application software training for Esri's ArcGIS Server. Students will learn the components of ArcGIS Server, about the available libraries and APIs and server development guidelines, and the development of different types of Web applications. In the course, students will also learn how to install and configure ArcGIS Server. The course concludes with a project in which students will build a centrally managed GIS applications using ArcGIS Server.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$20.00

Pre-requisites: GIS1200

Co-requisites: none

Restrictions: none

GIS 2540 - GIS in Business (SU)**2.00 credit(s)**

This course is designed for members of the business community. Students learn how to use ArcGIS tools to perform basic GIS tasks as they specifically relate to business. In the course, students will also learn the core GIS skills they need to support their organizations' missions using terminology, exercise scenarios, and data relevant to business.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$20.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

GIS 2550 - GIS in 3D (SU)**2.00 credit(s)**

This course focuses on the use of 3D data in GIS applications. Students will learn 3D visualization techniques, perform 3D analysis, 3D data creation and they will learn how to manage and use LIDAR data.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$20.00

Pre-requisites: GIS1201

Co-requisites: none

Restrictions: none

GIS 2594 - Current Topics: GIS (On Demand)**1.00 - 4.00 credit(s)**

This course will be offered for special topics in GIS that meets needs of the GIS community.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

GIS 2950 - Gis Practicum & Seminar (A SP SU)**3.00 credit(s)**

This course is intended to provide the student with an opportunity to apply the science, knowledge and skills of Geographic Information Systems in a business environment or career area of GIS and it is the application of business knowledge to specific areas of on-the-job work experience. This course augments formal education received in the technology with actual work conditions and job experience. "N" credit will not be allowed for this course.

Contact Hours: Seminar 1.00, Practicum 14.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

History of Art

HART 1201 - History of Art I (A SP SU)

3.00 credit(s)

This course is an historically based introduction to the study of visual arts in the West. Through a critical examination of the fundamental formal concepts and the historical developments in the visual arts, this course examines the visual expression of culture from the Prehistoric era to the early Renaissance.

Contact Hours: Lecture 3.00

Lab Fee: \$7.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

HART 1202 - History of Art IIyHistory of Art II (A SP SU)

3.00 credit(s)

This course is an historically based introduction to the study of visual arts in the West. Through a critical examination of the fundamental formal concepts and the historical developments in the visual arts, this course examines the visual expression of culture from the early Renaissance to the present.

Contact Hours: Lecture 3.00

Lab Fee: \$7.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

HART 1260 - World Cinema (A SP SU)

3.00 credit(s)

HART 1260 is a course exploring the history of world cinema through analysis of the content and structure of selected major historic examples in the genre, from the beginnings of film in the late 19th century to the present. Special attention will be given to the work of important filmmakers from around the world and to the social and philosophical context in which they worked.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

Health Information Management Technology

HIMT 1111 - Introduction to Health Information Mgmt (A)

2.00 credit(s)

Students are introduced to the roles of the health information management technician in a variety of healthcare settings. The educational and credentialing requirements for the HIM professional will be discussed along with an overview of the U.S. healthcare delivery system and the various reporting and accrediting requirements.

Contact Hours: Lecture 2.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: HIMT1133 and HIMT1135

Restrictions: none

HIMT 1121 - Advanced Medical Terminology (A SP SU)

2.00 credit(s)

This course provides advanced study of medical terminology. Students learn how word parts determine the meaning of medical terms. Medical terminology of diseases/disorders, treatments, procedures, and pharmacological agents are also studied. Material is presented in a systems approach which includes an overview of anatomy and physiology, medical abbreviations and pronunciation of medical terms. "

Contact Hours: Lecture 2.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

HIMT 1133 - Legal Aspects of Health Information (A)

2.00 credit(s)

Students study the legal principles and regulations governing the management and disclosure of health information.

Contact Hours: Lecture 2.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: HIMT1111 and HIMT1135

Restrictions: none

HIMT 1135 - Health Data Management (A)

3.00 credit(s)

Students are introduced to categories of data collected and maintained by healthcare providers and the concept of data flow in the paper, hybrid, and electronic health record (EHR).

Contact Hours: Lecture 2.00, Lab 2.00**Lab Fee: \$62.00**

Pre-requisites: none

Co-requisites: HIMT1111 and HIMT1133

Restrictions: none

HIMT 1141 - Pharmacology (A SP SU)**2.00 credit(s)**

This course surveys the major drug classifications. Indications and contraindications for use of drugs is presented with emphasis placed on the correlation between drug therapy and disease.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: Recommended Prerequisite: HIMT 1121

Co-requisites: none

Restrictions: none

HIMT 1245 - ICD-10-CM/PCS Coding (A)**3.00 credit(s)**

Students are introduced to the ICD-10-CM/PCS coding system used to code diagnoses and procedures. Basic principles of ICD-10-CM/PCS are introduced.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$41.00

Pre-requisites: BIO1101 Minimum grade of "C" and HIMT1111 Minimum grade of "C" and HIMT1121

Minimum grade of "C" and HIMT1256 Minimum grade of "C" and HIMT1274 Minimum grade of "C"

Co-requisites: BIO2300

Restrictions: Program Admission

HIMT 1255 - CPT-4 Coding (A)**3.00 credit(s)**

Students are introduced to CPT-4 coding used to code outpatient procedures and services.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$41.00

Pre-requisites: HIMT1111 Minimum grade of "C" and HIMT1121 Minimum grade of "C" and HIMT1256

Minimum grade of "C" and HIMT1274 Minimum grade of "C" and BIO1101 Minimum grade of "C"

Co-requisites: BIO2300

Restrictions: Program Admission

HIMT 1256 - Clinical Documentation & Disease (SP SU)**2.00 credit(s)**

Students study clinical information used to support diagnoses and services provided to patients as it pertains to healthcare data management.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: HIMT1121

Restrictions: none

HIMT 1265 - Medical Reimbursement (A)**2.00 credit(s)**

Students are introduced to revenue cycles, payers, and reimbursement systems as they apply to the payment of healthcare services.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$62.00

Pre-requisites: HIMT1111 Minimum grade of "C" and MATH1025 Minimum grade of "C"; or placement into STAT 1350 and CSCI1101 Minimum grade of "C"

Co-requisites: none

Restrictions: Program Admission

HIMT 1274 - Intro to Medical Coding & Reimbursement (A SP SU)**2.00 credit(s)**

This course provides an overview of hospital- and physician-based medical coding and reimbursement principles.

Contact Hours: Lecture 2.00

Lab Fee: \$41.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HIMT 2257 - Introduction to Health Statistics (SP)**2.00 credit(s)**

Students study the basics of statistical computation as it relates to healthcare. Procedures for collecting, organizing, displaying, and interpreting healthcare data are presented.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: HIMT1111 Minimum grade of "C" and MATH1025 Minimum grade of "C"; or placement into STAT 1350 and CSCI1101 Minimum grade of "C"

Co-requisites: none

Restrictions: Program Admission

HIMT 2259 - Quality and Resource Management (SP)**3.00 credit(s)**

Students study internal and external requirements for establishing, operating, and maintaining quality improvement and utilization management programs. Accreditation standards pertaining to the quality of health information are discussed, along with the methods used for benchmarking, credentialing, patient outcomes monitoring and evaluation, case management, and risk management.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: HIMT1111 Minimum grade of "C" and HIMT1135 Minimum grade of "C" and CSCI1101 Minimum grade of "C"

Co-requisites: none

Restrictions: Program Admission

HIMT 2267 - Principles of Management (A)**2.00 credit(s)**

Students study the functions related to planning, organizing, controlling, budgeting, and evaluating human resources.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

HIMT 2275 - Intermediate Coding (SP)**2.00 credit(s)**

This course provides students with continued experience in ICD-9-CM, ICD-10-CM/PCS, and CPT-4 Coding. An emphasis is placed on practical applications of professional coders. Students will code from case studies and patient medical records.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$0

Pre-requisites: BIO2300 Minimum grade of "C" and HIMT1111 Minimum grade of "C" and HIMT1121 Minimum grade of "C" and HIMT1135 Minimum grade of "C" and HIMT1245 Minimum grade of "C" and HIMT1255 Minimum grade of "C" HIMT1265 Minimum grade of "C"

Co-requisites: HIMT2930

Restrictions: Program Admission

HIMT 2276 - Analyzing Healthcare Data (A)**2.00 credit(s)**

This course introduces students to data analysis, a description of the types of healthcare data, and tools used in data analysis.

Contact Hours: Lecture 2.00

Lab Fee: \$62.00

Pre-requisites: none

Co-requisites: CSCI2380

Restrictions: Program Admission

HIMT 2277 - Health Data Analyst Exam Preparation (SP)**2.00 credit(s)**

This course is designed to help prepare students for the Certified Health Data Analyst (CHDA) certification examination. The course includes a review of the CHDA exam competencies.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: HIMT2276 Minimum grade of "C"

Co-requisites: CSCI2385

Restrictions: Program Admission

HIMT 2294 - Spec Topics in Health Info Mgmt (A SP SU)**1.00 - 3.00 credit(s)**

This course is designed to present pertinent topics and trends in the health information management field.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

HIMT 2870 - PPE HIM Applications (SP)**2.00 credit(s)**

Students are provided professional practice experience (PPE) in basic HIM functions (e.g., storage and retrieval, record completion, release of information) through software applications and possible visits to healthcare facilities. Students are assigned projects requiring the application of concepts studied throughout the HIMT curriculum including the creation of a database project, workflow redesign, EHR maintenance and installation.

Contact Hours: Lecture 0.50, Lab 3.00

Lab Fee: \$62.00

Pre-requisites: HIMT1111 Minimum grade of "C" and HIMT1133 Minimum grade of "C" and HIMT1135 Minimum grade of "C"

Co-requisites: HIMT1245 and HIMT1255 and HIMT1265 and CSCI1320 or CSCI2325

Restrictions: Program Admission

HIMT 2930 - PPE HIM Field Experience (SP)**1.00 credit(s)**

Students are provided professional practice experience (PPE) in various field experiences which may include medical coding and revenue cycle management, HIM operations (e.g., storage and retrieval, record completion, release of information), compliance/risk management, informatics/data analysis, and information technology (IT). Students are assigned projects requiring the application of concepts studied throughout the HIMT curriculum in the professional practice experiences. This course is intended to help students bridge the gap between the classroom and the work environment. Student must complete all corequisite courses with a minimum of C grade.

Contact Hours: Lecture 0.50, Field Experience/Internship 6.00

Lab Fee: \$153.00

Pre-requisites: HIMT1111 Minimum grade of "C" and HIMT1133 Minimum grade of "C" and HIMT1135 Minimum grade of "C" and HIMT1245 Minimum grade of "C" and HIMT1255 Minimum grade of "C" and HIMT1256 Minimum grade of "C" and HIMT1265 Minimum grade of "C"

Co-requisites: HIMT2257 and HIMT2259 and HIMT2267 and HIMT2294 or HIMT2275

Restrictions: Program Admission

History

HIST 1111 - European History to 1648 (A SP SU)**3.00 credit(s)**

This course is a survey of the culture, ideas, and values of human civilization in western world from their origins through 1648. Emphasis is on the achievements of the Ancient Middle East, Classical Greece and Rome, the Christian and Islamic Middle Ages, the Renaissance era, and the Protestant Reformation. Students are exposed to historical methodologies and analysis through the reading of primary and secondary sources.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

HIST 1112 - European History Since 1648 (A SP SU)**3.00 credit(s)**

This course is a survey of the culture, ideas, and values of human civilization in the western world from their origins from 1648 to the present. This course focuses on the rise of modern science, the Enlightenment, the American and French Revolutions, the Industrial Revolution, and the theories of Karl Marx and Charles Darwin. The growth of ideologies--liberalism, socialism, capitalism, nationalism, and imperialism--will be explored. Contemporary issues and political movements will also be discussed. Students are exposed to historical methodologies and analysis through the reading of primary and secondary sources.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

HIST 1151 - American History to 1877 (A SP SU)**3.00 credit(s)**

This course covers a wide range of topics in early American history from the age of discovery through the Civil War and reconstruction. It is an introduction to the study of history and to the political, economic, intellectual and social themes that have shaped our present society. Sections of this course are H-designated Honors classes.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

HIST 1152 - American History Since 1877 (A SP SU)**3.00 credit(s)**

This course covers a wide range of topics in modern American history from reconstruction to the present time. It is an introduction to the study of history and to the political, economic, intellectual, and social themes that have shaped our present society. Sections of this course are H-designated Honors classes.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

HIST 1181 - World Civ I Non Western to 1500 (A)**3.00 credit(s)**

This course is a survey of non-Western Civilization since 1500. It serves as an introduction to the study of history and to the intellectual, social, and cultural values of the Far East, India, Middle East, Africa, and South America.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

HIST 1182 - World Civ II Non Western Since 1500 (SP) **3.00 - credit(s)**

This course is a survey of non-Western Civilization since 1500. It serves as an introduction to the study of history and to the intellectual, social, and cultural values of the Far East, India, Middle East, Africa, and South America.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

HIST 2223 - African-American History I Before 1877 (A SP SU) **3.00 credit(s)**

The class is primarily a lecture/discussion course which included the history of African Americans in the New World from the time of the slave trade to the end of Reconstruction.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

HIST 2224 - African-Amer History II Since 1877 (A SP SU) **3.00 credit(s)**

The class is primarily a lecture/discussion course which includes the history of African Americans from the end of Reconstruction to present times.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

HIST 2294 - SPT: History (On Demand) **1.00 - 3.00 credit(s)**

Students explore special topics in History designed to meet specific needs. This course is on demand.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

Human Nutrition

HNTR 1153 - Nutrition for a Healthy Lifestyle (A SP SU)

3.00 credit(s)

A study of the role of nutrition in establishing, promoting and maintaining good health. The composition and functions of foods, nutrition needs throughout the life cycle, and contemporary nutrition concerns are included in the course. The science of bioenergetics and current recommendations specific to human performance are also reviewed in this course.

Contact Hours: Lecture 3.00**Lab Fee: \$0**

Pre-requisites: MATH1104 and Placement into ENGL 1100

Co-requisites: Placement into ENGL 1100

Restrictions: none

HNTR 1901 - DIET Practicum I (A)

1.50 credit(s)

Practical application of information presented in the classroom related to the field of dietetics, dietetic professionals, and education pathways. Skills are developed through supervised learning situations and observations of Dietetic Technician roles in health care facilities, community agencies and schools.

Contact Hours: Seminar 1.00, Practicum 3.50**Lab Fee: \$60.00**

Pre-requisites: Placement into ENGL 1100 and STAT1350

Co-requisites: Placement into ENGL 1100 and STAT1350

Restrictions: Instructor Permission Health Code Program Admission Other

HNTR 1902 - DIET Practicum II (SP)

2.00 credit(s)

Practical application of information presented in the classroom from HOSP 1122, HNTR 1153, HOSP 1109, and HOSP 1107. Skills are developed through supervised learning situations to operate and maintain foodservice equipment, to participate in food production and service, and to maintain food quality and portion control. Skills are also developed through supervised learning situations to procure and store food, supplies and equipment, to maximize fiscal outcomes, to participate in quality improvement, and to provide for the nutritional needs of the customer.

Contact Hours: Seminar 1.00, Practicum 7.00**Lab Fee: \$20.00**

Pre-requisites: HNTR1901 with a minimum grade of C

Co-requisites: HOSP1109 and HOSP1107

Restrictions: Instructor Permission Health Code

HNTR 2265 - Dietetic Current Issues (SP)**1.00 credit(s)**

This course is an in depth study of current topics in the field of nutrition. Information about professional organizations, and the legal and ethical practice of dietetics will be discussed. Current legislative issues and their impact on the profession are reviewed. This course requires that students achieve a minimum grade of C for completion of the program.

Contact Hours: Lecture 1.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: HNTR2905

Restrictions: Instructor Permission

HNTR 2275 - Medical Nutrition Therapy IyMedical Nutrition Therapy (A)**3.00 credit(s)**

An introduction to the study of nutrition assessment, diet modifications and nutrition care plans. The rationale for nutritional intervention and related medical conditions and terminology is presented. Calorie controlled and consistency and nutrient modified diets for a variety of medical conditions are studied. The student will identify and utilize appropriate nutritional assessment tools and techniques and develop care plans and chart notes for specific medical conditions using the Nutrition Care Process and model. Methods and management of clinical documentation will be emphasized. The student will plan, prepare and evaluate menus and nutritional supplements related to these diet modifications.

Contact Hours: Lecture 2.00, Lab 2.00**Lab Fee: \$10.00**

Pre-requisites: HNTR1153 minimum grade of C and BIO2300 with a minimum grade of C and BIO2301 with a minimum grade of C

Co-requisites: none

Restrictions: none

HNTR 2276 - Medical Nutrition Therapy II (SP)**3.00 credit(s)**

A continuation of the study of nutrition assessment, diet modifications, nutrition care plans and documentation. The rationale for nutrition intervention and related medical conditions is presented. Nutrition interventions targeted toward various population groups throughout the human life cycle are identified. Food and nutrition requirements for specific age groups and cultural preferences for foods are examined. The student will identify and utilize appropriate nutritional assessment tools and techniques and develop care plans and chart notes for specific medical and/or life cycle related conditions using the Nutrition Care Process and model. The student will plan, prepare and evaluate menus and nutritional supplements related to these diet modifications. This course requires that students achieve a minimum grade of C for completion of the program.

Contact Hours: Lecture 2.00, Lab 2.00**Lab Fee: \$10.00**

Pre-requisites: HNTR2275 with a minimum grade of C

Co-requisites: HNTR2905

Restrictions: none

HNTR 2277 - Dietetic Technician Reg Exam Review (SP) **1.00 - credit(s)**

This course is designed to prepare dietetic technician majors for success in completing the American Dietetic Association- Commission on Dietetic Registration Examination for Dietetic Technicians. This course requires that students achieve a minimum grade of C for completion of the program.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

HNTR 2903 - DIET Practicum III A (A) **1.00 credit(s)**

Supervised learning situations in community based organizations develop student skills in utilization of community services, group and individual nutrition education presentations, in interviewing skills and techniques used to obtain and evaluate nutrition data from individuals, and utilization of communication skills with both clients and other personnel.

Contact Hours: Seminar 0.50, Practicum 3.50

Lab Fee: \$100.00

Pre-requisites: HNTR1153 with a minimum grade of "C" and HNTR1902 with a minimum grade of "C" and BIO2300 with a minimum grade of "C" and BIO2301 with a minimum grade of "C"

Co-requisites: HNTR2275

Restrictions: Health Code

HNTR 2904 - DIET Practicum III B (A) **1.00 credit(s)**

Additional client interviews, assessment of nutrition data, review of diet modification rationales and menu planning for modified diets are provided through supervised learning situations in a healthcare facility.

Contact Hours: Seminar 0.50, Practicum 3.50

Lab Fee: \$0

Pre-requisites: HNTR2903 with a minimum grade of "C"

Co-requisites: none

Restrictions: Instructor Permission

HNTR 2905 - DIET Practicum IV (SP) **2.50 credit(s)**

Practical application of information presented in the classroom from all technical courses to clients in health care facilities. Opportunities are provided through supervised learning situations to demonstrate proficiency in client interviewing, evaluation of nutritional data, rationales for dietary intervention and menu planning for modified diets. This course requires that students achieve a minimum grade of C for completion of the program.

Contact Hours: Seminar 1.00, Practicum 10.50

Lab Fee: \$20.00

Pre-requisites: HNTR2275 with a minimum grade of "C" and HNTR2904 with a minimum grade of "C"

Co-requisites: HNTR2276 HNTR2277

Restrictions: Instructor Permission Health Code

Horticulture

HORT 1130 - Plant Sciences (A SP SU)

3.00 credit(s)

This course will explore the basic physiology of plant growth and development. Also discussed will be plant anatomy, bio-history, morphology and other related topics.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$30.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HORT 1530 - Spring Plants (SP)

3.00 credit(s)

This course will study the identification parameters, landscape features and growing conditions of trees and shrubs of the Midwest climate zone. The class will combine both in class and field experience. This course will be offered in summer semester in odd numbered years.

Contact Hours: Lecture 1.50, Lab 4.50

Lab Fee: \$15.00

Pre-requisites: HORT1130

Co-requisites: none

Restrictions: Instructor Permission

HORT 1535 - Arboriculture (A SU)

2.00 credit(s)

This course introduces the basic principles of tree biology and care. Arboricultural practices will be discussed and performed.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$23.00

Pre-requisites: HORT1130 and HORT2130

Co-requisites: none

Restrictions: Instructor Permission

HORT 2130 - Autumn Plants (A)

3.00 credit(s)

This course will study the identification parameters, landscape features and growing conditions of trees and shrubs of the Midwest climate zone. The class will combine both in class and field experience. This course will be offered in summer semester in even numbered years.

Contact Hours: Lecture 1.50, Lab 4.50

Lab Fee: \$15.00

Pre-requisites: HORT1130

Co-requisites: none

Restrictions: Instructor Permission

HORT 2530 - Herbaceous Plant (A SU)**3.00 credit(s)**

This course will study the identification parameters, landscape features, and growing conditions of herbaceous flowering plants. Additional material will include the design of perennial gardens.

Contact Hours: Lecture 1.50, Lab 4.50

Lab Fee: \$0

Pre-requisites: HORT1130

Co-requisites: none

Restrictions: Instructor Permission

HOSP 1106 - Professional Kitchen Fundamentals (A)**3.00 credit(s)**

This course presents a detailed study of the HACCP (Hazard Analysis Critical Control Points) procedures which include the control of bacteria, materials handling and safety practices to maintain a safe and healthy environment for the consumer in the food and lodging industry. Included is an examination of laws and regulations related to safety, fire, and sanitation, as well as an emphasis on the importance of facility planning, design and maintenance. To receive credit for the course, students must pass the Applied Foodservice Sanitation examination from the Educational Foundation of the National Restaurant Association (ServSafe®). Students will receive certificates from the Educational Foundation and from the Ohio Dept. of Health. In this course, students will learn to operate, clean, and describe preventative maintenance of commercial food service equipment and apply that knowledge in a laboratory setting. Appropriate uses for equipment and general equipment layout for safety, sanitation and efficiency will be discussed. Basic knife skills and cooking techniques, following sanitation and safety guidelines, will be practiced. Students will learn about the various food and delivery systems.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$135.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HOSP 1106A - Professional Kitchen Fundamentals Part A (Hospitality Facilities & Sanitation) (A SP)**1.00 credit(s)**

This course presents a detailed study of the HACCP (Hazard Analysis Critical Control Points) procedures which includes bacteria, materials handling and safety practices to maintain a safe and healthy environment for the consumer in the food and lodging industry. Included is an examination of laws and regulations related to safety, fire, and sanitation, as well as the importance of facility planning, design, and maintenance. To receive credit for this course, students must pass the Applied Foodservice Sanitation Examination (ServSafe) from the National Restaurant Association Educational Foundation(NRAEF). Students will receive certificates from the NRAEF and from the Ohio Department of Health.

Contact Hours: Lecture 0.50, Lab 1.00

Lab Fee: \$10.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HOSP 1106B - Professional Kitchen Fundamentals Part B (SP SU) **2.00 credit(s)**

In this course, students will learn to operate, clean, and describe preventative maintenance of commercial food service equipment and apply that knowledge in a laboratory setting. Appropriate uses for equipment and general equipment layout for safety, sanitation and efficiency will be discussed. Basic knife skills and cooking techniques, following sanitation and safety guidelines, will be practiced. Students will learn about the various food and delivery systems.

Contact Hours: Lab 3.00, Lecture 0.50

Lab Fee: \$125.00

Pre-requisites: HOSP1106A

Co-requisites: HOSP1106A

Restrictions: none

HOSP 1107 - Food Principles & Purchasing (A SP) **4.00 credit(s)**

This is a course in basic food preparation including the terminology and definitions used and the scientific principles involved in procuring, preparing and record keeping (utilizing manual methods and computer applications) food, equipment and non-food supplies and products. Emphasis is given to a detailed study of the principles of preparation and selection criteria for all categories of foods served in food service operations including the writing of specifications, determining order quantities, evaluating product quality, and selecting suppliers. Field trips allow the student to see food processing operations and wholesale food markets.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$40.00

Pre-requisites: Placement into MATH 1104

Co-requisites: none

Restrictions: none

HOSP 1109 - Basic Food Production (A SP) **3.00 credit(s)**

A course in which students will learn to operate, clean and describe preventive maintenance of commercial foodservice equipment and apply that knowledge in a laboratory setting in which students will produce and serve marketable food products according to standardized recipes in a commercial kitchen environment. Basic knife skills and cooking techniques, following sanitation and safety guidelines, will be practiced. Appropriate uses for equipment and general equipment layout for safety, sanitation and efficiency will be discussed. The products will be served in a dining room setting.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$140.00

Pre-requisites: HOSP1122 HOSP1107

Co-requisites: HOSP1122 HOSP1107

Restrictions: none

HOSP 1110 - Baking Principles (A SP)**2.00 credit(s)**

A course in the fundamentals of baking terminology, baking principles, the characteristics and functions of the main ingredients used in bakery production, and an introduction to recipe adjustments and recipe costing.

Contact Hours: Lecture 2.00

Lab Fee: \$0.00

Pre-requisites: Placement into Math 1104

Co-requisites: none

Restrictions: none

HOSP 1112 - Breads (SP SU)**4.00 credit(s)**

This laboratory course builds on the baking terminology, baking science and theory of HOSP1110. Bread-making processes and techniques, such as scaling, mixing and leavening methods, shaping, proofing, scoring, and baking are studied and practiced for skill development. A broad range of consumer baked goods such as yeast-raised breads, quickbreads, complex whole grain and other artisan breads are produced. Industry standard products for commercial production will be introduced. Within the study of the various baking topics, ingredient selection considerations, conversions, recipe adjustments and recipe costing will be studied and incorporated. Principles of food safety and proper facilities and equipment safety will be emphasized.

Contact Hours: Lecture 1.00, Lab 9.00

Lab Fee: \$110.00

Pre-requisites: HOSP1122 and HOSP1110

Co-requisites: none

Restrictions: none

HOSP 1113 - Pastries I (SP SU)**4.00 credit(s)**

A laboratory course which builds on the baking terminology, baking science and theory of HOSP1110. A broad range of consumer baked goods such as specialty cakes and cookies, pies, tarts, and fundamental pastry elements such as choux paste, meringues, custards, creams and sauces are studied and produced. Both scratch and industry standard convenience products will be utilized in the production of restaurant and specialty desserts. Within the study of the various topics, ingredient selection considerations, baking calculations, conversions, recipe adjustment and recipe costing are studied and incorporated. Principles of food safety and proper facilities and equipment safety will be emphasized.

Contact Hours: Lecture 2.00, Lab 6.00

Lab Fee: \$90.00

Pre-requisites: HOSP1110 and HOSP1122

Co-requisites: none

Restrictions: none

HOSP 1122 - Hospitality Facilities & Sanitation (A SP SU) **2.00 credit(s)**

A detailed study of the HACCP (Hazard Analysis Control Points) procedures which include the control of bacteria, materials handling and safety practices to maintain a safe and healthy environment for the consumer in the food and lodging industry. Examination of laws and regulations related to safety, fire, and sanitation. Students must pass the Applied Foodservice Sanitation examination from the Educational Foundation of the National Restaurant Association (ServSafe), Students will receive certificates from the Educational Foundation and from the Ohio Dept. of Health. To receive credit for this course, students must pass the ServSafe examination. The course also includes an emphasis on the importance of and concepts related to facility planning, design, and maintenance.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$10.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HOSP 1143 - Hospitality & Tourism Law (A SU) **2.00 credit(s)**

Provides a general knowledge of the law as it applies to the hospitality and tourism industry.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

HOSP 1145 - Lodging Operations (A SP) **3.00 credit(s)**

This Course provides the student with a basic understanding of the lodging industry. It covers the activities of various hotel operating departments: front office, housekeeping, food & beverage, hotel purchasing, marketing, yield management, engineering, security and accounting, Emphasis will be placed on handling guest needs.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HOSP 1154 - Tourism Geography (A SP) **3.00 credit(s)**

Geographical and cultural study of all major regions of the world with emphasis on the most popular travel destinations. Includes lodging, points of interest, customer profile and transportation types for each destination.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HOSP 1155 - Tourism Operations (A SP)**4.00 credit(s)**

This course provides students with a basic understanding of the travel and tourism industry. Travel agency operations are covered, with students using a variety of reference material, to develop air and rail itineraries, reserve cars and hotels, calculate fares, and create tours and cruises. Government agencies and organizations that affect the industry are described. Also included is a framework for the development of tourism in the community and region.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$60.00

Pre-requisites: HOSP1154

Co-requisites: HOSP1154

Restrictions: none

HOSP 2114 - Pastries II (A)**4.00 credit(s)**

A laboratory course which builds on the baking terminology, baking science and theory and skill development of HOSP1113. A broad range of advanced topics in Pastry Arts such as restaurant style plated desserts and presentation components, classic European-style tortes and petits fours, specialty cakes, fillings, frostings, and decorative elements are studied and produced. Both scratch and industry standard convenience products will be studied and utilized. Within the study of the various topics, ingredient selection considerations, baking calculations, conversions, recipe adjustment and recipe costing are studied and incorporated. Principles of food safety and proper facilities and equipment safety will be emphasized.

Contact Hours: Lecture 2.00, Lab 6.00

Lab Fee: \$90.00

Pre-requisites: HOSP1113

Co-requisites: none

Restrictions: none

HOSP 2207 - Hospitality Financial Analysis (A SP SU)**3.00 - credit(s)**

This course looks at accounting theory and use of the Uniform System of Accounting as applied to the hospitality & restaurant industry. It emphasizes development and use of financial statements and provides an overview and understanding of the need for budgets and budgeting. This course covers the principles and procedures involved in an effective system of food, beverage, labor and sales control. This course emphasizes the development and use of standards and calculations of actual costs.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: MATH1104

Restrictions: none

HOSP 2214 - International Cuisine (SP)**2.00 - credit(s)**

This course focuses on the cuisines of the world. Students will research diverse countries and regions and prepare and present a written report on a specific country. Students will prepare foods using recipes that represent a variety of cultures, native ingredients, seasonings, and flavors. Instructor's consent is required.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$125.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

HOSP 2216 - Food Laboratory & Menu Management (A SP SU)**4.00 credit(s)**

This is a laboratory course to follow (HOSP 1109) Basic Food Production. Proper roasting, grilling, poaching, sauteing and braising of meats, seafood and poultry with appropriate sauces. Classical preparation of consommé, bisque and cream soups. Starch and vegetable preparation. Plated desserts. Principles of menu planning for a variety of food service operations, which includes layout and design, and pricing strategies. Consideration is given to food selection; nutritional requirements; food, labor, and other costs; equipment utilization. Students will research and develop recipes and prepare and serve four course menus in the required amount of time.

Contact Hours: Lecture 3.00, Lab 3.00

Lab Fee: \$145.00

Pre-requisites: HOSP1107 and HOSP1109 and HOSP1122

Co-requisites: none

Restrictions: Instructor Permission

HOSP 2217 - Garde Manger (A SP)**3.00 credit(s)**

A laboratory course including preparation of cold food items commonly produced in a garde manger station. Students will prepare garnitures, appetizers, salads, sandwiches, marinades, relishes, cold sauces and forcemeat items. Ice carving is introduced. Students will acquire knowledge and develop competency skills in the preparation and artistic presentation of savory mousses, terrines, pates, galantines, and ballotines. The standards used in this regard are those specified in the Garde Manger section of the Training Log of the National Apprenticeship Training Log of the National Apprenticeship Training Program for Cooks, published by the American Culinary Federation. Buffet presentation, including platters, bowls and plates, and culinary show guidelines and practices are covered.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$225.00

Pre-requisites: HOSP1122 and HOSP1109

Co-requisites: none

Restrictions: Instructor Permission Declared Major

HOSP 2218 - Baking Fundamentals (SP SU)**2.00 credit(s)**

Includes the fundamentals of baking and function of ingredients with production of baked goods and dessert specialties. Proper use and care of equipment and hygienic work habits are emphasized.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$90.00

Pre-requisites: HOSP1122 and HOSP1109

Co-requisites: none

Restrictions: Instructor Permission Declared Major

HOSP 2219 - Food Production & Menu Management (SP)**5.00 credit(s)**

A capstone laboratory course in which application of foodservice management will occur in a simulated restaurant. Principles of menu planning for a variety of food service operations, which includes layout and design, and pricing strategies. Consideration is given to food selection; nutritional requirements; food, labor, and other costs; equipment utilization. Students will plan menus, prepare food items, and serve the public to gain experience in various managerial positions in the front and back of the house. A grade of "C" or higher is required for graduation.

Contact Hours: Lecture 3.00, Lab 6.00

Lab Fee: \$110.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission Declared Major

HOSP 2224 - Hospitality Supervision and Quality Mgmt (A SP)**3.00 credit(s)**

This course applies supervisory skills and quality management principles to the hospitality/tourism industry and includes the study of organization structures, performance standards, employee selection and retention processes, orientation and training programs, employee appraisal and performance improvement, and quality improvement techniques. A grade of "C" or higher is required for graduation.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

HOSP 2246 - Hospitality Sales and Marketing (A SP SU)**3.00 credit(s)**

This course covers selling theory, including all phases of the selling process, from initial contact to closing the sale in a variety of hospitality and tourism settings. This course provides students with an overview of the marketing function associated with business organizations. This course will focus on the fundamental elements of the services marketing mix which includes the product, promotion, price and place (distribution). An extension of the traditional marketing mix known as the Extended Marketing Mix, includes People, Process, and Physical Evidence will be discussed. The concepts of effective marketing, total quality management, relationship marketing, and competitive strategy are explored in this course. Students will be presented with the basic knowledge and skills necessary to work within the marketing plan of a hospitality or tourism organization.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

HOSP 2271 - Catering & Event Services (A SP SU)**3.00 credit(s)**

Principles of and practice experiences in meeting planning and catered functions. Students will plan, organize, execute, and evaluate meeting and catering functions to meet the needs of clients and guests. Emphasis is placed on how customer service is measured. This course explores the classification, history and control of beer, wines and spirits. Students will examine Ohio liquor and legal regulations, inventory control, liquor dispensing systems, cash control, drink merchandising and alcohol responsibility. The art of mixology and wine and food affinity.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$25.00

Pre-requisites: HOSP1122

Co-requisites: none

Restrictions: none

HOSP 2272 - Event Management (A SU)**3.00 credit(s)**

This course will describe how event managers design, plan, market and stage an event of any size. The course will describe the managing of staff and how to handle staffing problems. The course will describe the safety requirements that ensure staff and attendees' safety. This course will also describe the legal compliance, risk management, financial control, and evaluations of the success of the event.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HOSP 2273 - Casino & Gaming Operations (SP SU)**2.00 - credit(s)**

Covers the history of the gaming industry from its beginning to today. Familiarize student with gaming trends. Emphasize the operation and management of the gaming and casino industry. Upon completion of this course, the student should see the intricate workings of all departments necessary in a casino organization to include marketing, accounting and finance, and customers relations.

Contact Hours: Lecture 2.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HOSP 2286 - Apprenticeship Final Project (A SP)**2.00 credit(s)**

A capstone course required for students registered in the two year American Culinary Federation (ACF) National Apprenticeship Training Program. Preparation for and completion of national practical and written examinations. Evaluation of 4,000 hours on-the-job training and documentation of completion of all required training objectives. Culminating evaluation of culinary skills and competencies, based on standards established by the American Culinary Federation and current industry standards; demonstrated with the opportunity and completion of ACF certification exams both written and practical for certified Sous Chef (CSC).

Contact Hours: Lecture 2.00

Lab Fee: \$150.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission Declared Major

HOSP 2528 - Casino Culture (SP SU)**3.00 credit(s)**

This course analyzes the operations of casinos and examines the many internal and environmental cultures that surround and make up the casino. Students will study the structures of the casino organizations into departments and their function. Also discussed is the examination of the interior culture of casinos: how their culture, organization, management, and make-up have evolved. Finally, the course looks at casino culture as part of larger and local communities through its addressing of gambling and addictive behaviors, and how it functions as a community-minded business.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HOSP 2529 - Sport & Event Management (A)**3.00 credit(s)**

This course will describe how sport and event managers design, plan, and market a sporting event of any size. This course will describe the management of revenue streams and cost identification. The course will describe sponsorship arrangements and solicitation. The course will describe the safety requirements to ensure staff and attendees safety. This course will also describe the legal compliance, risk management, financial control, and evaluation of the success of the event.

Contact Hours: Lecture 3.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HOSP 2711 - Financial Regulations & Revenue Management (A SU) 3.00 credit(s)

This course provides students an introduction to the financial controls placed on a gaming organization. Students will also identify the various organizations, both federal and state, that provide and enforce regulations relating to the casino/gaming industry.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HOSP 2730 - Security Mgmt Sport & Special Events (SP SU) 3.00 - credit(s)

This course will provide the framework to assist in planning and managing security for events that attract large numbers of spectators and participants. The focus will be on national and regional sport, recreation, leisure, and special events. Threat assessment and risk assessment will be discussed. Students will determine the variety of approaches that can be tailored to large or small events.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

HOSP 2901 - Hospitality Co-Op (A SP SU) 3.00 credit(s)

A minimum of 300 hours will be spent in cooperative work experience, with one classroom hour per week in an on-line seminar.

Contact Hours: Lecture 1.00, Practicum 20.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

HOSP 2902 - Hosp Cooperative Work Experience II (SP SU) 3.00 credit(s)

Work experience in the hospitality/tourism industry. A minimum of 300 hours will be spent in cooperative work experience, with one classroom hour per week in an on-campus seminar. This course is required for 1st year apprentices. It consists of the on-the-job training in the food service industry following the guidelines of the American Culinary Federations (ACF) national apprenticeship training program for cooks. The equivalent of one hour per week will be spent in an on-campus seminar related to the culinary profession. Students will maintain membership in the ACF as "student members".

Contact Hours: Lecture 1.00, Practicum 20.00

Lab Fee: \$225.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission Declared Major

Human Resources Management Technology

HRM 1121 - Human Resources Management (A SP SU)

3.00 credit(s)

This is an introductory course in Human Resources Management including the philosophy, principles, and legal aspects of human resources management and the roles of the manager and the human resources professional/department in this management function. The course focuses on the laws governing policymaking, recruiting, selection, training, evaluation, wage and salary administration, benefit programs, representation, and safety; and the employer's obligations and the employee's rights under these laws. Students use the Internet to research human resources issues. Recommend: CRJ-2252 for Criminal Justice Majors.

Contact Hours: Lecture 3.00**Lab Fee: \$5.00**

Pre-requisites: BMGT1111

Co-requisites: none

Restrictions: none

HRM 1223 - Human Resource Policy and Procedure (A SP)

3.00 - credit(s)

The course provides an in-depth study of employment law, the recruiting process, and the selection process. It promotes a transition from "term paper writing" to formal policy writing, using the basic application of employment law, business grammar, and policy writing skills through the development of an employment policy, procedures, and employee handbook summary of the policy.

Contact Hours: Lecture 3.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

HRM 1224 - Employee Training & Development (A SP)

3.00 - credit(s)

This course provides students with the tools needed to develop and present effective training programs for an organization or to identify and evaluate the services of an outside training provider to meet the needs of the organization.

Contact Hours: Lecture 3.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

HRM 1225 - Employee and Labor Relations (A SP)**3.00 credit(s)**

The course provides a study of labor and employee relations including the history of the labor movement; the legislative history of labor law; in-depth study of the four major pieces of private sector collective bargaining legislation; a discussion of the State of Ohio collective bargaining law; the union organizing process and management responses; the collective bargaining process, grievance process, and arbitration process; and the differences in these processes in the public and private sectors. This course also examines various dimensions of an employee's relationship with an employer. Human resources personnel, managers, and supervisors determine and develop this relationship by designing and implementing employee policies that establish expectations regarding employee performance, conduct, conflict of interest and discipline. Managing employee relations issues creates a work environment where employees are positioned and empowered to be both effective and efficient in the pursuit of corporate objectives.

Contact Hours: Lecture 2.00, Lab 2.00**Lab Fee: \$5.00**

Pre-requisites: HRM1121 Minimum grade of "C" and BOA1200 and CSCI1100 and ENGL1100 and STAT1350 previously or concurrently

Co-requisites: none

Restrictions: none

HRM 1825 - Compensation (A SP)**3.00 credit(s)**

The course provides an in-depth study of the history, principles, and theories of a compensation package; the laws governing monetary compensation; and the application of these principles, theories and laws through the development of internal and external equity in monetary compensation including the job analysis process, the development of job descriptions and job specifications, and the job evaluation process. The course also addresses the development of monetary compensation policies and procedures.

Contact Hours: Lecture 2.00, Lab 2.00**Lab Fee: \$5.00**

Pre-requisites: HRM1121 Minimum grade of "C" and HRM1223 Minimum grade of "C" and STAT1400 and ENGL1100

Co-requisites: none

Restrictions: none

HRM 1828 - Benefits (A SP)**3.00 credit(s)**

This course provides an in-depth study of voluntary and federaly mandated benefits, including The Affordable Care Act, Social Security, Worker's Compensation, Unemployment Compensation, Family and Medical Leave (FMLA), the Health Insurance Portability and Accountability Act (HIPAA), and the Consolidated Omnibus Budget Reconciliation Act (COBRA). Students examine laws, procedures, forms, and handbooks summaries for each topic. This course also provides in-depth study of voluntary benefits: those benefits employers most commonly choose to offer to help attract and retain employees. The course will focus on health insurance options (HMOs, PPOs, traditional carriers, HSAs), life insurance options (basic life, supplemental life, term life, and accidental death and dismemberment), short-term and long-term disability options, pension/retirement plan options, pay-for-time-not-worked options (holidays, vacations, sick leave, personal leave, bereavement leave, jury duty, military leave, and other PTO options), and miscellaneous benefit options (tuition reimbursement, child/elder care, safety equipment, social and sports programs).

Contact Hours: Lecture 3.00**Lab Fee: \$0**

Pre-requisites: HRM1121 Minimum grade of "C" and HRM1223 Minimum grade of "C" and STAT1400 and ENGL1100

Co-requisites: none

Restrictions: none

HRM 2221 - Staffing Under the Law (A SP)**2.00 credit(s)**

The course provides an in-depth study of the laws governing affirmative action, sexual and other forms of harassment, discipline, and termination, and the application of these laws through the development of policies, procedures, rules, regulations, and summary postings for the organization.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$5.00

Pre-requisites: HRM1121 Minimum grade of "C" and HRM1223 Minimum grade of "C" and ENGL1101 and STAT1400 or MATH1104

Co-requisites: none

Restrictions: none

HRM 2901 - HR Mgmt Practicum & Seminar (A SP SU)**3.00 credit(s)**

As a part of the capstone sequence for the Human Resources Management Technology, the course provides a guided work experience (minimum of 14 hours per week) in a human resources office or work environment providing human resources services. The student and the employer/placement site supervisor determine exact duties. Students are responsible for securing their own practicum position. The course also provides for a discussion of the work experience and demonstration of the ability to transfer program skills to a real-world work environment through the completion of written weekly reports and the development of work related projects and assignments. HRM-2240 may be taken previously or concurrently. HRM prerequisite courses should be completed with a minimum grade of C or better.

Contact Hours: Seminar 1.00, Practicum 14.00

Lab Fee: \$0

Pre-requisites: HRM1223 Minimum grade of "C" and HRM1224 Minimum grade of "C" and HRM1225 Minimum grade of "C" and HRM1825 Minimum grade of "C" and HRM1828 Minimum grade of "C" and HRM2221 Minimum grade of "C"

Co-requisites: none

Restrictions: none

Humanities

HUM 1100 - Introduction to Humanities (A SP SU)**3.00 credit(s)**

This course examines the role of art, music, and theater in the construction, maintenance and criticism of values and beliefs within specific historical and cultural periods.

Contact Hours: Lecture 3.00

Lab Fee: \$12.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

HUM 1160 - Music & Art Since 1945 (A SP SU) **3.00 credit(s)**

A survey of the styles and subject matter of important contemporary works of music and visual art and their relationship to the major intellectual and social issues of that era.

Contact Hours: Lecture 3.00

Lab Fee: \$12.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

HUM 1270 - Comparative Religions (A SP SU) **3.00 credit(s)**

This course introduces the study of religion through a historical overview and comparison of the major world religions of Judaism, Christianity, Islam, Buddhism and Hinduism through readings in their sacred texts in translation. Attention will be focused on the concepts, categories, theories and methods used by the various religious disciplines and how each of them addresses basic issues of the human condition. Also included will be an examination of Sectarianism and contemporary sects in America and the World. HUM 1270 meets elective requirements in the Associate of Arts degree program and distributive transfer requirements in comparative studies, religion and philosophy.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

HUM 1275 - Visual Studies I: Concepts/Theories/Pract (SP SU) **3.00 credit(s)**

This course is an introduction to the interdisciplinary field of visual studies. Through the analysis of a variety of art forms, this course explores codes, values, and meaning associated with our cross mediated experience of the visual world. Ideas and images associated with contemporary visual practices and theory will be examined in the context of ethics, aesthetics, constructs of interpretation, historical contexts, and significant art movements.

Contact Hours: Lecture 3.00

Lab Fee: \$7.00

Pre-requisites: ENGL1100 Minimum grade of "C"

Co-requisites: none

Restrictions: none

Heating, Ventilating, and Air Conditioning

HVAC 1120 - Load Calculations I (SP) **3.00 credit(s)**

This course is a comprehensive study of the fundamentals of environmental conditioning, energy consumption and operating cost analysis, the properties of air, insulation materials, heat loss and gain calculations, to include the methods of air conditioning, heating and ventilation. Load calculations will be performed using the applicable ACCA manuals and computer software.

Contact Hours: Lab 1.00, Lecture 2.50

Lab Fee: \$12.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HVAC 1140 - Principles of Refrigeration (A SP)**3.00 credit(s)**

This course is a basic refrigeration cycle theory course covering heat thermodynamics, temperature-pressure relationships, mechanical operations of refrigeration equipment and representative application and selection data for Class I refrigerants.

Contact Hours: Lecture 3.00

Lab Fee: \$10.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HVAC 1150 - Instrumentation/Combustion Process (SP)**3.00 credit(s)**

This is a course about basic combustion processes, using all the fossil fuels and psychrometric chart work to track the thermal heat transfer. The instruments used to test these processes will also be explained along with the fan laws and psychrometric chart procedures.

Contact Hours: Lab 1.00, Lecture 2.50

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HVAC 1160 - Hand Tools/Safety (A)**3.00 credit(s)**

This course a basic safety and hand on tools course to develop the students understanding of proper tool usage along with proper shop safety. Pipe, tubing , and Sheetmetal labs will be accomplished along with meter care and usage and proper refrigerant handling and usage. State and local codes will be discussed.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$41.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HVAC 1180 - HVAC Wiring Circuits I (A)**2.00 credit(s)**

This course is designed to teach a new student how to read, draw, interpret and understand residential heating and cooling wiring diagram symbols, devices and wire size identification, basic circuit distribution concepts and schematic applications of same.

Contact Hours: Lab 1.00, Lecture 1.50

Lab Fee: \$32.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

HVAC 1280 - HVAC Wiring Circuits II (SP)**3.00 credit(s)**

This course will concentrate on lab experiments designed to teach a student how to properly wire up typical heating and cooling devices into working circuits. Devices such as motors, controllers, contactors, compressors and safety devices will be covered.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$46.00

Pre-requisites: HVAC1180 or SKTR1310

Co-requisites: none

Restrictions: none

HVAC 2110 - Piping Systems (A)**2.00 credit(s)**

This course is a comprehensive study of the UPC, water supply, water treatment, and distribution, to include waste water disposal and sanitation standards. Emphasis will be placed upon mechanical piping design, nomenclature, the physics of metal pipe, tubing, fittings, valves, joining methods, pumps, pump sizing, water flow principles, pressure loss, sizing and terminal units. Boilers, furnaces, chillers and refrigeration systems will be discussed in detail.

Contact Hours: Lab 1.00, Lecture 1.50

Lab Fee: \$12.00

Pre-requisites: HVAC1140

Co-requisites: none

Restrictions: none

HVAC 2140 - A/C & Heat Pump (A SP)**4.00 credit(s)**

This course is designed for the student with a fundamental knowledge of the refrigeration cycle. Previous training in refrigeration theory, wiring diagrams, control circuits, and tools used in the trade is necessary to enroll in this course. The course is designed around hands-on training and testing of the various component parts of a vapor compression split system, split system heat pumps, and water source heat pumps.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$70.00

Pre-requisites: HVAC1140 and HVAC1160 and HVAC1180

Co-requisites: none

Restrictions: none

HVAC 2150 - Heating Systems (A SP)**3.00 credit(s)**

This course is designed for the student with a fundamental knowledge of heat transfer characteristics and air movement properties. The course will incorporate hands-on training and testing of the various component parts and accessories that make up gas, electric and fuel oil type forced air furnaces, along with accessories such as humidifiers, air filtration systems, and set-back thermostats.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$20.00

Pre-requisites: HVAC1150 and HVAC1160 and HVAC1180

Co-requisites: none

Restrictions: none

HVAC 2160 - Automatic Controls (A SP)**3.00 credit(s)**

This course introduces HVAC residential, light commercial, and large commercial control systems and their essential components. Control circuit logic and sequence of operation theory will be examined. Operators, sensors, controllers and various pneumatic and electrical devices used in modern control systems along with the logic used to develop their control sequences will be covered .

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$43.00

Pre-requisites: HVAC1150 and HVAC1140 and HVAC1180

Co-requisites: none

Restrictions: none

HVAC 2170 - Commercial A/C Systems (A)**3.00 credit(s)**

This course uses basic piping knowledge, refrigeration cycle theory, codes, and control knowledge to build a basic understanding of the operational theory and safe operating practices for an industrial Class II ammonia refrigeration system, ice machines , and commercial chillers.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$10.00

Pre-requisites: HVAC1140 and HVAC1160 and HVAC2110 and HVAC2160

Co-requisites: none

Restrictions: none

HVAC 2180 - Advanced Controls (A)**5.00 credit(s)**

This course is designed to take senior level HVAC students and teach them the fundamentals, installation practices and common application parameters of representative pneumatic control and electronic control systems.

Contact Hours: Lecture 3.00, Lab 4.00

Lab Fee: \$47.00

Pre-requisites: HVAC1280 and HVAC2160

Co-requisites: none

Restrictions: none

HVAC 2190 - Boiler Systems (SP)**4.00 credit(s)**

This course uses basic combustion knowledge from HVAC 1150 and piping system knowledge from HVAC 2110 to build a basic understanding of boiler types, systems, safety procedures and codes that will prepare a person to take the High Pressure Boiler License Examination.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$10.00

Pre-requisites: HVAC2110 and HVAC1150

Co-requisites: none

Restrictions: none

HVAC 2193 - Advanced Problems in HVAC (On Demand) **3.00 credit(s)**

This course presents a simulation that will allow the students to use their educational knowledge on a problem(s) that emphasizes the design or practical service aspects of a heating and cooling system. The instructor will need to give prior approval of the project or projects to be completed by the student.

Contact Hours: Lab 6.00

Lab Fee: \$8.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

HVAC 2220 - Load Calculations II (A) **2.00 credit(s)**

This course covers commercial heat gain/loss calculations, design of systems, and selection of equipment. The systems used in commercial applications will be discussed and compared, along with correct balancing procedures. The factor of sound as it applies to these types of systems will also be included.

Contact Hours: Lab 1.00, Lecture 1.50

Lab Fee: \$12.00

Pre-requisites: HVAC1120

Co-requisites: none

Restrictions: none

HVAC 2950 - Field Experience HVAC (On Demand) **3.00 credit(s)**

This course offers an opportunity for an off-campus work experience in heating, venting and air conditioning industry that augments formal education received in the technology with actual work conditions and job experience. 'N' credit will not be allowed for this course.

Contact Hours: Field Experience/Internship 36.00

Lab Fee: \$8.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

Interpreter Education Program**IEP 1120 - Intro to Interpreting Professions (A)** **2.00 - credit(s)**

This course provides students with a general overview of the practice profession of interpreting. Students will explore the following topics: introductory discourse analysis; diverse consumers of interpreting services; the historical development and current best practices of interpreters; identity, culture and power; and interpreting competencies and attributes. This course requires students to shadow a working interpreter outside of class time. Requires admission to IEP through Mandatory Information Session.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

IEP 1194 - Special Topics in Interpreting (On Demand) **1.00 - 5.00 credit(s)**

This course is offered for interpreters who are employed, or are pre-practice interpreters, interested in exploring or developing an issue or skill related to the interpreting profession. This course is repeatable up to six hours and fulfills the Technical Elective requirement.

Contact Hours: Lecture 1.00

Lab Fee: \$5.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

IEP 1294 - SPT: American Sign Language (On Demand) **1.00 - 5.00 credit(s)**

This course is offered for interpreters who are employed, or are pre-practice interpreters, interested in exploring or developing an issue or skill related to ASL. This course is repeatable up to six hours and fulfills the Technical Elective requirement.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

IEP 1301 - Beginning Interpreting (SP) **2.00 credit(s)**

This course is a theoretical and practical "hands-on" approach to the process of consecutive and simultaneous interpreting. The student will be actively learning how to identify the message and intent in the source language, both ASL and English, and convey it accurately into the target language, both ASL and English.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$15.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: ASL1103 and ASL1150 and IEP1120

Restrictions: none

IEP 1302 - Intermediate Interpreting I (SP) **2.00 credit(s)**

This course is a continuation of IEP 1301. Students continue the process of actively learning how to identify the intent of the source message for both ASL and English and convey it accurately into the target language, both ASL and English. Students will learn effective teamwork strategies. Students will apply both ASL to English and English to ASL skills simultaneously.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$15.00

Pre-requisites: IEP1301 Minimum grade of "C" and IEP1120 Minimum grade of "C" and ASL1103 Minimum grade of "C" and ASL1150 Minimum grade of "C"

Co-requisites: ASL1100 and ASL1104 and IEP1601 and IEP1401

Restrictions: none

IEP 1401 - Theoretical Foundations of Interpreting (SP) **3.00 - credit(s)**

In this course, the most significant and relevant theoretical approaches to interpreting will be explored and practiced. Specifically, students will consider the social, cultural and linguistic complexities of processing messages within dynamic contexts. They will learn to apply various approaches to discourse analysis to enhance their understanding of these complexities.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

IEP 1601 - ASL to English Interpreting I (SP) **3.00 credit(s)**

This course will introduce students to ASL to English skills. Students will learn how to use appropriate English grammar and register. A variety of signed texts will be used to assist students with professional behaviors in a variety of settings.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$15.00

Pre-requisites: IEP1301 Minimum grade of "C" and IEP1120 Minimum grade of "C" and ASL1150 Minimum grade of "C" and ASL1103 Minimum grade of "C"

Co-requisites: IEP1302 and IEP1401 and ASL1100 and ASL1104

Restrictions: none

IEP 2303 - Intermediate Interpreting II (SU) **2.00 credit(s)**

This course is a continuation of IEP-1302. The students continue the process of actively learning how to identify the intent of the source message for both ASL and English, and convey it accurately into the target language, both ASL and English in a monologue setting.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$15.00

Pre-requisites: IEP1302 Minimum grade of "C" and IEP1401 Minimum grade of "C" and IEP1601 Minimum grade of "C" and ASL1100 Minimum grade of "C"

Co-requisites: ASL1104 Minimum grade of "C" MULT2403 and IEP2403 and IEP2602

Restrictions: none

IEP 2304 - Advanced Interpreting I (A) **2.00 credit(s)**

This course is a continuation of IEP-2303. The students continue the process of actively learning how to identify the intent of the source message for both ASL and English, and convey it accurately into the target language, both ASL and English in a monologue setting. Students will continue to work in teams. Students will apply both ASL to English and English to ASL skills consecutively and simultaneously and will interpret for unrehearsed assignments, both in class and in the community.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$15.00

Pre-requisites: MULT2403 Minimum grade of "C" and IEP2303 Minimum grade of "C" and IEP2403 Minimum grade of "C" and IEP2602 Minimum grade of "C"

Co-requisites: IEP2405 and IEP2901 or IEP2903

Restrictions: none

IEP 2305 - Advanced Interpreting II (SP)**3.00 credit(s)**

This course is a continuation of IEP-2304. The students will interpret in the following specialized settings: mental health, AA, legal, deaf-blind, platform and conference.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$15.00

Pre-requisites: IEP2304 Minimum grade of "C" and IEP2405 Minimum grade of "C" and IEP2901 Minimum grade of "C" or IEP2903 Minimum grade of "C"

Co-requisites: ASL1105 and IEP2404 and IEP2902 or IEP2903

Restrictions: none

IEP 2403 - Educational Interpreting I (A)**3.00 - credit(s)**

This course provides in-depth information on interpreting in K-12 educational settings. ♦ Students will explore the linguistic, psychosocial and cognitive developmental needs of children along with classroom discourse patterns as they impact interpreting practice. During this exploration, they will consider past and present practices associated with interpreter ethics and responsibilities, the role of the interpreters as members of an educational team, and the importance of establishing working conditions that foster effective interpreting practice. ♦ They will also examine school organization, laws, certification, licensure, and other issues that will impact their success as educational interpreters.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

IEP 2404 - Specialized Interpreting (A)**2.00 - credit(s)**

This course allows students to explore context-specific demands that are often unique to particular types of interpreting assignments, specifically VRS settings, medical and mental health settings, artistic settings and working with people who are deaf and blind. Students will learn the requisite skills, knowledge and ethical considerations critical to working effectively in these unique situations.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

IEP 2405 - Interpreting in Healthcare Settings (A)**2.00 - credit(s)**

This course introduces students to the unique knowledge, skills, and attributes necessary for interpreting in diverse medical and mental healthcare settings. Students explore healthcare interpreting from a variety of perspectives, including linguistic, legal, ethical, cultural, social, and personal. This course requires students to engage in a service-learning project outside of class time.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

IEP 2602 - ASL to English Interpreting II (A SP SU)**2.00 credit(s)**

This course is a continuation of ASL to English Interpreting I. Student will continue to learn how to use appropriate English grammar and register. A variety of signed texts will be used to assist students with professional behaviors in a variety of settings.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$15.00

Pre-requisites: ASL1104 Minimum grade of "C" and IEP1302 Minimum grade of "C" and IEP1401 Minimum grade of "C" and IEP1601 Minimum grade of "C" and ASL1100 Minimum grade of "C"

Co-requisites: IEP2303 and IEP2403 and MULT2403

Restrictions: none

IEP 2701 - Processing (On Demand)**1.00 credit(s)**

This course will provide students with a review of current approaches to interpreting processing theory and the opportunity to enhance their processing skills through the applications of processing theories and various assessment methods to live and pre-recorded interpreting scenarios. Students will analyze monologue- and dialogue-based source texts and practice effective interpretations in both English to ASL and ASL to English. Attention will be given to discourse analysis, effective decision-making during the interpretation and assessment of the target.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

IEP 2703 - Advanced Fingerspelling (On Demand)**1.00 credit(s)**

This course is a theoretical and practical hands-on approach to the process of receptive fingerspelling. The student will actively learn how to identify the methods of improving receptive fingerspelling.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

IEP 2704 - Religious Interpreting (On Demand)**1.00 credit(s)**

This course will increase students' knowledge and skills of religious interpreting. An increased focus is placed on Christian religious settings including: weddings, funerals, and Christian church settings.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

IEP 2901 - Community Interpreting Practicum I (A SP SU) **3.50 - credit(s)**

Students participate in a 160 hour practicum supervised experience in a community setting where utilization and practice of the knowledge and skills in the corresponding courses are required. In addition, students participate in a 1 hour a week seminar for additional personal/professional support, supervision, feedback and exploration of field-related experiences. The opportunity to enhance/augment knowledge and skills related to specific interpreting settings is available. Adherence to the NAD/RID Code of Professional Conduct is required. This course must be completed with a B or higher to fulfill IEP AAS graduation requirements.

Contact Hours: Seminar 1.50, Practicum 14.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

IEP 2902 - Community Interpreting Practicum II (A SP SU) **3.50 - credit(s)**

Students participate in a 160 hour practicum supervised in a community setting where utilization and practice of the knowledge and skills in the corresponding courses are required. In addition, students participate in a 1 hour a week seminar for additional personal/professional support, supervision, feedback and exploration of field-related experiences. The opportunity to enhance/augment knowledge and skills related to specific interpreting setting is available under the supervision of a qualified field interpreter. Adherence to the NAD/RID Code of Professional Conduct is required. This course must be completed with a B or higher to satisfy the IEP AAS graduation requirements.

Contact Hours: Seminar 1.50, Practicum 14.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

IEP 2903 - K-12 Educational Interpreting Practicum (A SP) **3.50 - credit(s)**

Students participate in a 160 hour practicum supervised experience in a community setting where utilization and practice of the knowledge and skills in the corresponding courses are required. In addition, students participate in a 1 hour a week seminar for additional personal/professional support, supervision, feedback and exploration of field-related experiences. The opportunity to enhance/augment knowledge and skills related to specific interpreting setting is available under the supervision of a qualified field interpreter. Adherence to the NAD/RID Code of Professional Conduct is required. This course must be completed with a B or higher to fulfill IEP AAS graduation requirements. Students who complete this course with a B or higher and fulfill all IEP AAS graduation requirements are eligible to apply for the K-12 Interpreter for the Hearing Impaired Licensure awarded by the Ohio Department of Education.

Contact Hours: Seminar 1.50, Practicum 14.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

Medical Imaging

IMAG 1101 - Intro RAD Equipment/Patient Care (A SP SU) **0.50 credit(s)**

This is a module course, which introduces the student to radiography equipment utilization, basic patient care procedures, applied radiation protection practices, and processing techniques using film and digital imaging.

Contact Hours: Lecture 0.20, Lab 0.60

Lab Fee: \$0

Pre-requisites: IMAG1190

Co-requisites: none

Restrictions: none

IMAG 1102 - Rad Positioning of Upper Extremities (A SP SU) **0.50 credit(s)**

This module introduces the student to radiographic positioning of the upper extremities.

Contact Hours: Lecture 0.20, Lab 0.60

Lab Fee: \$0

Pre-requisites: IMAG1101

Co-requisites: none

Restrictions: none

IMAG 1103 - Rad Positioning of Lower Extremities (A SP SU) **0.50 credit(s)**

This module introduces the student to radiographic positioning of the lower extremities

Contact Hours: Lecture 0.20, Lab 0.60

Lab Fee: \$0

Pre-requisites: IMAG1101

Co-requisites: none

Restrictions: none

IMAG 1104 - Rad Positioning Chest & Abdomen (A SP SU) **0.50 credit(s)**

This module introduces the student to radiographic positioning of the chest and abdomen.

Contact Hours: Lecture 0.20, Lab 0.60

Lab Fee: \$0

Pre-requisites: IMAG1118 and MULT1110

Co-requisites: none

Restrictions: none

IMAG 1105 - Rad Positioning Spine, Skull & Sinuses (A SP SU) **0.50 credit(s)**

This module introduces the student to radiographic positioning of the spine, skull and sinus.

Contact Hours: Lecture 0.20, Lab 0.60

Lab Fee: \$0

Pre-requisites: IMAG1101

Co-requisites: none

Restrictions: none

IMAG 1111 - Intro to Radiologic Technology (A) **1.00 credit(s)**

This is an introduction to radiologic principles and clinical radiography. Areas of emphasis include fundamentals of radiation protection, medical ethics, body mechanics, patient care skills, and clinical observation. This course is a prerequisite for all other radiologic technology courses.

Contact Hours: Lecture 1.00

Lab Fee: \$30.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

IMAG 1113 - Radiologic Science (SP) **2.00 credit(s)**

The course begins with a review of basic concepts of electricity, electromagnetism, and electrical circuits. The student is then introduced to the theory of x-ray production, x-ray emissions, and x-ray interactions. Specialized x-ray equipment applications of equipment are discussed.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: IMAG1111 and BIO2300 and MATH1148

Co-requisites: none

Restrictions: none

IMAG 1118 - Radiographic Exposure & Processing (SU) **2.00 credit(s)**

This course consists of a study of radiographic image formation and technical factor manipulation. Film and digital image receptors are discussed. Image properties are evaluated to ensure production of an acceptable quality radiographic image. Technical conversions necessary to maintain proper image receptor exposure while minimizing patient dose are discussed. Methods are presented to reduce image artifacts and equipment malfunction.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$44.00

Pre-requisites: IMAG1113 and BIO2301

Co-requisites: none

Restrictions: none

IMAG 1141 - Radiographic Procedures I (A)**3.00 credit(s)**

The student is introduced to radiologic terms specific to imaging, equipment operation, and patient positioning. Specific areas of study include physician assisting, and radiographic anatomy to include gastrointestinal system, basic fluoroscopic procedures, the vertebral column, bony thorax,, upper and lower extremities, chest, abdomen, and basic urography. Lab provides the opportunity for practice and demonstration of proficiency.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$97.60

Pre-requisites: none

Co-requisites: none

Restrictions: none

IMAG 1142 - Radiographic Procedures II (SP)**3.00 credit(s)**

This course serves as a continuation of RAD 1141, with progression through the positioning categories and radiographic anatomy. Course topics include basic the vertebral column, bony thorax, pediatric radiography, surgical radiography, skull radiography, tomography, and interventional radiography of the Skeletal, Digestive, and Biliary systems.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$97.60

Pre-requisites: IMAG1141 and MATH1148 and BIO2300 and BIO2301

Co-requisites: none

Restrictions: none

IMAG 1143 - Radiographic Special Procedures (SU)**3.00 credit(s)**

This course is designed to familiarize the student with common procedures performed in Interventional Radiography and Cardiac Catheterization. Labs will be scheduled to provide familiarity with intervention/cath lab equipment and as an introduction to sterile procedures. Upon completion of this course students should have a comprehensive understanding of vascular anatomy and familiarity with common interventional procedures. Students should also be familiar with the basics of medical sepsis as it applied to minimally invasive procedures.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$5.00

Pre-requisites: IMAG1142

Co-requisites: none

Restrictions: none

IMAG 1190 - Rad Protection General Machine Operators (A SP SU)**1.50 credit(s)**

This course is designed to prepare non-radiographers with a specific background in radiation protection and radiation biology necessary to be eligible to apply for the State of Ohio, Radiology Technology Division, General Operator Examination. Areas of instruction include radiation physics, radiographic technique, darkroom processing and film handling, radiation health, safety and protection and radiation biology. Basic radiographic positioning skills and terminology are also presented.

Contact Hours: Lecture 1.50

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

IMAG 1901 - RAD Field Experience/Internship I (A)**1.00 credit(s)**

This field experience/internship in the clinical area provides an opportunity for the student to become familiar with the care and positioning of the patient. Proficiency requirements are completed using a competency-based educational format over the course material presented in Radiologic Procedures I. Film critique is incorporated to provide a correlation of all factors that comprise a finished radiograph to include an analysis of anatomic structures, patient positioning, radiation protection, and fundamental exposure techniques.

Contact Hours: Field Experience/Internship 14.00

Lab Fee: \$49.60

Pre-requisites: none

Co-requisites: IMAG1111

Restrictions: none

IMAG 1902 - RAD Field Experience/Internship II (SP)**1.00 credit(s)**

This field experience/internship in the clinical area provides the practical experience necessary to function as a radiographer and is designed to enhance and complement didactic studies. Experience is gained in the general diagnostic and fluoroscopic areas, the emergency department, and on portable radiography rotations. Film critique is continued to provide a correlation of all factors that comprise a finished radiograph. Case presentations are introduced.

Contact Hours: Field Experience/Internship 14.00

Lab Fee: \$49.60

Pre-requisites: IMAG1901

Co-requisites: none

Restrictions: none

IMAG 1903 - RAD Field Experience/Internship III (SU)**1.00 credit(s)**

This field experience/internship provides the practical experience necessary to function as a radiographer and is designed to enhance and complement the didactic studies. Experience is gained in the general diagnostic and fluoroscopic areas, the emergency department, the operating room, tomography, portable radiography, the computed tomographic area, to include an evening rotation. In addition, each student is required to observe a radiologist during film reading and dictation. Film critique and case presentations are continued.

Contact Hours: Field Experience/Internship 14.00

Lab Fee: \$31.00

Pre-requisites: IMAG1902

Co-requisites: none

Restrictions: none

IMAG 2126 - Radiographic Biology & Protection (SP) **2.00 credit(s)**

This advanced science course examines human responses to ionizing radiation. Early and late effects of radiation exposure are discussed, as well as an in-depth analysis of radiation protection standards and practices.

Contact Hours: Lecture 2.00

Lab Fee: \$30.00

Pre-requisites: IMAG1113

Co-requisites: none

Restrictions: none

IMAG 2212 - Radiographic Sectional Anatomy (A) **2.00 credit(s)**

Sectional anatomy is introduced, with an emphasis on head, chest, abdomen and pelvis. Students will be required to give a presentation demonstrating correlations between different sectional imaging modalities.

Contact Hours: Lecture 2.00

Lab Fee: \$3.00

Pre-requisites: IMAG1142

Co-requisites: none

Restrictions: none

IMAG 2222 - Radiographic Digital Imaging (A) **2.00 credit(s)**

This course presents a survey of computerized modalities related to radiography to include an introduction to computers in medical imaging, digital radiography, computed tomography, magnetic resonance imaging, positron emission tomography and Picture Archival and Communication Systems (PACS).

Contact Hours: Lecture 2.00

Lab Fee: \$49.00

Pre-requisites: IMAG1118 and MULT1110

Co-requisites: none

Restrictions: none

IMAG 2620 - Radiographic Pathology (SP) **2.00 credit(s)**

This course begins with a review of common terms relating to pathology. Using a survey approach, this course continues with a study of various disease processes and their effect on body systems as they relate to radiography and allied imaging modalities. Students are required to write a term paper on a specific pathologic process.

Contact Hours: Lecture 2.00

Lab Fee: \$3.00

Pre-requisites: IMAG1143

Co-requisites: none

Restrictions: none

IMAG 2800 - Radiography/Medical Imaging Seminar (SP) **1.00 credit(s)**

This course offers an evaluation and review of radiography cases and discussion of current issues in the radiologic sciences.

Contact Hours: Seminar 1.00

Lab Fee: \$0

Pre-requisites: IMAG2904

Co-requisites: none

Restrictions: none

IMAG 2804 - Medical Imaging Seminar I (SP) **1.00 - credit(s)**

This course offers an evaluation and review of radiography cases and discussion of current issues in the radiologic sciences.

Contact Hours: Seminar 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

IMAG 2806 - IMAG Post Primary Seminar I (A) **1.00 credit(s)**

This course is designed to help the student/technologist prepare for the didactic portion of post primary examination in either C.T, M.R.I., I.R., or Cardiac Catheterization. This course is designed to provide knowledge about care giving skills specific to patients undergoing post primary modality examinations. The role of the technologist to effectively communicate and maintain patient safety and comfort will be discussed. Patient preparation and monitoring, image acquisition, and all content specified for A.R.R.T. examination specific to the selected modality will be covered.

Contact Hours: Seminar 1.00

Lab Fee: \$50.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

IMAG 2807 - IMAG Post Primary Seminar II (A) **1.00 credit(s)**

This course is designed to help the student/technologist prepare for the didactic portion of post primary examination in either C.T, M.R.I., I.R., or Cardiac Catheterization. This course is designed to provide knowledge about care giving skills specific to patients undergoing post primary modality examinations. The role of the technologist to effectively communicate and maintain patient safety and comfort will be discussed. Patient preparation and monitoring, image acquisition, and all content specified for A.R.R.T. examination specific to the selected modality will be covered.

Contact Hours: Seminar 1.00

Lab Fee: \$50.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

IMAG 2904 - IMAG Field Experience/Internship IV (A)**3.00 credit(s)**

Provides the practical experience necessary to function as a radiographer and is designed to enhance and complement didactic studies. Experience is gained in the general radiographic and fluoroscopic areas, emergency department, operating room, portable radiography, tomography, computed tomography, cardiovascular and interventional radiology, digital imaging and special area (one day) rotations in nuclear medicine, radiation oncology, diagnostic medical sonography, cardiac catheterization laboratory, and extracorporeal shock wave lithotripsy. Film critique and case presentations are continued.

Contact Hours:**Lab Fee: \$49.60**

Pre-requisites: IMAG1903

Co-requisites: none

Restrictions: none

IMAG 2905 - IMAG Field Experience/Internship V (SP)**3.00 credit(s)**

In this second directed practice, students are required to complete the Final Competency Examination during this semester. Clinical rotations are scheduled in the general radiographic and fluoroscopic areas, the operating room, the emergency room, mammography, and magnetic resonance. Once the Final Competency Examination has been satisfactorily completed, the student may custom design individual specific clinical rotations. Film critique and case presentations are continued.

Contact Hours:**Lab Fee: \$49.60**

Pre-requisites: IMAG2904

Co-requisites: none

Restrictions: none

IMAG 2906 - Post Primary Imaging I (A)**2.00 - credit(s)**

Provides the practical experience necessary to function as a radiographer and is designed to enhance and complement didactic studies. Experience is gained in the general radiographic and fluoroscopic areas, emergency department, operating room, portable radiography, tomography, computed tomography, cardiovascular and interventional radiology, digital imaging and special area (one day) rotations in nuclear medicine, radiation oncology, diagnostic medical sonography, cardiac catheterization laboratory, and extracorporeal shock wave lithotripsy. Film critique and case presentations are continued.

Contact Hours: Practicum 14.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

IMAG 2907 - Post Primary Imaging II (A)**2.00 - credit(s)**

Provides the practical experience necessary to function as a radiographer and is designed to enhance and complement didactic studies. Experience is gained in the general radiographic and fluoroscopic areas, emergency department, operating room, portable radiography, tomography, computed tomography, cardiovascular and interventional radiology, digital imaging and special area (one day) rotations in nuclear medicine, radiation oncology, diagnostic medical sonography, cardiac catheterization laboratory, and extracorporeal shock wave lithotripsy. Film critique and case presentations are continued.

Contact Hours: Practicum 14.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

Interactive Media**IMM 1100 - Principles of Interactive Design (A SP SU)****3.00 credit(s)**

IMM 1100 series introduces students to the products, tools, and environment of the interactive multimedia profession. Initially, the course covers elements of communication, marketing, the Internet, Web development, digital media and graphic design. The focus is then on designing, choosing software and scripting the interactive media project. This course details how these disciplines are related to professional job responsibilities and the other team members and relies on industry Web sites to bring state-of-the-art information directly to the student in a timely manner.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

IMM 1115 - Survey of Gaming Industry (A SP SU)**3.00 credit(s)**

IMM 1115 is an introduction to the video game industry. Students will learn about the history of the game industry. They will also learn about its effect on culture, commerce, and politics. During the last half of this course, they will learn the process of game development through the creation of a Game Design Document. For majors, the document will provide a foundation for their future projects.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

IMM 1116 - Storytelling for Games (A SP)**3.00 credit(s)**

IMM 1116 deals with common writing principles and theories used in the video gaming industry. In addition to basic writing principles students will learn the history of the story, game storytelling devices, character types, and verbal character development. Students will develop an appropriate story line for a game and a three act structured game story with appropriate cut-scenes and dialogue.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

IMM 1120 - Fundamentals of Interactive Media (A SP SU)**4.00 credit(s)**

IMM 1120 deals with the basics of interactive media software including Fireworks, Dreamweaver and Flash. In Fireworks, students learn how to use the tools of Fireworks to create and edit web graphics, both vector and bitmap, work with layers, interactive buttons, components, symbols, optimization and web page layout. In Dreamweaver, students will learn how to use tables, basic CSS, layout and design for web. In Flash, students will learn to develop a working knowledge of various tools plus critical interface elements such as layers, scenes, nested symbols, and movie clips.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$8.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

IMM 1140 - Cascading Style Sheets (SP)**3.00 credit(s)**

IMM 1140 deals with basic and intermediate understanding of developing sites using Cascading Style Sheets. Components include CSS essentials, learning to build effective navigation and page layouts, working with typography, colors, backgrounds, and white space. The basics of HTML should be understood before entering this class.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$6.00

Pre-requisites: CSCI1145

Co-requisites: none

Restrictions: none

IMM 1160 - Media Graphics/Optimization (A SP)**3.00 credit(s)**

IMM 1160 provides the students with a deeper understanding of the industry standard Adobe Photoshop/Fireworks graphics software. The focus of this course enables students to create graphics, understand extensions, slice, animate and optimize. Students get to understand the process of creating graphics for multiple mediums including web, CD and DVD. In class projects as well as out of class assignments push the students to use both written, verbal and graphic communication skills.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$8.00

Pre-requisites: IMM1100

Co-requisites: none

Restrictions: none

IMM 1201 - 3D Modeling 1 (A SP SU)**4.00 credit(s)**

IMM 1201 teaches the students about the 3D production pipeline. Using industry standard 2D and 3D software, they will model, texture, rig, animate and render their projects. At the end of the course, students will be introduced to more advanced principles of multi texture creation and application.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$13.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

IMM 1202 - 3D Modeling 2 (SP)**3.00 credit(s)**

IMM 1202 is the second of three 3D modeling courses. The focus is on level content creation. Students learn about level structure creation, normal maps, specular maps, referencing, and many other principles. It will also teach students about what is expected in level creation of game development.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$19.00

Pre-requisites: IMM1201

Co-requisites: none

Restrictions: none

IMM 1220 - Digital Media Preparation (A)**2.00 credit(s)**

IMM 1220 overviews the required disciplines needed to function in the interactive multimedia profession. Primary focus in this course centers on planning, design and the software required in the completion of a multimedia project. This course is not intended for Interactive Media majors.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

IMM 1500 - Basics of Video and Sound (A SP SU)**3.00 credit(s)**

IMM 1500 is designed to introduce students about how to use the power of audio and video to communicate. Topics covered include basic digital audio and video editing in a non-linear environment, basic shooting and camera work, production planning, importing of assets, and exporting to the Web.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$9.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

IMM 1510 - Audio Production (SP)**3.00 credit(s)**

IMM 1510 is designed to develop an understanding of the relationship of audio production to various related media including multimedia and broadcast. Sound design and the creation and recording of audio assets are stressed. The course is structured around editing in a non-linear environment and the associated standard digital editing practices. Students will learn how to utilize a digital audio workstation in a typical production environment.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$10.00

Pre-requisites: IMM1500

Co-requisites: none

Restrictions: none

IMM 1520 - Single Camera Video Production (SP)**3.00 credit(s)**

IMM 1520 provides students with a comprehensive overlook and application of the production process. Students will analyze specific genres; write an appropriate script for the genre, storyboard, and produce a genre-focused video in a collaborative setting. In addition to genre storytelling, students will learn the proper audio and video aesthetics using a single camera for telling a specific story (dialogue framing, planning action scenes, lighting techniques, using boom mics, scoring a video). Image capture and editing at a digital workstation will be highlighted. Students will also be responsible for using graphic elements in the video as well as creating a poster aimed at a specific target audience.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$10.00

Pre-requisites: IMM1500

Co-requisites: none

Restrictions: none

IMM 1530 - Screenwriting (A)**3.00 credit(s)**

IMM 1530 deals with common writing principles and theories used in the digital audio and video fields. In addition too basic writing principles students will learn to develop a treatment, plan characters, write effective scenes, and a screenplay for use in both audio and video. Different screenwriting programs will be highlighted.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

IMM 1580 - Motion Graphics/AfterEffects (A)**2.00 credit(s)**

IMM 1580 students will learn fundamentals of how to use Adobe After Effects to create motion graphics by integrating interactive media, sound, and video into interesting compositions. Students will learn how to set keyframes on a timeline and work with transform properties, motion paths, masks, and effects. Students will need to have Adobe Premiere Pro knowledge before taking this class.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$10.00

Pre-requisites: IMM1500

Co-requisites: none

Restrictions: none

IMM 2201 - 3D Modeling 3 (A)**3.00 credit(s)**

IMM 2201 is the final 3D modeling course. It focuses on animation and character modeling. Students will use the skills that they have already developed and apply them to a more technical aspect of content development, with the learning of rigging for animation. They will also learn to take the skills that they have learned and apply them in the creation of an organic character model.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$26.00

Pre-requisites: IMM1202

Co-requisites: none

Restrictions: none

IMM 2370 - Interactive Animation (A SP)**3.00 credit(s)**

IMM 2370 provides the students with an overview of how to begin, storyboard, create and design a fully functional Animate Web site. Topics covered include becoming familiar with the palettes and tool box, new design, and drawing techniques, using Animate as an authoring tool, and understanding and applying Animate's expanded actions and scripting capabilities. Scripting is an accessible and powerful form of computer programming that designers and multimedia developers can use to increase the level of interactivity, optimize, and enhance their multimedia web projects.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$16.00

Pre-requisites: IMM1160

Co-requisites: none

Restrictions: none

IMM 2372 - Adobe Phonegap (SP)**3.00 credit(s)**

IMM 2372 provides the students with an overview of the software -- Adobe PhoneGap. PhoneGap is Adobe's distribution of the free and open source framework. Using PhoneGap, developers can build native mobile apps using standard HTML 5, JavaScript, and CSS, and then deploy those apps to every leading mobile platform with little or no recoding. Through realistic examples, the student will master key PhoneGap APIs for everything from GPS to the file system, contacts to camera, device to events, and more.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$8.00

Pre-requisites: IMM1140 and CSC12447

Co-requisites: none

Restrictions: none

IMM 2390 - Interactive 2D Games (SP)**3.00 - credit(s)**

IMM 2390 Builds on the previous course (IMM 2370), students learn deeper interactive scripting capabilities of Animate. This course briefly details the science of game development using the Animate software, including design, story character development, the physics and motion of a game, and audio issues. Through this course, a variety of games are created using the power of Flash and the most recent advancements in ActionScript 3.0. With a intermediate knowledge of Animate, the designers will get more of an understanding of what developers do to enhance their productivity and produce high quality games that make a real impact.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$8.00

Pre-requisites: IMM2390 IMM 2370 provides the students with an overview of how to begin, storyboard, create and design a fully functional Animate website. Topics covered include becoming familiar with the palettes and tool box, new design, and drawing techniques, using Animate as an authoring tool, and understanding and applying Animate's expanded actions and scripting capabilities. Scripting is an accessible and powerful form of computer programming that designers and multimedia developers can use to increase the level of interactivity, optimize, and enhance their multimedia Web projects.

Co-requisites: none

Restrictions: none

IMM 2520 - Advanced Video Production (A)**3.00 credit(s)**

IMM 2520 provides students with an overview of advanced video storytelling. Students will write appropriate scripts for a client, storyboard, and produce a professional video that has relevance to the local area or non-profit organization. In addition to advanced storytelling students will learn the proper video and audio aesthetics for telling the story (Interviewing, developing a narrative from footage, framing shots, framing, steadicam movement, costumes, casting, acquiring assets). Image capture/digitizing, editing at a digital workstation, and high-definition video will be highlighted.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0.00

Pre-requisites: IMM1510

Co-requisites: none

Restrictions: none

IMM 2601 - Game Development 1 (A)**2.00 credit(s)**

IMM 2601 is the first of two courses. It teaches the skills necessary in actual game production by using an industry standard game engine. Through experience, students will learn the difficulties of game creation, as well as the tools and resources necessary overcome them. They will discover the difference between just creating art assets, and actually making functional game play elements.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$0.00

Pre-requisites: IMM1115 and IMM1116 and IMM1202

Co-requisites: none

Restrictions: none

IMM 2603 - Collaborative Project (SP)**2.00 credit(s)**

IMM 2603 capstone course will combine the students in a setting that will simulate a realistic, collaborative production environment. Students will have to use all of the skills that they have developed through the program in a unique way to develop their group project. Rather than doing a little bit of everything, students will have the opportunity to focus on specific areas of the production process.

Contact Hours: Lab 4.00

Lab Fee: \$10.00

Pre-requisites: IMM2601

Co-requisites: none

Restrictions: none

IMM 2620 - Website Design Creation (A SP)**3.00 credit(s)**

IMM 2620 provides the student with an overview of how to begin, storyboard, create and design a fully functional Web site. The software Dreamweaver is a professional authoring tool for creating and managing Web pages. Topics covered include becoming familiar with the palettes and tool box, design techniques, templates, understanding and applying Dreamweaver's expanded scripting capabilities using Cascading Style Sheets.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$8.00

Pre-requisites: IMM1160

Co-requisites: none

Restrictions: none

IMM 2621 - Adobe Muse (SP)**3.00 credit(s)**

IMM 2621 provides the students with an overview of the software -- Adobe Muse. Students will learn Muse from the ground up and create websites using the latest web standards without writing code. They will learn how to plan projects using site maps and master pages, design pages and add interactivity through buttons, links and widgets and publish a website via Business Catalyst or standard web hosting.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$8.00

Pre-requisites: IMM1120 or IMM1160

Co-requisites: none

Restrictions: none

IMM 2622 - WordPress (A)**3.00 credit(s)**

IMM 2622 provides the students with an overview of the software -- WordPress. Legions of web designers and developers are choosing WordPress for building sites. That's because it's powerful, reliable, flexible, scalable and more. This class is the complete guide to mastering WordPress theme development covering everything from installation to leveraging the community and resources to improve your WordPress skills for years to come.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$8.00

Pre-requisites: IMM1120

Co-requisites: none

Restrictions: none

IMM 2710 - Interactive Portfolio (SP)**3.00 credit(s)**

Interactive Portfolio will assist students in building confidence and focus when marketing themselves using Flash. Students will take that knowledge and author their own interactive CD resume for external use in locating a professional job. Other marketing uses include web, social media and print versions.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$9.00

Pre-requisites: IMM2370

Co-requisites: none

Restrictions: none

IMM 2802 - IMM Seminar (A SP SU)**1.00 credit(s)**

IMM 2802 offers supervised, on-the-job application of knowledge and skills acquired in the classroom. Student must be a IMM major, who has completed 12 hours in the technology and has permission of the instructor.

Contact Hours: Seminar 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

IMM 2902 - Interactive Media Practicum (A SP SU)**1.00 credit(s)**

IMM 2902 explores the application of business knowledge to specific areas of on-the-job practicum experience. Student must be a IMM major, who has completed 12 hours in the technology and has permission of the instructor.

Contact Hours: Practicum 7.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: IMM2802

Restrictions: Instructor Permission

IMM 2994 - IMM Current Topics (On Demand)**1.00 - 3.00 credit(s)**

IMM 2994 course is a detailed examination of a selected current topic in Interactive Media. This course can be repeated.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

Italian**ITAL 1101 - Beginning Italian I (A SP SU)****4.00 credit(s)**

ITAL 1101 presents language instruction through the use of texts, audio/visual, and other selected materials to actively and proficiently communicate in the targeted language. This course also operates on developing student's historical, and cultural consciousness through the use of film, art, music and a wide range of cultural activities particular to the Italian culture. Encourages analytical thinking, individual and group participation and strengthens writing, reading and comprehension skills.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

ITAL 1102 - Beginning Italian II (A SP SU)**4.00 credit(s)**

This course is a continuation of ITAL 1101, with further development of listening, reading, speaking, and writing skills and further study of Italian culture. It meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: ITAL1101 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ITAL 1103 - Intermediate Italian (A SP SU)**4.00 credit(s)**

ITAL 1103 focuses on the reading and discussion of Italian short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of Italian culture. Course meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature programs.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: ITAL1102 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ITAL 1193 - Independent Study in Italian (On Demand) **1.00 - 3.00 credit(s)**

ITAL 1193 offers individual students an opportunity to examine selected topics in Italian in detail. Independent study courses are offered to meet the special needs or interests of an individual student and to pilot new courses.

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: ITAL1103 Minimum grade of "C"

Co-requisites: none

Restrictions: none

Information Technology Support Technician**ITST 1101 - Industrial Applications and Software (A SP)** **2.00 credit(s)**

This is an introductory Industrial Applications and Software (computers) course as it relates to the Engineering Department Students and Industry. The course introduces computer technology critical to the subsequent success in studies related to Manufacturing, Distribution, and Automation Industries.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$20.00

Pre-requisites: Placement into ENGL 1100 and DEV0114 Minimum grade of "C" or Placement into MATH 1010 or higher

Co-requisites: none

Restrictions: none

ITST 1102 - Industrial Network Communications (A SP) **2.00 credit(s)**

An introductory Industrial Network & Data Communication course as it relates to the Engineering, Electrical Mechanical and Mechanical Program's students and Industry. The course introduces communication technologies critical to the subsequent success in studies related to Manufacturing, Distribution, and Automation Industries. Topics include, but not limited to: PLC communications, Data Highway, Machine Communication and Security.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$20.00

Pre-requisites: ITST1101 Minimum grade of "C" or CSCI1103 or CSCI1152

Co-requisites: none

Restrictions: none

ITST 1123 - A + Cert, Managing/Troubleshooting PCs (A SP) **3.00 credit(s)**

This course covers the domains used for the A+ certification. The CompTIA A+ is the ideal foundational certification to get started on a career working with cutting-edge information technologies. It covers mobile, tablets, laptops, desktops and beyond. The exam verifies an individual can troubleshoot networking and security issues within operating systems such as Linux, Android, Windows and more.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$45.00

Pre-requisites: ITST1101 or CSCI1103 or CSCI1152

Co-requisites: none

Restrictions: none

ITST 1136 - Linux Essentials (A SP)**3.00 credit(s)**

This course covers the domains used for the LPI Essentials certification. You'll begin with basic principles of Open Source and the Linux way of doing things, then move on to common user programs such as the command line and text editors. With these skills in hand, you can tackle system administration tasks, such as file and user management and configuration.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$25.00

Pre-requisites: ITST1101 and ITST2252

Co-requisites: none

Restrictions: none

ITST 2238 - Information Security Fundamentals (A SP)**3.00 credit(s)**

This course offers in-depth coverage of the current risks and threats to an organization's data, combined with a structured way of addressing the safeguarding of these critical electronic assets. The course provides a foundation for those new to Information Security as well as those responsible for protecting network services, devices, traffic, and data. Additionally, the course provides the broad-based knowledge necessary to prepare students for further study in other specialized security fields. It is also intended to serve the needs of individuals seeking to pass the Computing Technology Industry Association's (CompTIA) Security certification exam (SY0-401).

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$0

Pre-requisites: ITST1101 and CSCI1152 or ITST1102 or ITST1101

Co-requisites: none

Restrictions: none

ITST 2252 - Scripting Fundamentals (A SP)**2.00 credit(s)**

This is an introductory level programming course geared at scripting for Computer Science, IT and Cyber students. Python is a dynamic object-oriented programming language that can be used for many kinds of software development. It offers strong support for integration with other languages and tools, comes with extensive standard libraries. Many Python programmers report substantial productivity gains and feel the language encourages the development of higher quality, more maintainable code.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$24.00

Pre-requisites: ITST1101 Minimum grade of "C"

Co-requisites: none

Restrictions: none

ITST 2258 - Application Security (A)**3.00 credit(s)**

This course introduces the key software security principles, concepts and techniques that are used to create secure software applications. It focuses on how to integrate secure development practices into the software development lifecycle. Students will understand how and why software security problems are exploited. Students will learn tools and techniques for software security vulnerability discovery and management.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$0.00

Pre-requisites: ITST1101 ITST 1101 + ITST 1123 OR ITST 1101 + 1102 OR ITST 1101 + CSCI 1152 and ITST1123 ITST 1101 + ITST 1123 OR ITST 1101 + 1102 OR ITST 1101 + CSCI 1152 or ITST1102 ITST 1101 + ITST 1123 OR ITST 1101 + 1102 OR ITST 1101 + CSCI 1152 or CSCI1152 ITST 1101 + ITST 1123 OR ITST 1101 + 1102 OR ITST 1101 + CSCI 1152

Co-requisites: none

Restrictions: none

Japanese

JAPN 1101 - Beginning Japanese I (A SP SU)**4.00 credit(s)**

Course introduces elements of standard modern colloquial Japanese grammar, with emphasis on oral communications and culture. Students will learn to hear and reproduce the sounds of modern Japanese accurately; handle basic interactive skills such as greetings, invitations and apologies; and learn about cultural factors that are reflected in the language.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

JAPN 1102 - Beginning Japanese II (A SP SU)**4.00 credit(s)**

This course is a continuation of JAPN 1101, with further development of reading and writing skills and further study of culture. JAPN 1102 meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: JAPN1101 Minimum grade of "C"

Co-requisites: none

Restrictions: none

JAPN 1103 - Intermediate Japanese (A SP SU) **4.00 credit(s)**

JAPN 1103 is a continuation of JAPN 1102, with further development of reading and writing skills and further study of culture. JAPN 1103 meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: JAPN1102 Minimum grade of "C"

Co-requisites: none

Restrictions: none

JAPN 1193 - Independent Study in Japanese (On Demand) **1.00 - 3.00 credit(s)**

JAPN 1193 offers individual students an opportunity to examine selected topics in Japanese in detail. Independent study courses are offered to meet the special needs or interests of an individual student and to pilot new courses.

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

Landscape Design/Build

LAND 1100 - Introduction to the Landscape Profession (A SP SU) **2.00 credit(s)**

This course is an overview of landscape professions in the green industry, with emphasis in environmental, design and horticultural applications. This course is not offered for degree credit.

Contact Hours: Lecture 2.00

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LAND 1160 - Landscape Principles (A SP SU) **2.00 credit(s)**

A verbal, written and illustrative investigation in understanding the basic components contained within the landscape design process. Exploring and defining Form vs. Function, Spatial Relationships, 2D vs. 3D, Horticultural Functions and numerous other design principles and how they are combined.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

LAND 1165 - Landscape Survey (A SP)**1.00 credit(s)**

This course explores various company structures through on site visits of Landscape companies.

Contact Hours: Lab 3.00

Lab Fee: \$17.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LAND 1545 - Landscape Computer Applications (A SP SU)**2.00 credit(s)**

This course will explore current computer applications and digital representations as they relate to landscape projects. Computer Aided Design (CAD) techniques needed to produce landscape designs, plant lists, construction details and specifications.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$22.00

Pre-requisites: LAND1560

Co-requisites: none

Restrictions: none

LAND 1560 - Residential Design (A SP)**3.00 credit(s)**

This course will study the application of landscape design principles to large and small residential construction situations, design vs. style, the various functional uses of plant material, performing site inventory and analysis and drafting basic projects.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$40.00

Pre-requisites: LAND1160

Co-requisites: none

Restrictions: none

LAND 1565 - Landscape Graphics (A SP)**2.00 credit(s)**

This course will study the graphic symbols used to create plan view, elevation and perspective landscape drawings. Included will be such information as color rendering, graphic representation of trees and shrubs, and the application of shade and shadow to create a two dimensional representation of the three dimensional landscape.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$22.00

Pre-requisites: LAND1160

Co-requisites: none

Restrictions: none

LAND 1590 - Landscape Management I (SP)**3.00 credit(s)**

Basic landscape management principles will be discussed with an emphasis on procedures best suited to promote optimum growth and aesthetic qualities of landscape plants.

Contact Hours: Lecture 1.50, Lab 4.50

Lab Fee: \$25.00

Pre-requisites: HORT1130 and LAND1160

Co-requisites: none

Restrictions: none

LAND 2160 - Landscape Construction (A SP)**3.00 credit(s)**

This course will study the technical design and specification of landscape structures (decks, stairs, pavements, retaining walls, and site fixtures). Projects for designer-contractor documentation will be developed.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$25.00

Pre-requisites: MATH1101 and LAND1160

Co-requisites: none

Restrictions: none

LAND 2165 - Landscape Irrigation (A)**3.00 credit(s)**

This course will study water and lighting systems, with the emphasis on landscape irrigation. Principles of irrigation design, installation and management will be developed with class projects.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$17.00

Pre-requisites: MATH1101 and LAND1560

Co-requisites: none

Restrictions: none

LAND 2175 - Sustainable Sites (A SP)**4.00 credit(s)**

This course will study the ecological design issues for good site planning processes, principles, and methods of site analysis. The application of landscape site design principles for sustainable sites will be implemented with class design projects.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$33.00

Pre-requisites: LAND1560

Co-requisites: none

Restrictions: none

LAND 2190 - Landscape Management II (A)**3.00 credit(s)**

Basic landscape management principles will be discussed with an emphasis on procedures best suited to promote optimum growth and aesthetic qualities of landscape plants.

Contact Hours: Lecture 1.50, Lab 4.50

Lab Fee: \$40.00

Pre-requisites: LAND1590

Co-requisites: none

Restrictions: none

LAND 2560 - Planting Design (SP SU)**3.00 credit(s)**

This course will study the composition and design characteristics of plant materials. Technical considerations for selection, climate, cultural suitability, availability, costs, and maintenance will be discussed. Students will develop landscape documents with planting plans, plant lists, details and specifications. This course will be offered in summer semester in even numbered years.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$33.00

Pre-requisites: HORT2130 and LAND1565 and LAND2160

Co-requisites: none

Restrictions: none

LAND 2590 - Landscape Operations (A SP)**3.00 credit(s)**

This is a comprehensive course for the landscape program and students will receive an overview of the business principles for a landscape contractor. Students will work on projects simulating the operations of a landscape business.

Contact Hours: Lecture 1.50, Lab 4.50

Lab Fee: \$26.00

Pre-requisites: LAND2160

Co-requisites: LAND2560

Restrictions: none

LAND 2900 - LAND Field Experience (A SP SU)**3.00 credit(s)**

This course provides an opportunity for an off-campus experience. It will reinforce the formal education received in the program with actual work conditions. "N" credit will not be accepted. Instructor permission is required for enrollment into this class.

Contact Hours: Field Experience/Internship 40.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

LAND 2994 - SPT: LAND (On Demand)**1.00 - 3.00 credit(s)**

This course will allow for special topics to be offered in a timely and responsive manner.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

Latin**LATN 1101 - Beginning Latin I (A SP SU)****4.00 credit(s)**

LATN 1101 is an introduction to the fundamentals of Latin with practice in reading and writing. It includes selected studies in culture. LATN 1101 meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

LATN 1102 - Beginning Latin II (A SP SU)**4.00 credit(s)**

This course is a continuation of LATN 1101, with further development of reading and writing skills and further study of culture. LATN 1102 meets elective requirements in the Associate of Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: LATN1101 Minimum grade of "C"

Co-requisites: none

Restrictions: none

LATN 1103 - Intermediate Latin (A SP SU)**4.00 credit(s)**

This course is a continuation of LATN 1102. It Arts and Associate of Sciences Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: LATN1102 Minimum grade of "C"

Co-requisites: none

Restrictions: none

LATN 1193 - Independent Study in Latin (On Demand)**1.00 - 3.00 credit(s)**

LATN 1193 offers individual students an opportunity to examine selected topics in Latin in detail. Independent study courses are offered to meet the special needs or interests of an individual student and to pilot new courses.

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: LATN1103 Minimum grade of "C"

Co-requisites: none

Restrictions: none

Paralegal Studies

LEGL 1101 - Intro to Paralegal Studies & Ethics (A SP SU)**3.00 credit(s)**

This course focuses on the responsibilities and duties of paralegals. The student will learn the history and growth of the paralegal occupation, educational options and the professional organizations which impact the paralegal. The course contains an extensive overview of the basic legal processes in the United States with an emphasis placed on the ethical duties, obligations and responsibilities of the paralegal. Finally the student will be given an opportunity to explore an introduction to legal research and writing and technology and how it impacts the paralegal profession.

Contact Hours: Lecture 3.00

Lab Fee: \$40.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

LEGL 1102 - Law Office Technology (A SP SU)**3.00 credit(s)**

This course is an introduction to office management procedures unique to law offices, including computerized time keeping and billing programs. Emphasis will be placed on the development of accurate record-keeping and organizational skills. The course will provide hands-on experiences by utilizing various legal software packages for students to apply to typical legal office situations.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$100.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 1105 - Torts and Contracts (A SP SU)**3.00 credit(s)**

The two cornerstones of legal practice, torts and contracts, will be extensively reviewed with the elements, theories and principles studied and their impact on the everyday practice of law.

Contact Hours: Lecture 3.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 1111 - Research and Writing (A SP)**3.00 credit(s)**

An introduction to conducting legal research and the proper methods for preparing briefs, pleadings and memoranda of law. Locating, analyzing, and checking of case law is emphasized. Students will learn proper citation methods and legal writing style, as well as become familiar with the Ohio Rules and Federal Rules of Appellate Procedure. Students will be taught primary and secondary sources The Lexis legal database will be introduced.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$60.00

Pre-requisites: LEGL1101 and LEGL1102

Co-requisites: none

Restrictions: none

LEGL 2005 - Civil Practice & Procedure (A SP)**3.00 credit(s)**

The student will learn the civil process of a typical trial utilizing a study of the Ohio Rules of Civil Procedure, the Federal Rules of Civil Procedure, and Federal and State Rules of Evidence. The elements of a tort claim will be discussed with the drafting of pleading and how e-discovery and other pretrial processes impact the legal process and the paralegal.

Contact Hours: Lecture 3.00

Lab Fee: \$60.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2010 - Criminal Law & Procedure (SP SU)**3.00 credit(s)**

The Ohio Criminal Code and Rules of Criminal Procedure will be the foundation of this examination of the pretrial and post-trial procedures in a criminal case. Students will be exposed to the criminal justice system from the elements of the offenses through post-conviction remedies. The drafting of motions and other documents associated with criminal matters will be included.

Contact Hours: Lecture 3.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2012 - Advanced Legal Research (SP SU) **3.00 credit(s)**

This course is an intense production-oriented research and writing course designed to prepare the student to function under the requirement of rapid completion of research and writing assignments commonly made in law offices and other legal environments. The student will encounter a variety of opportunities including motions, pleadings and briefs, the production of which will require both speed and accuracy and will incorporate both printed and computer-based research strategies.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$60.00

Pre-requisites: LEGL1111

Co-requisites: none

Restrictions: none

LEGL 2014 - Family Law (A SP) **3.00 credit(s)**

This course explores domestic relations matters including marriage, divorce, dissolution, child custody and support, visitation and adoption. The law regulating such matters, and the drafting of appropriate documents, will be emphasized.

Contact Hours: Lecture 3.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2015 - Electronic Discovery (A) **3.00 credit(s)**

This course is designed to familiarize the student with the basic principles of electronic discovery in the course of legal proceedings. Additionally, the student will become familiar with sources of potential evidence and the technical, procedural, and evidentiary rules that regulate locating, retrieving, and reviewing those sources.

Contact Hours: Lecture 3.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2018 - Probate Law (SP SU) **3.00 credit(s)**

This course is a study of the law of wills, trusts, living wills, health care power of attorney forms, estates and estate administration including estate taxation. The student will draft basic wills trust and plan a living will. Testate and intestate estates, law of descent and distribution, estate planning and other probate processes will be discussed.

Contact Hours: Lecture 3.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2019 - Real Estate (A SP)**3.00 credit(s)**

In this course the student will study the law governing real property, its ownership, sale, lease and other conveyances. Student will draft basic real estate documents utilized in the transfer of interest in real estate. The student will also study the concepts of tenant landlord law. The course will examine the title search of real estate as well as title insurance.

Contact Hours: Lecture 3.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2023 - Immigration Law (SP)**3.00 credit(s)**

This course is an overview of federal Immigration Law and practices for assisting immigrants and illegal aliens. The student will learn the origins of immigration law and explore current developments. The classification of aliens-their legal rights and the various administrative and judicial processes involving immigration cases.

Contact Hours: Lecture 3.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2024 - Business Organizations (SP SU)**3.00 credit(s)**

This class covers the fundamentals of the formation of business entities including sole proprietorships, partnerships, and corporations, limited liability entities and non profits. Students will prepare documents regarding the formation of such organizations, learn how statutes regulate and control the formation and operation business entities on the state and federal level.

Contact Hours: Lecture 3.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2026 - Administrative Law (A SP)**3.00 credit(s)**

In this class student will study the history and origins of administrative agencies on the federal and state level. An examination of statutory law, case law, and current administrative rules and actions will be utilized to develop an understanding of the role and authority of administrative agencies. Particular attention will be paid to due process, formal and informal agency actions and their rulemaking procedures. The paralegal's role in administrative adjudication will be emphasized.

Contact Hours: Lecture 3.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2029 - Certified Paralegal Exam Review (SP) **3.00 credit(s)**

This course is designed as a review course for the student wishing to take the Certified Paralegal Exam. The student will intensively review and complete practice exercises encompassing all areas of procedural and substantive law and ethics included on the Certified Paralegal Exam. A mock CP exam will be administered.

Contact Hours: Lecture 3.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2038 - Insurance Law (SP) **2.00 credit(s)**

LEGL 2038 is an introduction to insurance law. The course will include principles of indemnity, interests protected, the transfer of risk, and claims processes. The student will be taught the impact of administrative law and civil litigation as it relates to insurance.

Contact Hours: Lecture 2.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2043 - Alternative Dispute Resolution (A SP SU) **3.00 credit(s)**

This course examines the legal, ethical, and policy issues that arise in the use of negotiation, mediation, arbitration, mini-trials, summary jury trials and conciliation. The student will have the opportunity to learn mediation skills for personal and professional situations.

Contact Hours: Lecture 3.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2044 - Debtor/Creditor Relations (SP) **2.00 credit(s)**

This course will ensure that the student is aware of the respective legal rights of creditors and debtors provided under federal and state law debt collection procedures. Also the student will learn the statutory and regulatory structure, location and jurisdiction of bankruptcy law and bankruptcy courts and their nonjudicial officers. Parties and proceedings will be discussed and students will receive an overview of the different bankruptcy chapters, forms and PACER filing system.

Contact Hours: Lecture 2.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2050 - Intellectual Property (SP)**3.00 credit(s)**

This course explores the world of patents, trademarks, copyrights and trade secrets, as well as the history and origins of federal, state and foreign law which regulates the registration and ownership of these business assets. The course will discuss case law that covers these areas. Special emphasis will be given to the impact of the digital, electronic and Internet world in this specialized legal area. The student will learn the processes to register and protect these assets and the role of the legal professional in assisting the intellectual property client.

Contact Hours: Lecture 3.00**Lab Fee: \$40.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2051 - Computer Assisted Legal Research (SU)**2.00 credit(s)**

This course will expose the Paralegal student to the ever expanding role of computer-assisted research, an alternative to traditional, manual legal research. The student will explore Web resources techniques and sites to obtain both legal and non legal information. The student will be required to complete a series of projects on Lexis and Westlaw Skills sets in which the student will become proficient with the various uses and functions of electronic legal information retrieval.

Contact Hours: Lecture 1.00, Lab 2.00**Lab Fee: \$100.00**

Pre-requisites: LEGL2012

Co-requisites: none

Restrictions: none

LEGL 2061 - Business Law I (A SP SU)**3.00 credit(s)**

This course offers students a survey of the legal framework of business, the nature of legal systems and the law, including contracts, criminal, and the law of tort, intellectual property and cyber law. It also explores the law of agency, corporation, partnerships, and property.

Contact Hours: Lecture 3.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2064 - Legal Environment of Business (A SP SU)**3.00 credit(s)**

This course presents an overview of the American legal system with an introduction to the legal concepts and principles that form its foundation. The course will examine the judicial system and methods of dispute resolution, while focusing on business crimes and torts, including product liability, ethics, contract formation and enforcement, consumer protection, employment law, environmental regulations, business organizations, particularly sole proprietorship, partnerships, and corporations. Students will be able to understand the legal ramifications of their business decisions.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2072 - Mediation (SP SU)**2.00 credit(s)**

This course is an intensive overview of the mediation process. Students will study both statutory and private mediation processes. Students will review domestic relations mediation, employment fact-finding and labor mediation processes. Additionally, the student will learn the different models of mediation with particular emphasis on the Seven Step Model. Each student will be involved in preparing and conducting several mediation role playing sessions as both mediator and participant. Each student will conduct a mediation in class and prepare a mediation notebook as a final project.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: LEGL2043

Co-requisites: none

Restrictions: none

LEGL 2194 - SPT: Paralegal Studies (On Demand)**1.00 - 3.00 credit(s)**

This course is a special topics course designed to allow the student to research and develop an understanding of legal-assisting issues unique to the interest of the student and for which there is no other course available.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

LEGL 2815 - LEGL Practicum & Seminar (A SP SU) **2.00 credit(s)**

This course offers a guided internship work experience in an office, agency or business providing legal services. Exact duties are decided upon by agreement of the student and administrators of the placement site. The seminar discusses the work experiences and explores strategies to improve work performance. The development of an e-portfolio and preparation of resumes, interviewing and electronic job searching will be explored.

Contact Hours: Seminar 1.00, Practicum 7.00

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

Linguistics

LING 2000 - Introduction to Linguistics (A SP SU) **3.00 credit(s)**

This course presents a general survey of linguistics, with emphasis on five dimensions of the human production and use of language; physiological, grammatical, psychological, social/cultural, and historical. Students learn how their native language shapes their perception of self and the world, and how to understand the perceptions of other language-speakers.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

Massage

MASS 1236 - Massage Therapy Law & Ethics (A) **2.00 credit(s)**

This course provides a general overview of the legal system, including criminal and civil law. An in-depth review of the statutes and administrative rules that govern massage therapy in Ohio are provided. The professional practice of health care including the role of the massage therapy professional/practitioner, relationships with other health care providers, stress and self-care of health care professionals, health care ethics, role fidelity, and confidentiality is also discussed.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission

MASS 1261 - Massage Techniques (A SP)**4.00 credit(s)**

This course is an introduction to the professional practice of massage therapy including hygiene, and the seven (7) basic techniques of massage. The student will study the therapeutic applications and physiological effects of the basic techniques and begin to develop a systematic approach to the application of these techniques.

Contact Hours: Lecture 2.00, Lab 6.00

Lab Fee: \$75.00

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission Other

MASS 1273 - Massage Pathophysiology (A SP)**4.00 credit(s)**

This course provides the student with the indication and contraindication for conditions, disorders and dysfunctions of the human body and provides student with the appropriate application of massage techniques for indicated treatment.

Contact Hours: Lecture 2.00, Lab 6.00

Lab Fee: \$40.00

Pre-requisites: BIO1107 and MASS1261

Co-requisites: none

Restrictions: none

MASS 2200 - Myology (A SP)**2.00 credit(s)**

This course will be an in-depth review of the musculoskeletal system.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$30.00

Pre-requisites: BIO1107

Co-requisites: none

Restrictions: none

MASS 2240 - Fundamentals of Massage Therapy Practice (SP)**2.00 credit(s)**

This course provides the student with an in-depth look at building and maintaining a successful business practice, with a direct focus on massage and bodywork. Strategies for goal setting, time management, professionalism, therapeutic communications, and employment fundamentals are presented. Practice and financial management skills, various marketing fundamentals, and client retention strategies will be topics presented. The student will create marketing and business plans.

Contact Hours: Lecture 2.00

Lab Fee: \$0.00

Pre-requisites: MASS1236 Minimum grade of "C" and MASS1261 Minimum grade of "C"

Co-requisites: none

Restrictions: Program Admission

MASS 2280 - Nationwide Children's Hosp Adv Studies (A SP SU) **2.00 credit(s)**

The student will have the opportunity to work with the massage therapy staff of Nationwide Children's Hospital in the care and treatment of patients of the hospital in a variety of the clinical specialty units. The care unit students may work in include but are not limited to; General Surgery, Burns, Hematology/Oncology, Pulmonary Rehabilitation, Cardiac Rehabilitation, Heart & Lung Transplant, Pediatric Intensive Care, Physical Medicine & Rehabilitation and Pain Clinic. The course will also discuss issues surrounding death and dying of patients.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

MASS 2281 - Hot Stone Massage (SU) **2.00 credit(s)**

This course is designed to offer the massage therapist the opportunity to gain skill and understanding in the efficient, systematic use of hot and cool stones in a full body therapeutic massage, as well as the specified use of stones for deep tissue work. Tools and equipment are discussed in detail to instill confidence in it's use, safety and sanitary procedures.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$40.00

Pre-requisites: MASS1261 Massage Techniques and BIO1107 BIO 1112 Human Biology

Co-requisites: none

Restrictions: none

MASS 2282 - Trigger Point Therapy (SU) **4.00 credit(s)**

Course includes physiology of trigger point therapy and treatment modalities including fascial release, stretch and spray, post isometric muscle release, and advanced Swedish techniques.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$40.00

Pre-requisites: MASS1261 Massage techniques and BIO1107 Human Biology

Co-requisites: none

Restrictions: none

MASS 2284 - Sports Massage (SU) **2.00 credit(s)**

This course is an exploration of the various aspects of sports massage. It will include Event Sports Massage, including pre-event, post-event and inter-competition. Clinical sports massage including assessment and treatment of common sports related injuries by use of a variety of techniques is also discussed. Techniques may include but are not limited to Swedish, specific sports massage techniques, hydrotherapy, stretching, trigger points, and myofascial release.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$40.00

Pre-requisites: MASS1261 Massage techniques and BIO1107 Human Biology

Co-requisites: none

Restrictions: none

MASS 2285 - Aromatherapy Therapy Basics for Massage (SU)**2.00 credit(s)**

This course is designed for the massage therapist/massage student that has an interest in aromatherapy in combination with massage.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$40.00

Pre-requisites: MASS1261 Massage techniques and BIO1107 Human biology

Co-requisites: none

Restrictions: none

MASS 2286 - Spa Services for Massage Therapy (On Demand)**2.00 credit(s)**

This course is designed to familiarize the massage therapist with treatments offered in a spa setting. ♦ Wet-room techniques and equipment are discussed, but the focus is on the delivery of spa treatments in a dry-room setting allowing the student to use spa treatments in a variety of settings (i.e. private practice or day spa) without the need for expensive wet-room equipment. ♦

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$40.00

Pre-requisites: MASS1261 Massage techniques and BIO1107 Human biology

Co-requisites: none

Restrictions: none

MASS 2287 - Introduction to Oncology Massage (SU)**2.00 credit(s)**

This course provides students with an introduction to key concepts for understanding various types of cancer and aspects of a cancer diagnosis. Additionally, common medical interventions, and methods for safely applying massage therapy to individuals with the diagnosis are presented. The student will learn new techniques and be exposed to various massage modalities with specific applications for clinical situations among various populations in oncology massage.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$40.00

Pre-requisites: MASS2891

Co-requisites: none

Restrictions: none

MASS 2296 - Massage Therapy Board Review (SU)**2.00 credit(s)**

This course provides an overview of the Basic Sciences and Limited Branch sections of the Massage Therapy Program. The course is designed to assist in a massage student's preparation for the State of Ohio Medical Board licensure exam for Massage Therapy.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: MASS2891

Co-requisites: none

Restrictions: none

MASS 2298 - Special Topics in Massage Therapy (On Demand) **2.00 credit(s)**

This course brings together concepts discussed in previous program courses. Topics of discussion will revolve around massage therapy techniques other than Swedish massage. Also covered will be the development and modification of institutional programming based on individual and group needs.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$40.00

Pre-requisites: MASS1261 Massage techniques and BIO1112 Human biology

Co-requisites: none

Restrictions: none

MASS 2891 - Massage Clinical (A SP) **4.00 credit(s)**

This course provides the student with clinical practice of massage therapy. The student will learn new techniques and be exposed to various massage modalities with specific applications for clinical situations. The student will have the opportunity to hone their clinical skills with the experience gained in the student clinic.

Contact Hours: Lecture 2.00, Lab 6.00

Lab Fee: \$75.00

Pre-requisites: MASS1261 Massage techniques and BIO1107

Co-requisites: none

Restrictions: none

Medical Assisting

MAT 1100 - Clinical Medical Assisting I (A) **2.00 - credit(s)**

This course introduces the student to the entry-level skills performed by the medical assistant in the clinical area of the medical office. Discussion of standard precautions and compliance with federal regulatory agencies is included. Competency-based skills are instructed through theoretical presentations and will include infection control, sanitization, sterilization, hand-washing, measuring height and weight, setting up the physical examination tray, positioning patients and assisting the physician in examinations. The guidelines for OSHA compliance and emergency preparedness are discussed. Student must be accepted into the Medical Assisting Technology program before scheduling this course. Student must be admitted to the MAT program.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

MAT 1122 - Administrative Medical Assisting (A)**4.00 - credit(s)**

This course introduces students to administrative skills expected of the entry-level medical assistant. Topics to be covered include communications, medicolegal and ethical responsibilities, telephone procedures, medical records management, scheduling, office inventory and supplies, operating office equipment, managing practice finances, and managed care policies and procedures. Application of ICD (diagnosis) and CPT (procedural) coding and insurance claim submission will be included. Discussion and application of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) will be included as well as the importance of patient confidentiality. Student must be accepted into the Medical Assisting Technology program before scheduling this course. Student must be admitted to the MAT program.

Contact Hours: Lecture 4.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

MAT 1123 - Administrative Medical Assisting Lab (A)**1.00 - credit(s)**

This course provides demonstration of entry level administrative skills for the medical office. Topics include communications, medical records management, telephone procedures, scheduling and monitoring appointments, operating office equipment, application of ICD & CPT coding, managed care policies and procedures, insurance and managing practice finances. Student must be accepted into the Medical Assisting Technology program before scheduling this course. Student must be admitted to the MAT program.

Contact Hours: Lab 3.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

MAT 1200 - Clinical Medical Assisting I Lab (A)**1.00 - credit(s)**

This course provides demonstration of the medical assistant's entry-level skills and requires students to perform all skills at competency level. The students will be expected to explain the theory and demonstrate the practical aspects of the clinical skills following a check-off format outlined by the instructor. Student must be accepted into the Medical Assisting Technology program before scheduling this course. Student must be admitted to the MAT program.

Contact Hours: Lab 3.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

MAT 1230 - Pharmacology (SP)**2.00 - credit(s)**

This course will introduce students to the pharmacology of commonly prescribed drugs in the medical office. The topics included in this lecture include prescription legalities, prescription abbreviations, prescription format, maintenance of medication and immunization records, drug therapy, screening and follow-up patient procedures. The theory and principal of drug administration is discussed. The accuracy of recording medications in the medical record is emphasized.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

MAT 1231 - Pharmacology Lab (SP)**1.00 - credit(s)**

This course provides demonstration and technique of administration of medications in the medical office setting; included will be intradermal, subcutaneous, and intramuscular routes as well as oral, topical, sublingual, vaginal and rectal administration. Students will be expected to perform to competency level the pharmacological skills in check-off format outlined by the instructor.

Contact Hours: Lab 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

MAT 1238 - Comp Apps for the Medical Office Lab (SP)**1.00 credit(s)**

This course introduces students to the medical office computer package. The theory of the utilization of a medical office computer package is demonstrated and includes creating a physician data base, preparing patient demographics and daily appointment scheduling. A complete review of coding diagnosis and procedures and insurance claim submissions is included. This lab allows the students to practice the principals of the medical office computer package through hands-on production of office simulations.

Contact Hours: Lab 3.00

Lab Fee: \$10.00

Pre-requisites: MAT1100 Minimum grade of "C" and MAT1122 Minimum grade of "C" and MAT1123 Minimum grade of "C" and MAT1200 Minimum grade of "C" and MAT1300 Minimum grade of "C" and MAT1400 Minimum grade of "C"

Co-requisites: none

Restrictions: none

MAT 1240 - Lab Techniques for the Med Office (SP)**2.00 - credit(s)**

This course introduces students to the procedures utilized to collect and process specimens. Emphasis is placed on methods of collection, processing of specimens and quality control. Additionally, the student is introduced to CLIA guidelines, cardiopulmonary procedures, the microscope, the techniques of capillary puncture and venipuncture (vacutainer, syringe, and butterfly method), CLIA waived procedures, urinalysis, blood typing, microbiology procedures, and understanding the normal ranges and the various laboratory reports.

Contact Hours: Lecture 2.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

MAT 1241 - Physician's Office Laboratory (SP)**2.00 - credit(s)**

This course provides demonstration and techniques utilized to collect and process specimens in the medical office setting; included will be EKG, PFT, capillary puncture, venipuncture, urinalysis, CLIA waived procedures, and microbiology procedures. Students will be expected to perform to competency level the laboratory skills in check-off format outlined by the instructor.

Contact Hours: Lab 6.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

MAT 1300 - Clinical Medical Assisting II (A)**2.00 - credit(s)**

This course introduces medical assisting students to theories beyond the basic entry-level knowledge. The advanced skills will include vital signs, telephone, in-person screenings, minor surgery in the medical office, physical agents to promote tissue healing, and assistance with both routine and specialty examinations. Medical conditions and disease treated in the medical office by the various medical specialties will be studied. Student must be accepted into the Medical Assisting Technology program before scheduling this course. Student must be admitted to the MAT program.

Contact Hours: Lecture 2.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

MAT 1400 - Clinical Medical Assisting II Lab (A)**1.00 - credit(s)**

This course provides demonstration of the advanced level skills for the medical assistant and requires students to perform all advanced level skills at competency level . The students will be expected to explain the theory and demonstrate the practical aspects of the clinical skills following a check-off format outlined by the instructor. Student must be admitted to the MAT program.

Contact Hours: Lab 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

MAT 2800 - Seminar: Medical Assisting (SU)**1.00 credit(s)**

This seminar course includes group discussion of topics related to practicum experiences, current trends and topics, and future employment strategies for the medical assistant. Students will present a professional portfolio of individual competency check-off sheets and completed projects. Review of topics included in the certifying medical assisting exam will be discussed.

Contact Hours: Seminar 1.00

Lab Fee: \$0

Pre-requisites: MAT1100 Minimum grade of "C" and MAT1122 Minimum grade of "C" and MAT1123 Minimum grade of "C" and MAT1230 Minimum grade of "C" and MAT1231 Minimum grade of "C" and MAT1200 Minimum grade of "C" and MAT1300 Minimum grade of "C" and MAT1400 Minimum grade of "C"
Co-requisites: MAT2950

Restrictions: none

MAT 2950 - Clinical Practicum: Medical Assisting (SU)**2.00 credit(s)**

This course provides opportunity for practical experience in a physician's office combining the administrative, clinical and laboratory skills of patient care under the supervision of a licensed physician or a certified medical assistant. Students will be placed in various health care facilities and will serve 210 unpaid externship hours.

Contact Hours: Practicum 14.00

Lab Fee: \$0

Pre-requisites: MAT1100 Minimum grade of "C" and MAT1200 Minimum grade of "C" and MAT1122 Minimum grade of "C" and MAT1123 Minimum grade of "C" and MAT1230 Minimum grade of "C" and MAT1231 Minimum grade of "C" and MAT1238 Minimum grade of "C" and MAT1240 Minimum grade of "C" and MAT1241 Minimum grade of "C" and MAT1300 Minimum grade of "C" and MAT1400 Minimum grade of "C"

Co-requisites: MAT2800

Restrictions: none

Mathematics**MATH 1000 - Mathematics Skills Health Professionals (A SP SU)****1.00 credit(s)**

This course is designed to provide students with the mathematical skills and strategies required to successfully work in the allied health fields. The course begins with a basic review of math skills necessary for administering basic health care. The course also includes ratio and proportion calculations, an introduction to the metric and apothecary systems of measure, metric-household-apothecary conversions, strengths of solutions, general accounting concepts applicable to running medical offices, unit conversions between Fahrenheit and Celsius scales, dose conversions, and a brief introduction to descriptive statistics.

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MATH 1010 - Mathematics for Business Applications (A SP SU) **4.00 credit(s)**

Percents and the percent formula; units of measurement; scientific notation; gross earnings; FICA and withholding; markup and markdown; simple and compound interest; simple discount notes; loan amortization; depreciation and inventory; fundamentals of geometry; introduction to descriptive statistics, modeling with data and probability. Emphasis on Applications.

Contact Hours: Lecture 4.00

Lab Fee: \$6.00

Pre-requisites: DEV0114 Minimum grade of "C" or MATH1099 completion of DEV 0114 module or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1024 - Mathematics of Measurement (A SP SU) **2.00 credit(s)**

MATH 1024 introduces the fundamentals of measurement, including the operation of tools for obtaining measurements. MATH 1024 provides an elementary understanding of the basic structure of measurements including types, arithmetic, accuracy, precision, representations, and application of measurements.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$5.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MATH 1025 - Quantitative Literacy (A SP SU) **3.00 credit(s)**

This is a first course in algebra specifically designed for students enrolled in programs that do not require college algebra. Traditional beginning algebra topics including basic numeric/algebraic skills and reasoning, linear equations, application modeling, and data literacy are addressed in a contextualized format using a pedagogy that promotes problem solving and critical thinking through collaborative learning and online tools.

Contact Hours: Lecture 3.00

Lab Fee: \$4.00

Pre-requisites: DEV0114 Minimum grade of "C" or MATH1099 DEV 0114 module or by placement equivalent

Co-requisites: none

Restrictions: none

MATH 1050 - Elementary Algebra (A SP SU) **5.00 credit(s)**

First of a two-semester sequence. Includes the study of the real number system including properties of real numbers, order of operations, operations on algebraic expressions, solving linear equations and inequalities in one variable, the rectangular coordinate system, graphs of linear equations and inequalities in two variables, systems of equations and inequalities in two variables, applications and modeling, properties of exponents, scientific notation, polynomial arithmetic, factoring, solving polynomial equations. Includes applications and activities to build skills in problem solving. Not open to students with credit for MATH 1020 and 1030, or 1075 and above.

Contact Hours: Lecture 5.00

Lab Fee: \$4.00

Pre-requisites: DEV0114 Minimum grade of "C" or MATH1099 DEV 0114 module, or by placement equivalent

Co-requisites: none

Restrictions: none

MATH 1075 - Intermediate Algebra (A SP SU)**5.00 credit(s)**

Second of a two-semester sequence. Includes the study of rational expression arithmetic and simplification and complex fraction simplification; operations on radical expressions and expressions containing rational exponents; the complex number system; solving absolute value, rational, radical, and quadratic equations; solving absolute value and polynomial inequalities in one variable; solving compound inequalities in one and two variables; graphs, relations, and functions including quadratic functions; the distance and midpoint formulas and circles. Includes applications and activities to build skills in problem solving. Not open to students with credit for MATH 1110, 1116, 1113, or 1130 and above.

Contact Hours: Lecture 5.00

Lab Fee: \$4.00

Pre-requisites: MATH1050 Minimum grade of "C" or MATH1099 MATH 1050 module, or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1099 - Bridge to College Math (A SP SU)**3.00 credit(s)**

The topics contained in DEV 0115, MATH 1050 (or MATH 1020 & 1030), and MATH 1075 will be delivered in a modularized format using technology, allowing students to begin at the appropriate level based on course placement and allowing them to move through as many modules, and courses, as they can within the time limits of the course. This modularized, mastery approach will pre-test, provide a prescriptive study plan, and post-test students from one module to the next. Emphasis will be placed on individualized pace with a greater time period of active learning. At the end of the course, based on proficiency of the series of modules associated with one or more courses, students will earn a grade of "S" for satisfactory progress and gain permission to enter subsequent courses in their plan of study. This course is recommended for students who have an appropriate placement score and have passed High School Algebra II within the last 5 years.

Contact Hours: Lab 6.00

Lab Fee: \$7.00

Pre-requisites: Placement score which allows for DEV 0114 or MATH 1050 or MATH 1075 registration

Co-requisites: none

Restrictions: none

MATH 1101 - Math Construction Sciences/Applied Tech (A SP SU)**3.00 credit(s)**

This college level mathematics course is designed for students seeking degrees in Automotice Technology, Construction Sciences, Heating Ventilating and Air Conditioning Technology, Skilled Trades Technology, and Landscape Design and Management. Topics include: mathematics of measurement, function concepts and representations, basic elementary functions, right angle trigonometry, systems of linear equations, quadratic equations, and mathematical modeling. All topics are delivered in the construction context of Automotive Technology(AUTO), Construction Sciences(CMGT), Heating Ventilating and Air Conditioning Technology(HVAC), Skilled Trades Technology(SKTR), and Landscape Design and Management(LAND). This course focuses on building problem solving and critical thinking skills and the supporting algebraic and analytical skills. Excel labs are included to support and extend the course topics. The course fulfills the mathematics requirement for designated AAS degree programs at CSCC. Transfer credit is not guaranteed.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$5.00

Pre-requisites: MATH1050 Minimum grade of "C" or MATH1099 MATH 1050 module or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1104 - Mathematical Concepts for Business (A SP SU) **3.00 credit(s)**

This is a college level course which will provide students with the fundamental mathematical content knowledge necessary for employment in a diverse array of entrepreneurial fields and skilled professions. These concepts are intended to broaden and deepen students' mathematical knowledge and understanding from a business perspective. Topics including foundations and business basics, interest, personal finance, and business finance are addressed in a contextualized format using a pedagogy that promotes problem solving and critical thinking through the use of collaborative learning and online tools.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$4.00

Pre-requisites: MATH1025 Minimum grade of "C" or MATH1050 Minimum grade of "C" or MATH1099 MATH 1050 module or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1109 - Mathematics for Emergency Services (A SP SU) **3.00 credit(s)**

This college level mathematics course is designed for students seeking degrees in Fire Science or Emergency Medical Services. Topics include: development, interpretation, and use of graphical, tabular, and formulaic relations; rates; geometry of shapes; statistics; and mathematical modeling. All topics are delivered in the context of Fire Science (FS) and Emergency Medical Services (EMS). This course focuses on building problem solving and critical thinking skills. Excel labs are included to support and extend the course topics. Just-in-time mathematics remediation is provided to support student success. This course fulfills the mathematics requirement for designated AAS degree programs at CSCC. Transfer credit is not guaranteed.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$6.00

Pre-requisites: DEV0145 Minimum grade of "C" and DEV0114 Minimum grade of "C" or MATH1099 DEV 0114 Module or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1110 - Mathematics for the Skilled Trades (A SP) **3.00 credit(s)**

This course is intended to be a basic math course for students in the skilled trades. Special emphasis will be given to the practical application of topics in elementary algebra and elementary geometry. Topics include measurement, ratio and proportion, systems of equations, the study of quadratic equations, basic plane geometry, and basic right triangle trigonometry. Not open to students with credit for MATH 1148.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$3.00

Pre-requisites: MATH1050 Minimum grade of "C" or MATH1099 MATH 1050 Module

Co-requisites: none

Restrictions: none

MATH 1111 - Discrete Mathematics for Computing (A SP SU) **3.00 credit(s)**

This college level mathematics course is designed for students seeking degrees in Computer Science (CSCI), Information Technology Support Technician (ITST), and Geographic Information Systems (GIS), and introduces students to the logic and mathematical structures required for computer programming. Elementary logic, set theory and Boolean algebra are introduced. Functions and relations are emphasized, along with types of functions common in business or scientific applications, properties of functions such as domain, range, and one-to-one functions, and recursion. Mathematical structures like summations and sequences, elementary probability and vectors are also introduced. Data types, number systems such as binary and hexadecimal, right angle trigonometry, and applications of algebra are introduced in a contextualized framework that emphasizes collaborative problem-solving and applications to branches of programming practice.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$5.00

Pre-requisites: MATH1025 Minimum grade of "C" or MATH1050 Minimum grade of "C" or MATH1099 MATH 1050 module or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1113 - Technical Mathematics (A SP SU) **5.00 credit(s)**

This is a technical mathematics course which includes rules for measurement; the study of rational expression arithmetic and simplification; operations on radical expressions and expressions containing rational exponents; the complex number system; solving rational, radical, and quadratic equations; solving polynomial inequalities in one variable; solving compound inequalities in one and two variables; graphs, relations and functions including quadratic and trigonometric functions, the distance and midpoint formulas and circles. Emphasis is on technically oriented applications and activities to build skills in applied problem solving.

Contact Hours: Lab 2.00, Lecture 4.00

Lab Fee: \$2.00

Pre-requisites: MATH1050 Minimum grade of "C" or MATH1099 MATH 1050 Module or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1115 - Mathematics for Engineering Technologies (A SP SU) **4.00 credit(s)**

This college level mathematics course is designed for students seeking degrees in Mechanical Engineering Technology, Electronic Engineering Technology, and Electro-Mechanical Engineering Technology. Topics include: mathematics of measurement, function concepts and representations, basic elementary functions, right angle trigonometry, vectors, and mathematical modeling. All topics are delivered in the engineering context of Mechanical Engineering Technology(MECH), Electronic Engineering Technology(EET), and Electro-Mechanical Engineering Technology(EMEC). This course focuses on building problem solving and critical thinking skills and the supporting algebraic and analytical skills. Labs are included to support and extend the course topics. This course fulfills the mathematics requirement for designated AAS degree programs at CSCC. Transfer credit is not guaranteed.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: MATH1024 Minimum grade of "C"

Co-requisites: none

Restrictions: none

MATH 1116 - Mathematics for Liberal Arts (A SP SU)**3.00 credit(s)**

A survey of modern mathematical topics relevant to everyday life, intended for students who are not majoring in the physical sciences. This course applies critical thinking and problem solving skills to topics such as elementary graph theory, the mathematics of voting and apportionment and probability. Not open to students with credit for Math 1130, Math 1148, or above.

Contact Hours: Lecture 3.00

Lab Fee: \$4.00

Pre-requisites: MATH1075 Minimum grade of "C" or MATH1099 MATH 1060 Module or Placement equivalent

Co-requisites: none

Restrictions: none

MATH 1125 - Conceptual Mathematics for Teachers I (A SP SU)**5.00 credit(s)**

This course is designed as an in-depth study of the basic concepts of number systems, binary operations, number theory, algebraic thinking, and problem-solving as appropriate for primary and middle school teachers. Development of these concepts will be based on the current Common Core State Standards for Mathematics. Instruction will focus on the development of these concepts through demonstration, exploration, and discussion using hands-on manipulatives and appropriate technology.

Contact Hours: Lecture 5.00

Lab Fee: \$5.00

Pre-requisites: MATH1075 Minimum grade of "C" or MATH1099 completion of MATH 1075 module or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1126 - Conceptual Mathematics for Teachers II (A SP SU)**5.00 credit(s)**

A continuation of MATH 1125. This course is designed as an in-depth study of the basic concepts of logic, geometric constructions and proof, transformations, measurement, counting, probability, and problem solving as appropriate for primary and middle school teachers. Development of these concepts will be based on the current Common Core State Standards for Mathematics. Instruction will focus on the development of these concepts through demonstration, exploration, and discussion using hands-on manipulatives and appropriate technology.

Contact Hours: Lecture 5.00

Lab Fee: \$5.00

Pre-requisites: MATH1125 Minimum grade of "C"

Co-requisites: none

Restrictions: none

MATH 1130 - Business Algebra (A SP SU)**5.00 credit(s)**

This course focuses on college algebra topics for students majoring in the economics and business. Presents a review of applications of equations, inequalities and function notation. Course serves as an introduction to: graphs of functions; translations and reflections of graphs of functions; asymptotic behavior; algebra of functions including function composition and inverses; difference quotients and average rates of change; direct and inverse variation; behavior and modeling of functions including linear, quadratic, higher degree polynomials, rational, radical, exponential, logarithmic and piecewise functions; matrices (addition, subtraction, multiplication, row reduction, and solving systems using row reduction); and the mathematics of finance (compound interest, annuities, amortization and sinking funds.) Business applications throughout. Not open to students with credit for MATH 1116 or 1148 and above.

Contact Hours: Lecture 5.00

Lab Fee: \$3.00

Pre-requisites: MATH1075 Minimum grade of "C" or MATH1099 completion of MATH 1075 module or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1131 - Calculus for Business (A SP SU)**6.00 credit(s)**

An introduction to calculus: limits, continuity, derivatives, rules of differentiation, derivatives of logarithmic and exponential functions, derivative as a limit, slope, and rate of change, increasing and decreasing, extrema, concavity, points of inflection, antiderivatives, definite integrals, area, fundamental theorem of calculus, techniques of integration, differential equations, functions of several variables, partial derivatives, extrema of functions of two variables. Business applications throughout. Not open to students with credit for MATH 1151 and above.

Contact Hours: Lecture 6.00

Lab Fee: \$0

Pre-requisites: MATH1130 Minimum grade of "C" or MATH1148 Minimum grade of "C" or MATH1149 Minimum grade of "C" or MATH1150 Minimum grade of "C" or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1148 - College Algebra (A SP SU)**4.00 credit(s)**

This course is a continuation of the study of functions. The concept of transformations is used to graph and analyze functions including quadratic, higher degree polynomial, power, piecewise, rational, exponential, and logarithmic functions. The function concept is applied to solving equations, inequalities, and applications regarding these types of functions. Factor and remainder theorems and roots of polynomial functions are included. The concept of functions is extended to include composition of functions and inverse functions. Systems of linear and non-linear equations are solved using algebraic and graphical methods. Trigonometric functions of right angles are defined and used in problem solving. This course meets the general education requirement for the AA degree. Not open to students with credit for MATH 1149 and above.

Contact Hours: Lecture 4.00

Lab Fee: \$3.00

Pre-requisites: MATH1075 Minimum grade of "C" or MATH1099 completion of MATH 1075 module or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1149 - Trigonometry (A SP SU)**4.00 credit(s)**

This course is a study of the trigonometric functions, vectors, and related applications. Topics include right triangle trigonometry; trigonometry of general angles; the unit circle; the graphs of the trigonometric functions; analytical trigonometry; inverse trigonometric functions; verifying identities; solving trigonometric equations; the Law of Sines; the Law of Cosines; applications of trigonometry; polar coordinates and the graphs of polar equations; geometric and algebraic vectors; vector applications; plane curves and parametric equations, trigonometric form of complex numbers, and DeMoivre's Theorem. The conic sections are defined and analyzed algebraically and graphically. Not open to students with credit for MATH 1150 and above

Contact Hours: Lecture 4.00

Lab Fee: \$3.00

Pre-requisites: MATH1148 Minimum grade of "C" or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1150 - Precalculus (A SP)**6.00 credit(s)**

This is an accelerated course intended for well prepared students going on to take calculus. Topics included polynomial and rational functions, exponential and logarithmic functions, trigonometric and inverse trigonometric functions. Such functions are graphed and analyzed and related equations and inequalities are solved. Problem solving with related applications occurs throughout. Sequences and series are introduced. This course is intended for students with strong mathematics preparation. Students should have completed four years of high school mathematics including Algebra II or above. Not open to students with credit for MATH 1148 and 1149, or 1151 and above.

Contact Hours: Lecture 6.00

Lab Fee: \$3.00

Pre-requisites: MATH1075 Minimum grade of "A" or MATH1099 completion of MATH 1075 module with overall course average of at least 90% or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1151 - Calculus I (A SP SU)**5.00 credit(s)**

Introduction to differential calculus: functions, limits, continuity, derivatives, differentiation rules, derivatives of the trigonometric, exponential, and logarithmic functions, related rates, extrema, curve sketching, and optimization. Introduction to integral calculus: antiderivatives, definite integral, Riemann sums, area under a curve, Fundamental Theorem of Calculus, numerical integration, integration by substitution, and derivatives and integrals of inverse trigonometric, hyperbolic, and inverse hyperbolic functions. Applications to problems in science and engineering. Sections of this course are H-designated Honors classes.

Contact Hours: Lecture 5.00

Lab Fee: \$2.00

Pre-requisites: MATH1149 Minimum grade of "C" or MATH1150 Minimum grade of "C" or placement equivalent

Co-requisites: none

Restrictions: none

MATH 1152 - Calculus II (A SP SU)**5.00 credit(s)**

Continue introduction to integral calculus: integration of exponential, logarithmic, trigonometric, inverse trigonometric functions, volume and surface area of solids of revolution, arc length, and methods of integration. Also includes L'Hopital's Rule and Improper Integrals. Analyze plane curves given parametrically or in polar coordinates, and their differential and integral calculus. Infinite sequences and series, and their sum and/or convergence, conic sections, vectors in the plane and in space. Applications to problems in science and engineering. Not open to students with credit for MATH 1157 and above.

Contact Hours: Lecture 5.00

Lab Fee: \$2.00

Pre-requisites: MATH1151 Minimum grade of "C"

Co-requisites: none

Restrictions: none

MATH 1172 - Engineering Mathematics A (A SP SU)**5.00 credit(s)**

Integration techniques, sequences & series, Taylor series, vectors and parametric curves, several variables, partial derivatives, chain rule, max-min. Not open to students with credit for any higher numbered math class, or for MATH 1152.

Contact Hours: Lecture 5.00

Lab Fee: \$0

Pre-requisites: MATH1151 Minimum grade of "C"

Co-requisites: none

Restrictions: none

MATH 1193 - Independent Study in Mathematics (A SP SU)**1.00 - 5.00 credit(s)**

Designed to give students an opportunity for a detailed study of topics of interest in mathematics.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

MATH 1194 - SPT: Mathematics (A SP SU)**1.00 - 5.00 credit(s)**

Designed to give groups of students an opportunity for a detailed study of topics of interest in mathematics not otherwise offered.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

MATH 2153 - Calculus III (A SP SU)**5.00 credit(s)**

Introduction to multivariable calculus: Vector valued functions and motion in the plane and in space, functions of several variables, partial derivatives, directional derivatives, gradients, extrema, multiple integrals, line integrals, Green's theorem, parametric surfaces, divergence theorem, and Stokes theorem. Applications to problems in science and engineering.

Contact Hours: Lecture 5.00

Lab Fee: \$2.00

Pre-requisites: MATH1152 Minimum grade of "C"

Co-requisites: none

Restrictions: none

MATH 2173 - Engineering Mathematics B (A SP SU)**5.00 credit(s)**

Multiple integrals, line integrals, vector fields, second order constant coefficient ODEs.

Contact Hours: Lecture 5.00

Lab Fee: \$0

Pre-requisites: MATH1172 Minimum grade of "C"

Co-requisites: none

Restrictions: none

MATH 2174 - Linear Algebra & Diff Equations for Eng (A SP SU)**5.00 credit(s)**

Matrix theory, eigenvectors and eigenvalues, ordinary and partial differential equations.

Contact Hours: Lecture 5.00

Lab Fee: \$0

Pre-requisites: MATH2173 Minimum grade of "C"

Co-requisites: none

Restrictions: none

MATH 2193 - IS Mathematics II (A SP SU)**1.00 - 5.00 credit(s)**

Designed to give students an opportunity for a detailed study of topics of interest in mathematics.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

MATH 2255 - Elementary Differential Equations (SP SU) **4.00 credit(s)**

This course is a study of the basic concepts and methods of solving ordinary differential equations. Topics include slope fields; separable, linear, exact, Bernoulli, and homogeneous first order equations; homogeneous and nonhomogeneous second and higher order linear equations; Laplace transforms; series solutions; numerical methods; applications to physical sciences and engineering.

Contact Hours: Lecture 4.00

Lab Fee: \$2.00

Pre-requisites: MATH2153 Minimum grade of "C"

Co-requisites: none

Restrictions: none

MATH 2366 - Discrete Math Structures (SU) **5.00 credit(s)**

This course covers mathematical formalization and reasoning; logic; sets, mappings, and functions; methods of proof, recursive definitions; mathematical induction; elementary counting techniques, probability theory; relations and equivalence relations; Boolean algebra, logic gates; graphs, directed graphs, and trees; with applications to computer science.

Contact Hours: Lecture 5.00

Lab Fee: \$0

Pre-requisites: MATH1151 Minimum grade of "C"

Co-requisites: none

Restrictions: none

MATH 2415 - Ordinary Partial Differential Equations (A SP SU) **4.00 credit(s)**

A study of the basic concepts and methods of solving ordinary and partial differential equations; slope fields; separable, linear, exact, Bernoulli, and homogeneous first order equations; systems of first order differential equations; homogeneous and nonhomogeneous second order linear equations; Fourier Series, Heat Equation and other separable partial differential equations; applications to physical sciences and engineering.

Contact Hours: Lecture 4.00

Lab Fee: \$0

Pre-requisites: MATH2153 Minimum grade of "C" or MATH1172 Minimum grade of "C" and MATH2568 Minimum grade of "C"

Co-requisites: none

Restrictions: none

MATH 2568 - Elementary Linear Algebra (SP SU) **4.00 credit(s)**

Systems of linear equations, matrices, and determinants; vector spaces and their subspaces, R^n , coordinate systems and bases; linear transformations; eigenvalues including complex eigenvalues, eigenvectors; inner product and orthogonality, orthogonal matrices; geometric and real-world applications.

Contact Hours: Lecture 4.00

Lab Fee: \$2.00

Pre-requisites: MATH1172 Minimum grade of "C" or MATH2153 Minimum grade of "C"

Co-requisites: none

Restrictions: none

Mechanical Engineering Technology

MECH 1130 - Statics (A SP)

3.00 credit(s)

This course deals with the principles of trusses, frames, machines and machine components. The course will offer the student experience in dealing with coplanar load systems that are concurrent, parallel and nonparallel. It is recommended, but not required, that PHYS 1200 be taken before this course.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$23.00

Pre-requisites: MATH1113 or MATH1148 or MATH1115

Co-requisites: none

Restrictions: none

MECH 1145 - CAD I (A SP SU)

3.00 credit(s)

This course will cover non-parametric based CAD in 2D and 3D. Course presents fundamental and intermediate Computer Aided Design concepts to produce detailed mechanical drawings and models.

Contact Hours: Lecture 1.00, Lab 5.00

Lab Fee: \$23.00

Pre-requisites: ENGT1115

Co-requisites: none

Restrictions: none

MECH 1150 - Manufacturing Materials & Processes (A SU)

3.00 credit(s)

This is a course that will acquaint the technician with the nature, properties, performance, characteristics, manufacturing processes, and practical uses of various engineering materials. Materials such as ferrous and nonferrous metals as well as polymers, ceramics, and composites will be covered. Both primary and secondary processes will be covered.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$19.00

Pre-requisites: Placement into 'no reading required'

Co-requisites: none

Restrictions: none

MECH 1150A - Manufacturing Materials & Processes A (A)

1.00 credit(s)

This course is the first course of the complete MECH 1150 course and is intended for CNC Operators certificate candidates. This is a course that will acquaint the technician with the nature, properties, performance, characteristics, manufacturing processes, and practical uses of various engineering materials. Materials such as ferrous and nonferrous metals will be covered.

Contact Hours: Lecture 0.50, Lab 1.00

Lab Fee: \$9.00

Pre-requisites: placement into No Reading Required

Co-requisites: none

Restrictions: none

MECH 1150B - Manufacturing Materials & Processes B (A) **2.00 credit(s)**

This course is the second course of the complete MECH 1150 course and is intended for students who have completed MECH 1150A in the CNC Operators Certificate. This is a course that will acquaint the technician with the nature, properties, performance, characteristics, manufacturing processes, and practical uses of various engineering materials. Materials such as ferrous and nonferrous metals as well as polymers, ceramics, and composites will be covered. Both primary and secondary processes will be covered.

Contact Hours: Lab 1.00, Lecture 1.50

Lab Fee: \$10.00

Pre-requisites: MECH1150A

Co-requisites: none

Restrictions: none

MECH 1240 - Machine Tools (A SP SU) **3.00 credit(s)**

This course features hands-on operation of mills, lathes, shapers, and grinders in addition to instruction in safety practices and related theory needed for operating these machines. Additional instruction will be given on cutting tool materials and geometry, feeds and speeds, and associated bench practices.

Contact Hours: Lecture 1.00, Lab 5.00

Lab Fee: \$48.00

Pre-requisites: placement into MATH 1020 or higher

Co-requisites: none

Restrictions: none

MECH 1240A - Machine Tools A (A) **1.00 credit(s)**

This course features hands-on operation of mills and lathes in addition to instruction in safety practices and related theory needed for operating these machines. Additional instruction will be given on cutting tool materials and geometry, feeds and speeds.

Contact Hours: Lecture 0.50, Lab 1.25

Lab Fee: \$20.00

Pre-requisites: placement into MATH 1020 or higher

Co-requisites: none

Restrictions: none

MECH 1240B - Machine Tools B (A) **2.00 credit(s)**

This course features hands-on operation of mills, lathes, and saws in addition to instruction in safety practices and related theory needed for operating these machines. Additional instruction will be given on cutting tool materials and geometry, feeds and speeds, and associated bench practices.

Contact Hours: Lecture 0.50, Lab 3.75

Lab Fee: \$28.00

Pre-requisites: MECH1240A

Co-requisites: none

Restrictions: none

MECH 2215 - Parametric CAD (A SP SU)**3.00 credit(s)**

This Course will cover Multiple Parametric CAD platforms used in the production of complete drawing sets for the Manufacturing field. Students will create production drawings and documentation required to take a product from concept to design, sales, prototyping, production, and final assembly.

Contact Hours: Lecture 1.00, Lab 5.00

Lab Fee: \$23.00

Pre-requisites: ENGT1115

Co-requisites: none

Restrictions: none

MECH 2242 - Strength of Materials (A SP)**3.00 credit(s)**

This course is a study of the application of external loads to rigid bodies and the analysis of the resulting stresses and deflections produced in those bodies. Study will be devoted to normal stress and strain, shear stress and strain in joints and shafts, beam stresses and deflection, beam design, column buckling. Considerations such as safety factors, thermal expansion, fatigue, stress concentrations, material properties, and combined stresses are also covered.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$23.00

Pre-requisites: MECH1130

Co-requisites: none

Restrictions: none

MECH 2243 - Robotics (SP SU)**2.00 credit(s)**

"This course presents robotic operations and system configurations. Students are required to flowchart, code, compile, and debug programs using the Fanuc Karel programming language. Hands-on experience with robotic systems is gained through teaching and executing the programs on an articulated 6 axis Fanuc robot."

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$19.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MECH 2253 - Computer Numerical Control (SP)**2.00 credit(s)**

This course covers manual computer numerical control programming. Each student will prepare numerical control programs in both absolute and incremental positioning systems using standard industrial G and M codes. Students will program for state-of-the-art computerized numerical control equipment including mills and lathes. Each student will prepare and debug programs and setup and operate computer numerical controlled equipment in the lab.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$27.00

Pre-requisites: ITST1101 and ENGT1115 and MECH1240 and placement into MATH 1020 or higher

Co-requisites: none

Restrictions: none

MECH 2270 - Engineering Statistics (SP SU)**3.00 credit(s)**

This course provides a broad overview of statistics and statistical process control practices in the industrial environment. This course includes presentation of the philosophy and practices of modern quality control principles, data presentation techniques, basic statistics, basic probability, control chart applications, process capability measures, and inference and hypothesis testing.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$23.00

Pre-requisites: MATH1050

Co-requisites: none

Restrictions: none

MECH 2299 - Machine Design/CAM (SP)**3.00 credit(s)**

This Course covers elements of Machine design and digital Prototyping using Parametric Based CAD platforms. Students will incorporate knowledge, gained through their course work at Columbus State, in physical and digital prototypes.

Contact Hours: Lecture 1.00, Lab 5.00

Lab Fee: \$30.00

Pre-requisites: MECH1240 and MECH2215 and MECH2242

Co-requisites: none

Restrictions: none

Marketing

MKTG 1105 - Retailing (A SP SU)**3.00 credit(s)**

MKTG 1105 provides the student with an overview of current and evolving retailing trends and practices. Merchandising, sales promotion, finance, store operations and control are addressed. Special emphasis is given to the growing importance of international retailing, e-Commerce and multi-channel retailing. In addition, the course examines the impact of innovative technologies and methods used by retailers to improve store operating efficiencies and improve customers' shopping experiences.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MKTG 1110 - Marketing Principles (A SP SU)**3.00 credit(s)**

MKTG 1110 involves the study of marketing activities, analysis, strategies, and decision making in the context of other business functions. Topics include: integration of product, price, promotion, and distribution activities; research and analysis of markets, environments, competition, and customers; market segmentation and selection of target markets; and emphasis on behavior and perspectives of consumers and organizational customers. Planning and decision making for products and services in profit and nonprofit, domestic and global settings are analyzed in this course.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: ECON2200

Co-requisites: ECON2200

Restrictions: none

MKTG 1120 - Branding (A SP SU)**3.00 credit(s)**

MKTG 1120 provides the student with an overview of current and evolving branding trends and practice. The primary focus is on the importance of brands, their impact on corporate profitability, and effective principles of brand management. In addition, the course describes a disciplined process to create and implement effective brand design, identity and positioning.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MKTG 1125 - Introduction to Social Media (A SP SU)**3.00 credit(s)**

MKTG 1125 is an overview of the social media mix: Facebook, LinkedIn, Google+, Twitter, blogs, and other social media marketing sites. This course will focus on how businesses use these social media tools to enhance their exposure, sales, and customer retention. Students will also learn how businesses measure results and analyze metrics derived from their use of social media tools. This course provides an introduction to social media concepts as a required tool in today's business environment.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MKTG 1230 - Customer Service & Sales (A SP SU)**3.00 credit(s)**

MKTG 1230 provides an introduction to the sales process and the key role that sales activities play in any consumer or commercial business endeavor. The course deals with the basic components of selling including understanding customer psychology, building customer relationships. This course also emphasizes the important issues facing customer service providers and customer service managers in business. Special emphasis is placed on the mastery of specific skills and analyzing customer attitudes and behaviors to determine the tasks required to deliver excellent customer service.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MKTG 1230A - Customer Service & Sales-A (On Demand)**1.00 credit(s)**

MKTG 1230A emphasizes the important issues facing customer service providers and customer service managers in business. Special emphasis is placed on the mastery of specific skills and analyzing customer attitudes and behaviors to determine the tasks required to deliver excellent customer service.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MKTG 1230B - Customer Service & Sales-B (On Demand)**2.00 credit(s)**

MKTG 1230B provides a more extensive introduction to the sales process and the key role that sales activities play in any consumer or commercial business endeavor. The course deals with the basic components of selling including understanding customer psychology and building customer relationships. This course also touches on the important issues facing customer service providers and customer service managers in business.

Contact Hours: Lecture 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MKTG 2200 - Digital Marketing (A SP)**3.00 credit(s)**

MKTG 2200 describes how to use the Web for various marketing functions: gathering and evaluating primary and secondary sources of information, market research, sales, advertising and promotion, and customer service/retention. Introduction to emerging Web 2.0 technologies with particular emphasis on the role of the various social networking tools used in the process of marketing to and communicating with consumers. Examples of Web 2.0 features and tools to be explored include online communities, wikis, blogs, vlogs, podcasts, RSS feeds, and mobile communication devices. An overview of the marketing and technical aspects of e-Commerce will be examined and how various markets use e-Commerce in product, pricing, distribution and promotion decisions.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MKTG 2290 - Business to Business Marketing (A)**3.00 credit(s)**

MKTG 2290 is designed to provide students with a comprehensive understanding of fundamental marketing principles, practices and strategies utilized in business to business marketing. An empirical approach is taken to deepen the discussion of marketing topics relevant to the dynamics of the business environment. Additional emphasis is placed on organizational marketing, future trends and decisions facing business to business marketing managers.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: MKTG1110

Co-requisites: none

Restrictions: none

MKTG 2360 - Direct and Database Marketing (SP)**3.00 credit(s)**

MKTG 2360 presents a survey of the direct marketing process including the theory and practice of direct marketing, its function and organization. Topics covered include direct response television/radio, database marketing, list selection and evaluation, direct marketing media and planning. This course provides students with an overview of the use of databases in consumer and business-to-business marketing to both acquire and retain customers. Particular emphasis is placed on developing in-house databases, purchasing lists and managing a marketing database. Special emphasis is given to how direct and database marketing can be integrated into the overall marketing mix.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: MKTG1110

Co-requisites: none

Restrictions: none

MKTG 2400 - Advertising and Promotion (A SP)**3.00 credit(s)**

The role of advertising and promotion in the marketing communications program and as part of an integrated marketing communications perspective is analyzed from both a traditional and an electronic media perspective. Other promotional areas covered include direct marketing, sales promotion, public relations, and personal selling. Regulatory, social and economic factors that influence, and are in turn influenced by, an organization's advertising and promotional program will be examined. Media buying and selling are explored focusing on the role of the various participants in the process: clients, advertising and media agencies, media sales companies, media companies, etc.

Contact Hours: Lecture 3.00

Lab Fee: \$4.00

Pre-requisites: MKTG1110

Co-requisites: none

Restrictions: none

MKTG 2450 - Services and Non-Profit Marketing (A)**3.00 credit(s)**

MKTG 2450 studies the characteristics of services, their contribution to an economy, service quality, service customer behavior and the relationship between organizational performance and customer retention. This course will also give students an understanding of the basic organizational structures, systems and practices of nonprofit organizations. Emphasis will be placed on identifying the various types of nonprofit organizations, nonprofit marketing mixes, and nonprofit marketing strategies.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MKTG 2550 - Marketing Info & Consumer Analysis (A)**3.00 credit(s)**

MKTG 2550 course introduces the field of market research with particular emphasis on how to use research data to make better marketing decisions and to provide a framework for understanding the consumer decision-making process and purchasing behavior. Topics covered include the market research process, research design and data sources, data collection, and the analysis of marketing research data. Emphasis is placed on why consumers behave as they do, and how marketers, consumer activists, and public officials use this knowledge to influence consumer behavior.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: MKTG1110

Co-requisites: none

Restrictions: none

MKTG 2750 - Global Marketing (A SP)**3.00 credit(s)**

MKTG 2750 as the capstone course for marketing majors, this course builds on the knowledge acquired in other marketing and business courses to give students the skills and knowledge necessary to successfully analyze economic, cultural, political and fiscal issues in global marketing and to suggest appropriate business solutions. As a result of completing this course, students will develop a broader understanding of the marketing function and its relationship to business strategy in the context of a global marketing environment. Student must be a Marketing major , who has completed 12 hours in the technology and has permission of the instructor.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: MKTG1110

Co-requisites: none

Restrictions: none

Medical Laboratory Technology

MLT 1100 - Basic Concepts in Health Care (A SP SU)

2.00 credit(s)

This course provides a general introduction to health care in the U.S. General topics such as health care past and present, legal and ethical issues, diversity in health care, safety topics, and health industry systems will be covered. Professional attributes, skills, and qualities needed for success in a health care career are also discussed.

Contact Hours: Lecture 2.00**Lab Fee: \$0.00**

Pre-requisites: Placement into ENGL 1100 and Placement into No Reading Required

Co-requisites: Placement into ENGL 1100 and Placement into No Reading Required

Restrictions: none

MLT 1110 - Introduction to MLT Lecture (SU)

1.00 credit(s)

This course will provide an in-depth examination of the role and responsibilities of the Medical Laboratory Technician as an important professional in the delivery of quality health care. Discussions will include such topics as: quality assurance, the general organization, operational activities of a clinical laboratory, and career opportunities for MLT graduates. In addition, students will be introduced to specimen collection and processing techniques, equipment used in the clinical laboratory, safety policies and procedures, and the application of laboratory mathematics.

Contact Hours: Lecture 1.00**Lab Fee: \$0.00**

Pre-requisites: none

Co-requisites: MLT1111

Restrictions: Program Admission

MLT 1111 - Introduction to MLT Lab (SU)

1.00 credit(s)

This course provides a lab component to complement MLT 1110. Students will be introduced to specimen collection and processing procedures, principles of lab math, quality assurance, safety, and the laboratory operational activities.

Contact Hours: Lab 2.00**Lab Fee: \$50.00**

Pre-requisites: none

Co-requisites: MLT1110

Restrictions: Health Code Program Admission

MLT 1112 - Laboratory Theory for Health Industries (A SU) **2.00 credit(s)**

This course is designed to provide theoretical concepts for individuals in the health related industries who may be interested in learning an additional set of medically related skills. This knowledge and skill set is intended to enhance current job proficiency of for potentially increasing employability in entry-level health related position. The course is designed to encourage phlebotomists, medical assistants, nursing assistants, and other health-oriented industry personnel to achieve competencies requiring basic laboratory testing as a part of the facility's services.

Contact Hours: Lecture 2.00

Lab Fee: \$0.00

Pre-requisites: Placement into ENGL 1100 and No Reading required and High school biology with a grade of "C" or higher in the last 5 years or BIO0100 with a grade of "C" or higher or equivalent college credit

Co-requisites: none

Restrictions: none

MLT 1113 - Laboratory Techniques for Health Industries (A SU) **1.00 credit(s)**

This course is designed to provide the application of theoretical concepts for individuals in the health related industries who may be interested in learning an additional set of medically related skills. This knowledge and skill set is intended to enhance current job proficiency of for potentially increasing employability in entry-level health related position. The course is designed to encourage phlebotomists, medical assistants, nursing assistants, and other health-oriented industry personnel to achieve competencies requiring basic laboratory testing as a part of the facility's services.

Contact Hours:

Lab Fee: \$300.00

Pre-requisites: Placement into ENGL 1100 and No Reading required and Completion of High School biology with a grade of "C" or higher in the last 5 years or BIO0100 with a grade of "C" or higher or equivalent college credit

Co-requisites: MLT1112

Restrictions: Health Code

MLT 1120 - Hematology I Lecture (SU) **2.00 credit(s)**

This course is an introduction to theoretical concepts in Hematology that includes basic laboratory techniques and procedures; the study of the origin, formation, and differentiation of blood formed elements, and an introduction to the process of hemostasis. Included are the manual and automated techniques and principles used in evaluating red blood cells, white blood cells, platelets, reticulocytes, erythrocyte sedimentation rate, hemoglobin, hematocrit, and normal white blood cell differentials. The basic process of coagulation will be discussed, and will include the principles and methods of the prothrombin time (INR), and activated partial thromboplastin time screening tests.

Contact Hours: Lecture 2.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: MLT1121

Restrictions: Program Admission

MLT 1121 - Hematology I Lab (SU)**2.00 credit(s)**

This course presents the application of introductory Hematology laboratory skills that include basic laboratory techniques and procedures; the study of the origin, formation, and differentiation of blood formed elements, and an introduction to the process of hemostasis. Included are techniques (manual and automated) used in evaluating red blood cells, white blood cells, platelets, hematocrit, hemoglobin, and normal white blood cell differentials. Reticulocytes, erythrocyte sedimentation rate, and the basic coagulation screening tests prothrombin time (INR), and activated partial thromboplastin time are also included.

Contact Hours: Lab 6.00

Lab Fee: \$175.00

Pre-requisites: none

Co-requisites: MLT1120

Restrictions: Health Code Immunization Level Program Admission

MLT 1130 - Immunology Lecture (A)**1.00 credit(s)**

This course studies the immune system, the nature of immune responses, and the application of immunological reactions to a variety of diagnostic laboratory procedures including but not limited to: Serological tests for syphilis, viral infections, streptococcal infections, pregnancy, C-Reactive Protein, and the Rheumatoid Factor. Discussions will include the etiology and diagnosis of immunologically mediated diseases and the theoretical principles of testing techniques such as: agglutination, precipitation, labeled immunoassays, and molecular diagnostics.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: MLT1131

Restrictions: Program Admission

MLT 1131 - Immunology Lab (A)**1.00 credit(s)**

This course provides a lab component to complement MLT 1130. Emphasis is placed on commonly performed serological tests including but not limited to: Heterophile Testing, Serological Tests for Syphilis, Anti-Streptolysin O Tests, Tests for C-Reactive Protein, Rheumatoid Factor, and various tests for pregnancy. Students will also learn the basics of laboratory glassware, pipetting, dilutions, automated serological and molecular diagnostic techniques.

Contact Hours: Lab 2.50

Lab Fee: \$175.00

Pre-requisites: none

Co-requisites: MLT1130

Restrictions: Health Code Program Admission

MLT 1140 - Clinical Chemistry Lecture (A)**1.00 credit(s)**

This course presents the theory of biochemistry to laboratory medicine and the understanding of the human in health and disease. Analytical procedures utilized to determine chemical constituents in blood, urine, and other body fluids will be presented. The chemical principles of the methods will be discussed as well as the correlation of test results as indicators of presence or absence of disease.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: MLT1141

Restrictions: Program Admission

MLT 1141 - Clinical Chem Lab (A)**2.00 credit(s)**

This course presents the application of biochemistry to laboratory medicine and the understanding of the human in health and disease. Analytical procedures utilized to determine chemical constituents in blood, urine and other body fluids will be presented. The chemical principles of the methods will be discussed as well as the correlation of test results as indicators of presence or absence of disease.

Contact Hours: Lab 6.00

Lab Fee: \$250.00

Pre-requisites: none

Co-requisites: MLT1140

Restrictions: Health Code Program Admission

MLT 2250 - Body Fluids Lecture (SP)**2.00 credit(s)**

This course presents the theoretical study of the physical, chemical, and microscopic evaluation of urine, feces, cerebrospinal fluid, synovial fluid, serous fluid, amniotic fluid, and seminal fluid. Results of the physical, chemical, and microscopic evaluation of these body fluids will be correlated clinically.

Contact Hours: Lecture 2.00

Lab Fee: \$0.00

Pre-requisites: none

Co-requisites: MLT2251

Restrictions: Program Admission

MLT 2251 - Body Fluids Lab (SP)**1.00 credit(s)**

This course presents the application of the physical, chemical, and microscopic evaluation of urine, feces, cerebrospinal fluid, synovial fluid, serous fluid, amniotic fluid, and seminal fluid. Results of the physical, chemical, and microscopic evaluation of these body fluids will be correlated clinically.

Contact Hours: Lab 2.00

Lab Fee: \$100.00

Pre-requisites: none

Co-requisites: MLT2250

Restrictions: Health Code Program Admission

MLT 2260 - Clinical Micro Lecture (SP)**3.00 credit(s)**

This course presents an introduction to the theoretical study of laboratory identification and correlation of microbial agents associated with disease in man. Techniques utilized to isolate, identify, and evaluate the presence of clinically significant microorganisms will be presented. The course also includes an introduction to the study of medical mycology, parasitology, and virology.

Contact Hours: Lecture 3.00**Lab Fee: \$0.00**

Pre-requisites: BIO2215

Co-requisites: MLT2261

Restrictions: Program Admission

MLT 2261 - Clinic Micro Lab (SP)**3.00 credit(s)**

This course is a practical introduction to the laboratory identification of microbial agents associated with disease in man. Techniques utilized to isolate, identify, and evaluate the presence of clinically significant microorganisms will be presented and practiced. The course also includes an introduction to the study of medical mycology, parasitology, and virology.

Contact Hours: Lab 9.00**Lab Fee: \$250.00**

Pre-requisites: BIO2215

Co-requisites: MLT2260

Restrictions: Health Code Program Admission

MLT 2270 - Immunohematology Lecture (SU)**2.00 credit(s)**

This course presents the theory (lecture) portion of Immunohematology that must accompany the laboratory skills used to accurately perform, interpret, and report the routine serological procedures used in pretransfusion testing according to AABB (American Association of Blood Banks) standards. Donor blood collection and storage, component therapy, investigation of transfusion reactions, Hemolytic Disease of the Newborn, and the administration of Rh Immune Globulin are also studied in this course.

Contact Hours: Lecture 2.00**Lab Fee: \$0.00**

Pre-requisites: MLT1130 and MLT1131

Co-requisites: MLT2271

Restrictions: Program Admission

MLT 2271 - Immunohematology Lab (SU)**2.00 credit(s)**

This course presents the application portion of Immunohematology to teach the laboratory skills needed to accurately perform, interpret, and report the routine serological procedures used in pretransfusion testing according to AABB (American Association of Blood Banks) standards. In addition, students perform and interpret case studies involving antibody identification, the investigation of transfusion reactions, Hemolytic Disease of the Newborn, and the administration of Rh Immune Globulin.

Contact Hours: Lab 6.00**Lab Fee: \$400.00**

Pre-requisites: MLT1130 and MLT1131

Co-requisites: MLT2270

Restrictions: Health Code Program Admission

MLT 2280 - Hematology II Lecture (SU)**1.00 credit(s)**

This course presents an advanced theoretical study of Hematology. Anemias, hemoglobin disorders, benign disorders of leukocytes, leukemias, cytochemistry, and hemostasis will be covered. Abnormal morphologic characteristics of cells will be correlated with other laboratory results and disease processes. The study of Hematology instrumentation will include interpretation of abnormal histograms and scatterplots that are correlated clinically. Clinical interpretation and correlation is also included in the study of instrumentation that evaluates coagulation status and platelet function.

Contact Hours: Lecture 1.00**Lab Fee: \$0**

Pre-requisites: MLT1120 and MLT1121

Co-requisites: MLT2281

Restrictions: Program Admission

MLT 2281 - Hematology II Lab (SU)**1.00 credit(s)**

This course presents the application of the advanced study of Hematology. Anemias, hemoglobin disorders, benign disorders of leukocytes, leukemias, cytochemistry, and hemostasis will be covered. Abnormal morphologic characteristics of cells will be correlated with other laboratory results and disease processes. The study of Hematology instrumentation will include interpretation of abnormal histograms and scatterplots that are correlated clinically. Clinical interpretation and correlation is also included in the study of instrumentation that evaluates coagulation status and platelet function.

Contact Hours: Lab 2.00**Lab Fee: \$150.00**

Pre-requisites: MLT1120 and MLT1121

Co-requisites: MLT2280

Restrictions: Health Code Program Admission

MLT 2290 - Med Lab Case Correlations (SU)**1.00 credit(s)**

This capstone course provides a cumulative review of clinical laboratory procedures and theoretical concepts from all phases of laboratory testing. Emphasis is placed on recall and application of theory, correlation, and evaluation of all areas of clinical laboratory science. Upon completion, students should be prepared for national certification examinations and for the clinical practicum.

Contact Hours: Lecture 1.00**Lab Fee: \$0.00**

Pre-requisites: MLT1110 and MLT1111 and MLT1120 and MLT1121 and MLT1130 and MLT1131 and MLT1140 and MLT1141 and MLT2250 and MLT2251 and MLT2260 and MLT2261 and MULT1916

Co-requisites: MLT2270 and MLT2271 and MLT2280 and MLT2281

Restrictions: Program Admission

MLT 2800 - MLT Clinical Seminar (A)**1.00 credit(s)**

This course surveys professional issues in preparation for career entry. Students share selected case studies and other problem solving experiences they have encountered during their practicum. In addition, students prepare for credentialing examinations, postgraduate studies, and employment opportunities.

Contact Hours: Seminar 1.00**Lab Fee: \$0.00**

Pre-requisites: MLT1110 and MLT1111 and MLT1120 and MLT1121 and MLT1130 and MLT1131 and MLT1140 and MLT1141 and MLT2250 and MLT2251 and MLT2260 and MLT2261 and MLT2270 and MLT2271 and MLT2280 and MLT2281 and MLT2290 and MULT1916 MLT1100

Co-requisites: MLT2900

Restrictions: Health Code Program Admission

MLT 2900 - MLT Clinical Practicum (A)**2.00 credit(s)**

This course provides students with entry-level clinical laboratory experience in a supervised laboratory setting. Students participating in the on-campus program will be placed in one of several clinical affiliates within an approximate 60 mile radius of Columbus. Students will be required to provide their own transportation. Upon completion, students should be able to demonstrate competency in career entry-level areas.

Contact Hours: Practicum 14.00**Lab Fee: \$0.00**

Pre-requisites: MLT1100 and MLT1110 and MLT1111 and MLT1120 and MLT1121 and MLT1130 and MLT1131 and MLT1140 and MLT1141 and MLT2250 and MLT2251 and MLT2260 and MLT2261 and MLT2270 and MLT2271 and MLT2280 and MLT2281 and MLT2290 and MULT1916

Co-requisites: MLT2800

Restrictions: Health Code Program Admission

Multi-competency Health**MULT 1110 - Medical Terminology (A SP SU)****2.00 credit(s)**

This introductory course provides an overview of medical language. Emphasis will be placed on terms that are practical and commonly found in the day-to-day work of all allied health professions. This concise course gives basic principles for understanding the language with an overview of terms from many areas of medicine.

Contact Hours: Lecture 2.00**Lab Fee: \$5.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MULT 1114 - Introduction to Addiction Studies (A SP SU) **3.00 credit(s)**

This introductory course provides an overview of the addiction studies field including: impact of use of psychoactive drugs of abuse, evaluation of substance use disorders, individual and group intervention and treatment approaches, service coordination, professionalism and ethics. Social, political and legal dynamics are explored. This course meets the chemical dependency specific content required by the Ohio Dependency Professional Board for the Chemical Dependency Counselor Assistant Phase I Certification (CDCA I). This course must be completed with a "C" or higher.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MULT 1115 - Helping Skills Allied Hlth & Human Serv (A SP SU) **3.00 credit(s)**

This introductory course assists students in developing rapport building, basic interviewing and active listening skills. Through role play simulations and self evaluation opportunities, students enhance their engagement skills. Simulated interactions and multi-media productions allow students to practice behavioral writing and progress notes utilizing a variety of documentation requirements, formats and styles. State, federal and HIPPA guidelines are reviewed. This course must be completed with a "C" or higher.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MULT 1120 - Cardiopulmonary Resuscitation (A SP SU) **0.50 credit(s)**

MULT 1120 covers cardiopulmonary resuscitation and foreign body airway obstruction removal for adults, children and infants. This course includes training on the use of bag valve masks, automated external defibrillators (AED) and cricoid pressure. Students completing this course are eligible for American Heart Association Healthcare Provider certification. This course follows 2010 Emergency Cardiac Care (ECC) guidelines and is professional level CPR.

Contact Hours: Lecture 0.50

Lab Fee: \$40.00

Pre-requisites: Placement into Engl 1100

Co-requisites: Placement into Engl 1100

Restrictions: none

MULT 1130 - Responding to Emergencies (A SP SU)**2.00 credit(s)**

Requirements for Red Cross Certification including artificial respiration, bleeding control, treatment of shock, and care of fractures are presented This course includes MULT 1120. American Heart Association CPR-Basic Life Support.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$55.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MULT 1140 - Adult & Pediatric CPR (A SP SU)**0.50 credit(s)**

This course is based on the 2010 guidelines and standards set forth by the American Heart Association (AHA) in Heartsaver AED CPR. This course covers Adult and Pediatric Cardiopulmonary Resuscitation (CPR), Automated External Defibrillation (AED) and care to relieve a foreign body airway obstruction (FBAO) for the non-health care professional audience.

Contact Hours: Lecture 0.50

Lab Fee: \$40.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MULT 1160 - Exploring Healthcare Professions (A SP SU)**1.00 credit(s)**

Because the health care industry has many career pathways to consider, this course is designed to help the student explore and understand his/her personal and professional interest as a health professional.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MULT 1170 - Current Issues:HIV Infection (A SP SU)**1.00 credit(s)**

This is an introductory course covering the psychological, social, legal, and epidemiological issues surrounding HIV infection.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MULT 1180 - Family & Aging Services (A SP SU)**2.00 credit(s)**

This course provides an overview of family dynamics in both traditional and nontraditional families. The impact of and resources available to family members of individuals with developmental disabilities, mental health and / or addictive disorders are explored. In addition, this course provides the student with an overview of the aging process. Gerontological challenges, needs and resources for the growing number of individuals in later life and their family members are discussed. This course must be completed with a "C" or higher.

Contact Hours: Lecture 2.00

Lab Fee: \$5.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

MULT 1194 - SPT: Multi-Competency (A SP SU)**1.00 - 4.00 credit(s)**

Various topics covered as an opportunity to respond to community needs and meet industry standards.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

MULT 1400 - Screening for Substance Use: SBIRT (On Demand)**1.00 credit(s)**

This course is designed to introduce SBIRT as an evidence-based approach proven to be effective in the prevention and identification of substance use disorders. As greater attention is being given to identifying substance use disorders in non-treatment settings, the SBIRT has become an essential intervention to engage those impacted by substance use. Students will be prepared to implement SBIRT in various settings. This course must be completed with a 'C' or higher.

Contact Hours: Lecture 1.00

Lab Fee: \$5.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MULT 1401 - Integrated Healthcare (SU)**2.00 credit(s)**

This course focuses on the purpose, models and applicability of Integrated Healthcare (IHC). Students will examine the rationale for IHC. Focus on IHC models, funding, and exploration of the correlation between mental health and/or substance use issues and physical health problems. Students will learn and apply skills to work effectively with people with healthcare issues. This course must be completed with a 'C' or higher.

Contact Hours: Lecture 2.00

Lab Fee: \$5.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MULT 1402 - Selfcare for Allied Health/Human Service (On Demand) **2.00 credit(s)**

This course provides an overview of the importance of managing stress and burnout in professional practice as health and human services workers. The impact of compassion fatigue, self-care, utilizing natural support systems and available resources will be presented and discussed. In addition, students will develop a self-care plan that can be practically applied as participants move into the profession. This course must be completed with a 'C' or higher.

Contact Hours: Lecture 2.00

Lab Fee: \$9.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MULT 1500 - Concepts for the Pharmacy Technician (A SP SU) **4.00 credit(s)**

This course prepares students to work under the supervision of a registered Pharmacist in preparing medications for dispensing to patients according to physician orders. Topics covered include reading and interpreting prescriptions, dosage calculations, aseptic technique, drug compounding, dose conversions, inventory control, billing and reimbursement. This course prepares students for the Pharmacy Technician Certification Board Exam.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: none

Co-requisites: MULT1525 and BMGT1008 and MKTG1230

Restrictions: Other

MULT 1525 - Basic Health Care Analytical Concepts (A SP SU) **1.00 credit(s)**

This course provides students with the mathematical skills and strategies required to successfully work in the allied health fields. Topics covered include: an introduction to the metric and apothecary systems of measure, dose conversions, strengths of solutions, unit conversions between Fahrenheit and Celsius scales, ratio and proportion calculations, common abbreviations used in interpreting prescriptions, dosage calculations.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

MULT 1865 - Intro Patient Care Wkforc (A SP SU) **3.00 - credit(s)**

This is a workforce training course for employees of health care systems who have entered into a partnership with CSCC. The student learns nurse aide training skills (basic patient care skills such as bathing, feeding, etc.) in order to work with patients prior to taking the BASIC PCA/MSP training. Prerequisite: Employee of health care system who has a partnership with CSCC.

Contact Hours: Lecture 1.00, Lab 2.00, Clinical 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

MULT 1866 - Basic PCA/MSP Train Wkfr (On Demand) **2.00 - credit(s)**

This is a workforce training course for employees of health care facilities who have entered into a partnership with CSCC. In classroom, laboratory and clinical settings, students learn sterile technique and patient care skills. Prerequisite: NATP or MULT 128 and employee of health care facility who has a partnership with CSCC

Contact Hours: Lab 1.00, Lecture 2.00, Clinical 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

MULT 1867 - Phlebotomy Training for the Workforce (On Demand) **2.00 - credit(s)**

This is a workforce training program for employees of health care facilities who have entered into a partnership with CSCC. In classroom, laboratory and clinical settings, students learn the skills of drawing blood. Prerequisite: MULT 135 or permission of instructor and employee of health care facility who has a partnership with CSCC

Contact Hours: Lab 1.00, Lecture 2.00, Clinical 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

MULT 1910 - Basic Electrocardiography (A SP) **3.00 credit(s)**

This course is designed to provide the necessary information to correctly perform the twelve lead EKG, instrumentation source of error, explanation of result, introduction to health care, anatomy and physiology of the heart, and basic dysrhythmia recognition. In addition, this course provides CPR training in accordance with the American Heart Association Healthcare Provider guidelines. This course includes 16 hours clinical experience.

Contact Hours: Lab 1.00, Lecture 2.50

Lab Fee: \$38.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MULT 1916 - Venipuncture for Health Care Providers (SP) **2.00 credit(s)**

Basic blood collection techniques by venipuncture will be covered and practiced in the student laboratory and clinical settings. Emphasis is on basic skills, safety and infection control.

Contact Hours: Lecture 1.00, Lab 1.00

Lab Fee: \$28.00

Pre-requisites: MLT1110 and MLT1111

Co-requisites: none

Restrictions: none

MULT 1950 - Phlebotomy (A SP)**4.00 credit(s)**

This course is the first of a 2 course sequence required to be eligible for a national exam which will qualify the student as a certified phlebotomist. The course will include various blood collection and handling procedures, using a variety of techniques and equipment. To support these skills, other topics included in this course include safety, the healthcare system, quality assurance and professional standards. A 48 hour clinical experience is required.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$55.00

Pre-requisites: MULT1110 Placement into ENGL 1100 or HIMT1121 Placement into ENGL 1100 Placement into ENGL 1100, and Placement into No Reading Required

Co-requisites: none

Restrictions: none

MULT 2070 - HR Mgmt for Health Services (A)**2.00 credit(s)**

The focus of this course is the application, analysis, synthesis, and evaluation of human resource management principles and practices for healthcare managers

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MULT 2072 - Health Care Resource Management (A)**2.00 credit(s)**

This course is designed to provide management approaches to health care resources (budget, equipment, supplies, etc.). It is intended for healthcare managers with limited financial skills.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MULT 2074 - TQM/UM/Accreditation (SP)**2.00 credit(s)**

This course prepares healthcare professionals to apply, analyze, synthesize, and evaluate principles and practices of Total Quality Management, Utilization Management, and accreditation.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MULT 2076 - Legal Aspects and Risk Management (SP)**2.00 credit(s)**

This course provides a basic overview of the legal aspects of health services management and develops a general framework for managers to understand the legal dimension of problems.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MULT 2114 - Chem Dep Counselor Asst. Phase II (A SP SU)**2.00 credit(s)**

This course provides the thirty (30) hours of required addictions specific content for the renewal of the CDCA as required by the Ohio Chemical Dependency Professionals Board. The following areas of content are included: Addiction and treatment knowledge, individual and group counseling, evaluation, service coordination, documentation and professionalism. Community members who currently hold a CDCA Phase I with the State of Ohio may also take this course. This course must be completed with a 'C' or higher.

Contact Hours: Lecture 2.00

Lab Fee: \$5.00

Pre-requisites: MULT1114

Co-requisites: none

Restrictions: none

MULT 2234 - Therapeutic & Applied Humor (On Demand)**2.00 credit(s)**

This technical elective course focuses on the benefits of humor and laughter as an adjunctive approach to working with individuals throughout the human services spectrum. Planning and facilitating a community based "laughter sessions" is a required component of this course. Successful completion of this course meets the academic and experiential requirements for the Certified Laughter Leader set by the World Laughter Tour. This course can be taken as one of the SAHS technical electives or can be taken as a stand alone course by any college student.

Contact Hours: Lecture 2.00

Lab Fee: \$8.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MULT 2403 - Ethics & Decision Making for Interpreter (SU)**3.00 credit(s)**

This course addresses professional, social, cultural, interpersonal and intrapersonal complexities as they impact an interpreter's decision-making processes and professional development. Students learn strategies for developing more self-reflective, culturally-aware approaches to their relationships with potential consumers and colleagues. Best practices in the field of interpreting are explored through a critical lens. This course requires students to shadow a working interpreter outside of class time.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$5.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MULT 2950 - Phlebotomy Practicum II (SP SU)**1.00 credit(s)**

This course is designed to be a continuation of MULT 1950 by providing an additional 75 hours clinical phlebotomy experience and requiring an additional 60 successful blood collections in an inpatient setting. Phlebotomy Practicum II is designed for students who intend to be a professional phlebotomist and will be arranged individually. MULT 1950 and MULT 2950 completes the NAACLS approved program.

Contact Hours:

Lab Fee: \$0

Pre-requisites: MULT1950 Minimum grade of "C"

Co-requisites: none

Restrictions: none

Music**MUS 1101 - Introduction to Vocal Techniques I (A SP SU)****1.00 credit(s)**

An introduction to vocal technique for nonmusic majors. This class will develop basic skills for both solo and group singing through the use of traditional song materials. Course is repeatable for a total of 2 credits.

Contact Hours:

Lab Fee: \$7.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MUS 1102 - Introduction to Vocal Techniques II (A SP SU)**1.00 credit(s)**

A continuation of MUS 1101. An introduction to vocal technique for nonmusic majors. This class will develop basic skills for both solo and group singing through the use of traditional song materials. Course is repeatable for a total of 2 credits.

Contact Hours:

Lab Fee: \$7.00

Pre-requisites: Audition

Co-requisites: none

Restrictions: Instructor Permission

MUS 1103 - Class Piano I (A SP SU)**2.00 credit(s)**

Introduction to the fundamentals of keyboard technique combined with the development of music reading and basic aural skills. This course is for those without prior keyboard experience.

Contact Hours: Lecture 1.00

Lab Fee: \$7.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MUS 1104 - Class Piano II (A SP SU)**2.00 credit(s)**

Continuation of MUS 1103. This course continues the development of fundamentals of keyboard technique combined with music reading and basic aural skills. This course is for those who have taken MUS 1103 and wish to continue improving their skills.

Contact Hours: Lecture 1.00

Lab Fee: \$7.00

Pre-requisites: MUS1103

Co-requisites: none

Restrictions: Instructor Permission

MUS 1120 - Introduction to Electronic Music (A SP)**3.00 credit(s)**

This course will introduce students to the fundamentals of synthesized music. The origin, development and present day applications of computerized sound manipulations will be studied.

Contact Hours: Lecture 2.00

Lab Fee: \$2.00

Pre-requisites: MUS1103

Co-requisites: none

Restrictions: Instructor Permission

MUS 1121 - Fundamentals of Music Theory (A SP SU)**3.00 credit(s)**

Introduces the elements of music for non music majors, including notation and the basic skills necessary for listening and performance. The class is designated to acquaint students with the elements and procedures necessary for the composition and performance of music. This course is on demand.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MUS 1122 - Beginning Musical Composition (SP)**3.00 credit(s)**

This course offers a course in basic techniques and principles of standard musical composition in the 21st century. Building upon foundational music theory, formal compositional methods of contemporary music will be explored and creative expressions developed. This course is on demand.

Contact Hours: Lecture 3.00

Lab Fee: \$7.00

Pre-requisites: MUS1121

Co-requisites: none

Restrictions: Instructor Permission

MUS 1203 - Vocal Ensemble (A SP SU)**1.00 credit(s)**

Large conducted choral ensemble, admission by audition. Participants prepare a variety of music for concert performance.

Contact Hours:

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

MUS 1204 - Concert Band (A SP)**1.00 credit(s)**

Large conducted choral ensemble, admission by audition. Participants prepare a variety of music for concert performance.

Contact Hours:

Lab Fee: \$2.00

Pre-requisites: Audition

Co-requisites: none

Restrictions: Instructor Permission

MUS 1205 - Small Instrumental Ensemble (A SP SU)**1.00 credit(s)**

Placement is through audition. Allows a specialized ensemble to concentrate on specific instrumental techniques and to explore specialized musical literature. Prior experience in instrumental music is expected.

Contact Hours:

Lab Fee: \$2.00

Pre-requisites: Audition

Co-requisites: none

Restrictions: Instructor Permission

MUS 1206 - Gospel Vocal Ensemble (A SP SU)**1.00 credit(s)**

Admission is by audition. Participants practice and prepare for concert performance of music from the gospel and African-American vocal/choral traditions. Music reading ability not required. Repeatable for a total of 6 credit hours.

Contact Hours:

Lab Fee: \$7.00

Pre-requisites: Audition

Co-requisites: none

Restrictions: Instructor Permission

MUS 1208 - Electronic Music Ensemble (On Demand) **1.00 credit(s)**

Admission is through audition or permission of instructor. Class consists of a select group of musicians rehearsing arranging and performing music on electronic instruments. This course is on demand.

Contact Hours:

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

MUS 1221 - Musicianship I (A) **4.00 credit(s)**

Course covers the elements of music and musical notation; analytical concepts and terminology; major and minor scales; fundamentals of harmony and melody as well as the development of basic aural skills, sight singing and dictation.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: MUS1121

Co-requisites: none

Restrictions: Instructor Permission

MUS 1222 - Musicianship II (SP) **4.00 credit(s)**

This course continues with the study of diatonic modulation and secondary dominants, modal and pentatonic harmonic patterns and pentatonic and blues scales. Continued development of aural skills is also emphasized.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: MUS1221

Co-requisites: none

Restrictions: none

MUS 1251 - Survey of Music History (A SP SU) **3.00 credit(s)**

This is an introductory course within the context of the liberal arts, offering a history of the Western art music tradition from early times to the present, with an introduction to major composers, styles, and representative works. Music will be discussed with historical perspective providing a thorough understanding and the ability to define and describe terms, elements and characteristics of music

Contact Hours: Lecture 3.00

Lab Fee: \$7.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MUS 1271 - Business of Music (A)**3.00 credit(s)**

This course surveys the business aspects of music with an emphasis on recording companies and artists, music publishers and writers, contracts, unions and guilds, agents and managers, records, markets, artists' recording contracts, record production, promotion, distribution and merchandising. This course is on demand.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

MUS 2221 - Audio Productions I (A SP)**3.00 credit(s)**

This course presents an examination of recording techniques in the studio for live performance. Analog and digital formats will be explored as will elements of post production. This course is on demand.

Contact Hours: Lecture 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

MUS 2222 - Audio Production II (SP)**3.00 credit(s)**

This course is a continuation of MUS 2221. This course will explore recording and sound reinforcement techniques and principles in addition to post production issues such as editing techniques, maintenance, and repair. This course is on demand.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: MUS2221

Co-requisites: none

Restrictions: none

MUS 2294 - Special Topics in Music (On Demand)**1.00 - 5.00 credit(s)**

Students explore special topics in Music designed to meet specific needs. This course is on demand.

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

Nursing Certificate Program

NURC 1001 - Nurse Aide Training Program (A SP SU)

3.00 credit(s)

The Nurse Aide Training Program is designed to instruct the student in the knowledge and skills needed to provide basic care for clients in the long-term care setting. The student who completes this course will receive a "certificate of class completion" and will be eligible to take the state test for nurse aides in Ohio. This course satisfies the NURC 1001 prerequisite for specific health technologies at the college. Because this is a skills-based course, classroom, clinical and laboratory attendance is mandatory. The completion of the health record and the background check is required for the student to enroll in this course.

Contact Hours: Clinical 0.00, Lecture 1.50, Lab 4.50

Lab Fee: \$28.00

Pre-requisites: Placement into ENGL 1100 and Placement into No Reading Required or college transcript with previous ENGL coursework

Co-requisites: none

Restrictions: none

NURC 1003 - Patient Care Assistant:Acute Care Focus (A SP SU)

3.00 credit(s)

The Patient Care Assistant Course is designed to instruct students in the knowledge and skills needed to provide nursing care for patients in an acute care setting and/or a skilled rehabilitation unit. The course is an expansion of the curriculum content and skills that are within the state approved Nurse Aide Training Program. The curriculum includes information related to communication, infection control, and safety practices within the acute care setting and/or the skilled care unit. Students learn additional skills related to the measurements of vital signs, nutrition/intake, and elimination/output. Basic skin and wound care, specimen collection, telemetry and oxygen delivery are taught. In addition, the expanded role of the patient care assistant includes the care of: patients following surgery; patients receiving rehabilitation and restorative services; obstetrical patients and neonates; and the pediatric patient. Because this is a skills-based course, classroom and laboratory attendance is mandatory.

Contact Hours: Clinical 0.00, Lecture 1.50, Lab 4.50

Lab Fee: \$30.00

Pre-requisites: NURC1001 Minimum grade of "C", or STNA and Placement into ENGL 1100 and Placement into No Reading Required

Co-requisites: none

Restrictions: none

NURC 1102 - Patient Care Skills Course (A SP SU)

3.00 credit(s)

This course is an introduction to skills that will be learned in the pre-licensure nursing program and presents the rationale for and practice of skills that may be performed by patient care technicians in an acute care setting. It is a combination of lecture, laboratory skills, demonstration, and practice. Major topics include: wound care, specimen collection, airway care, oxygen administration, enteral nutrition, and elimination assistance. Because this is a skills-based course, classroom and laboratory attendance is mandatory. Prior Learning Assessment (PLA) credit for NURC 1101 Nurse Aide Training may be available to a student with a valid State of Ohio Nurse Aide Registry Card.

Contact Hours: Lecture 1.50, Lab 4.50

Lab Fee: \$30.00

Pre-requisites: NURC1001 Minimum grade of "C" and Placement into ENGL 1100 and Placement into DEV 0114, and Placement into No Reading Required or college transcript with previous ENGL coursework

Co-requisites: none

Restrictions: Program Admission

NURC 1104 - Basic Care Skills (A SP)**2.00 credit(s)**

The student will be introduced to and utilize basic care skills in a laboratory setting. The student will learn the rationale for and practice of skills necessary to provide patient care in a healthcare setting. This course is a combination of lecture, laboratory skills, demonstration and practice. The student will incorporate concepts and skills related to perfusion, protection, and elimination in a lab setting. Basic care skills taught in this course are cardiac monitoring, sterile technique, wound care, specimen collection, urinary elimination and ostomy care. Because this is a skills-based course, classroom and laboratory attendance is mandatory. Students must earn a grade of "C" or better in this course.

Contact Hours: Lecture 1.00, Lab 3.00**Lab Fee: \$30.00**

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission

NURC 1170 - Holistic Healing Methods (A SP SU)**3.00 credit(s)**

This course offers an introduction to the fundamentals of holistic healing, which includes philosophical and theoretical foundations, alternatives methods and their uses for health maintenance, and development of personal healing capacities. This class facilitates the development of daily self-healing practices.

Contact Hours: Lecture 3.00**Lab Fee: \$5.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

NURC 1171 - Fundamentals of Herbology (A SP SU)**3.00 credit(s)**

This course outlines the uses of herbs in the healing process from ancient history to the present day. Herbs will be discussed according to their traditional uses and current clinical trial/research. The course will provide a foundation of how to use herbs in cooking, as well as creating simple home preparations. Emphasis will be on therapeutic self-care first aid.

Contact Hours: Lecture 3.00**Lab Fee: \$5.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

NURC 1172 - Principles of Homeopathy (A SP SU)**3.00 credit(s)**

This course is designed to introduce the student to the principles and theories behind the use of homeopathic preparations to treat most disease and disorders. The practical applications of homeopathy are presented by familiarizing the student with homeopathic case taking, homeopathy for acute conditions and the study of materia medica.

Contact Hours: Lecture 3.00**Lab Fee: \$5.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

NURC 1250 - Train the Trainer Program (A SP SU)**2.00 credit(s)**

This course prepares the qualified nurse to teach, coordinate, and supervise a Nurse Aide Training Program and meets federal and state requirements. The following eligibility requirements must be met to enroll in this course: current RN/LPN licensure in Ohio; minimum of two years experience in caring for elderly or chronically ill; letter of verification documenting employment history.

Contact Hours: Lecture 2.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

NURC 1901 - Registered Nurse First Assistant (A)**4.00 credit(s)**

This is an intensive web-based program which is designed to provide the experienced perioperative nurse with the advanced preparation and study necessary to assume the role of first assistant. The course is based on AORN's Core Curriculum for the RN First Assistant. The following requirements must be met to enroll in this course: current RN licensure; two years current perioperative experience; CNOR certified or eligible; current ACLS or CPR; liability insurance; two letters of recommendation.

Contact Hours: Seminar 1.00, Lecture 2.00, Practicum 7.00**Lab Fee: \$425.00**

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

NURC 1902 - RNFA Experience in Operating Rm (A SP)**4.00 credit(s)**

This course provides the student the continuation of the Web based program for the completion of the RN First Assistant Program.

Contact Hours: Seminar 1.00, Lecture 2.00, Practicum 7.00**Lab Fee: \$8.00**

Pre-requisites: NURC1901

Co-requisites: none

Restrictions: none

Nursing

NURS 1100 - Spiritual Nursing Care (A)

2.00 credit(s)

Nursing elective: Students are introduced to the basic concepts of spiritual nursing care. Students utilize assessment tools and interventions to meet patient's spiritual care needs and assist in understanding their own spirituality. This course may be used to fulfill the elective requirement for nursing. This course may be offered in the Summer term on an On Demand basis.

Contact Hours: Lecture 2.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

NURS 1101 - Neonatal Nursing (A)

2.00 credit(s)

Nursing elective: Students focus on the roles of the nurse as the provider of care for high risk neonates and their families. This course examines potential complications in the antepartum and postpartum periods. Students gain specialized knowledge and skills ranging from pre-hospitalization through post discharge and follow up. This course may be used to fulfill the elective requirement for nursing. This course may be offered in the Summer term on an On Demand basis.

Contact Hours: Lab 1.00, Lecture 1.50**Lab Fee: \$20.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

NURS 1102 - Principles of Basic Trauma Nursing (A)

2.00 credit(s)

Nursing elective: This course is designed to introduce students to the basic concepts of Trauma Nursing. The focus of the course is exploration of the major concepts and conceptual issues underlying the specialty of Trauma Nursing. This course may be offered in the Autumn term on an On Demand basis.

Contact Hours: Lecture 2.00**Lab Fee: \$25.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

NURS 1103 - Holistic Intervention for Hlth Care Prac (SP) **2.00 credit(s)**

Nursing elective: The students are introduced to the concept of holism particularly in relationship to holistic nursing. Included is an overview of the body/mind/spirit paradigm. The scope of practice, core values and standards of holistic nurses will be explored. A survey of commonly used techniques such as guided imagery, therapeutic touch, and relaxation techniques will be explored. This course may be used to fulfill the elective requirement for nursing. This course may be offered in the Summer term on an On Demand basis.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission Program Admission

NURS 1104 - Gerontological Nursing (A) **2.00 credit(s)**

Nursing elective: This course focuses on meeting the needs of the elderly. Content will reflect the influence of legal, ethical, cultural, and economic issues related to health care needs of the elderly. This course may be used to fulfill the elective requirement for nursing. This course may be offered in the Summer term on an On Demand basis.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission Program Admission

NURS 1105 - End of Life Care (SP) **2.00 credit(s)**

Nursing elective: Students are introduced to various interventions appropriate at the end of life. This includes an overview of commonly experienced problems. Nine critical areas are explored. This course may be used to fulfill the elective requirement for nursing. This course may be offered in the Summer term on an On Demand basis.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission Program Admission

NURS 1106 - Critical Care Nursing (SP) **2.00 credit(s)**

Nursing elective: Students are exposed to advanced theory and skills needed to manage the care of individuals in a variety of critical care areas. The focus identifies critical situations and potential problems then selects and implements appropriate interventions. Human Patient Simulator is used. This course may be used to fulfill the elective requirement for nursing. This course may be offered in the Spring term on an On Demand basis.

Contact Hours: Lecture 2.00

Lab Fee: \$25.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

NURS 1107 - Current Trends in Pediatric Nursing (SU)**2.00 credit(s)**

Nursing elective: The course is designed to increase the depth of knowledge for students considering specializing in pediatric nursing. Current health care trends and their effects on the delivery of nursing care will be examined. The course will provide students with an opportunity to assess personal goals regarding employment opportunities as a pediatric nurse. Human Patient Simulator is used. This course may be used to fulfill the elective requirement for nursing. This course may be offered in various terms on an On Demand basis.

Contact Hours: Lecture 2.00**Lab Fee: \$20.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

NURS 1108 - Information Technology in Healthcare (SP)**2.00 credit(s)**

Nursing elective: This introductory course in computer applications helps simulate the attainment of knowledge and skills needed to function in today's computerized environment. Emphasis is placed on the application of information technology used in health care, IT's impact on society is also considered. This course may be used to fulfill the elective requirement for nursing. This course may be offered in the Summer term on an On Demand basis.

Contact Hours: Lecture 2.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

NURS 1109 - Cultural Immer-Health Promo Family/Comm (SP)**1.00 credit(s)**

Nursing elective: This course provides students an opportunity to gain exposure to different cultures and clinical settings. Students work with primary health care providers in ambulatory care clinics. Travel expenses are paid by the student. Students must have a valid US passport. This course may be used to fulfill the elective requirement for nursing. This course may be offered in the Summer term on an On Demand basis.

Contact Hours: Lab 3.00**Lab Fee: \$5.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

NURS 1113 - Transition to Registered Nursing (A SU)**1.00 credit(s)**

This course is designed to assist the student who has successfully completed a practical nursing program into the RN sequence. The components of the course include orientation into the associate degree nursing student role at CSCC, professional role expectations, communication, nursing process with a focus on assessment, and teaching/learning principles.

Contact Hours: Lecture 1.00**Lab Fee: \$0.00**

Pre-requisites: Acceptance into the Associate Degree Nursing Program via Practical Nurse (PN) route.

Co-requisites: none

Restrictions: Health Code Immunization Level Program Admission

NURS 1140 - Pharmacology Concepts in Nursing I (A SP) **1.00 credit(s)**

This course focuses on the nurse's role in the safe administration of medications to persons of all ages with a focus on selected drug classifications, over-the-counter medications and supplements. Dosage and calculation principles will be introduced.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: COLS1100 and MATH1025 and NURC1104 and NURS1871

Co-requisites: none

Restrictions: Program Admission

NURS 1141 - Pharmacology Concepts in Nursing I (A SP) **1.00 credit(s)**

This course builds upon NURS 1140 and focuses on classifications of drugs and prototypes including parenteral drug calculations. Nursing implications associated with the administration of medications used for patients of all ages experiencing common physical problems will be emphasized.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: BIO2300 and NURS1872 and NURS1871 and NURS1140 and NURC1104 and MATH1025 and COLS1100

Co-requisites: none

Restrictions: none

NURS 1194 - SPT: Nursing (On Demand) **1.00 - 4.00 credit(s)**

This course is designed for special course topics in the field of Nursing.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

NURS 1871 - Fundamental Concepts of Nursing Care (A SP) **6.00 credit(s)**

This course introduces the role of the nurse in the delivery of safe patient care across the lifespan. The focus of the course will be on selected nursing skills, health assessment and introduction to the nursing process as a foundation in caring for patients with basic health care needs.

Contact Hours: Lecture 2.00, Lab 2.00, Seminar 2.00, Clinical 4.00

Lab Fee: \$99.86

Pre-requisites: NURS1140 and MATH1025 and COLS1100

Co-requisites: NURS1140 and MATH1025 and COLS1100 NURC1104

Restrictions: Program Admission

NURS 1872 - Nsg Cre Reproductive/Common Hlth Problms (A SP) **7.00 credit(s)**

The course focuses on developing nursing judgement in the delivery of patient-centered care for individuals with common physical problems across the life span. Students will be introduced to women's health, care of the newborn, and safe administration of parenteral medications and solutions.

Contact Hours: Lecture 2.00, Seminar 2.00, Lab 3.00, Clinical 6.00

Lab Fee: \$156.87

Pre-requisites: NURS1871 and NURC1104 and NURS1104 and MATH1025 and COLS1100

Co-requisites: none

Restrictions: none

NURS 2042 - Concepts of Pharmacology III (A SP) **1.00 credit(s)**

This course emphasizes classifications, prototypes, and nursing implications of medications used for patients of all ages experiencing complex physical and behavioral problems.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: NURS1141 and NURS1872 and BIO2301 and BIO2300 and PSY1100 and STAT1350 and ENGL1100

Co-requisites: none

Restrictions: none

NURS 2871 - Nsg Cre Patients Complx Physcl Problems (A SP) **5.00 credit(s)**

This course focuses on the nursing management and collaborative care of patients across the lifespan with complex physical problems. The student will refine skills in nursing judgement, prioritization, delegation, and supervision in the delivery of safe, patient-centered care.

Contact Hours: Lecture 1.00, Lab 2.00, Seminar 2.00, Clinical 4.00

Lab Fee: \$128.19

Pre-requisites: NURS1141 and NURS1872 and BIO2300 and BIO2301 and PSY1100 and ENGL1100 and STAT1350

Co-requisites: none

Restrictions: none

NURS 2872 - Nursing Care Behavioral Health Problems (A SP) **3.00 credit(s)**

This course focuses on the nursing management and collaborative care of patients across the lifespan with complex behavioral problems. The student will refine skills in nursing judgement, prioritization, delegation, and supervision in the delivery of safe, patient-centered care.

Contact Hours: Lecture 2.00, Seminar 2.00, Clinical 6.00

Lab Fee: \$62.55

Pre-requisites: NURS1872 and NURS1141 and BIO2300 and BIO2301 and ENGL1100 and PSY1100 and STAT1350

Co-requisites: none

Restrictions: none

NURS 2873 - Ldrshp & Nsg Care Multiple Hlth Problms (A SP) **8.00 - credit(s)**

The course is designed to address the nurse's role related to emerging health care issues and safe, patient-centered care for individuals experiencing multi-system disorders across the lifespan. Students will be provided with the opportunity to synthesize clinical and theoretical learning from previous nursing courses through a role-transition experience.

Contact Hours: Clinical 10.00, Lecture 2.00, Lab 2.00, Seminar 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

Nutrition

NUTR 2310 - Fund Human Nutrition & Metabolism (A SP SU) **3.00 credit(s)**

A study of nutrient and food energy needs of humans throughout the life cycle with consideration of socio-psychological factors. Content includes processes, chemistry, digestion, absorption, metabolism, and utilization of nutrients. An on-line review of biological chemistry, anatomy, physiology, and pathophysiology relevant to nutrition is also included in this course. A one-time techniques session including analysis of blood for nutrients is required of all students. Distance Learning students are required to take their exams at a proctored testing facility. Course is team-taught by faculty with advanced degrees limited to nutrition.

Contact Hours: Lecture 3.00

Lab Fee: \$4.00

Pre-requisites: BIO2301 and CHEM1112 or CHEM1200 or CHEM1113 or BIO1122 or BIO1114

Co-requisites: none

Restrictions: none

Philosophy

PHIL 1101 - Intro to Philosophy (A SP SU) **3.00 credit(s)**

This course offers an introduction to the problems, methods and terminology of philosophy, the types of questions addressed by philosophers, and the pivotal thinkers and systems of Western civilization from the Greeks to the 20th century. PHIL 1101 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in philosophy and humanities.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

PHIL 1130 - Ethics (A SP SU)**3.00 credit(s)**

This course introduces students to moral reasoning, examining theories of right and wrong, good and bad, justice and injustice as they have been viewed in the past and as they shed light on contemporary ethical issues. PHIL 130 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in philosophy and humanities. Sections of this course are H-designated Honors classes.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

PHIL 1150 - Introduction to Logic (A SP SU)**3.00 credit(s)**

PHIL 1150 is an introduction to critical thinking and the methods of inductive, deductive and symbolic logic. PHIL 1150 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in philosophy, humanities, and, in some instances, mathematics and science. Check with an academic advisor.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: MATH1075 and Placement into ENGL 1100

Co-requisites: none

Restrictions: none

PHIL 2250 - Symbolic Logic (SP)**3.00 credit(s)**

This course offers a presentation of deductive logic focused on propositional logic, natural deduction and predicate logic. Symbolic Logic develops in greater detail the principles of deductive logic covered in PHIL 1150. This course meets elective requirements in the Associate of Arts and Associate of Science Degree programs and distributive transfer requirements in philosophy, humanities, and in some cases, mathematics and sciences. Check with academic advisor.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: MATH1075 and Placement into ENGL 1100

Co-requisites: none

Restrictions: none

PHIL 2270 - Philosophy of Religion (SP)**3.00 credit(s)**

This course presents an introduction to the major issues in the philosophy of religion including the existence of God, faith and reason, the problem of evil, miracles, death and immortality, and God and morality. PHIL 2270 meets elective requirements in the Associate of Arts and Associate of Science Degree programs.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

Physics

PHYS 0100 - Introduction to Physics (A SP SU) **4.00 credit(s)**

This course is a survey of the basic concepts of physics. Topics include mechanics, electrostatics, nuclear physics and electromagnetism.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$11.00

Pre-requisites: MATH 1020 or higher and Placement into ENGL 1100

Co-requisites: none

Restrictions: none

PHYS 1103 - World of Energy (A SP SU) **3.00 credit(s)**

This course explores the basic principles of physics in the context of energy use. It covers the topics of forces, electricity, magnetism and machines.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: MATH 1020 or higher and placement into ENGL 1100

Co-requisites: none

Restrictions: none

PHYS 1200 - Introductory Algebra-Based Physics I (A SP SU) **5.00 credit(s)**

This is a laboratory course in classical mechanics (kinematics, Newton's laws, gravitation, energy, momentum, rotational motion, and angular momentum) as well as fluids, harmonic motion, waves, and sound.

Contact Hours: Lab 2.00, Lecture 4.00

Lab Fee: \$17.00

Pre-requisites: MATH 1113 or MATH 1148 or higher or placement equivalent and placement into ENGL 1100 and PHYS 0100 or higher or placement equivalent

Co-requisites: none

Restrictions: none

PHYS 1201 - Algebra-Based Physics II (A SP SU) **5.00 credit(s)**

This is a laboratory course in classical electromagnetism (electric charge, field, and potential, DC circuits, magnetic forces & fields, induction, and electromagnetic waves), geometric and physical optics, and topics in modern physics (special relativity and quantum, atomic, and nuclear physics).

Contact Hours: Lab 2.00, Lecture 4.00

Lab Fee: \$16.00

Pre-requisites: PHYS1200

Co-requisites: none

Restrictions: none

PHYS 1250 - Calculus-Based Physics I (A SP SU)**5.00 - credit(s)**

This is a laboratory course in classical mechanics (kinematics, energy, momentum, rotation, simple harmonic motion, etc.) as well as mechanical waves and sound. It is recommended the student complete PHYS 0100 before enrolling in this course.

Contact Hours: Lab 2.00, Lecture 4.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

PHYS 1251 - Calculus-Based Phys II (A SP SU)**5.00 - credit(s)**

This is a laboratory course in classical electromagnetism (electric charge, field, and potential, DC and AC circuits, magnetic forces and fields, induction, and electromagnetic waves), geometric and physical optics, and topics in modern physics (special relativity and quantum, atomic, and nuclear physics).

Contact Hours: Lab 2.00, Lecture 4.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

PHYS 2293 - Independent Study in Physics (A SP SU)**1.00 - 3.00 credit(s)**

This course is an individual, student-structured course that examines a selected topic in physics through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program.

Contact Hours: Lecture 1.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

PHYS 2300 - Dynamics of Particles & Waves I (A)**4.00 - credit(s)**

This course covers vectors and kinematics; the foundations of Newtonian mechanics; momentum, work, and energy; conservative and nonconservative forces; potentials; angular momentum; and rotations about a fixed axis.

Contact Hours: Lecture 4.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

PHYS 2301 - Dynamics of Particles & Waves II (SP)**4.00 credit(s)**

This course covers rigid body motion; noninertial systems and fictitious forces; central force motion; the special theory of relativity; relativistic kinematics; and relativistic momentum and energy.

Contact Hours: Lecture 4.00

Lab Fee: \$1.00

Pre-requisites: PHYS2300 and MATH2153

Co-requisites: none

Restrictions: none

Practical Nursing**PNUR 1100 - Practical Nursing Fundamentals (SU)****2.00 credit(s)**

This course introduces the student to the role, responsibilities and scope of practice for the practical nurse. It explores the foundations of practical nursing based on the program's conceptual framework of person, health, environment and nursing. The nature of a professional relationship with its boundaries between nurse and client is also explored. Cultural, developmental, spiritual and end of life aspects of care, legal and ethical issues, and concepts of communication including documentation will be introduced within the framework of the nursing process. The principles of critical thinking are introduced. Nutritional concepts will be discussed as they relate to wellness. Basic nursing skills including vital signs, pain concepts and evaluation, and data collection to contribute to the client assessment will be reviewed and practiced in the laboratory. Review of basic skills such as safety using restraints, and body mechanics, are reviewed as well as infection control practices. Math review is included in the course as independent study.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$74.74

Pre-requisites: none

Co-requisites: none

Restrictions: none

PNUR 1200 - Mental Health Concepts for the PN (SU)**2.00 credit(s)**

This course introduces the student to the role, responsibilities and the scope of practice for the practical nurse in dealing with patients who have mental health alterations. The concepts of therapeutic milieu and communication and the use of the nursing process in relation to various mental health disorders will be addressed. An emphasis will be placed on students actively choosing to optimize their own mental health in order to provide optimal care for patients.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: PNUR1100

Co-requisites: none

Restrictions: none

PNUR 1201 - Introduction to Relaxation Techniques (On Demand) **1.00 credit(s)**

The student will be introduced to various relaxation, stress reduction and coping techniques.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission

PNUR 1202 - Care of the Older Adult (On Demand) **1.00 credit(s)**

The student will explore selected issues relevant to the licensed practical nurse working with older adults in a variety of settings.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission

PNUR 1203 - Transcultural Nursing (On Demand) **1.00 credit(s)**

Students will explore how their interactions with patients are affected by their own culturally-influenced values and communication styles, the values of the nursing subculture, and the patient's own cultural values and communication styles. They will also explore the values and traditions of immigrant cultures most commonly found in the Central Ohio area.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission

PNUR 1204 - Ethical Issues in Healthcare and Nursing (On Demand) **1.00 credit(s)**

The student is introduced to major ethical theories and principles as they relate to issues in healthcare and nursing. Case studies are used to illustrate strategies for ethical decision making.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission

PNUR 1205 - PN Role with ECGs (On Demand) **1.00 credit(s)**

This course includes content related to beginning interpretation skills of 5-lead cardiac monitor strips for normal and selected abnormal cardiac rhythms. Correct procedures to obtain 5-lead and 12-lead ECG tracings will be demonstrated and practiced.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission

PNUR 1206 - Care of the Immobile Patient (On Demand) **1.00 credit(s)**

Students will explore physiological and psychosocial factors that relate to immobility. This includes causes of immobility as well as effects of immobility. Students will discuss how they can contribute to the care of patients at risk for, and/or who actually have limited mobility. Some issues include changes in circulation, pulmonary function and skin integrity, obesity, depression and social isolation. In skills lab, students will practice techniques related to caring for patients with impaired mobility including body mechanics, pressure reduction devices, modalities for supporting circulation and pulmonary function, and complex dressing changes.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission

PNUR 1300 - Pharmacology I for the Practical Nurse (A) **2.00 credit(s)**

This course focuses on the practical nurse's role in medication administration to persons across the lifespan. This course introduces students to basic concepts of drug classifications, and nursing implications for medications prescribed to affect various body functions. Vitamins, minerals, and herbs will be discussed in relation to interactions with prescribed medications. Concepts of health care economics and cultural awareness are threaded through the course. Using the nursing process to develop critical thinking skills and safe patient care practices is encouraged. Safe administration and documentation of oral and g-tube, topical and parenteral medications will be presented in the laboratory. Math dosages and calculations practice and evaluations will be included.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$68.84

Pre-requisites: PNUR1100 and BIO2300 and NURC1102

Co-requisites: PNUR1766 and PNUR1866

Restrictions: none

PNUR 1400 - Pharmacology II For the Practical Nurse (SP)**2.00 credit(s)**

This course continues to build on the student's understanding of medication classifications and the nursing implications associated with administration of selected medications commonly prescribed across the health-illness continuum. Intravenous therapy theory and regulations governing this therapy will be presented. An emphasis will be placed on using the nursing process to develop critical thinking skills and safe patient care practices.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$112.74

Pre-requisites: PNUR1300

Co-requisites: PNUR1767 and PNUR1867

Restrictions: none

PNUR 1765 - PN Maternal/Child Care (SP)**2.00 credit(s)**

This course applies the practical nursing concepts to the care of women and children. Health promotion related to the stages of pregnancy will be a focus along with the complications which can occur during pregnancy and delivery. Issues related to the care of women and their families will be discussed. Medications related to these populations will be introduced in lecture and laboratory experiences. Developmental stages of infants through adolescents will be covered. Information on the practical nurse's role in caring for children with altered health will be included. Laboratory practice and simulator experience pertinent to those skills related to care of maternal and pediatric clients will be included. The concepts of critical thinking, communication, and promotion of safety and self-care will be threaded throughout. Math dosages and calculations practice and evaluations will be included.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$77.88

Pre-requisites: PNUR1100 and BIO2300 and NURC1102

Co-requisites: PNUR1865

Restrictions: none

PNUR 1766 - PN Health Promotion & Restoration I (A)**2.00 credit(s)**

This course focuses on the application of the nursing process by the practical nurse with emphasis on health promotion of clients. Nursing concepts related to fluid balance, cancer, oxygenation, and perfusion will be presented. Skills learned in the laboratory will consist of nursing interventions that assist patients in achieving optimal health. The student is expected to apply the concepts of critical thinking, communication, and promotion of safety throughout the course. Math dosages and calculations practice and evaluations will be included.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$73.14

Pre-requisites: PNUR1100 and BIO2300 and NURC1102

Co-requisites: PNUR1300 and PNUR1866

Restrictions: none

PNUR 1767 - Concepts Rel to Health Promo/Rest II (SP) **2.00 credit(s)**

This course continues to focus on application of the nursing process by the practical nurse to promote and restore health of clients with commonly occurring alterations of specific body functions. The goal of care is to promote use of self-care activities to assist clients in attaining an optimal level of health. Skills learned in the laboratory will consist of nursing interventions that assist clients in achieving optimal health. The student is expected to apply the concepts of critical thinking, communication and promotion of safety in the skills lab setting. Math dosages and calculations practice and evaluations will be included.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$110.13

Pre-requisites: PNUR1766 and PNUR1866

Co-requisites: PNUR1400 and PNUR1867

Restrictions: none

PNUR 1865 - Pn Maternal/Child Clinical (SP) **1.00 credit(s)**

This course applies the practical nursing concepts from PNUR 1765 to the care of women and children in the clinical setting. The concepts of critical thinking, communication and promotion of safety and self-care will be applied in practice.

Contact Hours: Clinical 2.00

Lab Fee: \$144.44

Pre-requisites: PNUR1100 and BIO2300 and NURC1102

Co-requisites: PNUR1765

Restrictions: none

PNUR 1866 - PN Health Promo & Rest I Clinical (A) **1.00 credit(s)**

The practical nurse role in observation and collection of data is presented with emphasis on observing the physical, psychosocial and developmental components of adult and geriatric clients. The concepts of critical thinking, communication and promotion of safety and self-care taught in PNUR 1766 will be applied in the clinical setting. Clinical experiences will be conducted in a variety of geriatric settings.

Contact Hours: Clinical 3.00

Lab Fee: \$144.44

Pre-requisites: PNUR1100 and BIO2300 and NURC1102

Co-requisites: PNUR1300 and PNUR1766

Restrictions: none

PNUR 1867 - PN Hlth Promo & Restoration Clinical II (SP) **2.00 credit(s)**

This course continues to focus on application of the nursing process by the practical nurse in the clinical setting to promote and restore health of clients with commonly occurring alterations of specific body functions. The goal of care is to promote use of self-care activities to assist clients in attaining an optimal level of health. The student is expected to apply the concepts of critical thinking, communication and promotion of safety in the clinical setting. Clinical experiences will be conducted in a variety of adult acute or sub-acute health care facilities. Math dosages and calculations practice and evaluations will be included with medication administration experiences in the clinical setting.

Contact Hours: Clinical 6.00

Lab Fee: \$144.44

Pre-requisites: PNUR1300 and PNUR1766 and PNUR1866

Co-requisites: PNUR1400 and PNUR1767

Restrictions: none

PNUR 1900 - PN Transition to Practice (SP)**2.00 credit(s)**

This course builds on previous course concepts of leadership and management looking at specific theories of leadership, change and management. It focuses on skills utilizing communication, delegation, conflict management, motivation and team building. Course content and discussion also includes the legal scope of practice of the LPN in Ohio and transition to practice skills. Specific information about applying for licensure and taking the NCLEX-PN is included. Time is spent each week discussing the student experience in the clinical area with focus on what works and how to improve. Math dosages and calculations practice and evaluations will be included.

Contact Hours: Lecture 0.50, Seminar 1.00, Lab 1.50

Lab Fee: \$138.75

Pre-requisites: PNUR1300 and PNUR1766 and PNUR1866

Co-requisites: PNUR1906

Restrictions: none

PNUR 1906 - PN Transition to Practice Practicum (SP)**1.00 credit(s)**

The student is expected to demonstrate ability to apply the concepts of critical thinking, communication and promotion of safety with groups of patients in the clinical setting. The practicum provides the opportunity for students to apply concepts of leadership and management while under the supervision of an RN instructor or RN/PN preceptor. The concepts of critical thinking, communication and promotion of safety and self-care taught in PNUR 1900 will be applied in the clinical setting. Clinical experiences will be conducted in a variety of geriatric settings.

Contact Hours: Practicum 7.00

Lab Fee: \$144.44

Pre-requisites: PNUR1400 and PNUR1767 and PNUR1867

Co-requisites: PNUR1900

Restrictions: none

Political Science**POLS 1100 - Introduction to American Government (A SP SU)****3.00 credit(s)**

This course introduces students to the nature, purpose and structure of the American political system. Attention is given to the institutions and processes that create public policy. The strengths and weaknesses of the American political system are discussed, along with the role of citizens in a democracy.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: ENGL0190 or Placement into ENGL 1100

Co-requisites: none

Restrictions: none

POLS 1194 - SPT: Political Science (On Demand)**1.00 - 3.00 credit(s)**

A detailed examination of selected topics of interest in political science.

Contact Hours: Lecture 1.00

Lab Fee: \$3.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

POLS 1200 - Comparative Politics (A SP SU)**3.00 credit(s)**

This course is designed as an introductory survey class for the student interested in the field of comparative politics. Students will analyze what comparative politics is; explore a theoretical framework that helps the student understand the basic principles found within comparative politics; and will study specific countries by analyzing their history, institutions, political culture, and economy.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: ENGL0190 or Placement into ENGL 1100

Co-requisites: none

Restrictions: none

POLS 1250 - State & Local Government (A SP SU)**3.00 credit(s)**

This course introduces the student to the nature, purpose and structure of state and local governments, especially in Ohio. Attention is given to the institutions and processes that create public policy, including fiscal policy and the court system. The strengths and weaknesses of the state and local government system are discussed along with the everyday role of citizens in a democracy - especially at these levels of government.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: ENGL0190 or Placement into ENGL 1100

Co-requisites: none

Restrictions: none

POLS 1300 - International Relations (A SP SU)**3.00 credit(s)**

This course examines the origin, nature, and development of the post-Cold War international system. It explores how individuals, Nation-States, nongovernmental and international organizations interact with one another. Basic concepts include knowledge of actors such as Nation-States, international organizations like the United Nations, transnational corporations, nongovernmental organizations (NGOs) and social movements. The course further examines theoretical frameworks for interaction such as idealism, realism, and nationalism. The course considers aspects of foreign policy including political economy, isolationism, and interventionism. It also explores strategies for enhancing international security, conflict resolution, diplomacy, military intervention, and the role of international law.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: ENGL0190 or Placement into ENGL 1100

Co-requisites: none

Restrictions: none

POLS 2193 - Independent Study in Political Science (On Demand) **1.00 - 3.00 credit(s)**

An individual, student-structured course that examines a selected topic in Political Science through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program.

Contact Hours: Lecture 1.00

Lab Fee: \$3.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

Psychology

PSY 1100 - Introduction to Psychology (A SP SU) **3.00 credit(s)**

This introductory course provides an overview of the origins, growth, content and applications of psychology, including the application of the scientific method to the following topics: research methodology; beginning statistics; theories of physical, cognitive, moral and emotional development; sensation; perception; learning; motivation; intelligence; memory; personality; coping processes; abnormality; adjustment; and the individual in small groups and a pluralistic society. Sections of this course are H-designated Honors classes.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

PSY 2193 - IS in Psychology (On Demand) **1.00 - 3.00 credit(s)**

PSY 2193 is an individual, student-structured course that examines a selected topic in psychology through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: PSY1100 Minimum grade of "C"

Co-requisites: none

Restrictions: Instructor Permission

PSY 2200 - Educational Psychology (A SP SU) **3.00 credit(s)**

This course offers students interested in becoming teachers an opportunity to consider practical, education-related applications of basic introductory psychology concepts. Teaching and learning topics include effective teaching skills; classroom management; the cognitive, social, and emotional development of learners; learner diversity; teacher- and student-centered instructional approaches; assessment of student learning; learning theories; creating optimal learning environments; student motivation; and the technology revolution in education. Methods may include interactive small group work, team presentations, educator communication skill building exercises, and computer lab experiences, including beginning training to use educational databases and Microsoft PowerPoint software.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: PSY1100 Minimum grade of "C"

Co-requisites: none

Restrictions: none

PSY 2245 - Children With Exceptionalities (A SP SU)**3.00 credit(s)**

This course is an introductory course that offers teachers, teaching assistants and students interested in becoming teachers an opportunity to study both the characteristics of children with special needs and the educational practices and programs that work to meet these learners' needs in inclusive settings. Course topics include causes, prevalence and assessment of specific exceptionalities; historic and current theories, issues, trends, legal rights and responsibilities in special education; student placement and service options; teaching strategies, modifications and accommodations; classroom organization and management; and professional and home-school collaboration for lifelong learning.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: PSY1100 Minimum grade of "C"

Co-requisites: none

Restrictions: none

PSY 2261 - Child Development (A SP SU)**3.00 credit(s)**

This course examines the nature, nurture and development of children from conception through middle childhood. The traditional child development approach is used with emphasis upon physical, cognitive, social, emotional, and language development. Sections of this course are S-designated Service-Learning classes.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: PSY1100 Minimum grade of "C"

Co-requisites: none

Restrictions: none

PSY 2325 - Social Psychology (A SP SU)**3.00 credit(s)**

This course provides an overview of the origins, growth, content, and interaction of individuals in social settings, including the application of the scientific method and cultural influence to the following topics: attitudes and attitude change, attribution, social identity (self and gender), social perception (understanding others), social cognition (thinking about others and their social environment), prejudice and discrimination, non-verbal communication, obedience to authority, conformity, aggression, prosocial behavior, interpersonal attraction, and behavior in groups.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: PSY1100 Minimum grade of "C"

Co-requisites: none

Restrictions: none

PSY 2331 - Abnormal Psychology (A SP SU)**3.00 credit(s)**

Abnormal Psychology presents the basic concepts of abnormalities as defined by the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). The course focuses on classification schemes of diagnoses and looks at descriptive terms and symptoms. Research, major perspectives and myths in the field of mental health are examined.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: PSY1100 Minimum grade of "C"

Co-requisites: none

Restrictions: none

PSY 2340 - Human Growth & Development/Life Span (A SP SU)**3.00 credit(s)**

This course is a survey of developmental change throughout the lifespan. It is an interdisciplinary course which studies human growth and development for each stage of life from the time of conception and prenatal growth through infancy, childhood, adolescence, and adulthood. The course focuses on the physical, social, emotional, and cognitive development of human beings and familiarizes students with the many forces that shape individual development. This course is a service learning course. Students are required to complete curriculum-related service hours at a local non-profit agency.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: PSY1100 Minimum grade of "C"

Co-requisites: none

Restrictions: none

PSY 2530 - Psychology of Personality (A SP SU)**3.00 credit(s)**

Psychology of Personality is an exploration of major personality theories (trait, biological, psychodynamic, humanistic, socio-cultural, behavioristic, social learning, and cognitive). It includes examination of the structure, dynamics, development, and assessment of personality and related psychological processes.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: PSY1100 Minimum grade of "C"

Co-requisites: none

Restrictions: none

PSY 2551 - Adolescent Psychology (A SP SU)**3.00 credit(s)**

This course examines human development from puberty to young adulthood from a variety of perspectives. The course emphasizes the physical, cognitive, moral, identity and career development of adolescents in contemporary society. Although the emphasis is on major theories of development and the normal development sequence, problems arising at this stage, and means of dealing with these problems, will be addressed. Topics to be covered include education, academic performance and cognitive development; variations in physical and sexual maturation; social, emotional and moral development; parent-child relationships; identity and self-image; work and leisure behavior; and transition to adulthood and independence"

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: PSY1100 Minimum grade of "C"

Co-requisites: none

Restrictions: none

Quality Assurance Technology

QUAL 1112 - Total Quality Management (A SP) **4.00 credit(s)**

This course focuses on the urgency of making people, organizations, and businesses more functional and competitive in a global economic environment. The course is a study of the major elements and concepts of Total Quality Management principles and styles of quality management, systems thinking, continuous improvement, (which include team tools, statistical techniques and statistical tools used by teams and individuals), scientific management using data, and the historic influences of leaders in quality management.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$20.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

QUAL 2111 - Reliability Systems Analysis (SP SU) **4.00 credit(s)**

This course is an examination of current methods use to ensure the reliability of measurements, data, products, systems & services. Students examine methods used in TQM, Six Sigma & Lean Manufacturing including the use of simulations, and ways to improve performance from the design stage. The concepts of value engineering that identifies the function of a product or service, establishes a monetary value for that function, and provide the necessary function reliability or maintainability is studied. Reliable data collection procedures using measurements traceability to NIST standards is also presented and measurement instrument capability is demonstrated.

Contact Hours: Lecture 2.00, Lab 4.00

Lab Fee: \$20.00

Pre-requisites: QUAL1112

Co-requisites: none

Restrictions: none

QUAL 2900 - Field Experience: Quality Assurance (On Demand) **2.00 credit(s)**

Contact Hours: Field Experience/Internship 24.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

Real Estate

REAL 1011 - Real Estate Principles and Practices (A SP SU)

3.00 credit(s)

This course is an introduction to the language of real estate, the economics of the real estate business, and the general practices performed in the listing and selling of real estate. It provides a basic knowledge of the real estate business by addressing the physical, legal, locational, and economic characteristics of real estate, real estate markets, regional and local economic influences on real estate values, evaluation, financing, licensing, and professional ethics. This course meets all state requirements for licensing. State of Ohio Department of Commerce only accepts course work taken within the last 10 years towards educational requirements to sit for the state real estate licensing exam.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

REAL 1012 - Real Estate Law (A SP SU)

3.00 credit(s)

Real Estate Law includes all areas of law of common concern to the typical real estate practitioner and investor-consumer. Among topics covered are the law of agency, law of fixtures, freehold and leasehold, estates, conveyance of real estate, real estate managers, licensure laws of Ohio, zoning, cooperatives and condominiums. This course meets all state requirements for licensure. State of Ohio Department of Commerce only accepts course work taken within the last 10 years towards educational requirements to sit for the state real estate licensing exam.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

REAL 1013 - Real Estate Finance (A SP SU)

2.00 credit(s)

REAL 1013 covers four major concerns of real estate financing: financing instruments and creative financing techniques; in-depth mortgage payment patterns and concepts, economic characteristics and standards, and financing of single and income-producing properties; sources and availability of mortgage money and credit and the impact of various factors on the mortgage market; and special government activities having an impact on real estate financing. This course meets state requirements for licensing. State of Ohio Department of Commerce only accepts course work taken within the last 10 years towards educational requirements to sit for the state real estate licensing exam.

Contact Hours: Lecture 2.00**Lab Fee: \$2.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

REAL 1014 - Real Estate Appraisal (A SP SU)**2.00 credit(s)**

REAL 1014 stresses the methodology of appraising the single-family residential property and the theory underlying appraisal techniques. This course covers the three basic techniques of appraising: market comparison, penalized cost of replacement, and income approach (GMRM). A term appraisal project is assigned to give the student practical experience in applying these techniques. This course meets state requirements for licensing. State of Ohio Department of Commerce only accepts course work taken within the last 10 years towards educational requirements to sit for the state real estate licensing exam.

Contact Hours: Lecture 2.00**Lab Fee: \$2.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

REAL 1221 - Residential Sales Practices (SP)**2.00 credit(s)**

This is a "how to" course providing a step-by-step approach for success as a real estate professional based on sound principles and acceptable techniques. This course sets forth basic fundamentals which must be mastered by real estate practitioners, regardless of their specialization or type of property involved. The underlying theme is communication. See advisor to find out if course might meet continuing education requirement.

Contact Hours: Lecture 2.00**Lab Fee: \$2.00**

Pre-requisites: REAL1011

Co-requisites: none

Restrictions: none

REAL 2220 - Real Estate Ethics & Etiquette (A SP)**2.00 credit(s)**

This course is intended to educate real estate licensees and potential licensees on the importance of etiquette and professionalism in the real estate practice. This course covers etiquette between agents and clients, be they English-speaking or foreign-born. Students will learn basic customs and traditions in the real estate industry and will learn appropriate conduct for a variety of settings that they will experience in the real estate field.

Contact Hours: Lecture 2.00**Lab Fee: \$2.00**

Pre-requisites: REAL1011

Co-requisites: none

Restrictions: none

REAL 2221 - Professional Property Management (A SP) **2.00 credit(s)**

This is a course studying decision-making as it affects management of residential, commercial and industrial property. The emphasis shall be on the practical application of theory to actual management problems. Specific topics include the Ohio Tenant Landlord Act, forcible entry and detainer, typical leases, office management, hiring, merchandising, advertising, collection problems, taxes, insurance and maintenance. See advisor to find out if course might meet continuing education requirement.

Contact Hours: Lecture 2.00

Lab Fee: \$2.00

Pre-requisites: REAL1011

Co-requisites: none

Restrictions: none

REAL 2250 - Commercial Real Estate (A SP) **2.00 credit(s)**

This course introduces students to commercial real estate practice including basic vocabulary, various compliance requirements, tools, and training to proceed with commercial listing or sales activity. Students will learn to establish market value and return for investments in a variety of commercial buildings as well as a broad selection of financing options for commercial real estate.

Contact Hours: Lecture 2.00

Lab Fee: \$2.00

Pre-requisites: REAL1011 or Real Estate License

Co-requisites: none

Restrictions: none

REAL 2270 - Introduction to Real Estate Investing (A SP) **2.00 credit(s)**

This course offers a practical approach to understanding the steps necessary to purchase real property as part of an investment portfolio. Students will use case studies to develop investment plans that achieve financial wealth through real property investment. Investment property will include single family, multi-family, and small commercial ventures. It is recommended that the student be familiar with Excel spreadsheets or similar software.

Contact Hours: Lecture 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

REAL 2275 - Introduction to Property Renovation (A SP) **2.00 credit(s)**

This course will introduce students to a broad overview of common repair issues and typical maintenance requirements for residential buildings. Students will cover primary issues and requirements associated with historical properties. Students will review architectural and construction styles as a method of determining the age of property and assess typical repairs required. This course will review the scope, material, and labor investments required for common residential repairs. Students will learn to recognize and use basic materials, tools, and techniques used in residential repairs.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$15.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

REAL 2950 - Real Estate Seminar/Practicum (A SP SU) **2.00 credit(s)**

This course introduces students to the real estate profession and daily activities of a real estate agent. The course will provide a foundation of the real estate process and an opportunity for students to apply classroom information, theories, and skills in a real estate office environment. Students will participate in an actual real estate office environment. Program coordinator's approval needed.

Contact Hours: Lecture 1.00, Practicum 7.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

Respiratory Care

RESP 1110 - Introduction to Respiratory Care (SU) **2.00 credit(s)**

This course introduces students to the role and responsibilities of the respiratory therapist. Emphasis will be placed physical examination techniques and general respiratory therapeutics. Fundamental concepts including effective communication skills, legal and ethical principles, and infection control will be presented.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$10.00

Pre-requisites: none

Co-requisites: RESP1220

Restrictions: Program Admission

RESP 1220 - Cardiopulmonary A&P (SU) **3.00 credit(s)**

This course provides an integrated approach to the anatomy and physiology of the cardiopulmonary system. Basic pathological concepts related to the pulmonary system will be introduced. Normal and abnormal function will be compared.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: BIO2300

Restrictions: Program Admission

RESP 1230 - Respiratory Pharmacology (A) **2.00 credit(s)**

This course provides an introduction to the basic principles of therapeutic drug administration. Classification of drugs included are bronchodilators, anti-inflammatory agents, anti-asthma agents, mucus controlling agents, surfactants, antimicrobial agents, and other drugs used in the treatment of cardiopulmonary patients. Special emphasis will be placed on safety issues and the application of drug administration in respiratory care practice.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: RESP1220

Co-requisites: RESP1861 and RESP2472

Restrictions: Program Admission

RESP 1360 - Therapeutic Procedures I (SP)**4.00 - credit(s)**

This course is focused on the basic therapeutic and diagnostic procedures performed by the respiratory therapist. Topics included are medical gas therapy, lung expansion therapy and basic airway care. Special emphasis will be placed on the indications, contraindications, techniques and effectiveness of each. The student will practice procedures in a simulated patient care environment.

Contact Hours: Lecture 3.00, Lab 3.00

Lab Fee: \$0

Pre-requisites: RESP1220

Co-requisites: RESP2452 and RESP2442 and RESP2482 and RESP1862

Restrictions: Program Admission

RESP 1861 - Intro to the Clinical Experience (A)**1.00 credit(s)**

This course is focused on introducing the student to the clinical setting. Emphasis is placed on patient safety and patient confidentiality.

Contact Hours:

Lab Fee: \$0

Pre-requisites: RESP1220

Co-requisites: RESP1230 and RESP2472

Restrictions: Health Code Program Admission

RESP 1862 - Clinical Practice I (SP)**1.50 credit(s)**

This course is focused of conducting general therapeutic respiratory care procedures in the general medical surgical and intermediate care units in the acute care setting. This course will expose students to adult, pediatric, and neonatal patients.

Contact Hours: Directed Practice 8.00

Lab Fee: \$0

Pre-requisites: RESP1861

Co-requisites: RESP1360 and RESP2442 and RESP2452 and RESP2482

Restrictions: Health Code Program Admission

RESP 2442 - Pulmonary Diagnostics (SP)**2.00 credit(s)**

This course focuses on the role of the respiratory therapist in advanced patient assessment. Topics included are flexible fiberoptic bronchoscopy examination, cardiac output measurement, hemodynamic assessment, nutritional assessment and neurologic assessment.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$18.00

Pre-requisites: RESP1220

Co-requisites: RESP1360 and RESP1862 and RESP2452 and RESP2482

Restrictions: Program Admission

RESP 2452 - Respiratory Pathophysiology (SP)**3.00 credit(s)**

This course focuses on the role of the respiratory therapist in the assessment of patients with cardiopulmonary disease. Topics included are pulmonary functions, clinical laboratory studies, imaging studies, electrocardiography, sleep studies, bronchoscopic and hemodynamic assessment.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$40.00

Pre-requisites: RESP1220

Co-requisites: RESP1360 and RESP1862 and RESP2442 and RESP2482

Restrictions: Program Admission

RESP 2462 - Therapeutic Procedures II (SU)**4.00 credit(s)**

This course is focused on advanced therapeutic procedures performed by the respiratory therapist. Topics include advanced airway care and continuous mechanical ventilation. Special emphasis will be placed on the indications, contraindications, techniques and effectiveness of each. This course will also provide a study of the theory and principles of operations of mechanical ventilators used in the treatment of adult patients. An introduction to pediatric and neonatal care will be provided. Emphasis will be placed on manipulation, troubleshooting, infection control, and quality control. The student will practice procedures in a simulated patient care environment.

Contact Hours: Lecture 3.00, Lab 3.00

Lab Fee: \$36.00

Pre-requisites: RESP1360

Co-requisites: RESP2870

Restrictions: Program Admission

RESP 2472 - Respiratory Equipment (A)**2.00 credit(s)**

This course provides a study of the operating principles of equipment used to administer respiratory therapy in the general medical-surgical care settings. Equipment used in the administration of medical gases, humidity and aerosol therapy, lung expansion therapy, and bronchial hygiene will be emphasized. Additional topics will include equipment used in pulmonary diagnostics and patient monitoring. Emphasis will be placed on troubleshooting, infection control and quality control.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$0

Pre-requisites: RESP1220

Co-requisites: RESP1230 and RESP1861

Restrictions: Program Admission

RESP 2482 - Neonatal Pediatric Respiratory Care (SP) **3.00 credit(s)**

This course will provide a study of respiratory care to the neonatal pediatric population. Course content will include the assessment and management of pulmonary disorders in the newborn, infant and pediatric patient with emphasis on application of respiratory therapy. Students will complete the American Heart Association Neonatal Resuscitation Program and the American Heart Association Pediatric Advanced Life Support Program.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$10.00

Pre-requisites: RESP1220

Co-requisites: RESP1360 and RESP1862 and RESP2452 and RESP2442

Restrictions: Program Admission

RESP 2530 - Therapeutic Procedures III (A) **3.00 credit(s)**

This course is focused on the respiratory management of the critically ill patient. Emphasis will be placed on the initiation and maintenance of mechanical ventilation of the adult and neonate. The student will practice in a simulated patient care environment.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$66.00

Pre-requisites: RESP2462

Co-requisites: RESP2890

Restrictions: Program Admission

RESP 2870 - Clinical Practice II (SU) **1.50 credit(s)**

This course is focused on conducting respiratory care in the acute care, long-term acute care, and critical care settings. Experience with the pediatric and neonatal patient will be provided.

Contact Hours:

Lab Fee: \$25.00

Pre-requisites: RESP1862

Co-requisites: RESP2462

Restrictions: Health Code Program Admission

RESP 2890 - Clinical Practice III (A) **1.50 credit(s)**

This course is focused on conducting respiratory care procedures in the critical care settings. Experience with the pediatric and neonatal patient will be provided with an emphasis on caring for the critically ill adult.

Contact Hours:

Lab Fee: \$25.00

Pre-requisites: RESP2870

Co-requisites: RESP2530

Restrictions: Health Code Program Admission

RESP 2950 - Clinical Practicum (A)**1.50 credit(s)**

This course provides the student the opportunity to apply previously learned skills. Most time will be spent in the critical care setting. The student will have the opportunity to select specialty rotations in their area of interest. The students will complete the Advanced Cardiac Life Support provider course.

Contact Hours: Seminar 1.00, Practicum 10.00

Lab Fee: \$90.00

Pre-requisites: RESP2530

Co-requisites: none

Restrictions: Health Code Program Admission

Social and Human Services

SAHS 1111 - Introduction Social Work & Mental Health (A SP SU)**3.00 credit(s)**

This course introduces students to the field of human services and the study of social work including its history and fields of practice. This course includes an introduction to the various practice settings, roles of the social worker and social work assistant, NASW code of ethics as well as the knowledge base and skills required to be a culturally competent, critical thinker within generalist social work practice. Students will also explore the spectrum of human service agencies in the community and the role of social and economic justice in serving a diverse cross section of at-risk, oppressed and vulnerable societal groups. Special emphasis on the mental health population will be included. This course must be completed with a 'C' or higher.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SAHS 1112 - Introduction Developmental Disabilities (A SP SU)**3.00 credit(s)**

This course provides the student with an overview of the developmental disability field as it relates to current and historical issues impacting persons with disabilities and the service delivery system. Students will gain knowledge of definitions, causes and characteristics of a variety of developmental disabilities as well as the services available. Principles of self-determination, behavior supports, teaching and supporting strategies and community connections will be discussed. This course must be completed with a "C" or higher.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SAHS 1120 - Service Delivery & Ethics in Human Services & Social Work (A SP SU)**2.00 credit(s)**

This course prepares students for their practicum experiences by reviewing clinical expectations, supervision, professionalism and ethics. Practicum sites where social work, mental health, addiction studies and developmental disabilities services are provided and discussed. Students sign a confidentiality pledge and a professional commitment document. Students complete required documentation for practicum. Licensure requirements are reviewed. This course must be completed with a "C" or higher.

Contact Hours: Lecture 2.00**Lab Fee: \$4.00**

Pre-requisites: SAHS1111 and SAHS1112 and ENGL1100 and COLS1100

Co-requisites: none

Restrictions: none

SAHS 1130 - Intervention Strategies (On Demand)**2.00 credit(s)**

This course focuses on understanding individual behavior. Topics include building healthy relationships, proactive interaction, the crisis cycle, effects of trauma, trauma informed care, success plans, teaching healthy choices and the stages of change. Students will learn skills and strategies for de-escalating, resolving, and preventing conflict, aggression and violence. Must be completed with a "C" or higher.

Contact Hours: Lecture 2.00**Lab Fee: \$4.00**

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission

SAHS 1150 - Pharmacology in Human Services (On Demand)**2.00 credit(s)**

The course provides an overview of the pharmacology of psychoactive drugs and psychotropic medications that are frequently used by individuals who seek services in human services. Medications used in the treatment of opiate and other substance use disorders will be covered. Herbal drugs of abuse will also be explored. This course must be completed with a "C" or higher.

Contact Hours: Lecture 2.00**Lab Fee: \$2.00**

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission

SAHS 1300 - Supported Employment (On Demand)**2.00 credit(s)**

This course provides information about the Employment First Initiative sweeping the country and how to make this initiative a reality. History of work, supported employment/customized employment, the discovery process, job analysis, person centered job development strategies, job carving, job coaching and follow along services will be explored. Understanding basic roles of key stake holders and Social Security work incentives will be included. This course can be taken as a MHAD.AAS Technical elective or as part of the Supported Employment or Advanced Supportive Services Certificate. This course must be completed with a "C" or higher.

Contact Hours: Lecture 2.00**Lab Fee: \$5.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SAHS 1301 - Supportive Housing (SP)**2.00 credit(s)**

This course provides an overview of supportive housing programs and the service linkages and supports offered to ensure successful community living. This course can be taken as a part of a certificate program, technical elective as a part of the MHAD.AAS degree program or independent from certificate or degree programs. This course must be completed with a "C" or higher.

Contact Hours: Lecture 2.00**Lab Fee: \$5.00**

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SAHS 2194 - SPT: SAHS (On Demand)**1.00 - 4.00 credit(s)**

These courses are designed to meet specific needs of students who wish to pursue in-depth training in the SAHS field. Typical subject areas include theory and skills in helping individuals who have substance use, mental health and/or co-occurring disorders, or persons with developmental disabilities, service learning and rehabilitation employment. Students enroll in these courses with permission of faculty. These courses must be completed with "C" or higher. Courses may include content required during transition from quarters to semesters.

Contact Hours: Lecture 1.00**Lab Fee: \$5.00**

Pre-requisites: Varies

Co-requisites: none

Restrictions: none

SAHS 2236 - Prevention Services (On Demand)**3.00 credit(s)**

This course provides the 45 hours of prevention specific content required by the Ohio Chemical Dependency Professionals Board for the Ohio Certified Prevention Specialist Assistant. Content covers the foundations and domains of chemical use/abuse/dependency, foundations in prevention of OAD issues, ethics, planning and evaluation, education and skill development, community organization, public policy and environmental changes and professional growth and responsibility. This course can be taken as a SAHS AAS technical elective or for the Prevention Services Certificate. Students must receive a "C" or better in this course.

Contact Hours: Lecture 3.00**Lab Fee: \$5.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

SAHS 2241 - Advanced Helping Skills (A SP)**2.00 credit(s)**

This course focuses on various aspects of effective helping through the professional relationship with clients who have developmental disabilities, mental health concerns, have addiction issues or those who are seeking supportive services. Trauma Informed Care, Motivational Interviewing, Cognitive Behavioral Therapy and other evidence based treatment approaches are utilized throughout this course. This course must be completed with a "C" or higher.

Contact Hours: Lecture 2.00**Lab Fee: \$5.00**

Pre-requisites: SAHS1120

Co-requisites: SAHS2861 and SAHS2901

Restrictions: none

SAHS 2251 - Social Welfare & Policy (A SP SU)**3.00 credit(s)**

This course examines the history and structure of social welfare institutions in the United States. Students will examine a variety of social problems that include those who are impacted by poverty, oppression and discrimination and will explore their own values and beliefs related to social issues. Specific areas to be explored include homelessness, mental illness, substance abuse, health care access, abuse and aging. The student gains an understanding of the change process on a micro, mezzo and macro level as related to at-risk and vulnerable populations. This course must be completed with a grade of 'C' or higher. A TAG application is pending.

Contact Hours: Lecture 3.00**Lab Fee: \$5.00**

Pre-requisites: ENGL1100 and PSY1100

Co-requisites: none

Restrictions: none

SAHS 2261 - Advanced Addiction Studies (SU)**2.00 credit(s)**

This technical elective course explores each of the 12 core functions of a substance abuse counselor: screening, intake, orientation, assessment, treatment planning, counseling (individual, group, and family), client education, crisis intervention, case management, referral, documentation; record keeping, and consultation with other professionals. Students practice the associated tasks and skills during an elective field practicum. This course is offered summer term only to ensure practicum experiences in the addictions treatment field. This course must be completed with a "C" or better.

Contact Hours: Lecture 2.00**Lab Fee: \$5.00**

Pre-requisites: SAHS2861

Co-requisites: none

Restrictions: Instructor Permission

SAHS 2271 - Assessment & Treatment Problem Gambling (On Demand) **2.00 credit(s)**

This technical elective course provides students with the thirty (30) hours of gambling related content required by the Ohio Chemical Dependency Professionals Board. Licensed professionals may also take this course to demonstrate meeting the required training. Content includes: Basic gambling knowledge, screening, assessment, treatment planning, counseling strategies for individuals with problem gambling, and co-occurring disorders. Additionally, cultural competence, financial implications and ethics are included. This course can be taken as part of the SAHS AAS degree or by professionals in the community. This course must be completed with a "C" or higher

Contact Hours: Lecture 2.00

Lab Fee: \$4.00

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission Other

SAHS 2861 - Fundamentals Social and Human Services (A SP) **4.00 credit(s)**

This course provides the knowledge and skills that are the foundation for working in the Human Services field. It covers observation, data gathering, bio-psycho-social assessment, person-centered/individualized treatment planning, case management/service coordination and documentation. The 12 core functions of an addictions counselor are also interwoven throughout the course. Services that promote self-determination and utilization of community supports are emphasized. This course integrates classroom learning with practicum objectives. This course must be completed with a "C" or higher.

Contact Hours: Lecture 4.00

Lab Fee: \$5.00

Pre-requisites: SAHS1120

Co-requisites: SAHS2901 and SAHS2241

Restrictions: none

SAHS 2862 - Treatment Approaches SAHS (A SP) **3.00 credit(s)**

This course provides the advanced student with greater opportunity to explore and enhance skills necessary to effectively work with individuals, family members and groups. Content includes: individual, group and family related treatment services, teaching and supporting strategies, stage-wise treatment approaches, community integration supported living, and supported employment. This course integrates class content with practicum objectives. The identification of the 12 core functions occurs throughout the course. This course must be completed with a "C" or higher.

Contact Hours: Lecture 3.00

Lab Fee: \$5.00

Pre-requisites: SAHS2861 and SAHS2901 and SAHS2241

Co-requisites: SAHS2922

Restrictions: none

SAHS 2901 - Practicum/Seminar I in SAHS (A SP)**3.00 credit(s)**

Students participate in a 157.5 hour supervised practicum experience in a community agency where utilization and practice of the knowledge and skills in the corresponding course are required. Students participate in a 1.5-hour per week seminar experience for additional personal/professional support, supervision, feedback and exploration of field-related experiences. The opportunity to enhance/augment knowledge and skills related to specific client populations is available. Confidentiality, professionalism and ethical principles, self awareness and critical thinking skills are emphasized. This course must be completed with a "C" or higher. Each component, the practicum and the seminar, must be completed with a "C" or higher.

Contact Hours: Seminar 1.50, Practicum 10.50

Lab Fee: \$23.00

Pre-requisites: SAHS1120

Co-requisites: SAHS2861 and SAHS2241

Restrictions: none

SAHS 2905 - Intervention Strategies Practicum/Semina (On Demand)**4.00 - credit(s)**

Students participate in a 210 hour practicum experience in a community agency that provides services to individuals with a developmental disability where utilization and practice of the knowledge, skills and intervention techniques in the corresponding course are required. Students demonstrate professional conduct and appropriate work habits. In addition, students participate in a 2-hour a week seminar experience for additional personal/professional support, supervision, feedback and exploration of field-related experiences. The opportunity to enhance/augment knowledge and skills related to specific client population is available. Confidentiality, professionalism, ethical principles and conduct are emphasized. Students enroll in this course with permission of faculty. This course must be completed with 'C' or higher.

Contact Hours: Practicum 14.00, Seminar 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

SAHS 2922 - Practicum & Seminar II in SAHS (A SP)**3.00 credit(s)**

This course provides the advanced student with greater opportunity to explore and enhance skills necessary to effectively work with individuals, family members and groups. Content includes: individual, group and family related treatment services, case management/service coordination, stage-wise treatment approaches, community integration, supported living, supported employment, recovery management, and trauma informed care. This course integrates class content with practicum objectives. This course must be completed with a "C" or higher.

Contact Hours: Seminar 1.50, Practicum 10.50

Lab Fee: \$23.00

Pre-requisites: SAHS2901

Co-requisites: SAHS2862

Restrictions: none

SAHS 2936 - Practicum in Prevention Services (On Demand) **3.50 credit(s)**

This course provides the 157.5 hours of prevention specific experience content required by the Ohio Chemical Dependency Professionals Board for the Ohio Certified Prevention Specialist Assistant. Experience occurs in the specified foundations and domains of Chemical Use/Abuse/Dependency, foundations in prevention of AOD issues, ethics, planning and evaluation, education and skill development, community organization, public policy and environmental changes and professional growth and responsibility. Students also participate in a 2-hour per week seminar with the focus of professional development and ethics. This course can be taken as a SAHS.AAS technical elective or for the Prevention Services Certificate. Instructor permission required. Students must receive a "C" or better in this course.

Contact Hours: Practicum 10.50, Seminar 2.00

Lab Fee: \$23.00

Pre-requisites: SAHS1120

Co-requisites: SAHS2236

Restrictions: none

Supply Chain Management

SCM 1100 - Supply Chain Mgmt Principles (A SP SU) **3.00 credit(s)**

SCM 1100 provides an overview of the key processes, concepts, and methodologies of supply chain management. Emphasis is given to the study of the impact that the supply chain management framework, (that includes distribution, procurement, inventory, transportation and information technology components) has on business and the economy. The decision making process within supply chain is of particular importance as the interrelationships (cost and service trade-offs) between logistics and other areas of business will be covered. The overall focus is the strategic and financial significance the supply chain has on the firm's ability to add customer value.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

SCM 1100A - Supply Chain Mgmt Principles-A (On Demand) **1.00 credit(s)**

SCM 1100A provides an overview of the key processes, concepts, and methodologies of supply chain management. Emphasis is given to the study of the impact that the supply chain management framework, (that includes distribution, procurement, inventory, transportation and information technology components) has on business and the economy. The decision making process within supply chain is of particular importance as the interrelationships (cost and service trade-offs) between logistics and other areas of business will be covered. The overall focus is the strategic and financial significance the supply chain has on the firm's ability to add customer value.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

SCM 1100B - Supply Chain Mgmt Principles-B (On Demand) **2.00 credit(s)**

SCM 1100-B provides a more extensive overview of the key processes, concepts, and methodologies of supply chain management. The course relies more significantly on projects, case studies and additional content from the text book. Emphasis is given to the study of the impact that the supply chain management framework (that includes distribution, procurement, inventory, transportation and information technology components) has on business and the economy. The decision making process within supply chain is of particular importance as the interrelationships (cost and service trade-offs) between logistics and other areas of business will be covered. The overall focus is the strategic and financial significance the supply chain has on the firm's ability to add customer value.

Contact Hours: Lecture 2.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

SCM 1101 - Transportation & Traffic Mgmt (A) **3.00 credit(s)**

SCM 1101 is designed to provide the student with a practical learning experience based on what a person in traffic management may encounter in his or her daily work schedule and also review some of the transition of the manager's job from past to present. The traffic manager's job will be analyzed with regard to his or her daily dealings with others in the supply chain management and how the manager is involved with and must work with each of the other areas

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: SCM1100

Co-requisites: none

Restrictions: none

SCM 1101A - Transportation & Traffic Management-A (On Demand) **1.00 credit(s)**

SCM 1101A is designed to provide the student with an abridged, practical learning experience based on what a person in traffic management may encounter in his or her daily work schedule and also review some of the transition of the manager's job from past to present. The traffic manager's job will be analyzed with regard to his or her daily dealings with others in the supply chain management and how the manager is involved with and must work with each of the other areas.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

SCM 1101B - Transportation & Traffic Management-B (On Demand) **2.00 credit(s)**

SCM 1101B is designed to provide the student with a more extensive, practical learning experience based on what a person in traffic management may encounter in his or her daily work schedule and also review some of the transition of the manager's job from past to present. The traffic manager's job will be analyzed with regard to his or her daily dealings with others in the supply chain management and how the manager is involved with and must work with each of the other areas.

Contact Hours: Lecture 2.00

Lab Fee: \$1.00

Pre-requisites: SCM1100

Co-requisites: none

Restrictions: none

SCM 1190 - International Commerce (A SP SU) **3.00 credit(s)**

SCM 1190 focuses on the political, economic, social and cultural considerations in doing business globally. The course explores the factors that allow organizations to be successful in the globalization of markets and the growth of overseas business ventures. The need to develop varied techniques for managing the organizations resources from other cultural backgrounds, the means of minimizing risks in financial transactions, and development of systems for coordinating and controlling the value chain is stressed. Techniques to overcome international business barriers are examined.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

SCM 1501 - IT in Logistics (A SP) **3.00 credit(s)**

SCM 1501 introduces students to the I T Systems Operations and Applications of supply chain management. The purpose is to provide greater understanding of Information Systems and Information Technology (IS/IT) and its contribution to the business enterprise and the importance of IS/IT in embracing the complex and time saving processes in supporting the logistics operational processes.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: SCM1100

Co-requisites: none

Restrictions: none

SCM 1510 - Strategic Procurement (A SP)**4.00 credit(s)**

SCM 1510 is designed to teach the principles of world class supply chain management to the newly appointed buyer or to non-purchasing personnel looking to broaden their business knowledge. It focuses on how the basic and advanced purchasing management can be used effectively to meet the challenges and responsibilities of today's constantly changing business climate. Topics include the challenge of purchasing and materials management, objectives and organization, function, specification, quality control and inspection, computerization, international purchasing, and the establishment of teams to support complex supply chain and logistic programs.

Contact Hours: Lecture 4.00

Lab Fee: \$2.00

Pre-requisites: SCM1100

Co-requisites: none

Restrictions: none

SCM 1510A - Strategic Procurement-A (A SP)**1.00 credit(s)**

Through adaptive learning, SCM 1510A is designed to teach the principles of world class supply chain management to the newly appointed buyer or to non-purchasing personnel looking to broaden their business knowledge. It focuses on how the basic and advanced purchasing management can be used effectively to meet the challenges and responsibilities of today's constantly changing business climate. Topics include the challenge of purchasing and materials management, objectives and organization, function, specification, quality control and inspection, computerization, international purchasing, cost management and the establishment of teams to support complex supply chain and logistic programs.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

SCM 1510B - Strategic Procurement-B (A SP)**3.00 credit(s)**

Through the textbook, projects and case studies, SCM 1510B is designed to teach the principles of world class supply chain management to the newly appointed buyer or to non-purchasing personnel looking to broaden their business knowledge. It focuses on how the basic and advanced purchasing management can be used effectively to meet the challenges and responsibilities of today's constantly changing business climate. Topics include the challenge of purchasing and materials management, objectives and organization, function, specification, quality control and inspection, computerization, international purchasing, cost management, and the establishment of teams to support complex supply chain and logistic programs.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: SCM1100 and SCM1510A

Co-requisites: none

Restrictions: none

SCM 2110 - Warehouse Management (A SP)**4.00 credit(s)**

SCM 2110 a basic warehouse management procedures and skills course that focuses on "nuts & bolts" warehousing skills including basic warehousing functions, e.g., receiving; storage; order picking; and shipping; and support skills, e.g., performance measurement; documentation; powered industrial truck operator safety training; inventory control; hiring, firing, and employee motivation; handling returns; automated identification technology; basic unitization practices; freight claims; hazardous materials; and auditing both private and third-party warehouse operations. The need for close working relationships among the warehouse and other departments of the business is also covered.

Contact Hours: Lecture 4.00

Lab Fee: \$2.00

Pre-requisites: SCM1100

Co-requisites: none

Restrictions: none

SCM 2110A - Warehouse Management-A (On Demand)**1.00 credit(s)**

Through online, adaptive learning material, SCM 2110A gives students an abridged overview of basic warehouse management procedures and skills. The course focuses on "nuts & bolts" warehousing skills including basic warehousing functions e.g., receiving, storage, order picking, and shipping, and support skills, e.g., performance measurement, documentation, powered industrial truck operator safety training, inventory control, hiring, firing, and employee motivation, handling returns, automated identification technology, basic unitization practices, freight claims, hazardous materials, and auditing both private and third-party warehouse operations. The need for close working relationships among the warehouse and other departments of the business is also covered.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: SCM1100

Co-requisites: none

Restrictions: none

SCM 2110B - Warehouse Management-B (On Demand)**3.00 credit(s)**

Through text book, projects and case studies, SCM 2110-B gives students a more extensive overview of warehouse management procedures and skills. The course focuses on "nuts & bolts" warehousing skills including basic warehousing functions, e.g., receiving; storage; order picking; and shipping; and support skills, e.g., performance measurement; documentation; powered industrial truck operator safety training; inventory control; hiring, firing, and employee motivation; handling returns; automated identification technology; basic unitization practices; freight claims; hazardous materials; and auditing both private and third-party warehouse operations. The need for close working relationships among the warehouse and other departments of the business is also covered.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: SCM1100

Co-requisites: none

Restrictions: none

SCM 2111 - Inventory Management (A SP)**3.00 credit(s)**

SCM 2111 Discusses inventory management and control function(s) covering such topics as material management; purchasing; forecasting; inventory fundamentals; order quantities; independent demand; physical and cycle count inventories; warehouse management; physical distribution; just-in-time manufacturing; and total quality management.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: SCM1100

Co-requisites: none

Restrictions: none

SCM 2111A - Inventory Management-A (On Demand)**1.00 credit(s)**

SCM 2111A discusses inventory management. It covers such topics as purchasing, physical distribution and just-in-time manufacturing.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

SCM 2111B - Inventory Management-B (On Demand)**1.00 credit(s)**

SCM 2111B discusses inventory management and control functions giving an overview of the topic and specifically covering total quality management.

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: SCM1100 and SCM2111A and SCM2111C

Co-requisites: none

Restrictions: none

SCM 2111C - Inventory Management-C (On Demand)**1.00 credit(s)**

SCM 2111C specifically discusses the demand planning side of inventory management. It covers such topics as forecasting and economic order quantity.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

SCM 2160 - Perishable Supply Chain & Logistics (A)**3.00 credit(s)**

SCM 2160 provides an in-depth analysis of the key processes, concepts, and methodologies of the business management of the perishable supply chain and logistics, including such perishables as pharmaceuticals, food products, and transplantable organs and tissues. Emphasis is given to the study of the impact that the supply chain management and logistics has on perishable items, including procurement, inventory, distribution, transportation and information technology components. Businesses managing perishables focus on the critical attributes of security, speed, and cost, using technology including RFID and GPS tracking. The decision making process within supply chain and logistics and other consideration area will be covered. The overall focus is the strategic impact and significance that supply chain and logistics has on firms managing perishable items and products.

Contact Hours: Lecture 3.00**Lab Fee: \$1.00**

Pre-requisites: SCM1510

Co-requisites: none

Restrictions: none

SCM 2250 - International Shipping (A SP SU)**3.00 credit(s)**

SCM 2250 discusses - from the perspective of logistical services users, e.g., importers, exporters, and international firms - the history and development of international trade; trade terms; payment terms and methods; currency exchange risks; commercial documents; international insurance; ocean, air, and multi-modal transport; packaging; international logistics infrastructure; international contracts; and the 2010 revision of the Incotermsr

Contact Hours: Lecture 3.00**Lab Fee: \$1.00**

Pre-requisites: SCM1100

Co-requisites: none

Restrictions: none

SCM 2290 - Intro Import/Export Regs & Comp (SP)**4.00 credit(s)**

SCM 2290 an overview of the major international transportation and logistical regulatory compliance requirements with which logistics managers are most likely to be confronted while either exporting or importing their company's products. These include U.S. common and statutory laws; regulation of air, motor, and ocean carriers; various export/import documentation; third-party intermediaries, e.g., forwarders, brokers, and consultants; and export and import regulations. Emphasis placed on developing a company export management procedures guide.

Contact Hours: Lecture 4.00**Lab Fee: \$3.00**

Pre-requisites: SCM1100

Co-requisites: none

Restrictions: none

SCM 2450 - Transportation Rates & Claims (A)**3.00 credit(s)**

SCM 2450 Transportation rates and claims, will present the student with the various methods of rating transportation charges and the mathematical calculations for both rating and other situations in the supply chain. The course will also cover the financial liability and general legal implications of freight claims on the traffic manager and the impact and possible avoidance of such claims.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: SCM1100

Co-requisites: none

Restrictions: none

SCM 2460 - Procurement Planning & Negotiation (SP)**3.00 credit(s)**

SCM 2460 a capstone course is designed for the purchasing major. It focuses on the skills required to prepare for and conduct purchasing negotiations, and it utilizes a case study approach to be used to understand purchasing as the primary materials procurement activity while integrating purchasing with other materials management activities. Topics covered include legal considerations, public purchasing, the acquisition planning process, customer relations and control functions such as inventory control, budgeting, and production in today's business environment.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: SCM1510

Co-requisites: none

Restrictions: none

SCM 2601 - Performance Mgmt SCM Managers (A SP)**3.00 credit(s)**

SCM 2601 is designed around developing the skills required to plan, implement and evaluate performance competencies of an organization. Emphasis is placed on the interdependencies between the corporate strategic planning process and the role performance management plays in managing individual and group performance. Special emphasis is place on performance as it relates to the planning, and managing of the supply chain. The student will explore topics such as: how to proactively approach and resolve performance issues; developing and managing a balanced score card, selecting metrics to measure business and supply chain performance; creating positive relationships to ensure effective communication.

Contact Hours: Lecture 3.00

Lab Fee: \$1.00

Pre-requisites: SCM1510 and SCM2110 and ACCT1211

Co-requisites: none

Restrictions: none

SCM 2802 - SCM Seminar (SP)**1.00 credit(s)**

SCM 2802 focuses on the application of logistics knowledge to specific areas of on-the-job experience. Open to Supply Chain Management Technology students only who have completed 12 hours in the technology and have permission of the instructor.

Contact Hours: Seminar 1.00**Lab Fee: \$1.00**

Pre-requisites: none
Co-requisites: SCM2902

Restrictions: Instructor Permission

SCM 2902 - SCM Practicum (SP)**1.00 credit(s)**

SCM 2902 course presents an opportunity for supervised, on-the-job application of knowledge and skills acquired in the classroom. Open to Supply Chain Management Technology students who have completed 12 hours in the technology and have permission of the instructor.

Contact Hours: Practicum 7.00**Lab Fee: \$1.00**

Pre-requisites: none
Co-requisites: SCM2802

Restrictions: Instructor Permission

SCM 2910 - CLA Certification (A)**1.00 credit(s)**

SCM 2910 is designed to prepare students to take the Manufacturing Skill Standards Council's (MSSC) Certified Logistics Associate (CLA) examination. It focuses on the material handling portion of global supply chain logistics and covers (reviews) the foundational knowledge required of front-line material handling workers. Global supply chain logistics, a modern concept, also embodies the evolution of logistics as one of the earliest activities of mankind with a profound influence on the course of history.

Contact Hours: Lecture 1.00**Lab Fee: \$1.00**

Pre-requisites: none
Co-requisites: none

Restrictions: none

SCM 2911 - CLT Certification (A)**1.00 credit(s)**

SCM 2911 is designed to prepare students to take the Manufacturing Skill Standards Council's (MSSC) Certified Logistics Technician (CLT) examination. It focuses on the knowledge and skills that mid-technical workers in global supply chain logistics should understand. The technical level requires a higher level of knowledge by front-line supervisors, i.e., higher than that required by CLA-level workers. Mid-level technicians are expected to have a competency in supply chain logistics operations including product receiving and storage, order processing, packaging and shipment, inventory control, safe handling of hazardous materials, evaluation of transportation modes and dispatch and tracking operations.

Contact Hours: Lecture 1.00**Lab Fee: \$1.00**

Pre-requisites: none
Co-requisites: none

Restrictions: none

Sports and Exercise Studies

SES 1100 - Personal Fitness Concepts (A SP SU)

3.00 credit(s)

This course of study focuses on fitness issues which affect Americans today and in the future. Emphasis is placed on establishing a basis for positive fitness through a consideration of the various factors which influence fitness. Personal Fitness Concepts will focus attention on the need for each person to arrive at informed conclusions about how to take responsibility for his or her personal fitness.

Contact Hours: Lecture 3.00**Lab Fee: \$10.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

SES 1101 - Intro Sport & Exercise Studies (A SP SU)

3.00 credit(s)

A survey of the health and fitness arena both private and public, to include the study of facilities, recreational fitness options for the client, profiles, daily operations, legal aspects, personnel issues, and program administration.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: none

Co-requisites: none

Restrictions: none

SES 1102 - Recreation and Leisure Operations (A SP SU)

3.00 credit(s)

Explores and analyzes sport and leisure management from historical and organizational perspectives. Course will also explore the use of urban commercial recreation with special emphasis on travel and tourism; sport and athletics, theaters, fitness centers, amusement and theme parks, aquatic areas, risk recreation, and historical areas, as well as the travel and tourism industry.

Contact Hours: Lecture 3.00**Lab Fee: \$2.00**

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 1104 - Yoga (A SP SU)**1.00 credit(s)**

An introduction to yoga to include breathing, strength, balance and flexibility.

Contact Hours: Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

SES 1105 - Intro Strength & Resistance Training (A SP SU)**1.00 credit(s)**

An introduction to weight room use for the individual exerciser. Investigation of various types of resistance exercise devices, proper techniques and programs, and weight room safety. An introduction to basic anatomical and exercise concepts and their application in the use of resistance exercise modalities as a part of a total conditioning and exercise program.

Contact Hours: Lab 2.00

Lab Fee: \$10.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

SES 1106 - Golf (A SP SU)**1.00 credit(s)**

This course provides an introduction to playing the game of golf. Laboratory experiences to include introduction to the golf swing, club selection, driving range experience and game/course experience.

Contact Hours: Lab 2.00

Lab Fee: \$150.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

SES 1108 - Women's Self Defense (A SP SU)**1.00 credit(s)**

Instruction in the ideas of Self-defense with special concentrations on the self-defense needs of women It will include Self-defense techniques at the beginning level with an emphasis on the Self-defense needs of women.

Contact Hours: Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

SES 1109 - Bowling (A SP SU)**1.00 credit(s)**

Instruction in the methods of teaching and participation of Bowling to include a thorough understanding of the scoring, techniques, skills, and fundamentals of the sport. This class allows students to participate in an individual sport and experience success in an independent environment.

Contact Hours: Lab 2.00

Lab Fee: \$50.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

SES 1110 - Fitness Kick Boxing (A SP SU)**1.00 credit(s)**

This course will introduce the student to cardio kickboxing. Each week new basic body moves and techniques will be introduced. Basic punches, kicks and stances will be taught as well as choreographed patterns. Techniques will be taken from various martial arts such as karate, taekwondo and boxing as ways to improve the individual's cardiovascular fitness.

Contact Hours: Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

SES 1112 - Total Body Conditioning (A SP SU)**1.00 credit(s)**

Participation in a fitness program to include cardio-respiratory fitness muscle strength and endurance, strength training and flexibility.

Contact Hours: Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

SES 1327 - Individual Sport & Activity (A)**2.00 credit(s)**

A survey of individual activities/sports to include equipment, safety concerns, breakdown of skills and game play.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$5.00

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 1328 - Team Sport & Activity (SP)**2.00 credit(s)**

A survey of team activities/sports to include equipment, safety concerns, breakdown of skills and game play.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$5.00

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 2217 - Tae Kwon Do (A SP SU)**2.00 credit(s)**

Instruction in the methods of teaching and participation in Advance Tae Kwon Do to include a thorough understanding of the skills, fundamentals, and techniques of the sport. Marketing Tae Kwon Do, advanced self-defense strategies, weaponry, and concepts of Olympic competition events.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

SES 2410 - Conditioning & Training Youth Athlete (A SP)**3.00 credit(s)**

This course provides the science of safe and effective strength and conditioning for youth athletes ages 6 to 17. This course will emphasize the psychological and physiological development of children and how this affects conditioning strategies. This course will also explore safe exercise design and prescription based on age and development of the youth athlete.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0

Pre-requisites: SES1105

Co-requisites: none

Restrictions: Declared Major

SES 2415 - Adv Strength & Resistance Training Con (A SP SU)**4.00 credit(s)**

This course presents an analysis of the resistance training field to include types of resistance equipment used, resistance training methods for the client, proper lifting and spotting techniques for the various equipment, and assessment of clients. Also covered is goal setting for clients based on assessment findings and the use of periodization techniques in planning resistance training activities. Risk management aspects of the weight area and proper care and maintenance of equipment is explained.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$20.00

Pre-requisites: SES1101

Co-requisites: none

Restrictions: Declared Major

SES 2426 - Athletic Injury Control & First Aid (A SP SU) **3.00 credit(s)**

This course covers the recognition, treatment, management and prevention of basic injuries sustained by individuals while participating in athletic activities. It includes basic taping and treatment procedures introduced and applied in the athletic environment.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$20.00

Pre-requisites: SES2440

Co-requisites: none

Restrictions: none

SES 2437 - Health Promotion (A SP SU) **3.00 credit(s)**

This course of study focuses on current health and wellness issues related to the worksite environment. Course work will emphasize the major wellness components of fitness, nutrition, prevention, safety, and behavior modification and how these wellness components can be introduced into the worksite. Health Promotions will also focus on financial and administrative issues associated with Worksite Health Promotion.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 2438 - Fitness Concepts Across the Lifespan (A SP SU) **3.00 credit(s)**

A survey of the response of children, seniors, and physically challenged persons to exercise. Emphasis to be placed on choosing appropriate and challenging activities that will result in a positive physiological response while accommodating the social, developmental, and physical needs of potential clients.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 2440 - Exercise Physiology (A SP SU) **4.00 credit(s)**

Human anatomy and physiology as related to physical activity, exercise and work. A study of the musculoskeletal and cardiovascular systems; bioenergetics; body composition and behavior modification; as well as the health-related benefits associated with training adaptations. Course content will be supported by exercise and fitness studies including the measurement of vital signs, aerobic and anaerobic capacity, body composition, muscular strength, endurance, and flexibility in the laboratory.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$20.00

Pre-requisites: BIO2300

Co-requisites: none

Restrictions: Declared Major

SES 2441 - Kinesiology (A SP SU)**4.00 credit(s)**

Introduction to the fundamentals of kinesiology and biomechanics with discussion of both anatomical and mechanical principles. These concepts will be applied in the analysis of a wide variety of basic motor skills, exercise, and sport activities.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$20.00

Pre-requisites: SES2440

Co-requisites: none

Restrictions: Declared Major

SES 2442 - Exercise Prescript&quantitative Analysis (On Demand)**3.00 credit(s)**

This course provides the art and science of using fitness-related data to make informed individual exercise prescriptions. Course work will emphasize calculating and estimating metabolic demand of exercise, normal physiological response to exercise, and the abnormal physiological response to exercise. This course will also focus on the appropriate selection of fitness protocols for those clients who suffer from compromised health.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0

Pre-requisites: SES1101

Co-requisites: none

Restrictions: Declared Major

SES 2443 - Advanced Athletic Assessment (A SP)**3.00 credit(s)**

This course covers the assessment of athletic conditioning, skills and functional movement with corrective strategies applied based on test data. Students will learn testing protocols and data interpretation along with strategies to improve athletic conditioning and performance based on assessment results.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$20.00

Pre-requisites: SES2415

Co-requisites: none

Restrictions: Declared Major

SES 2444 - Advanced Athletic Conditioning (A SP)**3.00 credit(s)**

This course will provide the scientific foundation necessary for the development of advanced exercise prescription for athletes. Data interpretation, exercise science foundations, and advance prescription guidelines will be covered in this class. The class will also focus on appropriate exercise selection and programming for the athlete.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$0

Pre-requisites: SES2415

Co-requisites: none

Restrictions: Declared Major

SES 2524 - Sport Management Foundations (A SP SU)**3.00 credit(s)**

An advanced study of sport and business management theory applied in the sport environment. An analysis of organizational structure/theory and management style application. An overview of the budgeting, personnel process, staffing requirements and staff development procedures to include an advanced budgetary practice. Study of activity programming/facility needs and customer service protocol for the sport environment, to include ethics, leadership strategies, risk management, evaluation procedures, as well as proper equipment care and storage.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 2534 - Sport Marketing (A SP SU)**3.00 credit(s)**

An advanced study of sport marketing strategies for the sport environment both internal and external. Promotional guidelines and discussion of concepts of promotional activity. Study of the budgetary process, differentiation of budget styles, and implementation of the budgetary process in both the private and public sector.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 2535 - Sport Law (A SP SU)**3.00 credit(s)**

This course presents a survey of the legal framework of the athletic environment. It includes study of the nature of the legal system and the law pertaining to sports, tort law, contractual agreements and civil law.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 2544 - Rec Admin & Programming in Sport (A SU)**3.00 credit(s)**

A study of the recreational environment. An overview of program delivery, facilities, maintenance and equipment. A study of various avenues sport can be offered to include: intramural/extramural sport, informal/club sport, instructional sport and fitness.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 2548 - Adapted Physical Educ Programming (A SP)**3.00 credit(s)**

The Adapted Physical Education Programming course is based upon the concept of service-learning. The course and students therein is built to serve the annual Nationwide Children's Hospital Myelo Camp.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 2625 - Concepts of Coaching (A SP SU)**3.00 credit(s)**

This course will be a discussion based instructional program facilitated by a faculty member. It is designed to train sport managers to help athletes avoid or deal with the challenges and pressures often presented in the athletic realm. The program allows sport managers to develop rules and expectations about drug and alcohol usage, communication with parents and guardians, and behavior monitoring skills. Lessons on development of policies related to athlete usage and consequences and or interaction guidelines.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 2626 - Coaching the Young Athlete (A SP)**3.00 credit(s)**

This course is a discussion-based instructional program facilitated by a faculty member. It is designed to help sport coaches develop an understanding of all aspects of coaching the youth athlete, including training coaches to help student athletes recognize and avoid or deal with the problems, issues and pressures faced in today's sport realm. The course encourages the coach to explore various aspects of youth coaching and develop key components of the role such as philosophy, policy and procedure development, intervention and behavior modification techniques, and communication skills.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 2660 - Ethics in Sports (A SU)**3.00 credit(s)**

This course is a discussion-based instructional program facilitated by a faculty member. It is designed to help sport coach, administrator and others develop an understanding of the array of ethical issues in sport. The course will encourage and empower the student to think for themselves and recognize the ethics inherent in their own decision making and behavior, as well as that of others. This in turn, will provide the student with guideposts for making ethical decisions in the sport world and life.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1101 This course offers a survey of the health and fitness arena, both private and public, including the study of facilities, recreational fitness options for the client, profiles, daily operations, legal aspects, personnel issues, and program administration.

Co-requisites: SES1101 This course offers a survey of the health and fitness arena, both private and public, including the study of facilities, recreational fitness options for the client, profiles, daily operations, legal aspects, personnel issues, and program administration.

Restrictions: none

SES 2670 - Sport Psychology (A SP)**3.00 credit(s)**

This course is a discussion-based instructional program facilitated by a faculty member. It is designed to help sport coaches, administrators and others develop an understanding of all aspects of the psychological side of sport. The course encourages the student to explore various aspects of sport psychology, as well as bridging the science of sport psychology to the practice of sport psychology.

Contact Hours: Lecture 3.00**Lab Fee: \$0**

Pre-requisites: SES1101 This course offers a survey of the health and fitness arena, both private and public, including the study of facilities, recreational fitness options for the client, profiles, daily operations, legal aspects, personnel issues, and program administration.

Co-requisites: SES1101 This course offers a survey of the health and fitness arena, both private and public, including the study of facilities, recreational fitness options for the client, profiles, daily operations, legal aspects, personnel issues, and program administration.

Restrictions: none

SES 2680 - History Physical Education/Sport (A SP SU)**3.00 credit(s)**

An in-depth study of the history of sport in the United States and the impact of sport on society.

Contact Hours: Lecture 3.00**Lab Fee: \$0**

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 2690 - Sport Sociology (SP)**3.00 credit(s)**

This course will describe how critical issues currently and historically have impacted sport in society. This course will look at the specific changes that have taken place from ancient urban civilizations through today's current sport society. This course will bring critical issues currently affecting the sport industry. Through this course students will look at the larger picture of sport on society to understand how politics, money, sex, race, and various media outlets have on the industry.

Contact Hours: Lecture 3.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: none

SES 2694 - Special Topics: Sport & Exercise Studies (A SP SU)**1.00 - 3.00 credit(s)**

This course brings together concepts discussed in previous program courses. Topics revolve around exercise prescription for special populations, some disease states or social aspects of sport such as homophobia in sport. Also, explored will be the development and modification of institutional programming based on individual and group needs as well as resources, content and delivery of health promotion programs.

Contact Hours: Lecture 1.00**Lab Fee: \$0**

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

SES 2700 - Sport Tourism (SP SU)**3.00 credit(s)**

This course explores and highlights the growth in the sport tourism industry. This course will provide insight into the government regulations associated with the sport tourism industry. Basic concepts pertaining to sport, tourism and sport tourism.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1101

Co-requisites: none

Restrictions: none

SES 2710 - Sport Finance (A SP)**3.00 credit(s)**

This course is designed to provide the prospective sport manager with an overview of the major financial issues facing sport managers and the sport industry. An analysis of the following areas will be undertaken: sources of revenue for sport organizations and leagues, a comparison of public and private sector funding in sports, and investment of public resources into private sporting facilities. Discussed will also be auditing and budgeting as it relates to a successful sport organization.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES2524 This course offers an advanced study of sport and business management theory applied in the sport environment. It includes an analysis of organizational structure/theory and management style application. Also covered are an overview of the budgeting, personnel process, staffing requirements and staff development procedures including advanced budgetary practice. SES 2524 presents a study of activity programming/ facility needs and customer service protocols for the sport environment to include ethics, leadership strategies, risk management, evaluation procedures, as well as proper equipment care and storage.

Co-requisites: SES2524 This course offers an advanced study of sport and business management theory applied in the sport environment. It includes an analysis of organizational structure/theory and management style application. Also covered are an overview of the budgeting, personnel process, staffing requirements and staff development procedures including advanced budgetary practice. SES 2524 presents a study of activity programming/ facility needs and customer service protocols for the sport environment to include ethics, leadership strategies, risk management, evaluation procedures, as well as proper equipment care and storage.

Restrictions: none

SES 2712 - Promotion & PR in Sport & Events (A SU)**3.00 credit(s)**

This course provides the student with an introduction of promotions and public relations in sport and events. This course will define sport public relations as a managerial, communication-based function designed to identify a sport organization's key publics, evaluate its relationships with its publics, and foster desirable relationships between the organization and its publics.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

SES 2720 - Facilities Management (A SP SU)**3.00 credit(s)**

This course discusses the elements of managing sport facilities, including arenas, stadiums and athletic complexes. The course will include methodologies for planning and construction of new recreation, leisure and sport facilities as well as guidelines for evaluating the adequacy of existing facilities. An investigation

of the functions of recreation and leisure managers (arts and entertainment) in the design, operation, and financing of facilities. Students will examine the issues pertaining to management of public and private arenas, stadiums, theaters, and multipurpose facilities. Management of temporary facilities for special events will also be considered.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1101 This course offers a survey of the health and fitness arena, both private and public, including the study of facilities, recreational fitness options for the client, profiles, daily operations, legal aspects, personnel issues, and program administration

Co-requisites: none

Restrictions: none

SES 2740 - Dimension of Wellness (A SP SU)**3.00 credit(s)**

In this course, students will ask the question: What is the definition of wellness? More than ever before we hear this word in the news, on billboards, in conversation and even at work. Interestingly, there is no universally accepted definition of wellness. For this reason students will explore a set of common wellness characteristics and learn about the multidimensional states of wellness.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1100

Co-requisites: none

Restrictions: none

SES 2750 - Chronological & Physiological Wellness (A SP SU)**3.00 credit(s)**

This course is designed to develop knowledge and awareness of the major physiological changes that occur in humans as it relates to chronological aging. Students will use a dimensional wellness approach to design chronological wellness programming.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1100

Co-requisites: none

Restrictions: none

SES 2760 - Clinic/Corporate Wellness (A SP SU)**3.00 credit(s)**

This course is designed to develop knowledge and awareness of the major issues in the field of work site health promotion and clinical care. The focus of the course is on planning, administering and evaluating wellness and health promotion programs based in clinical, industrial and corporate environments. The cost of unhealthy lifestyle choices for the individual and employer and their relationship to the workplace will be explored.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1100

Co-requisites: none

Restrictions: none

SES 2770 - Society and Wellness (A SP SU)**3.00 credit(s)**

The purpose of this course is to increase student understanding of various wellness issues facing America and the world today. This course introduces students to the field of wellness and health promotion as a discipline and profession with a specific focus on contemporary topics facing all wellness professionals based on social divides.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: SES1100

Co-requisites: none

Restrictions: none

SES 2950 - SES Practicum/Seminar (A SP SU)**2.00 credit(s)**

This course presents an opportunity for practical training in the sport profession to include activity preparation, personnel evaluation and budget analysis. This course also includes an on-campus seminar which will discuss issues relating to the profession. Summative assessment will include a combination of objective tests, performance checklists and evaluation by the on-site supervisor.

Contact Hours: Seminar 1.00, Practicum 7.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

Speech and Hearing Sciences

SHS 2230 - Introduction to Communication Disorders (SP)**3.00 credit(s)**

This course provides a survey of the topics, methodologies, and applications of speech and hearing science in normal and disordered hearing, speech, and language. This includes an introduction to the components of normal communication, including anatomy and physiology of speech and hearing mechanisms and physical components of sound and language. Major emphasis is on specific communication disorders, including fluency disorders, stuttering, swallowing disorders, aphasia, reading disorders, and different types of hearing loss. Course material will also address the Speech Pathology and Audiology professions and communication therapies.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

Skilled Trades Technology

SKTR 1101 - Survey of the Construction Industry (A SU)**2.00 credit(s)**

This seminar course provides an overview of the vast array of opportunities in the construction industry. Students will be exposed to careers ranging from the many administrative and management career opportunities available in the industry (e.g., construction management, architecture, and civil engineering) as well as the wide range of skilled trades careers needed to build America (e.g., electrician, carpenter, operating engineer, plumber, HVAC, and welder). Also covered will be a wide range of construction operations: residential, commercial, industrial, and public works, and how Green Construction affects and influences these projects. A General overview of Job Site Safety will also be covered.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$10.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

SKTR 1110 - Electrical: Fundamentals (A SP)**2.00 credit(s)**

This course introduces the learner to the electrical profession, basic electrical theory and circuits, standard electrical safety, installation tools, electrical formulas, selection of proper wiring size and methods of installation. The learner will experience an introduction to wiring methods, wiring devices and their installation. This course will cover essential electrical test equipment.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$40.00

Pre-requisites: Placement into MATH 1020 or higher

Co-requisites: none

Restrictions: none

SKTR 1120 - Carpentry: Fundamentals (A SP SU)**2.00 credit(s)**

This course introduces the learner to the varied complex systems that make-up the Carpentry Trade and the history of the trade, career opportunities, and different types of Construction is discussed. Safety for job-site working conditions will be covered. Wood building materials, fasteners and adhesives for wood framing are covered. Basic Carpentry formulas will be covered. This class gives the learner an introduction to proper and safe use of hand, pneumatic, and power tools typically used by carpenters. Learners will experience hands on projects building wall sections.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$30.00

Pre-requisites: Placement into MATH 1020 or higher

Co-requisites: none

Restrictions: none

SKTR 1140 - Plumbing: Introduction to Supply Systems (A)**2.00 credit(s)**

This course introduces learners to the plumbing profession, plumbing safety, tools, plumbing formulas, and drawings. CPVC, copper, steel pipe and relative fittings are discussed. This course will cover sizing requirements, flow rates, and unit usages for different plumbing fixtures. The learning will engage in the installation of plumbing supply systems and proper usage of required tools and installation methods.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$90.00

Pre-requisites: Placement into MATH 1020 or higher

Co-requisites: none

Restrictions: none

SKTR 1180 - Welding: Introduction to Stick (A SP SU)**2.00 credit(s)**

This course introduces the learner to the welding profession, welding tools, welding safety, Oxy-Fuel setup, cutting, and heating, base metal preparation, weld quality, and several aspects of Shielded Metal Arc Welding (SMAW) (known as "Stick Welding") including equipment setup, and basic electrode selection. Through this course the learner will be able to assess what other welding skills and knowledge they desire and/or need for the work place.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$70.00

Pre-requisites: Placement into MATH 1010 or higher

Co-requisites: none

Restrictions: none

SKTR 1280 - Welding: Oxyfuel Methods and Plasma Cutt (A SP)**2.00 credit(s)**

This course introduces the learning to Oxy-Fuel welding (OFW) of mild steel and aluminum, this course will expand on Oxy-Fuel cutting and setup procedures taught in SKTR 1180. This course will cover equipment, setup, limitations, proper operation and methods used for plasma arc cutting and gouging, along with the basic nomenclature and use of the Carbon Arc Cutting (CAC) process. The learner will engage in lab activities pertaining to Oxy-Fuel welding and cutting, Plasma Arc cutting, Carbon Arc gouging and proper fit up and preparation of materials for joining by the Oxy-Fuel process.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$95.00

Pre-requisites: Placement into MATH 1010 or higher

Co-requisites: none

Restrictions: none

SKTR 1300 - Const Industry Employability Skills (A)**2.00 credit(s)**

This seminar course covers a wide range of life and employability/employee skills. These skill sets are essential to successfully enter the workforce and build a career with a clear upward path. Proper preparation of resumes, cover letters, and on line applications as well as job search techniques suited specifically for construction and maintenance job placements are covered.

Contact Hours: Lecture 2.00

Lab Fee: \$5.00

Pre-requisites: Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SKTR 1310 - Electrical: Wiring I (A SP SU) **2.00 credit(s)**

This course introduces the learner to electrical blueprints, wiring of single pole, three-way, and four-way switches, standard and GFCI receptacles, outlet boxes, and branch circuits. Learners will start their studies of the National Electrical Code (NEC), proper methods of conductor termination, splices, and properly sizing conductors. This course will introduce learners to basic concepts of raceway installations.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$45.00

Pre-requisites: SKTR1110

Co-requisites: none

Restrictions: none

SKTR 1320 - Carpentry: Structural Framing I (A SP) **2.00 credit(s)**

This course introduces the learner to various wood framing methods and systems used in carpentry. Learners will use Blueprint reading, plans for construction of projects. Floor, wall, and foundation systems are the principle focus of this course. Learners will engage in building floor and wall sections, perform foundation layout, and Transit setup for establishing elevations and project positioning.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$50.00

Pre-requisites: SKTR1120

Co-requisites: none

Restrictions: none

SKTR 1340 - Plumbing: Introduction to Dvw Systems (SP) **2.00 credit(s)**

This course introduces the learner to proper installation of Drain Waste and Vent (DWV) systems for installing sink, tub, roof, floor, and area drains. Coverage of building standards for proper and safe installation of DWV will be covered. Different types of materials and methods used for code compliant DWV and proper sizing of DWV systems, and DWV Isometric drawing / reading will be covered. The learning will engage in the installation of DWV systems and proper usage of required tools and installation methods.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$65.00

Pre-requisites: SKTR1140

Co-requisites: none

Restrictions: none

SKTR 1380 - Welding: Introduction to MIG (A SP) **2.00 credit(s)**

This course introduces the learner to additional welding symbols and drawings, all aspects of Gas Metal Arc Welding (GMAW) and Flux Cored Arc Welding (FCAW), including equipment set-up, gas selection, usage of both solid core and flux core welding wire, using both fillet and multiple-pass welds. Through this course the learner will be able to assess what other welding skills and knowledge they desire and need for the various trades in the work force. The learner will engage in lab projects joining metals in Lap, Tee, Butt, and V-groove configurations using gas-shielded (GMAW) and flux core (FCAW) methods and materials.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$75.00

Pre-requisites: MATH 1010 or higher

Co-requisites: none

Restrictions: none

SKTR 1470 - Welding: Layout & Fit Up (A SP) **2.00 credit(s)**

This course introduces the learner to shop fabrication equipment, layout, and fit-up principles. This course will teach the learner to set up, operate and select equipment needed to perform fabrication techniques in a production environment.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$55.00

Pre-requisites: SKTR1380

Co-requisites: none

Restrictions: none

SKTR 1480 - Welding: Specifications and Drawings (SP) **2.00 credit(s)**

This course will cover welding symbol fundamentals used to build all complex welding symbols. Students will engage in the interpretation and drawing of welding symbols. Welding symbols will be analyzed to determine specifications for rod, flux, joint design, and side of joint to be welded. Symbols will be evaluated to determine weld position relative to weldment and other essential criteria.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$10.00

Pre-requisites: MATH 1020 or higher and SKTR1180 and ENGT1115

Co-requisites: none

Restrictions: none

SKTR 1510 - Electrical:low Volt Systems I (SP) **2.00 credit(s)**

This course introduces the learner to the fundamentals of Plain Old Telephone (POT) lines, CAT 3 through 6 Data topologies and terminations, 59 Ohm, and 6 Ohm Coaxial dual shield and quad shield cabling. Students will learn proper industry standard termination methods, tool usage, and methods for proper installation, maintenance, and repair of TeleData / Coaxial Systems. The learner will engage in lab projects installing, terminating, and testing of these communication systems.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$55.00

Pre-requisites: SKTR1310

Co-requisites: none

Restrictions: none

SKTR 1520 - Carpentry: Steel Framing Construction (On Demand) **2.00 credit(s)**

This course introduces the learner to Steel Framing Technology and Fundamentals. This course will cover the materials, tools, and methods of installation for steel framing. This course will cover sizing and gauge of framing members for both structural and non-structural construction applications. The learner will engage in building wall systems, floor systems, ceiling systems and metal grid drop ceiling installations using steel framing materials, tools, and methods.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$50.00

Pre-requisites: SKTR1320

Co-requisites: none

Restrictions: none

SKTR 1570 - Welding: Codes & Inspection (A SP) **2.00 credit(s)**

This course will focus on teaching the learner to interpret welding codes and standards. The learner will engage in activities that require the learner to interpret welding procedures and welder qualifications. This course will introduce common testing methods used in the welding profession when qualifying welders for certification.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$10.00

Pre-requisites: SKTR1470 and SKTR1480

Co-requisites: none

Restrictions: none

SKTR 1580 - Welding: Introduction to TIG Process (A) **3.00 credit(s)**

This course will introduce the student, who is already proficient in basic SMAW, GMAW, and Oxy-Fuel Welding skills to the cursory skill sets and knowledge of the GTAW welding process. The learner will cover skills for equipment selection, set-up, techniques, theories and applications of the GTAW welding process. The learner will engage in lab projects welding mild steel plate utilizing mild steel filler metal using the GTAW process. This process will include lap, tee, and butt joints on mild steel plate and sheet metal.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$105.00

Pre-requisites: SKTR1280 and SKTR1380

Co-requisites: none

Restrictions: none

SKTR 1670 - Welding: Metallurgy (A SP) **2.00 credit(s)**

This course will focus on how materials react to chemicals, heat, stress, strain and alloying. The learner will engage in activities that promote awareness to how metals change in both structure and property as a result of welding. This course will emphasize the fundamental properties of metals and related welding metallurgy principles.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$10.00

Pre-requisites: SKTR1470 and SKTR1480

Co-requisites: none

Restrictions: none

SKTR 1675 - Welding: Basic of Principles NDT (A SP) **2.00 credit(s)**

This course introduces the learner to visual, dye penetrant and dry magnetic particle nondestructive testing methods. This course will teach the learner to set up, operate and interpret results from nondestructive testing equipment needed for inspection in a fabrication and production environment. This course also introduces the learner to destructive testing methods for welds such as section, polish and etch; fillet-break test; and arc spot tests in accordance with American Welding Society specifications D1.1, D1.3 or equivalent.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$45.00

Pre-requisites: SKTR1570 and SKTR1670

Co-requisites: none

Restrictions: none

SKTR 1770 - Welding: GTAW PLATE (A SP)**3.00 credit(s)**

This course will focus on GTAW using aluminum, stainless steel, and carbon plate. The learner will perform 3G and 4G weldments that conform to the AWS QC7 program. The learner will perform a workmanship qualification test on aluminum, stainless steel and carbon steel plate at the conclusion of the course.

Contact Hours: Lab 6.00

Lab Fee: \$140.00

Pre-requisites: SKTR1580

Co-requisites: none

Restrictions: none

SKTR 1894 - Special Topics Skilled Trades I (On Demand)**1.00 - 4.00 credit(s)**

Special topic course for year one type content

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

SKTR 2010 - Electrical: Wiring II (A)**2.00 credit(s)**

This course will continue with instructions for installing conduit raceway systems, conductors, devices, and branch circuits. Covering commercial wiring, grounding, circuit breakers, electrical services, and over current equipment are covered. Learners will continue to broaden their knowledge of the National Electric Code and its requirements. This course introduces the learner to intermediate levels of residential and commercial wiring methods, materials, and related applications.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$46.00

Pre-requisites: SKTR1310

Co-requisites: none

Restrictions: none

SKTR 2020 - Carpentry: Structural Framing II (A)**2.00 credit(s)**

This course introduces the learner to ceiling, and roof framing concepts and methods. This course will cover rafter types and angle calculations for building roof framing systems. This course introduces the learner to insulation, sheathing, vapor barriers, roofing materials, windows, and doors. The learner will cover energy conservation methods, materials, and "green building" methodologies. The learner will engage in lab projects building and installing various roofing systems and coverings, as well as sheathing and insulation.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$50.00

Pre-requisites: SKTR1320

Co-requisites: none

Restrictions: none

SKTR 2040 - Plumbing:Intermediate Supply & DWV Syst (A) **2.00 credit(s)**

This course will cover PEX type supply systems, hammer effects, expansion tanks, return loop systems, and Natural Gas supply methods and materials. The learner will engage in sizing and installing DWV materials for horizontal and vertical stack systems. This course introduces the learner to additional plumbing codes, sump pump and lift station systems. This course will introduce the learner to plumbing system testing tools and method required for successful plumbing installations. The learning will engage in the installation of and testing of plumbing supply systems and proper usage of required tools and installation methods.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$100.00

Pre-requisites: SKTR1340

Co-requisites: none

Restrictions: none

SKTR 2070 - Welding: GTAW PIPE I (SP) **3.00 credit(s)**

This course will focus on using aluminum, stainless steel and carbon steel tubing. The learner will perform 2G and 5G weldments that conform to the AWS QC7 program. The learner will perform a workmanship qualification test on aluminum, stainless steel and carbon steel tubing at the conclusion of the course.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$285.00

Pre-requisites: SKTR1580

Co-requisites: none

Restrictions: none

SKTR 2080 - Welding: Intermediate Stick MIG (A SP) **2.00 credit(s)**

Using welding methods, materials, and techniques of SMAW, GMAW, and FCAW the student will be instructed in methods that are best suited for welding metals in a wide range of real-world applications and positions. This includes "in-position" and "out-of-position" welding on both flat work and round work materials. The learner will be engaged in lab projects using the SMAW, GMAW and FCAW processes welding: Tee, Lap, and Square Groove joints, in and out-of-position.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$75.00

Pre-requisites: SKTR1380

Co-requisites: none

Restrictions: none

SKTR 2110 - Electrical: Repair and Service Practices (SP) **2.00 credit(s)**

This course provides learners with additional residential and commercial wiring methods, and materials. Learners will be introduced to motor maintenance, load calculations, feeder circuits, and over-current protection. The learner will be introduced to distribution equipment, fire alarm systems, and arc flash electrical hazards. This course helps the learner to apply their knowledge of wiring and circuitry for diagnoses and repair of common wiring problems.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$46.00

Pre-requisites: SKTR1101 and SKTR1300 and SKTR2010

Co-requisites: none

Restrictions: none

SKTR 2120 - Carpentry: Interior/Exterior Finish Syst (SP) **2.00 credit(s)**

This course introduces the learner to interior and exterior finish systems including: drywall installation and finishing, wall coverings, siding, soffit materials, primers, paints, ceilings, and floorings. The learner will cover energy conservation methods, materials, and "green building" methodologies. The learner will engage in lab projects installing and repairing various interior and exterior finish materials.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$45.00

Pre-requisites: SKTR1101 and SKTR1300 and SKTR2020

Co-requisites: none

Restrictions: none

SKTR 2140 - Plumbing: Repair and Service Practices (SP) **2.00 credit(s)**

This course introduces the learner to service processes, service tools, service methods, and replacement methods of plumbing equipment. This course introduces the learner to additional plumbing codes and their application. The learner will engage in lab projects replacing, retrofitting plumbing fixtures, equipment, and common repair and/or adjustment procedures.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$100.00

Pre-requisites: SKTR1101 and SKTR1300 and SKTR2040

Co-requisites: none

Restrictions: none

SKTR 2180 - Welding: Intermediate Applications I (A SP) **2.00 credit(s)**

Using techniques learned in the 2080 course and utilizing the SMAW, GMAW and FCAW processes, the student will be instructed in more advanced methods for welding metals in a wide range of real-world applications and positions. This course will encompass "out-of-position" welding on both flat work and round work materials. The learner will be engaged in lab projects using the SMAW, GMAW and FCAW processes while welding: Tee, Lap, and V-Groove joints in out-of-position setups.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$85.00

Pre-requisites: SKTR1101 and SKTR1300 and SKTR2080

Co-requisites: none

Restrictions: none

SKTR 2185 - Welding: Intermediate Applications II (A SP) **2.00 credit(s)**

This class will introduce the learner to intermediate out of position SMAW, GMAW, FCAW, GTAW, and Oxy-Fuel Welding for Horizontal, Vertical, and Overhead applications, the effects of differing enveloping gases and using flux core with enveloping gasses. The learner will be introduced to aluminum preparation, set-up and fit-up for GMAW. The learner will engage in lab projects covering Out of Position SMAW, GMAW, FCAW, GTAW, and Oxy-Fuel Welding, for Horizontal, Vertical, and Overhead situations.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$80.00

Pre-requisites: SKTR1480 and SKTR1580 and SKTR2180

Co-requisites: none

Restrictions: none

SKTR 2210 - Electrical: Photovoltaic Systems (SU) **3.00 credit(s)**

This course will provide the learner with hands on instructional training needed to develop the skills required for designing, building, installing, troubleshooting and maintaining photovoltaic systems. The course is designed to introduce design concepts, tools, equipment and methods of installation used for photovoltaic systems. Fully operational systems are available for hands-on training that interface with battery and real time utility grid tied systems.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$100.00

Pre-requisites: SKTR2010 and EMEC1251

Co-requisites: none

Restrictions: none

SKTR 2280 - Welding: Intermediate V Groove & Pipe (SP) **3.00 credit(s)**

This course introduces the learner to advanced welding techniques specific to V-Groove welding of flat materials and pipe. This course will cover V-Groove welding using the SMAW, GMAW, FCAW, and GTAW processes. The learner during this course will hone their metal joining skills. This course will focus on multi-pass applications for both in and out of position work and introduce learners to pipe welding and the challenges it encompasses. Learners will engage in lab projects for fitting up and selecting the proper welding process for performing both vertical up, vertical down travel progressions, horizontal welding of pipe and flat materials required for meeting different welding specifications.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$95.00

Pre-requisites: SKTR2180

Co-requisites: none

Restrictions: none

SKTR 2370 - Welding: SMAW PIPE I (A SP)**3.00 credit(s)**

This course will teach the learner to weld carbon steel pipe in the 2G and 5G positions. The learner will learn how to make minor repairs to surface flaws on welds and base metals. The learner will engage in learning activities that prepare them to pass a workmanship qualification test.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$695.00

Pre-requisites: SKTR2080

Co-requisites: none

Restrictions: none

SKTR 2410 - Electrical: NFPA 70E Workplace Safety (A SP SU)**1.00 credit(s)**

This course introduces the learner to electrical safety and the NFPA 70E Standard for providing safe working areas for employees relative to the hazards arising from the use, service, and maintenance of electricity and related electrical equipment. This course will cover the procedures required to work on energized equipment, its associated boundaries, the proper types and/or levels of PPE required for working about energized electrical equipment, and methods for determining the level of potential exposure.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: APPL2010 or SKTR2010

Co-requisites: none

Restrictions: none

SKTR 2470 - Welding: SMAW PIPE II (A SP)**3.00 credit(s)**

This course will focus on SMAW out of position pipe welding. The learner will engage in learning activities that prepare them for a 6G unlimited thickness qualification test on carbon steel. The qualification test will conform to AWS QC7 program guidelines.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$695.00

Pre-requisites: SKTR2370

Co-requisites: none

Restrictions: none

SKTR 2570 - Welding: GMAW PIPE I (A SP)**3.00 credit(s)**

This course will focus on GMAW short circuit transfer using 3" and 6" schedule 40 and 80 carbon steel pipe. The learner will perform 2G and 5G weldments that conform to the AWS QC7 program.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$255.00

Pre-requisites: SKTR1380

Co-requisites: none

Restrictions: none

SKTR 2670 - Welding: FCAW PIPE I (SP)**3.00 credit(s)**

This course will focus on the FCAW self-shielded and gas-shielded processes using 3" and 6" schedule 40 and 80 carbon steel pipe. The learner will be required to perform fillet welds, 2G and 5G welding procedures that conform to the AWS QC7 program. The learner will take a workmanship qualification test at the completion of the course.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$785.00

Pre-requisites: SKTR1380

Co-requisites: none

Restrictions: none

SKTR 2710 - Electrical: NEC&Electrical Contracting (SP)**4.00 credit(s)**

This course introduces the learner to understanding and developing a proper interpretation of the National Electric Code. This seminar course will introduce the learner to understanding NEC divisions, hierarchy, proper application of exceptions, and default rules for all electrical installations. This course will review electrical theory fundamentals, electrical formulas used for branch circuits, feeders and equipment calculations. This course will also cover contractor's business law and job site safety requirements for proper preparation for a State of Ohio Electrical Contractors License.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$25.00

Pre-requisites: Placement into MATH 1020 or higher

Co-requisites: none

Restrictions: Instructor Permission

SKTR 2780 - Welding Certification Preparation I (SU)**1.00 credit(s)**

This course will cover the requirements for passing an AWS certification for flat and out of position work in structural applications. This course will help to fine tune the learners understanding of welding inspection methods, specifications, standards, and procedures for successful structural welding.

Contact Hours: Lab 2.00

Lab Fee: \$100.00

Pre-requisites: SKTR2280

Co-requisites: none

Restrictions: none

SKTR 2894 - Special Topics in Skilled Trades III (On Demand)**1.00 - 4.00 credit(s)**

Special topic course for year two type content

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

Sociology

SOC 1101 - Introduction to Sociology (A SP SU) **3.00 credit(s)**

This course introduces the basic concepts, methods and findings of sociology as a scientific discipline. The sociological perspective, emphasizing social interaction and structure, is used to explore the following topics: culture; socialization; social groups, including organizations; deviance; various types of social inequality; major social institutions; collective behavior, social movement and social change. Sections of this course are H-designated Honors classes.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: ENGL1100 Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SOC 1194 - SPT: Sociology (A SP SU) **1.00 - 3.00 credit(s)**

A detailed examination of selected topics of interest in sociology.

Contact Hours: Lecture 1.00

Lab Fee: \$3.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

SOC 1500 - Intro to Rural Sociology (A SP SU) **3.00 credit(s)**

As an introduction to rural sociology and development, this course will survey contemporary issues in rural society throughout the world, paying special attention to the United States and developing countries. We will introduce sociological concepts and apply them to agriculture, natural resources, rural institutions and communities, population growth and change, globalization, environment, and development.

Contact Hours: Lecture 3.00

Lab Fee: \$4.00

Pre-requisites: ENGL1100 Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SOC 2193 - Independent Study in Sociology (A SP SU) **1.00 - 3.00 credit(s)**

An individual, student-structured course that examines a selected topic in Sociology through intensive reading or research. The independent study elective permits a student to pursue his/her interests within the context of a faculty-guided program.

Contact Hours: Lecture 1.00

Lab Fee: \$3.00

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

SOC 2202 - Social Problems (A SP SU)**3.00 credit(s)**

This course examines how various conditions within society come to be defined as social problems. Individual, social, cultural, economic and political causes and consequences of such problems are analyzed with contemporary social science research. Possible intervention strategies are also assessed. Problems covered include health and well being; social and interpersonal violence; conformity and deviance; social and economic inequality associated with poverty, minority status, aging and sex roles; institutional change; and future issues and trends.

Contact Hours: Lecture 3.00**Lab Fee: \$3.00**

Pre-requisites: ENGL1100 Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SOC 2209 - Sociology of Criminal Justice System (A SP SU)**3.00 credit(s)**

This course is an introduction to the criminal justice system as a social institution in society. Topics covered include an overview of the historical development and functions of the criminal justice system in the United States, theories of justice and punishment, the emergence and development of the modern police and court systems, and the structure and function of the correctional system. The social roles of personnel in the criminal justice system, including police, lawyers, judges, correctional officers, and parole officers will also be examined.

Contact Hours: Lecture 3.00**Lab Fee: \$3.00**

Pre-requisites: ENGL1100 Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SOC 2210 - Sociology of Deviance (A SP SU)**3.00 credit(s)**

This course explores the major sociological perspectives and theories of deviance. This introductory course includes the study of the definition, identification, treatment and management of types of deviance, such as crime, mental illness, alcoholism and other pathologies.

Contact Hours: Lecture 3.00**Lab Fee: \$3.00**

Pre-requisites: ENGL1100 Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SOC 2309 - Law and Society (A SP SU)**3.00 credit(s)**

This course examines the interrelationships between law and other social structures and processes. The structure of law, the origin of laws, the organization and function of the legal system, the impact of the law, and the relationship between law and social change will be examined.

Contact Hours: Lecture 3.00**Lab Fee: \$3.00**

Pre-requisites: ENGL1100 Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SOC 2330 - Marriage and Family Relations (A SP SU)**3.00 credit(s)**

This course examines the impact of modern society upon the family as it relates to courtship, size of family, member relationships, economic problems, and marital stability. This course compares alternative life styles and marriage and family relations throughout the life span.

Contact Hours: Lecture 3.00**Lab Fee: \$3.00**

Pre-requisites: ENGL1100 Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SOC 2380 - American Race & Ethnic Relations (A SP SU)**3.00 credit(s)**

This course explores racial and ethnic relations in the United States. The current and past experiences of selected American racial and ethnic groups are examined with respect to theories and patterns of intergroup relations and issues of prejudice and discrimination (both individual and institutional). Possible future trends in American intergroup relationships are addressed

Contact Hours: Lecture 3.00**Lab Fee: \$3.00**

Pre-requisites: ENGL1100 Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SOC 2410 - Sociological Aspects of Criminology (A SP SU)**3.00 - credit(s)**

This course is an introduction to the sociological study of criminology and examines fundamental issues of the discipline such as the nature and social distribution of crime, criminal law, and theories of crime. The primary focus of the course is on understanding theories surrounding the causes and correlates of criminal behavior and developing a critical perspective from which social policies on crime can better be understood.

Contact Hours: Lecture 3.00**Lab Fee: \$3.00**

Pre-requisites: ENGL1100 Placement into ENGL 1100

Co-requisites: none

Restrictions: none

Spanish

SPAN 1101 - Beginning Spanish I (A SP SU)

4.00 credit(s)

SPAN 1101 is an introduction to the fundamentals of the Spanish language with practice in listening, reading, speaking and writing. Course includes selected studies in Hispanic culture. SPAN 1101 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: ENGL1100 Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SPAN 1102 - Beginning Spanish II (A SP SU)

4.00 credit(s)

This course is a continuation of SPAN 1101, with further development of listening, reading, speaking and writing skills and further study of Hispanic culture. SPAN 1102 meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: SPAN1101 Minimum grade of "C"

Co-requisites: none

Restrictions: none

SPAN 1103 - Intermediate Spanish (A SP SU)

4.00 credit(s)

SPAN 1103 focuses on the reading and discussion of Spanish and Latin American short stories, novels, plays, newspapers, and magazines, emphasizing literary appreciation and the development of Hispanic culture. It meets elective requirements in the Associate of Arts and Associate of Science Degree programs and transfer requirements in foreign languages and literature.

Contact Hours: Lecture 4.00

Lab Fee: \$10.00

Pre-requisites: SPAN1102 Minimum grade of "C"

Co-requisites: none

Restrictions: none

SPAN 1105 - Spanish Conversation & Composition (A SP SU) **1.00 credit(s)**

This is a conversation/composition course designed to provide students completing the 1103-level with an opportunity to continue practicing the language. Students discuss current events and personal experiences in the target language. Readings are taken from literary texts, journals, magazines and newspapers.

Contact Hours: Lecture 1.00

Lab Fee: \$10.00

Pre-requisites: SPAN1103 Minimum grade of "C"

Co-requisites: none

Restrictions: none

SPAN 1120 - Spanish for Law Enforcement (A SP SU) **2.00 credit(s)**

In this course, students learn basic Spanish phrases and the questions necessary to carry out specific protocols in the law enforcement profession. Discussions also cover cross-cultural issues pertinent to relationships between non-Hispanic professionals and members of the Hispanic community. This course is useful for students interested in pursuing a career in law enforcement that has frequent contact with the Hispanic population.

Contact Hours: Lecture 2.00

Lab Fee: \$10.00

Pre-requisites: ENGL1100 Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SPAN 1121 - Spanish for Landscaping (A SP SU) **2.00 credit(s)**

In this course, students learn basic Spanish phrases and the questions necessary to carry out specific protocols in the landscaping profession. Discussions also cover cross-cultural issues pertinent to relationships between non-Hispanic professionals and members of the Hispanic community. This course is useful for students interested in pursuing a career in the landscaping profession that has frequent contact with the Hispanic population.

Contact Hours: Lecture 2.00

Lab Fee: \$10.00

Pre-requisites: ENGL1100 Placement into ENGL 1100

Co-requisites: none

Restrictions: none

SPAN 1193 - Independent Study Spanish (A SP SU) **1.00 - 4.00 credit(s)**

Designed to give the student an opportunity for a detailed study of topics of interest in Spanish not otherwise offered.

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: Varies, minimum grade of "C"

Co-requisites: none

Restrictions: none

SPAN 1194 - SPT: Spanish (A SP SU)**1.00 - 4.00 credit(s)**

Designed to give groups of students an opportunity for a detailed study of topics of interest in Spanish not otherwise offered.

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: Varies, minimum grade "C"

Co-requisites: none

Restrictions: none

Sterile Processing

SPT 1861 - Sterile Processing Tech I (A)**6.00 credit(s)**

Presentation and discussion of development and history of a modern Sterile Processing Department. Roles and responsibilities of Sterile Processing Technicians. Review of the anatomy and physiology of the human body in relation to processing of medical devices and patient care equipment. Discussion of basic Microbiology and identification of common microbes and diseases found in today's healthcare environment. Admission to the Sterile Processing Technology Program is required before enrolling in this course.

Contact Hours: Lecture 1.50, Clinical 13.50

Lab Fee: \$87.50

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission

SPT 1862 - Sterile Processing Technology II (SP)**6.00 credit(s)**

The techniques and protocol of processing patient care equipment are presented. Review and demonstration of the various packaging methods currently in use in today's healthcare environment for sterile processing of critical medical devices. Discussion and identification of surgical instruments including techniques for recognizing damage and/or poor working condition to allow technicians to remove for preventive maintenance. Discussion and identification of the various methods of sterilization currently used in healthcare. Demonstration of appropriate monitoring techniques to achieve required degree of sterile assurance level. Identification of sterile storage procedures and concepts. Review and demonstration of appropriate distribution methods and affect each has on the cost of med/surgical supplies. Presentation and discussion of history, development and current trends in the daily operations of modern hospitals. Hospital governance, administration and management. Continued review of functions of clinical patient care areas of inpatient care, outpatient care, surgery, emergency services, ancillary diagnostic and rehabilitation services. Review of patient, facility and administrative support services. Discussion of critical interrelated functions of all departments of hospital to insure quality patient care is delivered. Introduction to hospital budgeting, marketing, financing, billing, quality improvement and accreditation. Presentation of case studies to emphasize actual ethical concerns that may be experienced in performance of duties. Clinical experience in central service/materials management department of health care facility covering principles and practices of cleaning, decontamination and sterilization of medical instruments and apparatus. Fundamentals of wrapping, sterile set-ups, safety rules and regulations, inventory control, record-keeping and quality assurance

Contact Hours: Clinical 12.00, Lecture 2.00

Lab Fee: \$87.50

Pre-requisites: SPT1861

Co-requisites: none

Restrictions: none

SPT 1863 - Sterile Processing Tech BIO OHIO (A SP SU) **2.00 credit(s)**

This course will provide an introduction to the Central Service areas of a major hospital system. Orientation for the various roles and responsibilities of the Sterile Processing technologist will be presented. Introduction to the basic sciences to include medical terminology, anatomy, physiology and microbiology. Introduction to the regulations and standards for the successful function of a Sterile Processing Technology Unit are explored. Infection Prevention and Safety considerations are related to the duties of decontamination, disinfection and sterilization of supplies and equipment associated with the duties of the Central Service or Sterile Processing Department. Surgical patient care concepts are related to the sterilization of instrumentation and equipment to include pre/intra/post-operative routines for inventory management and tracking systems, point of care processing for various high and low temperature sterilization systems.

Contact Hours: Lecture 2.00

Lab Fee: \$111.90

Pre-requisites: none

Co-requisites: none

Restrictions: none

SPT 2530 - Sterile Processing Exam Review (SP) **2.00 credit(s)**

The purpose of SPT 2530 is to prepare students to successfully pass the Central Services Technician (CRST) examination. The Central Services Department provides key support to all areas of patient care. Further, it is the hub of all activity involving supplies and equipment required for surgery and other patient care areas (www.iahcsmm.org). Course includes completion of the IAHCMM certification examination.

Contact Hours: Lecture 2.00

Lab Fee: \$125.00

Pre-requisites: SPT1861

Co-requisites: SPT1862

Restrictions: Health Code

Social Sciences

SSCI 1798 - Study Tour/Social Sciences (On Demand) **1.00 - 3.00 credit(s)**

This course is a required component of a student's participation in a planned study tour. Course content relates to the destination and educational focus of the scheduled study tour, and to the application of relevant social science concepts and theories. The coinciding study tour allows students an opportunity to gain firsthand knowledge of groups within and outside the United States. A mandatory pre-tour orientation is required.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: Instructor Permission

Statistics

STAT 1350 - Elementary Statistics (A SP SU)

3.00 credit(s)

STAT 1350 is designed to acquaint students with statistical methods used in gathering and analyzing data. The course includes survey methods, graphical displays of data, descriptive statistics, the Normal distribution, correlation and linear regression, basic concepts in probability and simulation, sampling distributions and the Central Limit Theorem, confidence intervals, and significance testing.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: MATH1025 with minimum grade of "C" or MATH1050 with minimum grade of "C" or MATH1099 MATH 1050 module or by placement equivalent

Co-requisites: none

Restrictions: none

STAT 1400 - Statistical Concepts for Business (A SP SU)

3.00 credit(s)

This course is designed to introduce students to statistical concepts focusing primarily on business applications. The course contains techniques in descriptive and inferential statistics and includes sampling techniques; data types; experiments; measures of central tendency; measures of dispersion; graphical displays of data; basic probability concepts; binomial and normal probability distributions; sampling distributions and Central Limit Theorem; estimating population parameters and hypothesis tests of population parameters for one and two samples; linear regression and forecasting with exponential smoothing. STAT 1400 is intended primarily for students pursuing an AAS degree in the business programs.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$7.00

Pre-requisites: MATH1050 with a minimum grade of "C" or MATH1025 with a minimum grade of "C" or MATH1099 MATH 1050 module or by placement equivalent

Co-requisites: none

Restrictions: none

STAT 1450 - The Practice of Statistics (A SP SU)

4.00 credit(s)

This course is designed to acquaint students with statistical methods used in gathering and analyzing data. The course includes: sampling methods and data classification; descriptive statistics; percentiles and z-scores; basic concepts in probability; binomial and normal probability distributions; the Central Limit Theorem; estimating population parameters; hypothesis testing; linear correlation and regression; interval estimation and hypothesis testing with two samples; and chi-square tests of independence. STAT 1450 is intended primarily for students needing a college level, non-calculus based course in probability and statistics.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$7.00

Pre-requisites: MATH1116 Minimum grade "C" or MATH1130 Minimum grade "C" or MATH1099 MATH 1050 Module or by placement equivalent

Co-requisites: none

Restrictions: none

STAT 2180 - Statistics for the Biological Sciences (A SP SU)**4.00 - credit(s)**

This course is designed to equip students with the statistical methods needed in gathering and analyzing data. The course includes: sampling methods and data classification, descriptive statistics; basic concepts in probability; binomial, Poisson, and normal probability distributions; the Central Limit Theorem; estimating population parameters, interval estimation and hypothesis testing with one and two samples; chi-square tests of independence; experimental design; linear correlation and regression. Stat 2180 is intended primarily for students needing an integral calculus-based statistics course for majors in the biological and other life science fields.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

STAT 2430 - Business Statistics (A SP SU)**5.00 credit(s)**

STAT 2430 is designed to acquaint students with statistical methods used in gathering and analyzing data. The course includes: designing samples and experiments; describing data with graphs and numerical summaries; correlation and regression; concepts in probability; probability distributions including the binomial, normal, uniform, exponential, and other continuous probability distributions; the Central Limit Theorem; confidence intervals and hypothesis testing for means and proportions; inference for comparing two populations, Chi-Square test of independence,; and multiple linear regression. Applications in business, management and economics are emphasized.

Contact Hours: Lab 2.00, Lecture 4.00

Lab Fee: \$7.00

Pre-requisites: MATH1131 Minimum grade "C" or MATH1151 Minimum grade "C"

Co-requisites: none

Restrictions: none

STAT 2450 - Introduction to Statistical Analysis (SU)**4.00 credit(s)**

This course is designed as a calculus-based introduction to data analysis, experimental design, sampling, probability, and inference. Stat 2450 is intended primarily for students needing an integral calculus-based statistics course for majors in the social and behavioral sciences and other fields.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$7.00

Pre-requisites: MATH1131 Minimum grade "C" or MATH1151 Minimum grade "C"

Co-requisites: none

Restrictions: none

STAT 2460 - Principles of Stats for Engineers (SP)**4.00 - credit(s)**

This course introduces descriptive statistics; probability theory; discrete and continuous random variables; expected value and variance; the normal distribution; sampling distributions and the Central Limit Theorem; confidence intervals and hypothesis testing for means and proportions; simple linear regression; analysis of variance; multiple linear regression; model selection; and selected topics from quality control and experimental design. Applications to problems in science, engineering, computer science, and related areas are explored. STAT 2460 is intended primarily for students needing a calculus-based course in probability and statistics.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

STAT 2470 - Intro Probability Statistics Eng & Sci (A SP)**4.00 credit(s)**

This course introduces probability theory; discrete and continuous random variables; probability distributions; expected value and variance; the normal distribution; point estimation; sampling distributions, one and two sample confidence intervals; one and two sample hypothesis testing; simple linear regression and correlation; chi-square goodness-of-fit- test; analysis of variance; and multiple linear regression. Applications to problems in science, engineering, computer science, and related areas are explored. STAT 2470 is intended primarily for students needing a calculus-based course in probability and statistics.

Contact Hours: Lab 2.00, Lecture 3.00

Lab Fee: \$7.00

Pre-requisites: MATH1152 Minimum grade "C" or MATH1172 Minimum grade "C"

Co-requisites: none

Restrictions: none

Surgical Technology**SURG 1861 - Surgical Technology I (A)****7.00 credit(s)**

This course will provide an in-depth introduction to the role and responsibilities of the Surgical Technologist as an important professional in the delivery of surgical health care services. Introduction to the surgical environment will include professional responsibilities, legal and ethical considerations and basic surgical environment safety. Introduction to the principles of aseptic technique to include surgical asepsis, scrubbing, gowning, gloving, sterilization, disinfection, and operating room sanitation are explored. Direct patient care interventions to include positioning, prepping, draping techniques, and related operative procedures. Introduction to anesthesia and pharmacological considerations for patient surgical care are investigated. The surgical use of instrumentation and common surgical supplies are investigated. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based surgery units.

Contact Hours: Lab 15.00, Lecture 2.00

Lab Fee: \$150.00

Pre-requisites: none

Co-requisites: none

Restrictions: Program Admission

SURG 1862 - Surgical Technology II (SP)**7.00 credit(s)**

Principles of asepsis and the patient care concepts of positioning, prepping, draping, and procedural techniques are directly applied to the investigation of General (GEN), Gastrointestinal (GI), Obstetrics (OB), Gynecological (GYN), and Genitourinary (GU) surgical services. The role and responsibilities of the Surgical Technologist as the "scrub" member and the "circulator" member of the surgical team will focus on maintaining the integrity, safety, and efficiency of the sterile and nonsterile areas throughout various surgical procedures. Investigation of instrumentation, sutures, needles, dressings, packings, drainage tubes/systems, and auto-stapling devices will continue along with a focus on endoscopy use in GEN, GI, OB, GYN, and GU surgical services. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based surgery units.

Contact Hours: Lab 15.00, Lecture 2.00**Lab Fee: \$150.00**

Pre-requisites: SURG1861

Co-requisites: none

Restrictions: none

SURG 1863 - Surgical Technology III (SU)**7.00 credit(s)**

The principles of asepsis and the patient care concepts of positioning, prepping, draping, and procedural techniques are directly applied to the investigation of Orthopedic (Ortho) and Neurosurgery (Neuro) surgical services. The role of the surgical technologist as the "scrub" member and the "circulator" member of the surgical team continues to focus on maintaining the integrity, safety, and efficiency of the sterile and nonsterile areas throughout various surgical procedures. Investigation of instrumentation, sutures, needles, dressings, packings, and drainage tubes/systems will continue with a focus on selected internal and external fracture stabilization devices, cast immobilization, spinal fixation implants, and neurosurgical shunts. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based surgery units

Contact Hours: Clinical 15.00, Lecture 2.00**Lab Fee: \$150.00**

Pre-requisites: SURG1862

Co-requisites: none

Restrictions: none

SURG 2864 - Surgical Technology IV (A)**7.00 credit(s)**

This course will provide the Surgical Technology student with a continuing introduction to the following surgical services: General, Gynecology, Obstetrics, Cardiovascular, Peripheral Vascular, Thoracic, Oral, ENT, Ophthalmologic Maxillofacial, Orthopedics, Plastic/Reconstructive, and Neurosurgery. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a hospital-based surgery units. The role and responsibilities of the Surgical Technologist as the "scrub" and assisting "circulator" member of the surgical team will focus on maintaining the integrity, safety, and efficiency of the sterile and non-sterile areas throughout various surgical procedures. Investigation of instrumentation, sutures, needles, dressings, packing, and drainage tube systems specific to surgical services will continue, with an additional focus on selected auto-stapling devices and the use of endoscopic instrumentation. Investigation of instrumentation, sutures, needles, dressings, packings, and drainage tubes/systems will continue with a focus on endoscopy use, chest tubes, cardiopulmonary bypass, vascular autografts and allografts, intra-aortic balloon pumps, and vascular shunts. Additional investigation into special patient populations to include geriatric and the terminal ill and transplant patient care needs will be presented. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based and ambulatory surgery units.

Contact Hours: Clinical 15.00, Lecture 2.00

Lab Fee: \$150.00

Pre-requisites: SURG1863

Co-requisites: none

Restrictions: none

SURG 2865 - Surgical Technology V (SP)**4.00 credit(s)**

This course will provide the Surgical Technology student with an in-depth analysis, recognition, and medical/surgical treatment for a variety of advanced surgical specialty areas. These areas include Orthopedic Total Joint Replacement, Laser Therapy, Endoscopy, Ophthalmic, Oncology, Obstetrics, Pediatrics, Cardiovascular, Ambulatory Surgery, and Organ Procurement. Additional surgical specialty areas of interest will be investigated and offered to students, alumni, and surgical health care professionals as they become available. Students will be exposed to lecture, discussion, seminar, and recitation educational experiences all in support of direct patient care laboratory, practicum, and clinical applications in a variety of hospital-based and ambulatory surgery units.

Contact Hours: Lecture 1.00, Clinical 9.00**Lab Fee: \$150.00**

Pre-requisites: SURG2864

Co-requisites: none

Restrictions: none

Survey**SURV 1410 - Introduction to Surveying (A SU)****3.00 credit(s)**

This course offers a comprehensive study in performing measurements for the collection of data and for construction layout. The course elements include application of the English and metric (SI) measurement systems in performing angular and distance measurement. Elements of differential leveling are used for establishing the elevations of new bench marks, topographic mapping by grid method, and cut/fill calculations to finish floor elevations of proposed structures. Data manipulation includes taping corrections, precision and accuracy determination, traverse closures, traverse adjustments, local and state plane coordinate systems, level circuit reductions, radial building staking notes and boundary line determination by inverse coordinates. This course also explores emerging surveying technologies in construction sciences.

Contact Hours: Lecture 1.00, Lab 6.00**Lab Fee: \$18.00**

Pre-requisites: MATH1075

Co-requisites: none

Restrictions: none

SURV 1410A - Introduction to Surveying I (SP)**2.00 credit(s)**

This course offers a comprehensive study in performing measurements for the collection of data and for construction layout. The course elements include application of the English and metric (SI) measurement systems in performing angular and distance measurement. Elements of differential leveling are used for establishing the elevations of new bench marks, topographic mapping by grid method, and cut/fill calculations to finish floor elevations of proposed structures. Data manipulation includes taping corrections, precision and accuracy determination, traverse closures, traverse adjustments, local and state plane coordinate systems, level circuit reductions, radial building staking notes and boundary line determination by inverse coordinates. This course also explores emerging surveying technologies in construction sciences.

Contact Hours: Lecture 1.00, Lab 3.00**Lab Fee: \$18.00**

Pre-requisites: MATH1075

Co-requisites: none

Restrictions: none

SURV 1410B - Introduction to Surveying II (SU)**1.00 credit(s)**

This course offers a comprehensive study in performing measurements for the collection of data and for construction layout. The course elements include application of the English and metric (SI) measurement systems in performing angular and distance measurement. Elements of differential leveling are used for establishing the elevations of new bench marks, topographic mapping by grid method, and cut/fill calculations to finish floor elevations of proposed structures. Data manipulation includes taping corrections, precision and accuracy determination, traverse closures, traverse adjustments, local and state plane coordinate systems, level circuit reductions, radial building staking notes and boundary line determination by inverse coordinates. This course also explores emerging surveying technologies in construction sciences.

Contact Hours: Lab 3.00**Lab Fee: \$0.00**

Pre-requisites: SURV1410A

Co-requisites: none

Restrictions: none

SURV 1420 - Historical Surveying (A SU)**2.00 credit(s)**

This is a historical review of the surveying profession from classical time to the mid-20th Century. Emphasis is placed on the three major United States governmental surveying and mapping agencies or bureaus from the late 18th Century to mid 20th Century (Dawn of the Digital Age). Field exercises with period original and reproduction surveying equipment supports the subject material. It also includes a review of current surveying and mapping technologies. Integrated topics include drafting, surveying, cartography and geographic information systems.

Contact Hours: Lecture 1.00, Lab 3.00**Lab Fee: \$23.00**

Pre-requisites: MATH1075

Co-requisites: none

Restrictions: none

SURV 1460 - Computer Apps in Construction Science (A SP)**2.00 credit(s)**

This course involves the integrated use of word processing, spreadsheet, database management, graphic and computer assisted drafting software to solve problems associated with the surveying industry and to produce formal engineering reports using the most current version of MS Office, Autodesk and Adobe Photoshop software products.

Contact Hours: Lecture 1.00, Lab 3.00**Lab Fee: \$20.00**

Pre-requisites: MATH1148 and SURV1410

Co-requisites: none

Restrictions: none

SURV 2410 - Engineering Surveying (A SU) **4.00 credit(s)**

This class is a comprehensive study of the elements of route alignment including horizontal circular and spiral curves, combinations of circular and spiral curves, vertical curves, centerline and offset staking for rough and finished grade. The course includes the application of all elements of route design, construction staking and earthwork volume determination in a comprehensive integrated project format. Manual calculations are reinforced with the use of computer software such as Autodesk Civil 3-D.

Contact Hours: Lecture 2.00, Lab 6.00

Lab Fee: \$23.00

Pre-requisites: MATH1148 and SURV1410

Co-requisites: none

Restrictions: none

SURV 2410A - Engineering Surveying I (SP) **2.00 credit(s)**

This class is a comprehensive study of the elements of route alignment including horizontal circular and spiral curves, combinations of circular and spiral curves, vertical curves, centerline and offset staking for rough and finished grade. The course includes the application of all elements of route design, construction staking and earthwork volume determination in a comprehensive integrated project format. Manual calculations are reinforced with the use of computer software such as Autodesk Civil 3-D.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$23.00

Pre-requisites: MATH1148 and SURV1410 or SURV1410B

Co-requisites: none

Restrictions: none

SURV 2410B - Engineering Surveying II (SU) **2.00 credit(s)**

This class is a comprehensive study of the elements of route alignment including horizontal circular and spiral curves, combinations of circular and spiral curves, vertical curves, centerline and offset staking for rough and finished grade. The course includes the application of all elements of route design, construction staking and earthwork volume determination in a comprehensive integrated project format. Manual calculations are reinforced with the use of computer software such as Autodesk Civil 3-D.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$0.00

Pre-requisites: SURV2410A

Co-requisites: none

Restrictions: none

SURV 2450 - Legal Principles in Surveying (SP)**3.00 credit(s)**

This course presents a study of statute and common law, as pertains to land surveying and real property rights and the methods to describe real property. Current practices, current court decisions and applicable laws and Ohio Surveying Laws are examined and applied to real world scenarios.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$23.00

Pre-requisites: SURV1410 and SURV1420

Co-requisites: none

Restrictions: none

SURV 2480 - Geodetic Surveying (SU)**4.00 credit(s)**

This covers planning and execution of control surveying, cadastral surveying, network adjustment and topographic surveying using total stations and data collections, satellite positioning (Global Navigation Satellite System) and advanced imagery system. Elements also include remote sensing such LIDAR and laser scanning.

Contact Hours: Lecture 2.00, Lab 6.00

Lab Fee: \$23.00

Pre-requisites: MATH1148 and SURV1410

Co-requisites: none

Restrictions: none

SURV 2480A - Geodetic Surveying II (SP)**2.00 credit(s)**

This covers planning and execution of control surveying, cadastral surveying, network adjustment and topographic surveying using total stations and data collections, satellite positioning (Global Navigation Satellite System) and advanced imagery system. Elements also include remote sensing such LIDAR and laser scanning.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$23.00

Pre-requisites: MATH1148 and SURV1410 or SURV1410B

Co-requisites: none

Restrictions: none

SURV 2480B - Geodetic Surveying II (SU)**2.00 credit(s)**

This covers planning and execution of control surveying, cadastral surveying, network adjustment and topographic surveying using total stations and data collections, satellite positioning (Global Navigation Satellite System) and advanced imagery system. Elements also include remote sensing such LIDAR and laser scanning.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$0.00

Pre-requisites: SURV2480A

Co-requisites: none

Restrictions: none

SURV 2490 - Land Development Systems (SP)**3.00 credit(s)**

This course covers advanced surveying, including section and subdivision lines and residential property lines. Major topics include reestablishment of property boundaries and legal considerations for boundary descriptions, including local municipal record. This course also involves the development of preliminary plats, detailed plans and a final plat in accordance with State of Ohio minimum standards and local conveyance standards.

Contact Hours: Lecture 2.00, Lab 3.00

Lab Fee: \$23.00

Pre-requisites: SURV2410

Co-requisites: none

Restrictions: none

SURV 2499 - Surveying Capstone I (SP SU)**2.00 credit(s)**

This course is part one of a two part Capstone course. This Capstone experience provides student the opportunity to demonstrate, present, and simulate methods and techniques used to obtain and manage a surveying project. The methods and techniques studied include project data collection, schedule development, organizational forms, schedule adjustment, drawing coordination, along with corespondence and tracking techniques. Student teams are selected jointly by the students and approved by the instructor to prepare for and simulate the process of obtaining project data, management and some field operational concerns by the teams. The students will be evaluated by reviewing the completeness of the project data collected which will be used in SURV 2599 Capstone II course.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$35.00

Pre-requisites: SURV2490

Co-requisites: none

Restrictions: none

SURV 2599 - Surveying Capstone II (A)**1.00 credit(s)**

This course is the second part of the Capstone course. The data collected in SURV 2499 Surveying Capstone I will be organized by the teams and presented as if making a presentation to a potential customer as a final exercise for the course. This Capstone experience provides students the opportunity to demonstrate, present, and simulate methods and techniques used to obtain and manage a survey project. The methods and techniques studied throughout the entire program and surveying courses to comprise a final product to be presented to the potential customer. Including project data collection, schedule development, organizational forms, schedule adjustment, drawing coordination, along with corespondence and tracking techniques. Some computer simulations will be used to demonstrate project management activities and processes.

Contact Hours: Lecture 1.00

Lab Fee: \$0.00

Pre-requisites: SURV2499

Co-requisites: none

Restrictions: none

Theatre

THEA 1100 - Introduction to Theatre (A SP SU) **3.00 credit(s)**

Designed to help students bring critical thinking skills into their experience as theatre goers.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

THEA 1115 - Oral Interpretation (A SP) **3.00 - credit(s)**

Students explore literature through oral performance, critical listening and analytical writing. Emphasis is placed on the effective use of both voice and body language in public performance. Individual presentations, including at least three major performances, are required. Video taping of selected projects will occur.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

THEA 1180 - Theatre Practicum (A SP SU) **3.00 credit(s)**

Supervised practical experience in acting in a theatre production.

Contact Hours: Lecture 1.00, Lab 6.00

Lab Fee: \$2.00

Pre-requisites: THEA1100

Co-requisites: none

Restrictions: Instructor Permission

THEA 2205 - Technical Production Practicum (A SP SU) **2.00 credit(s)**

Supervised practical experience in technical area(s) of a theatre production.

Contact Hours: Lab 4.00

Lab Fee: \$2.00

Pre-requisites: THEA1100

Co-requisites: none

Restrictions: none

THEA 2210 - Technical Production: Stage Lighting (On Demand)**2.00 credit(s)**

Introduction to the basic principles and functions of stage lighting.

Contact Hours: Lecture 1.00, Lab 3.00

Lab Fee: \$2.00

Pre-requisites: THEA1100

Co-requisites: none

Restrictions: none

THEA 2215 - Fund Script Analysis (On Demand)**3.00 credit(s)**

Intensive study of the play script as a basis for production. Techniques for assessing a script from the diverse perspectives of a designers, directors, and performers.

Contact Hours: Lecture 3.00

Lab Fee: \$3.00

Pre-requisites: THEA2280

Co-requisites: none

Restrictions: none

THEA 2230 - Intro Dramatic Literature (A SP)**3.00 credit(s)**

Students will study selected masterpieces of Western drama and discuss their social, political and cultural influences.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

THEA 2231 - Literature for Theatre I (A)**3.00 credit(s)**

A survey of representative world drama and theatre from the classical Greek period through the 18th Century with a focus on plays as potential theatre.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: THEA1100

Co-requisites: none

Restrictions: none

THEA 2232 - Literature for the Theatre II (SP)**3.00 credit(s)**

A survey of representative world drama and theatre from the 19th Century to the present with a focus on plays as potential theatre.

Contact Hours: Lecture 3.00

Lab Fee: \$2.00

Pre-requisites: THEA1100

Co-requisites: none

Restrictions: none

THEA 2280 - Fundamentals of Acting (A SP SU)**3.00 credit(s)**

Basic principles of stage acting. Areas of emphasis include stage movement, vocal delivery, body language, concentration techniques, and basic script analysis and scoring.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$2.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

THEA 2281 - Adv Acting: Styles of Performance (A SP)**3.00 credit(s)**

Second-level acting course. Focused on stylistic demands of acting in various genres and historical styles, including Shakespeare.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$2.00

Pre-requisites: THEA2280

Co-requisites: none

Restrictions: none

THEA 2283 - Writing Plays (A SP)**3.00 credit(s)**

Introduction to the art and craft of writing plays. Emphasis on student's own work.

Contact Hours: Lecture 2.00, Lab 2.00

Lab Fee: \$2.00

Pre-requisites: ENGL1100

Co-requisites: none

Restrictions: none

THEA 2293 - IS: Theatre (On Demand)**1.00 - 3.00 credit(s)**

Individual topics and projects in theatre designed to meet specific needs.

Contact Hours: Lecture 1.00

Lab Fee: \$2.00

Pre-requisites: THEA1100

Co-requisites: none

Restrictions: Instructor Permission

Toyota

TOYO 2237 - Toyota Manual & Automatic Transmissions (On Demand)**2.00 - credit(s)**

This is an advanced course in diagnosis and repair of manual and automatic transmissions and drivelines as specifically applied to Toyota vehicles. It provides a brief refresher of the underlying theory and principles of these systems followed by a primary focus on proper maintenance, repair, and diagnosis of system concerns.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

TOYO 2257 - Toyota Suspension Steering Brake Systems (On Demand)**2.00 - credit(s)**

This is an advanced course in suspension, steering, and brake systems diagnosis and repair. It provides a brief refresher of the underlying theory and principles of these systems followed by a primary focus on proper maintenance, repair, and diagnosis of system concerns.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

TOYO 2267 - Toyota: Electrical Systems (On Demand)**3.00 - credit(s)**

This is an advanced course in electrical circuit diagnosis and repair. It provides a working knowledge of the principles of troubleshooting and diagnosis of Toyota electrical systems. This course also explores the effective use of manufacturer wiring diagrams, diagnostic tools, and the 6-step diagnostic process to isolate and resolve electrical malfunctions.

Contact Hours: Lecture 3.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

TOYO 2277 - Toyota Climate Control Systems (On Demand) **1.00 - credit(s)**

This is an advanced course in automotive heating and air conditioning systems diagnosis and repair as specifically applied to Toyota vehicles. It provides a brief refresher of the underlying theory and principles of these systems followed by a primary focus on proper maintenance, repair, and diagnosis of system concerns.

Contact Hours: Lecture 1.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

TOYO 2287 - Toyota: Eng Control I & Hybrid Gen Ser (On Demand) **2.00 - credit(s)**

This is an intermediate level course in engine controls and hybrid systems as specifically applied to Toyota vehicles. It provides an in-depth presentation of the engine control systems current in various Toyota vehicles. It also provides an overview of the operation of current Toyota hybrid systems and the operation and service unique to vehicles equipped with hybrid powertrain systems.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: none

Co-requisites: none

Restrictions: none

Veterinary Technology

VET 1103 - Intro to Small Animal Medicine (A) **1.00 credit(s)**

This course will familiarize the student with common business procedures used in veterinary practices, including fundamental record-keeping and medicolegal requirements. The role of the veterinary technician as a member of the veterinary health care team and client educator is addressed. Handling, restraint, patient assessment and medicating techniques for canine and feline species will be covered. An overview of USDA regulations and ethical use of animals will be explored. The student will learn basic animal training methods and how to assist clients with the resolution of common animal behavior problems.

Contact Hours: Lab 2.00

Lab Fee: \$107.00

Pre-requisites: none

Co-requisites: none

Restrictions: none

VET 1105 - Veterinary Parasitology (A)**2.00 credit(s)**

An introduction to the common internal and external parasites of domestic animals, including scientific nomenclature, life cycles, common methods of identification, and the treatment and/or prevention of these parasites.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$94.30

Pre-requisites: none

Co-requisites: VET1103

Restrictions: none

VET 1324 - Principles of Veterinary Radiology (A SP)**1.00 credit(s)**

In this course, students learn the basic principles of x-ray production, radiographic positioning, x-ray machine operation, radiographic technique, and film processing. Radiation safety and proper use of protective equipment is emphasized. Special radiographic procedures and technique evaluation are thoroughly explored.

Contact Hours: Lecture 1.00

Lab Fee: \$19.00

Pre-requisites: BIO1121 and BIO1122

Co-requisites: none

Restrictions: none

VET 1331 - Veterinary Anatomy & Physiology (SP)**2.00 credit(s)**

This course will provide a clinically relevant systems approach to the comparative anatomy and physiology of the canine, bovine, equine and feline species, including the circulatory, respiratory, digestive, muscular, skeletal, nervous, endocrine, exocrine, and urogenital systems. A brief presentation of avian anatomy and physiology is included.

Contact Hours: Lecture 2.00

Lab Fee: \$16.00

Pre-requisites: BIO1121 and BIO1122

Co-requisites: none

Restrictions: none

VET 1335 - Clinical Pathology I (SP)**3.00 credit(s)**

This course is designed to acquaint students with the equipment and techniques required to utilize body fluid and tissue samples as a diagnostic tool. Students will perform complete blood counts, chemistry profiles and cytologic evaluation on a variety of domestic animal species. Recognition of normal and abnormal clinical parameters will be stressed.

Contact Hours: Lecture 1.00, Lab 4.00

Lab Fee: \$224.80

Pre-requisites: BIO1121

Co-requisites: none

Restrictions: none

VET 1338 - Veterinary Surgical Techniques (SP) **2.00 credit(s)**

In this course, students learn the fundamentals of routine veterinary surgical procedures, including patient preparation, identification of instruments, preparation of surgical packs, methods of sterilization, suture materials, and suture patterns. Pre-anesthetic laboratory testing, postoperative patient care, and client follow-up instructions are discussed.

Contact Hours: Lecture 2.00

Lab Fee: \$12.00

Pre-requisites: VET1103

Co-requisites: none

Restrictions: none

VET 1426 - Principles of Veterinary Anesthesia (A SP) **2.00 credit(s)**

An introduction to veterinary anesthesia that correlates principles of animal physiology as it pertains to anesthetic agents. Students will learn patient preanesthetic evaluation, properties and uses of preanesthetic and general anesthetic agents, pain recognition and management, principles of fluid therapy, and dosage calculations. Patient monitoring, safe anesthetic equipment utilization, and handling anesthetic emergencies will also be emphasized.

Contact Hours: Lecture 1.00, Lab 2.00

Lab Fee: \$80.15

Pre-requisites: BIO1121 and BIO1122

Co-requisites: none

Restrictions: none

VET 1501 - Animal Nutrition (SU) **1.00 credit(s)**

This course focuses on fundamental animal nutrition for domestic species, including caloric and nutrient requirements, and feeding techniques. The student will learn to educate clients on the nutritional needs of various animal species and explain the necessity and purpose of veterinary prescription diets in the management of diseases.

Contact Hours: Lecture 1.00

Lab Fee: \$15.00

Pre-requisites: BIO1121

Co-requisites: none

Restrictions: none

VET 1502 - Laboratory and Exotic Animal Medicine (SU) **1.00 credit(s)**

This course is an introduction to laboratory animal medicine and management, including basic husbandry, common diseases, and treatment protocols for various laboratory animal species, pocket pets, avian and exotic species. The student will learn the scientific names and primary use of common laboratory animals and will practice restraint, sexing, appropriate methods of venipuncture, administration of medications, and anesthetic techniques.

Contact Hours: Lecture 0.50, Lab 1.00

Lab Fee: \$165.90

Pre-requisites: none

Co-requisites: none

Restrictions: none

VET 1533 - Clinical Application I (SP SU)**2.00 credit(s)**

This course involves laboratory exercises for VET 1338, VET 1324 and VET 1426. In VET 1533, students learn how to perform fundamental techniques commonly used in small animal veterinary practices, including physical examination, surgical preparation, anesthesia, radiology, venipuncture, dental prophylaxis, bandaging and splint application, administration of medical treatments, and record-keeping.

Contact Hours: Lab 4.00**Lab Fee: \$303.20**

Pre-requisites: VET1331 and VET1324

Co-requisites: none

Restrictions: none

VET 1536 - Small Animal Health & Disease (SU)**2.00 credit(s)**

Using a systems approach, the student will learn the more frequently encountered diseases of dogs and cats, including the disease name, etiology and pathogenesis, history and clinical signs, diagnosis and treatment, prevention, and zoonotic potential. Vaccination protocols commonly used in small animal veterinary practices will be covered.

Contact Hours: Lecture 2.00**Lab Fee: \$35.00**

Pre-requisites: VET1103

Co-requisites: none

Restrictions: none

VET 2535 - Clinical Pathology II (A SP)**2.00 credit(s)**

The urinalysis portion serves as an introduction to the physical, chemical, and microscopic evaluation of urine. Students will perform routine veterinary urinalysis procedures on a variety of animal species, and determine normal versus abnormal constituents. The microbiology portion serves as a practical introduction to the laboratory identification of microbial agents associated with diseases in various animal species. Students perform techniques necessary to isolate, identify, and evaluate the presence of clinically significant microorganisms.

Contact Hours: Lecture 0.50, Lab 1.50**Lab Fee: \$319.90**

Pre-requisites: VET1335

Co-requisites: none

Restrictions: none

VET 2562 - Veterinary Pharmacology (A SP)**2.00 credit(s)**

This course will provide an overview of veterinary pharmacology and therapeutics, including a basic understanding of pharmacokinetics, terminology, prescription writing, drug classifications, indications for drug use, and methods of administration. Pharmacy management, controlled substance use and regulations, and ethical behavior when handling pharmaceutical agents will be stressed.

Contact Hours: Lecture 2.00**Lab Fee: \$30.00**

Pre-requisites: VET1331

Co-requisites: none

Restrictions: none

VET 2563 - Clinical Application II (A SP)**2.00 credit(s)**

This course is a continuation of Clinical Application I designed for the student to practice skills and techniques commonly used in small animal veterinary practices.

Contact Hours: Lab 4.00

Lab Fee: \$293.80

Pre-requisites: VET1105

Co-requisites: none

Restrictions: none

VET 2566 - Large Animal Health and Disease (A SP SU)**2.00 credit(s)**

This course familiarizes the student with the most common diseases of horses, food animals, and camelid species. Husbandry, vaccination protocols, nutrition, breeding, and management for preventive health care are also covered.

Contact Hours: Lecture 2.00

Lab Fee: \$0

Pre-requisites: VET1103

Co-requisites: none

Restrictions: none

VET 2599 - Clinical Application III (A SP)**2.00 credit(s)**

This is a capstone course designed to demonstrate proficiency in small animal techniques performed in Clinical Application I & II, including medical record maintenance, physical examination, administration of fluids and medications, pre-anesthetic evaluation, general anesthetic administration and recovery, surgical preparation, splint application, dental prophylaxis, radiographic procedures, phlebotomy and laboratory techniques. A portion of this class will be devoted to student preparation for the Veterinary Technician National Exam.

Contact Hours: Lab 4.00

Lab Fee: \$251.80

Pre-requisites: VET1105 and VET1335 and VET1501 and VET1502 and VET1533 and VET1536 and VET2563

Co-requisites: none

Restrictions: none

VET 2800 - Veterinary Seminar I (A SP)**1.00 credit(s)**

This course focuses on issues related to the students' clinical experiences, including pet loss, client grief, euthanasia, problem solving models and change strategies. Companion animals as family members and the importance of the human-companion animal bond are explored.

Contact Hours: Seminar 1.00

Lab Fee: \$0

Pre-requisites: VET1105 and VET1335 and VET1501 and VET1502 and VET1533 and VET1536

Co-requisites: VET2921

Restrictions: none

VET 2821 - Veterinary Seminar A (SU)**0.50 credit(s)**

This course focuses on issues related to the students' clinical experiences, including pet loss, client grief, euthanasia, and client assistance during pet loss. Companion animals as family members and the importance of the human-companion animal bond are explored. Special topics in veterinary medicine and client communication are addressed.

Contact Hours: Seminar 0.50

Lab Fee: \$0

Pre-requisites: VET1105 and VET1335 and VET1501 and VET1502 and VET1533 and VET1536

Co-requisites: VET2921

Restrictions: none

VET 2822 - Veterinary Seminar B (A)**0.50 credit(s)**

This course explores the legal and ethical issues related to euthanasia of animals, including the pharmaceutical action and regulations for use of euthanasia drugs. Species differences that determine euthanasia methods and other special considerations related to euthanasia of large animals are explained. Special topics in veterinary medicine and client communication are addressed.

Contact Hours: Seminar 0.50

Lab Fee: \$0

Pre-requisites: VET1105 and VET1335 and VET1501 and VET1502 and VET1533 and VET1536

Co-requisites: VET2922

Restrictions: none

VET 2831 - Veterinary Seminar C (SP)**0.50 credit(s)**

This course addresses preparation for future employment as veterinary technician through discussion of employment strategies, job interviewing technique and resume preparation. Identifying stress factors that may occur in the workplace and methods for coping with job burnout are explored.

Contact Hours: Seminar 0.50

Lab Fee: \$0

Pre-requisites: VET1105 and VET1335 and VET1501 and VET1502 and VET1533 and VET1536

Co-requisites: VET2931

Restrictions: none

VET 2832 - Veterinary Seminar D (SP)**0.50 credit(s)**

This course explores the role of the veterinary technician in the field of veterinary medicine and the community. Laws, regulations and ethics that govern the practice of veterinary medicine and veterinary technology credentialing in Ohio are addressed. Course content from across the curriculum will be reviewed in preparation for the Veterinary Technician National Examination.

Contact Hours: Seminar 0.50

Lab Fee: \$0

Pre-requisites: VET1105 and VET1335 and VET1501 and VET1502 and VET1533 and VET1536

Co-requisites: VET2932

Restrictions: none

VET 2850 - VET Seminar II (A SP)**1.00 credit(s)**

A continuation of VET 2800, that addresses issues emanating from the students' clinical experiences. Students are prepared for employment as veterinary technicians through simulated job interviews, resume preparation, and discussion of employment strategies. The role of the veterinary technician in the community is explored. Applications for registration with the Ohio Veterinary Medical Licensing Board are distributed and the Ohio Veterinary Practice Act pertaining to veterinary technicians is discussed.

Contact Hours: Seminar 1.00**Lab Fee: \$0**

Pre-requisites: VET2800

Co-requisites: VET2950

Restrictions: none

VET 2900 - Veterinary Practicum I (A SP)**2.00 credit(s)**

Observation and practical application of techniques used in veterinary medicine. Students are assigned to various veterinary facilities, including The Ohio State University Veterinary Teaching Hospital, private veterinary practices, veterinary emergency hospitals, research centers, diagnostic laboratories, and zoos.

Contact Hours: Practicum 14.00**Lab Fee: \$178.00**

Pre-requisites: VET1105 and VET1335 and VET1501 and VET1502 and VET1533 and VET1536

Co-requisites: none

Restrictions: none

VET 2921 - Veterinary Practicum A (A)**1.00 credit(s)**

Observation and practical application of techniques used in veterinary medicine, designed for the evening Veterinary Technology program. Students are assigned to various veterinary facilities, including The Ohio State University Veterinary Teaching Hospital, private veterinary practices, veterinary emergency hospitals, research centers, and diagnostic laboratories.

Contact Hours: Practicum 7.00**Lab Fee: \$103.00**

Pre-requisites: VET1105 and VET1335 and VET1501 and VET1502 and VET1533 and VET1536

Co-requisites: none

Restrictions: none

VET 2922 - Veterinary Practicum B (A)**1.00 credit(s)**

This course is a continuation of VET 2921 designed for the evening program student.

Contact Hours: Practicum 7.00**Lab Fee: \$103.00**

Pre-requisites: VET1105 and VET1335 and VET1501 and VET1502 and VET1533 and VET1536

Co-requisites: none

Restrictions: none

VET 2931 - Veterinary Practicum C (SP)**1.00 credit(s)**

This course is a continuation of VET 2922 designed for the evening program student.

Contact Hours: Practicum 7.00

Lab Fee: \$103.00

Pre-requisites: VET1105 and VET1335 and VET1501 and VET1502 and VET1533 and VET1536

Co-requisites: none

Restrictions: none

VET 2932 - Veterinary Practicum D (SP)**1.00 credit(s)**

This course is a continuation of VET 2931 designed for the evening program student.

Contact Hours: Practicum 7.00

Lab Fee: \$103.00

Pre-requisites: VET1105 and VET1335 and VET1501 and VET1502 and VET1533 and VET1536

Co-requisites: none

Restrictions: none

VET 2950 - Veterinary Practicum II (A SP)**2.00 credit(s)**

This course is a continuation of VET 2900.

Contact Hours: Practicum 14.00

Lab Fee: \$0

Pre-requisites: VET1105 and VET1335

Co-requisites: none

Restrictions: none