This section of the catalog is arranged in alphanumeric order. In general, the following list may be used to find the courses offered within each technology:

ACC  Accounting
AET  Alternative Energy
ANT  Anthropology
ART  Art
ATS  Associate of Technical Studies
BAN  Banking and Finance
BIO  Biological Sciences (Biology, A & P, etc.)
BUS  Business
CAD  Computer Aided Design
CET  Construction Engineering Technology
CHM  Chemistry
CIS  Computer and Information Systems
CJT  Criminal Justice
DBP  Database Processing
ECD  Early Childhood
ECO  Economics
EDP  Paraprofessional
EDU  Education
EET  Electrical Engineering Technologies
EMS  Emergency Medical Services
ENG  Communications (Composition, Speech, Literature)
ETC  Electrical Trades Construction
FRA  Forensic Accounting
GEO  Geography
GSD  General Studies
HIS  History
HPF  Beginning Western/English Horsemanship
HST  Human Services
HUM  Humanities
IET  Industrial Engineering Tech
IND  Industry
INT  Industrial Technology
ITR  Industrial Training
MEA  Medical Assisting
MET  Mechanical Engineering Technologies
MGT  Management
MKT  Marketing
MTH  Mathematics
MUS  Music
NRS  Associate Degree Nursing
OAS  Office Administrative Services
PAR  Paralegal
PET  Plastics Engineering Technology
PHI  Philosophy, Ethics, Logic, Religions
PHY  Physics
PLC  Programmable Logic Controllers
PNE  Practical Nursing Program
PSY  Psychology
QCT  Quality Control Technology
REA  Real Estate
SPN  Spanish
SCM  Supply Chain Management
SSC  Social Sciences (Sociology, Political Science, etc.)
STA  Statistics
TRN  Transportation
VCT  Visual Communications
WLD  Welding Technology

The College reserves the right to change courses as needed. Course description, semesters offered, and prerequisites are effective for the academic year(s) of this catalog.

Most of the course descriptions include one of the following abbreviations to indicate when the course is usually taught:

- F  -  Fall Semester
- S  -  Spring Semester
- SU -    Summer Semester

The parentheses at the end of each course description indicate the lecture and lab hours respectively. Example: (3+1) indicates a course with 3 lecture hours and 1 lab hour.

Developmental classes have numbers below 100, and are graded Satisfactory/Unsatisfactory. These courses DO NOT meet course requirements for graduation.

ACC090  Introduction to Accounting  3 Cr. Hrs.
This course is designed for students who have had no previous accounting instruction or for those desiring an introductory course before beginning the accounting sequence. This course covers accounting terminology, financial statement concepts, intensive drills on debits/credits, and a brief overview of the accounting cycle.
(3+0) F, S

ACC111  Financial Accounting  4 Cr. Hrs.
The course includes a study of the accounting cycle beginning with the business transaction and ending with the preparation of financial statements along with other period end procedures for both sole proprietors as well as corporations. Other topics include: receivables, inventory, depreciation, liabilities, investments, and stock. Transfer Assurance Guide (TAG) approved effective spring 2008 (OBU001 - Introduction to Financial Accounting).
(4+0) F, S, SU

ACC112  Managerial Accounting  4 Cr. Hrs.
This course begins with the Statement of Cash Flows and then focuses on managerial topics. These areas of study include: job order and process costing, activity based costing, cost behavior and cost-volume-profit analysis, budgeting, variance analysis, evaluation for decentralized operations, differential analysis, and product pricing, and capital investment analysis. Transfer Assurance Guide (TAG) approved effective spring 2008 (OBU002 - Introduction to Managerial Accounting).
(4+0) F, S, SU
Prerequisite: ACC111 with a “C” or better

ACC120  Payroll Accounting  3 Cr. Hrs.
This course includes the various phases of the Social Security Act, unemployment compensation, and federal withholding tax, with considerable emphasis on the study of timekeeping systems and systems of accounting used in keeping payroll and wage records. Students complete the necessary federal and state tax reports and apply payroll accounting concepts to microcomputer applications.
(3+0) F, S
Co-requisite: ACC090 or ACC102 or ACC111
ACC140  Individual Income Tax Accounting  3 Cr. Hrs.
Major emphasis is on individual income tax laws and regulations.
The course is designed to have both a personal and vocational
value, covering tax return preparation, tax planning, and research.
(3+0) S

ACC211  Intermediate Accounting I  3 Cr. Hrs.
This course is a review and expansion of concepts learned in
accounting principles. Topics studied are the accounting cycle,
financial statements, revenue recognition, cash, receivables, and
inventories.
(3+0) F
Prerequisite: ACC112 with grade of “C” or better

ACC212  Intermediate Accounting II  3 Cr. Hrs.
This course is a continuation of Intermediate Accounting I. Subject matter includes: debt and equity financing, noncurrent
assets, long term investments, income tax allocation, employee
compensation, and additional disclosures.
(3+0) S
Prerequisite: ACC211

ACC221  Cost Accounting I  3 Cr. Hrs.
This course teaches determination of product costs using different
cost systems: primarily job order costing and process costing. Additional topics include: cost estimation, cost-volume-profit
analysis, activity-based budgeting, standard costing, operational
performance measures, flexible budgeting, and management of
overhead activity costs.
(3+0) F
Prerequisite: ACC112 with a grade of “C” or better

ACC222  Cost Accounting II  3 Cr. Hrs.
This course is a continuation of Cost Accounting I. Topics studied are activity-based costing and management, responsibility
accounting, investment centers, transfer pricing, relevant costs
and benefits in decision making, cost analysis for pricing
decisions, capital expenditure decisions, absorption costing, variable costing, and allocation of support activity costs and joint
costs.
(3+0) S
Prerequisite: ACC221

ACC230  Auditing  3 Cr. Hrs.
This is a study of theories, procedures, and practices employed in
audits. The course includes studies on auditor’s reports, internal
control procedures, tests, and generally accepted auditing
standards used in the profession.
(3+0) S
Prerequisite: ACC112

ACC240  Business Income Tax Accounting  3 Cr. Hrs.
This course teaches fundamentals of federal taxation in relation
to business forms and rules. Studies include preparation of
partnership, subchapter “S”, and corporation returns with related
income tax forms.
(3+0) F

ACC260  Accounting on Computers  3 Cr. Hrs.
This course is a combination of ACC261 QuickBooks, ACC271
Intermediate QuickBooks, and ACC272 Advanced QuickBooks
and allows the student to extensively study the QuickBooks
software. Information will be processed in most of the areas of
accounting in business. Many of the topics covered in financial
and managerial accounting courses will be converted into a
computerized accounting system. The course employs the case
study method of teaching and learning and emphasis is placed
upon hands-on practice in class and on assignments.
(3+0) F, S, SU
Prerequisite: ACC102 or ACC111

ACC261  QuickBooks  1 Cr. Hr.
In this course, students learn the capabilities of QuickBooks software. Using a case study approach, the course covers core
product features from writing checks and creating reports to
theories of basic business accounting, including managing
accounts payable/receivable, invoicing, inventory management,
and payroll. Students learn all the key concepts through hands-
on assignments and practice.
(1+0) F, S, SU
Prerequisite: ACC102 or ACC111

ACC271  Intermediate QuickBooks  1 Cr. Hr.
In this course, students learn specialized capabilities of
QuickBooks software. Using a case study approach, the course
covers product features such as recording special transactions,
exporting and importing data, and customizing reports. Students
learn key concepts through hands-on assignments and practice.
(1+0) F, S, SU
Prerequisite: ACC261

ACC272  Advanced QuickBooks  1 Cr. Hr.
In this course, students learn specialized capabilities of
QuickBooks software. Using a case study approach, the course
covers product features which apply to accounting procedures.
Students learn key concepts through hands-on assignments and practice.
(0+2) F, S, SU
Prerequisite: ACC271

ACC291  Accounting Internship  3 Cr. Hrs.
This course is a job-related accounting experience in which the
student works for a department within the college, a business, or
an industrial organization. The student is chosen for this course
on the basis of academic progress or job experience. Enrollment
only with instructor permission.
(1+20) F, S, SU
AET100 Intro to Alternative Energies 3 Cr. Hrs.
In this course the student will learn the units of energy, how it is measured, and what our current usage is. Students will determine their current energy usage. They will then be introduced to several alternative energy sources including solar, wind, biomass, hydrogen, fuel cells, and others. As these topics are introduced, students will gain an understanding of these energy sources, applications, and the ability to determine their potential for sustainable energy. The course ends with the development of a plan to create a sustainable energy program for them. These topics will be learned through text, presentations, various exercises, and hands on labs.
(3+0) F, S
Prerequisites: MTH080

AET110 Energy Audit 3 Cr. Hrs.
In this course the student will learn to conduct an effective and informative energy audit of various facilities for client or individual use. The student will learn sources, and extent, of energy usage in various facilities including residential, commercial, and industrial. Along with energy users, the operations, processes, and management of facilities will also be looked at. This material will be covered through various exercises, lecture and lab segments.
(3+0) S
Co-requisites: AET100 and IND120 or EET121

AET120 Wind Power 4 Cr. Hrs.
In this course the student will learn how energy can be captured from wind and converted into electrical energy for commercial or residential use. The student will learn the various wind sources and energy potential of wind in a given area. The types, components, construction, and basic installation of various wind turbines will be studied. They will also learn different techniques and equipment used for monitoring the energy produced from the turbines. This material will be covered through both lecture and lab segments.
(3+2) F
Prerequisites: AET100 and IND120 or EET121

AET130 Solar Thermal 4 Cr. Hrs.
In this course the student will learn how energy can be captured from the sun and converted into heat energy for air or water in a residential setting. The student will learn about the solar energy balance of the planet and the thermal comfort potential of solar radiation. Solar insolation and what determines its rate will be covered. The types, components, construction, and basic installation of various solar thermal configurations will be discussed. They will also learn different techniques and equipment used for monitoring the energy produced from solar collectors. This material will be covered through both lecture and lab segments. AET110 Energy Audit is recommended prior to or in addition to this class.
(3+2) S
Prerequisites: AET100 and IND120 or EET121

AET140 Geothermal 4 Cr. Hrs.
In this course the student will learn the basic concepts of geothermal energy production. The course will introduce the concept and applications of acquiring energy from the Earth’s core through steam powered generators for large scale electricity generation. This will be followed by the study of commercial and residential heat pumps. The student will learn how heat transfer with the ground is utilized to reduce energy consumption in both heating and cooling. The various types of heat pumps and types of wells will be discussed. This material will be covered through both lecture and lab segments. AET110 Energy Audit is recommended prior to or in addition to this class.
(3+2) F
Prerequisite: AET100

AET200 Sustainable Building Design 3 Cr. Hrs.
In this course the student will learn how to evaluate a site for the most efficient use of energy. The student will evaluate the building site for available energy sources. The student will evaluate current and new building constructions for energy efficiency and utilization of current energy sources. The student will utilize applicable data and software to determine improvements to existing construction or to design new energy efficient sustainable building structures.
(3+0) F
Prerequisite: AET110

AET220 Solar Photovoltaics 4 Cr. Hrs.
This course is a continuation, and more advanced study of Solar Energy. In this course the student will review how energy can be captured from the sun and converted into electrical energy for commercial or residential use. The student will learn the process of solar photovoltaic materials. The materials, types, components, construction, and basic installation of various photovoltaic cells will be discussed. They will also learn different techniques and equipment used for monitoring the energy produced from photovoltaic cells. Finally, new technologies in this area will be discussed. This material will be covered through both lecture and lab segments.
(3+2) S
Prerequisites: AET100 and IND120 or EET121

AET230 Hydrogen and Fuel Cell Technology 4 Cr. Hrs.
In this course the student will learn what hydrogen is and its potential use as an energy carrier. The production, transportation, storage, and economics of hydrogen will be discussed. Basic thermodynamics and electrochemical cell construction will be studied. With this the student will then learn the basic fuel cell construction. Variations and materials used in fuel cell construction will be covered along with various applications for fuel cells. This material will be covered through both lecture and lab segments.
(3+2) On Demand
Prerequisites: AET100 and CHM201
AET240  Biofuels  4 Cr. Hrs.
In this course the student will learn different sources of biomass and the relative energy potential of these fuel sources. The student will learn the processes that are required to convert biomass to fuels such as biodiesel, ethanol, and others. The course also will look at energy potential from directly burning biomass as an energy source such as wood and grains. The determination of energy per mass will be covered to use for comparison of different materials. This material will be covered through both lecture and lab segments. On Demand
Prerequisites: AET100 and CHM201

AET290  Alternative Energy Capstone  4 Cr. Hrs.
In this course the student will have the opportunity to apply the knowledge gained through the AET program to relevant scenarios. Specific content may vary with each offering and will be related to the specific Alternative Energy program and electives chosen through the program.
(4+0) S
Prerequisites: AET110, and at least one other course with AET prefix

ART103  Beginning Drawing  3 Cr. Hrs.
A basic drawing class facilitating students’ abilities to see objects rationally, developing expressive drawing skills using various approaches and a wide variety of graphic media. Transfer Assurance Guide (TAG) approved effective summer 2008 (OAH001 - Basic Drawing).
(0+6) S

ART210  Oil/Acrylic Painting  3 Cr. Hrs.
An introductory painting class emphasizing building stretcher frames, preparing painting surfaces, using oil/acrylic media, using color, and framing. Transfer Assurance Guide (TAG) approved effective fall 2005 (OAH048 - Painting)
(0+6) S

ART220  Beginning Sculpture  3 Cr. Hrs.
A basic level studio sculpture course facilitating students’ ability to see and create three dimensional works of art. In this introductory class, clay, placticine, found objects, and soapstone are used in creating manipulative, subtractive, and additive method sculptures, following examination of historical works and the guiding principles of design behind creation of sculpture. Transfer Assurance Guide (TAG) approved effective fall 2011 (OAH047 - Sculpture)
(0+6) S

ATS101  Portfolio Development  3 Cr. Hrs.
This course is designed for the student interested in developing a portfolio for submission and review for college credit. The student will work with his/her advisor in the development of the portfolio.
(3+0) On demand with approval of the appropriate Dean.

BAN110  Bank Management  3 Cr. Hrs.
A study of the commercial banking industry and the interrelationships between the various types of financial institutions. Special emphasis is given to branch banking, bank financial statements, methods of evaluating bank performance, lending policies, and the management of deposit liabilities and loan assets. The regulatory environment receives significant emphasis throughout.
(3+0) S

BAN210  Credit Management  3 Cr. Hrs.
An examination of the concept of credit with particular emphasis given to the process of credit management for both consumers and businesses. Also explored are the processes of granting and reviewing credit, collection practices, as well as the examination of financial statements leading to the credit decision. Dun and Bradstreet’s business services, as well as those of the major consumer credit organizations, receive in-depth treatment.
(3+0) F

BAN220  Investment Management  3 Cr. Hrs.
A study of the types of investment vehicles available to the individual investor or business investment officer. The major emphasis of study is on various types of stocks and bonds, but convertibles, options, futures, commodities, and mutual funds are also studied. In addition, several special concepts receive emphasis, such as strategies associated with margin accounts and short-selling. Valuation of the firm and related financial analysis also receive appropriate treatment. Algebra proficiency is recommended.
(3+0) S

BIO100  The World of Science  3 Cr. Hrs.
For non-science majors, assuming no background knowledge. Students will learn to scrutinize and assess critically scientific information, historical and current, from popular information outlets. This is a science appreciation course (same as CHM100, PHY100). Course projects will be based on the course prefix chosen.
(3+0) F, S, SU

BIO101  Principles of Biology  4 Cr. Hrs.
An introduction to principles and concepts of life, including topics on cell biology, genetics, diversity of life, and ecology. Laboratory work reinforces lecture.
(3+2) F, S, SU
Prerequisites: MTH079 or MTH080 and ENG080

BIO115  Ecology  4 Cr. Hrs.
An introduction to the field of ecology, including the organization, interrelationships and dynamic of populations, communities and ecosystems. A major emphasis on the relationship of humans to the environment. Lab includes field trips and the study of local aquatic and terrestrial communities.
(3+2) S - even years
Prerequisites: High school biology, BIO101, or consent of instructor

BIO131  Nutrition  3 Cr. Hrs.
A study of nutrition and its role in promoting good health throughout the life span. Includes the study of proper nutrients and the various functions of the nutrients in the body’s metabolism. Transfer Assurance Guide (TAG) approved effective summer 2007 (OHL016 - Basic Nutrition).
(3+0) F, S, SU

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F = Fall    S = Spring    SU = Summer
2015 - 2017
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>BIO150</td>
<td>The Human Body</td>
<td>4 Cr. Hrs.</td>
</tr>
<tr>
<td>BIO180</td>
<td>Principles of Genetics</td>
<td>4 Cr. Hrs.</td>
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<tr>
<td>BIO201</td>
<td>General Biology I</td>
<td>4 Cr. Hrs.</td>
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<tr>
<td>BIO202</td>
<td>General Biology II</td>
<td>4 Cr. Hrs.</td>
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<tr>
<td>BIO231</td>
<td>Anatomy &amp; Physiology I</td>
<td>4 Cr. Hrs.</td>
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<tr>
<td>BIO232</td>
<td>Anatomy &amp; Physiology II</td>
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<tr>
<td>BUS101</td>
<td>Introduction to Business</td>
<td>3 Cr. Hrs.</td>
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<tr>
<td>BUS110</td>
<td>Business Math/Calculators</td>
<td>3 Cr. Hrs.</td>
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<td>BUS160</td>
<td>International/Global Business</td>
<td>3 Cr. Hrs.</td>
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<tr>
<td>BUS160</td>
<td>Business Math/Calculators</td>
<td>3 Cr. Hrs.</td>
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An integrated course in the normal structure and function of the human body. It forms a basis for the later understanding of dysfunctional conditions. Each body system is presented individually, then the interrelationships between body systems are studied.

The fundamentals of classical genetics and the basic principles of human genetics are reviewed. Topics covered include plant and animal genetics, cancer genetics, genetic engineering, genetics in human medicine and criminology, and ethical issues raised by DNA technology such as eugenics.

The course is designed for students pursuing various disciplines of science, especially biology and allied health-related majors. The first course in a two-semester sequence. Successful completion of this course is a pre-requisite to BIO 202 (General Biology II). Major topics covered include: the scientific method; basic chemistry, especially as it relates to biochemistry; cell structure and function, including the cell cycle and photosynthesis; genetics, including DNA structure and function; and evolution and natural selection. Transfer Assurance Guide (TAG) approved effective summer 2009 (OSC003 - General Biology I).

A continuation of BIO231, which focuses on anatomical and physiological aspects of the endocrine, digestive, respiratory, circulatory, cardiovascular, lymphatic, urinary, and reproductive systems of the human body. Lab emphasizes human anatomy and physiology and includes cat dissection.

A study of anatomy, physiology, taxonomy, identification, growth, and control of micro-organisms. including bacteria, viruses, algae, fungi, and selected human parasites. Additional topics include bacterial metabolism, microbial genetics, immune responses, host defense mechanisms, and the spread of infectious diseases. Laboratory includes culture staining and identification of micro-organisms.

This course is a survey of business, introducing the major components of a business including production or service, marketing, finance, management, accounting and human resources. The course also examines the economic, social, technological, competitive and regulatory environment of business both domestically and internationally.

This course focuses on the economics, social and cultural considerations of doing business overseas. The globalization of markets and the growth of overseas business ventures is explored. The need to develop varied techniques for managing people from other cultural backgrounds, the means of minimizing risks in financial transactions, and development of systems for coordinating and controlling operations will be stressed. Techniques to overcome international business barriers are covered. Upon completion, students should be able to demonstrate an understanding of the economic, social and cultural considerations of doing business worldwide.
BUS221 Business Communications 3 Cr. Hrs.
This course introduces business communication principles and establishes written communication standards in preparation for the real-world workplace. Students analyze a variety of writing situations, design the form and content of communications, and write in appropriate styles that range from informal to business formal. Effective oral communication is emphasized, individually and as teams, utilizing appropriate technology, strategy, and delivery.
(3+0) F, S
Prerequisites: ENG111 and CIS112 or CIS114

BUS222 Business Law 3 Cr. Hrs.
This course is a study of the U.S. legal system and dispute resolution. Major units of study include: sources of law, torts and crimes, contract and sales law, personal property law, employment law, consumer credit/bankruptcy law, and a study of business organizations. In addition, units on ethics, cyber law, e-contracts, intellectual property law, and alternative dispute resolutions are presented. Cases and media presentations are used to highlight important concepts. Transfer Assurance Guide (TAG) approved effective spring 2008 (OBU004 - Legal and Social Environment of Business).
(3+0) F, S, SU

BUS223 Employment Law, Safety & Security 3 Cr. Hrs.
In this course we will address the need to understand and comply with employment law, the benefits of employee assistance programs, and compliance with occupational safety, health, and security programs within the workplace. Topics covered in the course include legal compliance, workplace violence, safety, security, emergency response plans, employee assistance programs, employee wellness programs, and chemical use and dependency.
(3+0) S

BUS250 Labor Relations 3 Cr. Hrs.
This is a study of unions and their relationship with management. Major topics include negotiating and administering labor contracts, wages, benefits, and working conditions, as well as their impact on contract negotiations.
(3+0) S

BUS260 International Trade 3 Cr. Hrs.
This course is a study in how to do business internationally. Topics include international terms, credits, export/import paperwork, and currency exchange. International marketing, distribution, and financing are emphasized, as well as cultural effects and local customs.
(3+0) S

CAD112 CAD II 4 Cr. Hrs.
A continuation of CAD I. The student progresses to more advanced commands and design features of the AutoCAD software. The student utilizes plotting equipment for finished projects. The goal is to become proficient in the operation of a CAD system to develop complex assemblies to learn the interrelationship of detailed and purchased parts and how it all comes together in a final set of working drawings. Transfer Assurance Guide (TAG) approved effective summer 2008 (OET012 - CAD).
(3+3) S
Prerequisite: CAD111 with a “C” or better
Recommended: IND103 and MET110

CAD213 CAD III 4 Cr. Hrs.
Students will develop and plot advanced 3D models, 2D detail drawings and 3D assembly drawings as used in the modern industry today. Students will also learn how to link their 3D models to develop design tables and bill of materials. This course is an advanced course in mastering the commands utilizing SolidWorks 3D feature-based parametric sold modeling design tool software. Transfer Assurance Guide (TAG) approved effective fall 2012 (OET021-3D Modeling).
(3+3) F, S - day
Recommend: MET110

CET100 Construction Methods & Materials 3 Cr. Hrs.
In this course the student will become familiar with construction drawings and techniques. Common building materials and methods will be explored with respect to sustainability and common construction practice.
(2+2) F

CET115 Project Management 3 Cr. Hrs.
In this course the student will learn a plan for project management that expands on initiating, planning, executing, monitoring and controlling, and closing projects. The course focuses on professional presentation and communication to navigate projects from conception to completion.
(3+0) F
Prerequisite: CIS090 or equivalent

CET120 Construction Material Testing 3 Cr. Hrs.
This course provides an introduction to fundamental materials used in the construction industry including aggregates, asphalt and asphalt concrete, Portland cement and Portland cement concrete, iron, steel, masonry, and wood. Students will study testing standards as published from ASTM and ACI. Laboratory exercises will perform materials testing according to job site standards.
(2+2) S
Co-requisite: MTH109

CET200 Surveying 3 Cr. Hrs.
Students learn the proper use of basic surveying equipment with an emphasis on coordinating theory and drawings into physical experience. This course will use conventional measuring instruments and compare the results to trigonometric predictions.
(2+2) S
Prerequisite: MTH112
CET240  Soils  3 Cr. Hrs.
In this course the student will learn the relationship between soil conditions and building design. Students will study industry standards and experiment to confirm the standard requirements. Laboratory tests will include sieve and hydrometer tests, compaction analysis, and permeability analysis. Lecture will introduce the theory to support laboratory findings and implementation of design specifications.
(2+2) S
Prerequisites: MET234 & MET235

CHM100  The World of Science  3 Cr. Hrs.
For non-science majors, assuming no background knowledge. Students will learn to scrutinize and assess critically scientific information, historical and current, from popular information outlets. This is a science appreciation course (same as CHM100, PHY100). Course projects will be based on the course prefix chosen.
(3+0) F, S, SU

CHM101  Principles of Chemistry  4 Cr. Hrs.
This course provides students with an introduction to the fundamental chemistry underlying a variety of technologies and careers. Topics covered include various aspects of conducting measurements, chemical nomenclature and equations, molecular bonding, atomic structure, uses of radioactivity and analytical methodologies. In addition, the behavior of gases, solutions, acid and bases will be explored. The student will also learn how to classify chemical reactions, as well as determine quantities of reagents needed for and products resulting from such reactions. Laboratory reinforces and supplements lectures.
(3+3) F, S, SU

CHM110  Science & Technology of Sustainability  4 Cr. Hrs.
CHM110 takes the approach of examining past practices; evaluating current technical developments, and exploring promising new technologies in a critical fashion. It is offered that the student will develop and hone the logical capacity to determine how chemical science and engineering principles might have impact on various sustainability issues and evaluate likely applications and results. Topical areas include: energy (e.g., alternative fuels); clean water and the principles of green chemistry. Laboratory work, along with occasional visiting speakers and field trips, will reinforce the basic principles and emphasize development of analytical thinking, laboratory techniques and sound understanding of environmental principles. Students will conduct laboratory exercises in which chemistry intersects a number of matters. Cited examples are clarification of water, detection of lead and characterization of solids in smoke. These areas of inquiry arise from sustainability issues related to clean water, children chewing on lead-based paint chips and by-products of combustion.
(3+3)

CHM138  Principles of Forensics  4 Cr. Hrs.
Forensics is the application of the natural sciences to all phases of criminal investigation. The study of basic chemistry and biology are now an important aspect of modern forensic science. Current topics in forensics such as DNA investigation, hair analysis, blood, grass and soil, body fluids, fingerprint analysis, drug analysis, arson, accelerants, explosives, toolmarks and firearms.
(3+2) F - even years

CHM201  General Chemistry I  5 Cr. Hrs.
This is the first part of a two-semester program for technically-oriented students needing a solid foundation in general chemistry. Topics covered include an in-depth treatment of measurement, atomic and molecular structures, ionic behavior in solutions, and inorganic chemical nomenclature. Also, the types of chemical reactions (including acid-base and oxidation reduction) are reviewed, along with stoichiometric principles, the behavior of gases and thermochemistry. Additional topics covered include electronic structure, periodic law, chemical bonding and molecular geometry. Lab work reinforces basic principles, supplements lectures and emphasizes analytical techniques.
Transfer Assurance Guide (TAG) approved effective summer fall 2009 (OSC008 - General Chemistry I).
(3+3+1 Recitation) F, S
Prerequisites: MTH090 or equivalent and CHM101 or High School Chemistry in past 5 yrs.

CHM202  General Chemistry II  5 Cr. Hrs.
A continuation of CHM201, this is the second part of a two-semester general chemistry program. Topics covered include a detailed treatment of states of matter, intermolecular forces, and the properties of solutions. Chemical kinetics, chemical equilibrium (including those of acid-base systems, complex ions and coordination compounds) and chemical thermodynamics are covered as well. Students are also introduced to electrochemistry, nuclear chemistry, and the chemistry of selected elements and materials (including polymers and organic substances). Lab work reinforces basic principles, supplements lectures, and emphasizes analytical techniques. Transfer Assurance Guide (TAG) approved effective spring 2011 (OSC009 - General Chemistry II).
(3+3+1 Recitation Hour) S
Prerequisites: CHM201 and MTH109 with a grade of “C” or better or instructor’s permission

CHM256  Principles of Biochemistry  3 Cr. Hrs.
An introductory course that deals with inorganic and organic biomolecules. Emphasizes the synthetic and degradative reactions of carbohydrates, lipids, nucleic acids, and proteins. Examines the roles of water, buffers, enzymes, vitamins, minerals, and organic salts in cellular metabolism. Laboratory reinforces and supplements lectures.
(2+2) F
Prerequisite: CHM101 or equivalent
CIS090  Introduction to Computers  1 Cr. Hr.
This course is a beginner’s introduction to computers (PC’s). The text covers most of the fundamental concepts associated with computers including terminology, hardware and software issues, and introduces the student to some elementary skills via some of the well-known software applications. Students will practice basic computer skills using word processing and spreadsheets, as well as explore the Internet. No prior computer knowledge is necessary for this course.
(0+2) F, S, SU
Course Placement Test is available

CIS104  Desktop Management  1 Cr. Hr.
This is a course in which the students learn to understand and operate the personal computer using the Microsoft Windows Environment. They will also learn how to communicate with others using Microsoft Outlook. The basic features for the latest operating system and Outlook will be covered.
(0+2) F
Prerequisite: CIS090 and OAS090 or satisfactory score on Course Placement Tests

CIS108  Internet Scripting  4 Cr. Hrs.
This course is designed to teach programming to a student using a current Internet scripting language. The course will teach the student traditional programming concepts such as variable usage, program flow statements and designing loops. The class will focus on using the scripting language to solve programming problems using Internet applications.
(3+3) S

CIS109  Database Management  4 Cr. Hrs.
This course is designed to familiarize students with the concepts underlying client/server relational databases. This class will teach students the basics of using the SQL query language. It will also teach more advanced SQL concepts such as query optimization and using SQL in other high level programming languages. This class will teach the student how to manage and maintain a server based database system. This will include tasks such as creating, backing up, repairing, optimizing, securing, localizing and internationalizing databases.
(3+3) S
Co-requisite: CIS191

CIS111  Visual Basic Programming  4 Cr. Hrs.
This is a computer programming course involving applications utilizing a Graphics User Interface (GUI) and serving the needs of users in an event driven environment. The course moves from fundamental input/output programs to applications accessing a database for the purpose of adding, deleting, and/or updating records. The course also covers user report processing needs and applications involving the Internet. Object oriented techniques are introduced and important programming concepts are emphasized. Students will be required to complete several laboratory assignments during the semester.
(3+3) F

CIS112  Microsoft Word  3 Cr. Hrs.
This course teaches basic and advanced commands in Microsoft Word software to create, format, edit, and save documents including letters, tables, reports, and merged documents. Other topics covered include desktop publishing features, web pages, styles and templates, master documents, online forms, workgroups, and information integration with other office programs.
(2+2) F, S, SU
Prerequisite: CIS090 and OAS090 or satisfactory score on Course Placement Tests

CIS113  Microsoft Excel  3 Cr. Hrs.
This course emphasizes beginning to advanced features of Microsoft Excel. Some of the topics presented include handling multiple worksheets, as well as creating and using formulas, macros, range names, data lists, data protection, data validation, pivot tables, and linking and embedding.
(2+2) F, S
Prerequisites: CIS090 and OAS090 or satisfactory score on Course Placement Tests

CIS114  Microsoft Applications  3 Cr. Hrs.
This course is a basic course in which the student learns to operate the personal computer using four components of Microsoft Office software: Microsoft Word, Excel, Access, and PowerPoint. All the basic program functions will be covered for each package, as well as many advanced functions. A basic knowledge of the keyboard is helpful. Transfer Assurance Guide (TAG) approved effective spring 2008 (OBU003 - Computer Applications).  
(1+1) S, F, S, SU
Prerequisite: CIS090 and OAS090 or satisfactory score on Course Placement Tests

CIS117  Microsoft Publisher  1 Cr. Hr.
This course will emphasize the basics of creating professional layouts, including flyers, newsletters, announcements, menus, etc. The student will learn the basics of desktop publishing using Microsoft Publisher.
(1+1) S
Prerequisite: CIS112 or CIS114

CIS118  Access  1 Cr. Hr.
This is a course in which students will use MS Access software to learn the basic concepts of database management. Creating databases, entering data, preparing a query, preparing graphs, and creating forms and reports are all practiced in a lab setting.
(0+2) S
Prerequisite: CIS090

CIS119  PowerPoint  1 Cr. Hr.
This is a course designed for the beginner in using PowerPoint, a presentation graphics program. Slide creation; use of graphics, charts, tables, and color to enhance slides; and methods of automation, use of sound, and collaboration techniques will be areas of study. Hands on experience and the ability to demonstrate usage of PowerPoint will be provided.
(0+2) F, S, SU
Prerequisite: CIS090
CIS121 Intermediate Word 1 Cr. Hr.
A continuation of CIS114 emphasizing advanced features of Microsoft Word including creating charts, formatting text into columns, formatting with styles, merging documents, sorting, creating tables, and linking and embedding.
(0+2) F, S
Prerequisite: CIS114 with a grade of “C” or better

CIS122 Intermediate Excel 1 Cr. Hr.
A continuation of CIS114 emphasizing advanced features of Microsoft Excel including handling multiple worksheets, as well as creating and using formulas, macros, range names, data lists, data protection, data validation, pivot tables, and linking and embedding.
(0+2) F, S
Prerequisite: CIS114 with a grade of “C” or better

CIS129 Web Page Development 3 Cr. Hrs.
The student will learn the concepts of web page design and layout, along with the writing of HTML, XHTML, and CSS code. In preparing web pages for the internet, current ADA standards, web page validation, and mobile devices will be studied.
(2+2) F, S
Prerequisite: CIS090 or equivalent

CIS150 Programming C++ 4 Cr. Hrs.
This is an introduction to structured programming using the ANSI C/C++ programming environment. Use of the environment tools, logic structures, and primary library functions of the language is emphasized. Additional subjects covered include variable types and declarations, math and logical operators, parameter passing, arrays and string handling and pointers.
(3+3) F

CIS155 Linux Networking I 4 Cr. Hrs.
This course covers data communications and operating system technology as implemented in a Linux environment. Subjects covered include the history, theory, administration, and installation of Linux and its associated software. This class will focus on the administration of Linux workstations. This class makes extensive use of lab projects to reinforce essential concepts.
(3+3) S
Co-requisite: CIS190 or CIS191

CIS161 C# 4 Cr. Hrs.
This course is an introductory programming course taught using Microsoft’s C# language. The course makes extensive use of the .NET framework which is common in most of the Microsoft programming languages. Students will create both console and GUI programs in this course. Variables, decisions, loops, arrays, classes, inheritance, event-handling, exceptions, file input/output and database connectivity are some of the topics covered. This course includes hands on laboratory assignments.
(3+3) S - even years

CIS165 Java Programming 4 Cr. Hrs.
This is an introductory programming course which utilizes the Java Programming Language and emphasizes object-oriented programming concepts. As a general purpose programming language Java can be utilized in traditional programming environments. It can support applications developed for a variety of computer platforms and other devices such as smart phones or tablets. This course includes hands on laboratory assignments requiring students to complete and submit programming projects.
(3+3) F

CIS191 Computer Operations 3 Cr. Hrs.
This course is an intensive study of operating systems and PC hardware. Topics include study of the theory and tasks commonly assigned to system software, basic disk and program commands, configuration and installation commands and techniques, as well as management of resources and security. Hardware issues are also addressed covering the theory, installation and maintenance of common personal computer hardware such as CPU’s, memory, hard drives and peripheral devices. This course helps prepare the student for the CompTIA A+ Certification Exams.
(2+3) F

CIS192 Microsoft Workstation Technology 3 Cr. Hrs.
This course teaches the basic and advanced concepts needed to manage a Microsoft Desktop Operating system in both a networked and standalone environment. This course makes extensive use of lab projects to reinforce essential concepts.
(2+3) F
Co-requisite: CIS191

CIS193 Microsoft Server Technology 3 Cr. Hrs.
This course teaches the basic and advanced concepts needed to manage a Microsoft Server Operating system in both a networked and standalone environment. This course makes extensive use of lab projects to reinforce essential concepts.
(2+3) F
Co-requisite: CIS191

CIS194 IT Security Fundamentals 3 Cr. Hrs.
This course is an introduction to security as it applies to computers, local area networks and the Internet. This class covers both methods of attack and the prevention of those attacks. The course provides an introduction to cryptography. The course covers the creation and implementation of a comprehensive security policy. This course helps prepare the student for the CompTIA Security+ Certification Exams.
(2+3) S
Co-requisite: CIS191

CIS195 Networking Essentials 3 Cr Hrs.
This is a survey course designed to introduce students to basic network concepts and terminology. Both theoretical and practical material is introduced in this class. This course covers learning objectives tested in the CompTIA Network+ exam. This course includes hands on laboratory assignments.
(2+3) F
CIS201 Workplace Technologies 3 Cr. Hrs.
This is a hands-on course addressing technology’s role in the workplace. Projects will focus on processes and tools that are available to students to enhance technological office procedures. It will introduce various technologies and DigiTools necessary in the business environment. DigiTools will include, but not limited to, Wacom Graphire Tablet, Tablet PC, scanners, speech recognition, and podcasting. Various productivity software packages will also be included. Digital reputation management will be discussed.
(3+0) S
Prerequisite: CIS104 or CIS112 or CIS113 or CIS114

CIS255 Linux Networking II 4 Cr. Hrs.
This course covers data communications and network services as implemented in a Linux environment. Subjects covered include firewalls, DNS, DHCP, file sharing, printer sharing, as well as email and web services. This class will focus on the administration of Linux workstations. This class makes extensive use of lab projects to reinforce essential concepts.
(3+1) S
Prerequisite: CIS195

CIS265 Java Programming II 3 Cr. Hrs.
This is an advanced programming course which utilizes the Java Programming Language and emphasizes object-oriented programming concepts. The course will introduce students to advanced topics such as interfaces, generic types, database connectivity, working with multiple threads and localizing programs so that they can be useful in a global market. This course includes hands on laboratory assignments requiring students to complete and submit programming projects.
(2+3) S
Prerequisite: CIS165

CIS284 Microsoft Infrastructure Technology 3 Cr. Hrs.
This course teaches the basic and advanced concepts needed to manage a Microsoft Infrastructure Services such as DNS, DHCP and Remote Access Services. This course makes extensive use of lab projects to reinforce essential concepts.
(2+3) S
Co-requisite: CIS193

CIS285 Microsoft Directory Services Technology 3 Cr. Hrs.
This course teaches the basic and advanced concepts needed to manage a Microsoft Directory Services environment. This course makes extensive use of lab projects to reinforce essential concepts.
(2+3) S
Co-requisite: CIS193

CIS290 Information Technology Intern. 1-4 Cr. Hrs.
This is a job-related computer experience in which the student works for a department within the college, a business, or an industrial organization. The student is chosen for this course on the basis of academic progress or job experience. Enrollment only with instructor permission.
(1+30) F, S, SU

CJT130 Principles of Criminal Justice 3 Cr. Hrs.
Students will become familiar with the criminal justice system by exploring theories of criminology, examining the development of criminal and procedural law, understanding the roles of law enforcement, court and correctional personnel, and by investigating critical issues surrounding criminal justice including multi-cultural and gender issues.
(3+0) F, S

CJT132 Criminal Justice Administration 3 Cr. Hrs.
Students will be examining the role of management versus leaders in the American criminal justice system focusing on the organization of bureaucratic systems, their basic principles, and the interrelationships between the major players. Students will also become familiar with organizational theory, leadership skills, disciplinary action and union issues.
(3+0) S

CJT134 Criminal Law 3 Cr. Hrs.
This course is designed as a study of the development and implementation of criminal law. Emphasis will be placed on exploring elements of criminal statutes, understanding Ohio’s criminal statutes, investigating affirmative defenses and sentencing practices. Students will analyze the law based on their own personal opinions and beliefs by critically examining and discussing certain laws, procedures, court cases, and case outcomes.
(3+0) S

CJT136 Juvenile Delinquency Principle 3 Cr. Hrs.
This course examines the problems of today’s “youth in trouble,” with an emphasis placed on prevention, causes and methods of approach and disposition of cases.
(3+0) F
Prerequisite: CJT130

CJT140 Constitutional Law 3 Cr. Hrs.
This course is a study of contemporary constitutional issues. Discussed are critical issues in criminal justice including detention, arrest, search and seizure, interrogations and confessions, self-incrimination, due process and right to counsel. Also included are constitutional aspects of criminal and civil liabilities of justice personnel, and constitutional and civil rights in the workplace.
(3+0) S
Prerequisite: CJT130

CJT220 Law Enforcement in American Society 3 Cr. Hrs.
Overview of the police role in modern American society; emphasis on problems and issues confronting police and solutions within an organizational framework.
(3+0) F - odd years
Prerequisite: CJT130

CJT230 Corrections 3 Cr. Hrs.
A survey of the general field of corrections, including the institutions and resources which are used. A historical overview of corrections is explored.
(3+0) S
Prerequisite: CJT130

F = Fall  S = Spring  SU = Summer

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>CJT240</td>
<td>Criminal Evidence &amp; Procedure</td>
<td>3 Cr. Hrs.</td>
<td>An overview of criminal procedure and law including constitutional provisions, rules of evidence, trial and pre-trial procedures, arrest, search and seizure, admissibility and confessions. (3+0) F Pre-requisites: CJT130 and CJT134</td>
</tr>
<tr>
<td>CJT242</td>
<td>Probation &amp; Parole</td>
<td>3 Cr. Hrs.</td>
<td>This course will explore the philosophies and guidelines utilized in both the juvenile and adult probation setting. The dilemma of surveillance involving custody/control factors verses supervision and treatment will be examined. A strong emphasis will be placed on developing citizen agency relationships in utilizing citizen volunteer programs to help rehabilitate offenders. (3+0) S Pre-requisites: CJT130 and CJT230</td>
</tr>
<tr>
<td>CJT244</td>
<td>Criminal Investigation</td>
<td>4 Cr. Hrs.</td>
<td>A study of investigative procedures; initial contact by the investigator, interviewing, case development, follow-up investigation, handling of leads, hot or cold information, in custody interviews and procedures. Crime scene labs will be incorporated into this class. (3+2) S Pre-requisites: CJT130 and CJT134</td>
</tr>
<tr>
<td>CJT246</td>
<td>Technical Skills for Officers</td>
<td>3 Cr. Hrs.</td>
<td>This course will focus on developing technical skills necessary for the performance of jobs in the Criminal Justice field. Topics covered will include Report Writing, Sketching, Interrogation, and Testifying in Court. (3+0) F Pre-requisite: Admission to Law Enforcement Academy</td>
</tr>
<tr>
<td>CJT252</td>
<td>Seminar in Criminal Justice</td>
<td>3 Cr. Hrs.</td>
<td>This course examines current critical issues in criminal justice. Topics to be considered for discussion and analysis include: terrorism, capital punishment, restorative justice, ethics, race and class issues, drugs, the decision making process, issues in policing and the future of crime and justice. (3+0) F Pre-requisites: CJT130 and CJT134</td>
</tr>
<tr>
<td>CJT281</td>
<td>Vehicle Patrol/Traffic Enforcement</td>
<td>4 Cr. Hrs.</td>
<td>Police academy cadets will become familiar with O.P.O.T.C. requirements for proper patrol techniques including identifying traffic offenses and correct tactical procedures for stopping and approaching vehicles. (3+3) F, S Pre-requisite: Admission to Law Enforcement Academy</td>
</tr>
<tr>
<td>CJT282</td>
<td>Firearms/Driving</td>
<td>4 Cr. Hrs.</td>
<td>Police academy cadets will become proficient in O.P.O.T.C. firearms techniques including identification of firearms and nomenclatures, secure handling of firearms, and will become certified in the firing of firearms. Students will also become adept in defensive and pursuit driving techniques and vehicle maneuverability. (2+6) F, S Pre-requisite: Admission to Law Enforcement Academy</td>
</tr>
<tr>
<td>CJT283</td>
<td>Defensive Tactics/Physical Fit</td>
<td>3 Cr. Hrs.</td>
<td>Police academy cadets will become experienced with several levels of defensive tactics including hand to hand and baton techniques as well as weapon retention. Students will also become physically ready to pass the O.P.O.T.C. physical fitness standards. (1+6) F, S Pre-requisite: Admission to Law Enforcement Academy</td>
</tr>
<tr>
<td>CJT284</td>
<td>Human Conditions</td>
<td>4 Cr. Hrs.</td>
<td>Police academy cadets will become certified in first aid and CPR techniques. Students will also identify cultural differences and how to effectively interact and communicate in diverse settings. Cadets will also become knowledgeable in preventing and controlling civil disorders. (3+3) F Pre-requisite: Admission to Law Enforcement Academy</td>
</tr>
<tr>
<td>CJT289</td>
<td>Special Topics CJ Professional</td>
<td>1 Cr. Hrs.</td>
<td>This course will examine special topics within criminal justice including sociological, criminological and philosophical discussions of criminal justice. Topics within the course will challenge students to examine the underlying theory and assumptions behind many of their current beliefs. (1+0) Pre-requisites: CJT132, CJT136, CJT230, and CJT240 Co-requisites: CJT242, CJT244, and HST214</td>
</tr>
<tr>
<td>CJT290</td>
<td>Criminal Justice Practicum</td>
<td>4 Cr. Hrs.</td>
<td>A basic exposure to a particular criminal justice agency through observation and limited participation. This course will provide an understanding of how this agency fits into the entire criminal justice system and local community. (3+8) F, S Pre-requisites: CJT132, CJT136, CJT230, and CJT240 Co-requisites: CJT242 and CJT244 (2+2) F, S, SU</td>
</tr>
<tr>
<td>DBP110</td>
<td>ICDL Computer Technologies</td>
<td>1 Cr. Hr.</td>
<td>This course provides a thorough understanding of information and communication technologies (ICT). Students who successfully complete this course will have a solid foundation in core desktop computer applications including word processing, spreadsheets, database and presentation software. Students will also be exposed to foundational topics including Windows operating system, computer operations and internet usage. This is an online course that includes demonstrations and hands on exercises. Successful completion of the course will prepare students for the ICDL certification tests. ICDL (International Computer Driving License) is the US arm of the ECDL Foundation and is an internationally recognized computer certification. (0+2) F, S, SU</td>
</tr>
</tbody>
</table>
DBP120  Computer Systems I  2 Cr. Hrs.
This course provides advanced level desktop application training for the IT professional. Topic areas include data analysis, project management, advanced queries and automating processes with VBA. The students will also receive exposure to multiple versions of these software applications in class so they will be prepared for various business environments. This course is designed for students who already possess fundamental knowledge of Microsoft computer applications.
(1+2) F, S, SU
Prerequisite: DBP110

DBP121  Computer Systems II  3 Cr. Hrs.
This course moves beyond the PC application environment and focuses on client-server systems and software development. The student will learn two models for the software development lifecycle as well as foundational programming concepts such as data types and variables. The student will also be exposed to a variety of client and server environments. Introduction to both cloud computing and open source applications are included in this program.
(2+2) F, S, SU

DBP130  IT Customer Service and Communication  2 Cr. Hrs.
IT professionals need the skills to communicate with other IT personnel as well as end users. Students will be taught to assist clients through effective electronic and verbal communication skills with a focus on the differences in communicating with each group. Students will also focus on professionalism in the workplace. There is an emphasis on email and phone etiquette, business manners, attention to detail in written and oral communication, presentation to specific audiences, value of listening to others, and conflict management. Students will also focus on the best ways to promote themselves in the employment market.
(2+2) F, S, SU

DBP150  Database Basics  3 Cr. Hrs.
This course is designed to move the student beyond the confines of PC based databases. The students will learn the basics of relational database systems including topics such as indexes and normalization. The focus of the course will then move to enterprise database management systems and include discussion of distributed computing and data warehousing. Finally, they will learn the fundamentals of querying using Structured Query Language (SQL).
(2+2) F, S, SU

DBP205  Discrete Structures  3 Cr. Hrs.
In this course the student will learn foundations that underlay programming in the majority of programming languages. Discrete structures such as Boolean logic, proof techniques, graphs, recurrence relations and functions will be covered. The class will then move into algorithms including sorting, binary search and flowcharting. Pseudo code will be used as a means to introduce programming that is non-language specific. The students will be introduced to the concept of screen flow as a way of analyzing how an end user will move through an application. Topics in this course will be reinforced with the assistance of Visual Logics software.
(2+2) F, S, SU
Prerequisite: DBP110

DBP210  Computer Programming I  3 Cr. Hrs.
In this course the student will learn foundations that underlay programming in the majority of programming languages. Discrete math such as sets, logic and proofs will be learned. The class will then move into algorithms including sorting, binary search and flowcharting. Pseudo code will be used as a means to introduce programming that is non-language specific. The students will be introduced to the concept of screen flow as a way of analyzing how an end user will move through an application. Finally, the students will move to the Visual Basic language to transfer their skills into a language to develop a variety of applications.
(2+2) F, S, SU
Prerequisite: ITR291

DBP220  Database Reporting  3 Cr. Hrs.
In this course the student will learn how to effectively pull information from a variety of database systems. The student will learn how to directly pull data from a database using a reporting tool and how to use SQL as an intermediate step in reporting to more effectively work with large stores of data. A heavy focus will be placed on the popular Crystal Reports (Pro, Server & Dashboard) software application.
(2+2) F, S, SU
Prerequisite: DBP150

DBP225  Computer Programming II  3 Cr. Hrs.
In this course the students will add to their knowledge of programming by focusing further on object oriented programming using the C# language. They will also learn how the .NET framework provides a structure for programs. Finally, they will be introduced to the widely used, class-based, object-oriented language Java. With these languages, students will learn about standalone applications as well as automating processes. Not only will students learn to write original code, they will be exposed to methods of debugging existing code.
(2+2) F, S, SU
Prerequisite: DBP210

ECD150  Infant & Toddler Development and Care  2 Cr. Hrs.
An understanding of the important role of adults in controlling, intervening and interpreting the environment so that infants and toddlers receive protective care, stimulation, and relaxation necessary to enhance physical, social, emotional, cognitive, and language development.
(2+0) F

ECD 190  Fundamentals of Early Childhood  3 Cr. Hrs.
This course provides an overview of early learning environments and developmental characteristics for children age 0-8. An emphasis will be placed on the history of early childhood education, theories and program models which influence program and curriculum development today. A weekly required field experience places the student in an early childhood program observing the development of young children. The student will learn appropriate observation methods and use a variety of tools to document children’s development.
(2 + 3) F, S
### ECD201 Pre-Kindergarten Curriculum & Methods
3 Cr. Hrs.

This course focuses on the role of the teacher in connecting content, teaching and learning for preschool children when building curriculum based on best practices. Ohio’s PreK Early Learning Standards will be used as students compare and contrast a variety of curriculum models. Students will apply understandings of how children learn to create healthy, respectful, supportive, and challenging learning environments for all children. Participation in a preschool classroom, seven hours each week, will give students an opportunity to develop, implement and reflect on lesson plans that they selected and prepared to meet the needs of individual children and the group.

(2+7) S
Prerequisites: ECD100, ECD101, and PSY230
Co-requisite: EDU120

### ECD270 Special Topics in Early Childhood
3 Cr. Hrs.

An independent study course permitting the student to explore issues affecting children and families. May be required by ECD faculty to assist students in meeting requirements for the Ohio Department of Education Pre-Kindergarten Associate License.

(3+0) S
Prerequisite: Determined by ECD Coordinator’s recommendation

### ECD280 Child Care Field Experience
3 Cr. Hrs.

A 60-hour field experience appropriate to student’s focused interest area. May be required by ECD faculty to assist students in meeting requirements for the Ohio Department of Education Pre-Kindergarten Associate License.

(1+4) F, S
Prerequisite: Determined by ECD Coordinator’s recommendation

### ECD282 ECD Field Experience
2 Cr. Hrs.

A 105-hour field experience appropriate to student’s focused interest area. Placement of 8 weeks in two different sites will give the student a broad view of services available.

(1+7) S
Prerequisites: ECD Coordinator Permission

### ECD290 Pre-Kindergarten Practicum
3 Cr. Hrs.

This is the capstone course of the Pre-Kindergarten associate degree program. Planning and carrying out specific teaching experiences requires M-F participation in a center based early childhood learning program. Principles are assimilated through practical experiences with an established group of 3-5 year old children and a mentor teacher. To be recommended for the ODE Pre-Kindergarten Associate License students must achieve a grade of B or higher, pass Praxis II 0531 and demonstrate that the degree program can be completed within 6 months of completing ECD290.

(1+14) S
Prerequisites: ECD201, EDU140, EDU210, EDU230, EDU240, EDU270, MTH170, Completed training in First Aid, CPR, Common Childhood Illness Recognition, Child Abuse Recognition per ODJFS requirements; Practicum application and requirements filed with ECD coordinator by October 15; Student must demonstrate that the PreK Associate Degree can be completed within 6 months of completing practicum.
Co-requisite: EDU250

### ECO211 Macroeconomics
3 Cr. Hrs.

Macroeconomics is a study of the U.S. economy emphasizing supply and demand, total production, total employment, and the general price level. Issues of inflation, recession, international trade, and federal budget deficits are also investigated. Economic solutions through fiscal policy and monetary policy are included. Transfer Assurance Guide (TAG) approved effective fall 2005 (OSS005 - Macroeconomics).

(3+0) F, S

### ECO212 Microeconomics
3 Cr. Hrs.

Microeconomics is a study of the U.S. economy emphasizing supply and demand, the individual firm, competition, and the industry. Issues of revenue, expense, profit, loss, and break-even are also investigated. Decisions such as price determination and production output are included. Transfer Assurance Guide (TAG) approved effective fall 2005 (OSS004 - Microeconomics).

(3+0) F, S

### ECO257 Global Economics
3 Cr. Hrs.

This course covers the economic analysis of international trade and foreign investment, including theories of international trade, balance of payments, exchange rates and international monetary arrangements, adjustments of payments disequilibrium, and government policies on trade and aid. Upon completion, students should be able to demonstrate an understanding of the international economic environment.

(3+0) F

### EDP 160 Introduction to Paraprofessional Education
4 Cr. Hrs.

This foundational course introduces the role and responsibilities of the paraprofessional. A field experience occurs in an educational setting serving special needs populations from preschool to grade 12. Students interact as a member of a multidisciplinary team, observe and support instructional activities under the direction of a licensed teacher, and operate within the recommended standards for health, safety, and nutrition.

(3 + 2) F

### EDP290 Paraprofessional Internship
2 Cr. Hrs.

This experience requires the student to be available for a continuous experience in a school system for not less than 14 hours per week. Assignments will be coordinated through local schools so that the student has the opportunity to apply knowledge and develop skills appropriate to the role of the educational paraprofessional.

(0+14) S
Prerequisites: EDU140, EDU270; MTH170; Completed training in First Aid, CPR, Common Childhood Illness Recognition, Child Abuse Recognition; Internship application filed with education department faculty by October 15.
Co-requisite: EDU 250
EDU100  Introduction to Teaching  2 Cr. Hrs.
Students will investigate the teaching profession and the many reforms which affect teacher preparation and licensure. Philosophies and the organization of American schools will be viewed both historically and in contemporary society. Students must be available to make several school visits and access the internet to research relevant topics. Transfer Assurance Guide (TAG) approved effective fall 2007 (OED001 - Introduction to Education).
(2+0) F, S

EDU120  Guidance & Classroom Management  3 Cr. Hrs.
Classroom management is a major concern of all educators from the preschool classroom through secondary education. This course explores various guidance theories providing a variety of techniques to be used in the development of a personal philosophy that can be put into practice in the classroom.
(3+0) S
Prerequisite: PSY110 or PSY230

EDU140  Strategies for Teaching Reading  3 Cr. Hrs.
Essential teaching methods and techniques of literacy instruction prepare the student for working with young readers as well as those with reading difficulties. Emphasis is placed on the understanding of phonics and its role in reading and writing instruction. Day time availability is required for a short term tutoring experience.
(3 + 0) F
Prerequisites: EDU 100

EDU150  Child Development I  3 Cr. Hrs.
The course addresses all aspects of child development from pre-natal through age eight. This overview course includes historical and contemporary theories emphasizing young children’s characteristics, needs, and the multiple influences on development and learning during the early years. It is a study of using developmental knowledge to create healthy, respectful, support and challenging learning environments.
(3+0) F, S

EDU210  Creative Arts Curriculum  3 Cr. Hrs.
This course is designed to teach theory and practice supporting play to develop children’s creative expression in music, drama, art, and movement. Principles and elements of the arts are introduced as the student advances own understanding of the arts and their contribution to child development and learning.
(3+0) S
Prerequisite: EDU100

EDU220  Special Education  3 Cr. Hrs.
All students have the right to an effective education and the majority of students with disabilities can receive an appropriate education if programs are designed with the needs of individual student in mind. This Special Education teacher class addresses the teaching of the gifted and talented child, the preschooler with disabilities, the at risk infant, as well as the child from a different culture or ethnic background and the adult with disabilities. Disabilities of different developmental areas are explored to prepare the future teacher for working with a variety of students. Transfer Assurance Guide (TAG) approved effective fall 2007 (OED004 - Individuals with Exceptionalities).
(3+0) F
Prerequisites: EDU100, PSY110

EDU230  Family, School & Community  3 Cr. Hrs.
This class prepares the teacher to work with students and their families. There is in-depth information focusing on the diversity of families and strategies for building partnerships with families. Emphasis will be placed on communication that results in collaboration and advocacy skills for strengthening families within communities. Transfer Assurance Guide (TAG) approved effective spring 2013 (OED006 – Families, Communities, Schools).
(3+0) F
Prerequisite: EDU100

EDU240  Educational Psychology  3 Cr. Hrs.
The course is an introduction to educational psychology that provides a review of scientific information and practical ideas about instructional techniques. Theory, research, and application are all emphasized. Students will investigate application of the appropriate theories in case based approach to specific learning situations. Learner differences are studied and instructional strategies are considered for a variety of learning environments.
(3+0) F
Pre-requisites: PSY 110

EDU250  Education Seminar  2 Cr. Hrs.
This end of program course meets once a week placing ECD290 and EDP290 students together for discussions of practical daily classroom issues as well as professional development needs. Advocacy opportunities related to children and families will be emphasized. Students will organize materials and documentation useful for licensure, employment and transfer to baccalaureate programs.
(2 + 0) S
Pre-requisites: Permission of Education Department
Co-requisites: EDP 290 or ECD 290, EDU 260

EDU260  Instructional Technology  3 Cr. Hrs.
This is a hands-on course addressing technology’s role in education at all grade levels. The focus is on processes and tools that are available to teachers to enhance classroom organization, instruction, and assessment. Students will research pedagogical issues regarding appropriate use of computers with young children and in the classroom. Transfer Assurance Guide (TAG) approved effective fall 2005 (OED002 - Educational Technology).
(2+2) S
Prerequisites: EDU100, OAS090, CIS090

EDU270  Cultural & Linguistic Diversity  3 Cr. Hrs.
This course will prepare students to support learners from diverse backgrounds in an educational setting. Emphasis will be on culturally responsive and relevant teaching to English language learners. A field experience consisting of 105 hours will be tailored to the student’s program of study.
(2 + 7) F
Pre-requisites: EDU 100, EDU 150, EDU 120, EDU 230, EDU 260, PSY 110
Co-Requisites: EDU 220, EDU 240

F = Fall   S = Spring   SU = Summer
EET121  DC Circuits  3 Cr. Hrs.
In this course the student will learn the fundamental principles of electricity with emphasis on DC (direct current) circuits. The concepts of Ohm’s Law, the Power Formula, and Kirchoff’s Laws will be applied to series, parallel, and series-parallel circuits. Electrical quantities will be defined and the behavior of resistors, inductors, and capacitors under DC conditions will be studied. Complex circuits will be analyzed using the theorems of superposition, and Thevenin and Norton equivalent circuits. The relationship between electricity and magnetism will also be introduced. These topics will be learned through text, presentations, various exercises, and hands-on labs. Transfer Assurance Guide (TAG) approved effective fall 2012. (OET001 - DC Circuits).
(2+2)  F
Prerequisite: MTH090

EET122  AC Circuits  3 Cr. Hrs.
In this course the student will continue to learn the fundamental principles of electricity with emphasis on AC (alternating current) circuits. The concepts of Ohm’s Law, the Power Formula, and Kirchoff’s Laws will be expanded to include steady-state AC circuits. The behavior of filter circuits and transformers will be studied along with the theorems of Superposition, and Thevenin and Norton equivalencies applied to AC networks. Complex numbers and phasors will be used to represent sinusoidal AC quantities. The course concludes with an introduction to electric power systems, power factor analysis, and poly-phase systems. These topics will be learned through text, presentations, various exercises, and hands-on labs. Transfer Assurance Guide (TAG) approved effective fall 2012 (OET003 - AC Circuits).
(2+2)  S
Prerequisite: EET121

EET132  Discrete Structures  3 Cr. Hrs.
In this course the student will be introduced to the discrete structures used in computer science for software development including mathematical proof techniques, Boolean logic, graphs, trees, recurrence relations, and functions. Topics will be learned through text, presentations, and various exercises.
(2+2)  S
Prerequisites: MTH109 and EET240

EET221  Digital Circuits  4 Cr. Hrs.
In this course the student will be introduced to the fundamentals of digital logic that forms the basis of digital electronic systems. Topics include number systems and codes, logic gates, Boolean algebra, and logic simplification using key theorems. Elementary digital circuits will be explored including: encoders, adders, multiplexers, flip-flops, counters, shift registers, and memory devices. Integrated circuit (IC) technologies and applications will also be discussed. These topics will be learned through text, presentations, various exercises, and hands-on labs. Transfer Assurance Guide (TAG) approved effective fall 2012 (OET002 – Digital Circuits).
(3+3)  S
Prerequisite: MTH090

EET231  Microprocessors  4 Cr. Hrs.
In this course the student will gain a fundamental understanding of the microprocessor and microcontroller. Microprocessor architecture and hardware including bus structures, memory, and input/output (I/O) will be studied. Operation of the microprocessor/controller will be programmed by the student using hardware specific Assembly language. Real-world applications using the microprocessor and microcontroller will also be discussed. These topics will be learned through text, presentations, various exercises, and hands-on labs.
(3+2)  F
Prerequisite: EET221

EET240  Engineering Programming  3 Cr. Hrs.
This course is the study of the popular Visual Basic 6.0 programming language. The focus will be on the student learning statement language and visual programming. Projects and learning activities will include Engineering and Industrial Maintenance applications.
(2+2)  F
Prerequisite: MTH090

EET272  Cisco Networking I  4 Cr. Hrs.
This class is designed to teach students the skills to configure and maintain a small to medium sized, multi-protocol, routed and/or switched network. Specific topics covered include the OSI reference model and how it relates to real world protocols such as Ethernet, Token Ring, TCP/IP, and others. Logical and physical network topologies are discussed. TCP/IP addressing topics such as subnet masks are covered. Several TCP/IP routing protocols such as RIP and OSPF are covered. The materials and labs cover the use of Cisco equipment and help to prepare the student for the testing needed to seek CCNA (Cisco Certified Network Administrator) certification.
(3+3)  F
Prerequisite: MTH090

EET277  Industrial Electronics  3 Cr. Hrs.
This course is a study of the electronic devices used in modern day industrial machinery. Solid state switching devices will be discussed, that includes transistors, SCRs and Triacs, as well as the firing devices used in current controlled circuits. Power supply circuits and basic amplifier circuits using Operational Amplifiers will also be discussed. Students will focus on operation, application and troubleshooting of the various electronic devices. Transfer Assurance Guide (TAG) approved effective fall 2012 (OET005 - Electronics).
(2+2)  F
Prerequisite: IND120

EET278  Systems Integration  3 Cr. Hrs.
This course is a capstone for the Manufacturing Maintenance, Industrial Electrical, PLC Certificate and Maintenance Technician/Mechatronics Programs. Upon the completion of the requirements for the previously mentioned programs the learner will display his/her newly developed skills by designing an industrially related system, (electrical and pneumatic), install the appropriate electrical and mechanical devices and troubleshoot the system to 100% of the design specifications.
(2+2)  On Demand
Prerequisites: PLC200 and IND134
EMS102  EMT Basic I  4 Cr. Hrs.
This course provides an overview of the Emergency Medical Services system and the roles and responsibilities of the Basic EMT. Topics include basic medical emergency management, patient assessment and triage, multi-system trauma management, patient stabilization and transportation. This course, along with successful completion of EMT Basic II, follows state and national guidelines for certification as a Basic EMT. The course requires hands-on laboratory and clinical experiences. 
(3+0) F

EMS103  EMT Basic II  3 Cr. Hrs.
This course provides training on special needs patients, including geriatric and pediatric patients as well as EMS Special Operations. Assessment based management of patients will be discussed. Laboratory experiences and clinical rotations are a required component of this course. Students must successfully complete EMT Basic I in order to enroll in this course. 
(2 + 2) S, SU
Prerequisite: EMS 102

EMS202  EMT Intermediate I  5 Cr. Hrs.
This course emphasizes the roles and responsibilities of the EMT-I and includes medical/legal considerations, basic pharmacology, medication administration, airway management, and advanced assessment techniques. The laboratory component includes procedures in IV therapy, shock management, cardiac management and EKG interpretation. This course, along with successful completion of EMT Intermediate II, follows state and national guidelines for certification as an EMT-I. Students must submit verification of current Ohio EMT-Basic certification.
(4+2) F, S
Prerequisite: EMS103 and Current Ohio EMT-Basic Certification

EMS203  EMT Intermediate II  3 Cr. Hrs.
This course provides the Intermediate EMT advanced training on emergency care of special needs patients, including geriatric and pediatric patients as well as a review of EMS Operations. Laboratory experiences and clinical rotations are a required component of this course. Students must successfully complete EMT Intermediate I in order to enroll in this course.
(2 + 2) S
Prerequisite: EMS 202

ENG080  Reading Comprehension  3 Cr. Hrs.
A critical reading and thinking course for improving vocabulary and comprehension for college level course requirements. Emphasizing skills for efficient, independent learning from textbooks and other college reading materials, this course will accent a variety of comprehension skill areas: activating background knowledge, distinguishing between main ideas and supporting details, recognizing organizational patterns, recognizing the difference between fact and opinion, and identifying a writer’s tone and purpose.
(3+0) F, S, SU

ENG090  Basic Composition  3 Cr. Hrs.
This course provides an understanding of the writing process and English fundamentals to ensure success in college writing assignments. It reviews grammar, usage, punctuation, spelling and emphasizes skills for composing paragraphs and essays. The course combines direct instruction, collaborative learning, peer editing, and individual conferences.
(3+0) F, S, SU

ENG095  Integrated College Reading & Writing  4 Cr. Hrs.
ENG095 blends the strategies necessary for successful reading in college courses with the writing processes which will lead to clear and effective communication. The course will emphasize skills for efficient, independent learning from textbooks and other college reading materials, with the emphasis on vocabulary development. It reviews the steps for composing college-level paragraphs and essays, including a review of common grammatical structures used in formal academic writing.
(4+0) F, S, SU

ENG111  Composition I  3 Cr. Hrs.
An expository composition course emphasizing the expectations of college-level writing, including thesis development, support, and coherence. Students will gain experience using a variety of rhetorical modes. In addition to a number of full-length essays, a short documented paper, based on research materials and using parenthetical references, is required.
(3+0) F, S, SU
Prerequisite: ENG090 or satisfactory score on Course Placement Test

ENG112  Composition II  3 Cr. Hrs.
Building on the skills learned in Composition I, this course further develops the student’s writing and research experience, with an emphasis on analytical writing in response to critical reading and class discussion. Using MLA parenthetical documentation techniques, the student will write several short essays and a research paper.
(3+0) F, S, SU
Prerequisite: ENG111 with grade of “C” or better

ENG113  Speech  3 Cr. Hrs.
This course provides experience in public speaking. Organization of ideas, improvement of critical thinking skills, and the use of visual aids are important parts of the course. Student speeches are analyzed and critiqued for effectiveness. Transfer Assurance Guide (TAG) approved effective summer 2007 (OCM004 - Basic Public Speaking/Oral Communication).
(3+0) F, S, SU

ENG210  Technical Communications  3 Cr. Hrs.
This course develops written and oral communication skills needed in technical fields, focusing on producing documents, effectively conducting group discussions, and giving presentations. It includes formal individual and group technical reports as well as shorter documents common to technical fields, emphasizing clear, concise, and logical communication strategies, format and visual aids.
(3+0) F
Prerequisite: ENG112 or instructor permission

ENG214  Discussion & Conference Method  3 Cr. Hrs.
Focuses on the elements of communication and small group theory as employed in a group discussion situation with emphasis on the individual’s responsibility in the discussion setting. Focuses on the development of the leadership abilities within the group, including analysis of group interaction in the decision-making process for task-oriented groups. Transfer Assurance Guide (TAG) approved effective summer 2007 (OCM003 - Small Group Communication).
(3+0) F

F = Fall    S = Spring    SU = Summer
2015 - 2017
ENG217  Introduction to Creative Writing  3 Cr. Hrs.
A multi-genre writing course which explores poetry, fiction and drama. Students will write and workshop original works and learn the basics of craft for each area, including: imagery, meter/form, character, metaphor, dialogue, story, setting, and voice. Reading selections emphasize contemporary and historical writers, and students develop a writing portfolio of revised creative works across three genres. (3+0)
Prerequisite: ENG111 with “C” or better

ENG223  Interpretation of Literature  3 Cr. Hrs.
Introduces the elements of critical reading of literature, specifically fiction, poetry, and drama. Topics such as structure, character, point of view, style, theme, tone, and symbolism are defined, then applied to selected pieces of literature. Exams the importance of historical, cultural, and literary contexts for understanding literature. Writing intensive. (3+0) S
Prerequisite: ENG111

ENG230  Children’s Literature  3 Cr. Hrs.
Reading and evaluation of nonfiction and fiction, folklore, myth, poetry, and illustrated books for children and adolescents from the critical and multi-cultural points of view. Writing intensive. (3+0) F, S
Prerequisite: ENG111

ENG234  Narrative Literature - Old Northwest Territory  3 Cr. Hrs.
Explores non-fiction narrative accounts from early travelers and settlers ranging from the Ohio River to the Upper Great Lakes as revealed through the journals, diaries, oral histories, and novels by such writers as Schoolcraft, Thoreau, Eckhart, Edward, Dickens, Goldthwaite, and others. Writing intensive. (3+0) F, S
Prerequisite: ENG111

ENG240  Introduction to Poetry  3 Cr. Hrs.
Introduces the elements of critical reading of poetry, including poetic language, imagery, and forms. Focuses on poems as expressions of important themes of human experience and as products of their historical and cultural contexts. Writing intensive. (3+0) S
Prerequisite: ENG111

ENG241  Introduction to Fiction  3 Cr. Hrs.
Focuses on a critical reading of fiction, particularly short stories, examining formal elements, including plot, character, setting, point of view, and theme. Introduces various critical perspectives for the interpretation of fiction, including the importance of historical, cultural, and literary contexts for understanding fiction. Writing intensive. (3+0)
Prerequisite: ENG111

ENG250  American Literature Through the Mid-19th Century  3 Cr. Hrs.
Surveys American literary works ranging from recorded Native American oral traditions through the literature of the Civil War period. Places works in historical and cultural contexts, focusing on the development of major themes and movements in American literature. Transfer Assurance Guide (TAG) approved effective fall 2005 (OAH250 - American Literature I). Writing intensive. (3+0) F
Prerequisite: ENG111

ENG251  American Literature Since Mid-19th Century  3 Cr. Hrs.
Surveys American literary works from the late nineteenth century through the contemporary period. Places works in historical and cultural contexts, focusing on the development of major themes and movements in American literature. Transfer Assurance Guide (TAG) approved effective summer 2009 (OAH054 - American Literature II). Writing intensive. (3+0) S
Prerequisite: ENG111

ENG260  British Literature Through the 18th Century  3 Cr. Hrs.
This course focuses on British literature from the Old English period through the Restoration and eighteenth century examining writers and representative literary texts, including poetry, drama, and prose fiction and non-fiction, as they reflect cultural and historical contexts. Transfer Assurance Guide (TAG) approved effective spring 2009 (OAH055 - British Literature I). Writing intensive. (3+0) F
Prerequisite: ENG111

ENG261  British Literature 19th Century to Present  3 Cr. Hrs.
This course focuses on British literature from the Romantic period through the twentieth century, examining writers and representative literary texts, including poetry, drama, and prose fiction and non-fiction, as they reflect cultural and historical contexts. Transfer Assurance Guide (TAG) approved effective spring 2009 (OAH056 - British Literature II). Writing intensive. (3+0) S
Prerequisite: ENG111

ENG271  Non-Western Literature  3 Cr. Hrs.
Examines twentieth-century, non-Western writers and literary works that contribute to an understanding of the experiences of non-Western peoples. Provides an overview of literary figures and forms in their historical and cultural contexts, with emphasis on their significance to our understanding of global issues. Reading selections emphasize examples from Asia, Africa, Latin America, and the Middle East. Writing intensive. (3+0)
Prerequisite: ENG111
The opportunity to commit and conceal fraud exists only when there are assets susceptible to misappropriation and a lack of internal controls to prevent or detect fraud. This course will focus on the high-risk fraud environments wherein assets are more vulnerable to misappropriation and fraud environments heightened by either a lack of, or non-functioning of, internal controls. Various fraud investigative methods and the process for communicating an expert report will play an essential role in these studies.

(3+0) S

FRA100 Fraud Detection & Deterrence 3 Cr. Hrs.

A study covering occupational fraud and abuse including asset misappropriation, corruption, and fraudulent statements. The course provides an understanding of fraud examination methodology, and sets forth the schemes used by executives, managers, and the employees to commit fraud against their organizations. It provides an analysis of various kinds of frauds and includes cases that illustrate and help the student understand each type of fraud. Based on extensive empirical research in forensic accounting, the course aids the student in identifying exposure to loss and appropriate prevention, detection, and investigation approaches.

(3+0) F
Prerequisite: ACC111

FRA200 Fraud Examination 3 Cr. Hrs.

There are four general elements under common law, all of which must be present for fraud to exist: (1) a material false statement, (2) intent, (3) reliance on the false statement by the victim, and (4) damages. This course takes an in-depth look at each of these components in relation to crimes that fall under the umbrella of fraud. It also emphasizes federal legislation related to fraud examinations including coverage of laws that preserve the rights of individuals suspected of committing fraud and laws that govern civil prosecutions, the admittance of evidence, and the examination of individuals suspected of committing fraud. It also emphasizes federal legislation related to fraud examinations including coverage of laws that preserve the rights of individuals suspected of committing fraud and laws that govern civil prosecutions, the admittance of evidence, and the testimony of expert witnesses.

(3+0) S
Prerequisite: ACC111

FRA210 Legal Elements of Fraud 3 Cr. Hrs.

This course conveys the nature, challenges, and component interrelatedness of the discipline of geography. The geographic method of inquiry is used to describe, explain, and analyze our environment. The principal goal of the course is to give the student a global perspective from which he or she can view the uniqueness of the discipline. Thus the student is introduced to the tools, vocabulary, and the spatial orientation used by the geographer. Transfer Assurance Guide (TAG) approved effective fall 2005 (OSS008 - Geography).

(3+0) F, S, SU

GEO100 World Geography 3 Cr. Hrs.

A study of the human geography of the U.S. and Canada, covering the geographic influence on the demographic, economic, political, and cultural themes of these countries, which share a common geography and history in many respects. Major focus is on human patterns and the interaction among these patterns as well as the actual physical environment.

(3+0) S – even years

GEO210 Geography - U.S. & Canada 3 Cr. Hrs.

A study of the social, political, and economic development of the United States through the Post Civil War period. Several critical periods in early American History are examined: colonization, settlement, rebellions, revolutions, making, Jeffersonian and Jacksonian democracy, slavery, the westward movement, the Indian problems, and the Civil War. Transfer Assurance Guide (TAG) approved effective summer 2005 (OHS043 - U.S. American History I and OHS010 - U.S. American History Sequence, Course 1 of 2). Writing intensive.

(3+0) F, S - odd years, SU - even years

GSD100 Success Seminar 1 Cr. Hr.

This course teaches self-management principles and practices for life-long learning that increase a student’s success in college and in life by enhancing the student’s skills in time management, effective living and learning skills, technology skills, effective study habits, note taking, and test anxiety reduction. Students will examine factors which impact learning, select relevant methods of enhancing learning and thinking processes, and develop strategies for maximizing effectiveness in college, work, and community settings.

(1+0) F, S, SU

Required course for students who test into either MTH050 or MTH080 and either ENG080 or ENG090; required for students on Academic Probation; required for students returning from Academic Suspension. This course is open to any student and could be used as 1 credit General Studies elective.

GSD120 Career and Life Planning 3 Cr. Hrs.

This class assists the student in examining the components of career choice. The focus is on career awareness, personal awareness, and educational awareness as they relate to the process of career choice. Planning skills and self-assessment instruments will help identify tentative career options. Decision-making strategies, resume writing, interviewing skills, and job search techniques will be reviewed.

(3+0)

HIS101 U.S. History Pre-1876 3 Cr. Hrs.

A study of the social, political, and economic development of the United States through the Post Civil War period. Several critical periods in early American History are examined: colonization, settlement, rebellions, revolutions, constitution making, Jeffersonian and Jacksonian democracy, slavery, the westward movement, the Indian problems, and the Civil War. Transfer Assurance Guide (TAG) approved effective summer 2008 (OHS043 - U.S. American History I and OHS010 - U.S. American History Sequence, Course 1 of 2). Writing intensive.

(3+0) F, S - odd years, SU - even years

Co-requisite: ENG111

HIS102 U.S. History Post-1876 3 Cr. Hrs.
United States from the Reconstruction period to the present. Topics include reconstruction, impact of industrialization, agricultural revolution, populism, rise of monopoly capital in the “progressive” era, the age of imperialism, WWI, Great Depression, WWII, the New Deal, the Welfare State, the Vietnam War and the popular protests, the civil rights movement, the rejection of the welfare state and rise of Neo-Conservatism. Transfer Assurance Guide (TAG) approved effective summer 2008 (OHS044 - U.S. American History II and OHS010 - U.S. American History Sequence, Course 2 of 2). Writing intensive. (3+0) F, S - even years, SU - odd years. Co-requisite: ENG111

HIS203 U.S. Since 1945 3 Cr. Hrs.
A contemporary history of the United States which provides a balanced account of foreign affairs, domestic politics, and social and cultural change. Presents change from U.S. global hegemony to a truly global economy as the backdrop for the replacement of the liberal-welfare state with the neo-conservative state. Relates this important transition to the form and content of popular protest since 1945. Topics include the New Deal, the Cold War, confronting the Third World, struggles for equality, and mass media effects on popular culture. Writing intensive. (3+0) S. Co-requisite: ENG111

HIS210 The Modern World 3 Cr. Hrs.
Joins a study of the history of the modern world with students’ understanding of their place in the contemporary world. Competing histories of the modern world’s origins are followed by a comparative study of western and non-western societies and the forces giving rise to modernism, reaction, revolution, and postmodern tendencies from the 13th century to the present times. Writing intensive. (3+0) F, S. Co-requisite: ENG111

HIS234 History Old NW Territory 3 Cr. Hrs.
Explores the many historical and cultural influences in this area beginning with the generations of Indian tribes through the Euro/American arrival beginning with early missionaries, explorers, traders and the multi-ethnic settlement that overwhelms the area in the early 20th. century. The course includes a coverage of the rapid transformation of this still rural landscape into the continents manufacturing core. The old Northwest and its development is still responsible for stamping the unique characteristics of what we call “American culture.” Writing intensive. (3+0) F. Co-requisite: ENG111

HIS290 Historic Preservation Internship 3 Cr. Hrs.
The Co-Op/Internship is an experience in which the student works in a position consistent with the program major. The student is expected to integrate skills learned in program courses with job responsibilities, while applying work experience to class activities. Primary work duties are documented through a work log, incident summary, focused report, and a site visit. (1+20) Prerequisite: Permission of Instructor

HPF106 Beginning Western/English Horsemanship 1 Cr. Hr.
This course is designed for the novice or beginner who has had little or no exposure to horses or riding. Students will learn horses and riding from the "ground-up" in which the very basics of horsemanship is taught. The instructor tries to match each student’s abilities with a specific horse while keeping in mind everyone’s safety is of the highest concern. All classes are conducted at Sanderson Stables, located on the corner of Union and Washington Streets, Cygnet, Ohio 43413; phone 419-655-2253. Sanderson Stables owns and maintains horses, tack, and grounds specifically for appropriate instruction. This course can also be taken as many times as the student desires. This course is many times used to fulfill the physical education requirement at the university level. (1+0) F, S, SU

HPF107 Intermediate Rider 1 Cr. Hr.
This course is designed for Intermediate level riders who have mastered the HPF106 level skills and thus builds on those skills. The instructor tries to match each student’s abilities with a specific horse while keeping in mind everyone’s safety is the highest concern. The focus of this course is on handling the horse on the ground and in the saddle, as well as practicing the jog, lope and lead departures. (1+0) F, S, SU

HPF108 Advanced Rider 1 Cr. Hr.
This course is designed for advanced level rider who has mastered the HPF107 level skills and thus builds on those skills. The focus of this course is on handling the horse on the ground and in the saddle, as well as practicing the jog, lope and lead departures. (1+0) F, S, SU

HST101 Principles of Human Services 3 Cr. Hrs.
An introduction to the field of human services, study of social work, social policy, and social welfare organizations, their history and fields of practice. This course includes an introduction to different practice settings, roles of the social worker and social work assistant, NASW Code of Ethics, as well as the knowledge base and skills required for culturally competent generalist social work practice. An overview of various public and private human service agencies in the community and their organizational structure, client services, and the role of social and economic justice in serving a diverse cross section of at-risk and vulnerable societal groups is also included. (3+0) F, S

HST105 Cultural Competence with Diverse Populations 3 Cr. Hrs.
This course describes special needs and diverse issues of the following populations: African American, Asian American, Native American, and Hispanic/Latin American in addition to persons with disabilities, diversity with sexual orientation, women, children/adolescence and the elderly. Special emphasis is placed on utilizing approaches that are culturally sensitive to and consistent with the values, norms, beliefs and experiences of these populations encountered by workers in Human Service settings. (3+0) S. Prerequisites: HST101 and PSY110. Co-requisite: SSC101 and PSY210.
HST108  Principles of Developmental Disability 3 Cr. Hrs.
A principles course in the field of Mental Retardation and Developmental Disabilities and the historical and legal perspectives within the field. Course includes service delivery models, current trends, prevention issues, causes, conditions and characteristics.
(3+0) F, S

HST112  Group Work in Human Services  3 Cr. Hrs.
This course in an introduction to basic knowledge, techniques, and skills used by Human Service workers in facilitating groups. Group dynamics, theory, leadership skills and techniques used in facilitating groups will be examined and applied to a variety of task and treatment groups utilized in Human Service settings with various target populations.
(3+0) S

HST208  Interviewing Techniques  3 Cr. Hrs.
Presents the basic principles and practices of interviewing clients, as well as crisis intervention in human services settings. The basic principles of oral communication are examined as the impact on effective interviewing techniques along with developing basic crisis intervention skills and techniques.
(3+0) F
Prerequisites: PSY110, HST101, and HST105

HST210  Human Services Methods  6 Cr. Hrs.
A practical, in-house lab experience meant to prepare students for their actual experience in a human service agency. Seminar format provides for discussion and integration of experiences with academic courses. Open only to Human Services Technology majors who have completed 18 credit hours of Human Services technical courses with a grade of “C” or better. Labs for this course will consist of supervised labs/lab hours to be arranged in-house along with field lab hours. Supervised by Master Level Social Worker, State Licensed.
(4+4) F
Prerequisites: HST101, HST105, PSY210, and HST112
Co-requisite: HST208

HST212  Principles of Addiction  3 Cr. Hrs.
Presents substance abuse and addictive problems from an addictions model approach. A historical, cultural, and social context is presented as well as an overview of the theories of addiction. Other major topics: recognizing early signs and symptoms of substance abuse, differences in counseling strategies with substance abusers, and other derivative problems. This is a foundation course with a scientific base. Family systems are reviewed.
(3+0) F, S

HST214  Human Services Case Management  3 Cr. Hrs.
Provides the experience and knowledge of the human service worker providing case management functions. Areas of concentration include service provisions when working with special populations. The provisions include, but are not limited to, client identification, individual assessment and diagnosis, determining service needs of the client, service planning and resource identification, linking the client to appropriate services, service implementation, how to monitor service delivery, how to advocate, and evaluation of service delivery. Special emphasis is on specific target populations, and services available.
(3+0) S
Prerequisites: HST208 & HST210 or Instructor Permission

HST218  Introduction to Developmental Disabilities  2 Cr. Hrs.
This course explores the effects of disability on individuals and families over the lifespan, including the categorical definitions of developmental disabilities, eligibility for services, causes, conditions, and prevention. A history of social services related to persons with developmental disabilities is reviewed along with the concepts of advocacy, behavior support and self-determination.
(2+0) S - odd years

HST219  Principles of Self-Determination  2 Cr. Hrs.
Students will be provided an introduction to the concepts and values of client self-determination as it relates to the service delivery system and persons with developmental disabilities.
(2+0) S - odd years

HST220  Principles of Work  2 Cr. Hrs.
This course will provide students with skills and knowledge for preparing persons with disabilities for productive work. The emphasis of the course will be on the development of supported work options. The course will address principles and practices of supported work options, job analysis, job development, marketing, job training and relevant state and federal requirements. This course will satisfy Adult Services MR/DD Certification Program.
(2+0) F - even years
Prerequisite: HST108

HST221  Principles of Habilitation Program  2 Cr. Hrs.
This course will provide the student with knowledge and performance objectives in the field of habilitation programming related to understanding the special needs of individuals with disabilities in relations to legal issues, community based training, habilitation programming, assessment and identification, and minority issues. This course will satisfy Adult Services MR/DD Certification Program.
(2+0) S - odd years
Prerequisite: HST108

HST222  Ethics in the Helping Profession  3 Cr. Hrs.
The practice of counseling and related helping professions is regulated both by law and by professional standards of practice or codes of ethics, which provide only general guidelines. This course will look at historical and contemporary theories of relevant ethical theories and provide exposure to real-life ethical issues from a multi disciplinary approach.
(3+0) F, S
Prerequisite: HST101

HST240  Social Problems  3 Cr. Hrs.
An examination of the major social problems existing in western society and how various conditions within society come to be defined as social problems. Topics include such areas as poverty, racism, sexism, unemployment, AIDS, and abusive behaviors (physical, psychological, sexual abuse, and neglect). Analysis of each of these problems along with the social welfare system’s responses and the role of the human service worker. Transfer Assurance Guide (TAG) approved effective fall 2007 (OSS025 - Social Problems).
(3+0) F, SU
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<th>Course Code</th>
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<td>HST242</td>
<td>Marriage and Family</td>
<td>3 Hrs.</td>
<td>(3+0) F, S</td>
<td>Co-requisite: ENG111</td>
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<tr>
<td>HST280</td>
<td>Special Problems in I Human Services</td>
<td>1-6 Hrs.</td>
<td>(3+0) F, S</td>
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<td>HST282</td>
<td>Special Problems in Human Services III</td>
<td>6 Hrs.</td>
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<tr>
<td>HST290</td>
<td>Practicum I</td>
<td>6 Hrs.</td>
<td>(2+2) F, S</td>
<td>Prerequisite: MTH080</td>
<td></td>
</tr>
<tr>
<td>HUM121</td>
<td>Concert Band</td>
<td>1 Hr.</td>
<td>(1+0) F, S</td>
<td>Prerequisite: Ability to play band instrument</td>
<td></td>
</tr>
<tr>
<td>HUM209</td>
<td>Humanities &amp; Cultures: Ancient &amp; Medieval Worlds</td>
<td>3 Hrs.</td>
<td>(3+0) F</td>
<td>Co-requisite: ENG111</td>
<td></td>
</tr>
<tr>
<td>HUM210</td>
<td>Humanities &amp; Cultures: Renaissance to Present</td>
<td>3 Hrs.</td>
<td>(3+0) S</td>
<td>Co-requisite: ENG111</td>
<td></td>
</tr>
<tr>
<td>HUM221</td>
<td>Music Appreciation</td>
<td>3 Hrs.</td>
<td>(3+0) S</td>
<td>Co-requisite: ENG111</td>
<td></td>
</tr>
<tr>
<td>HUM230</td>
<td>Art Appreciation</td>
<td>3 Hrs.</td>
<td>(3+0) F</td>
<td>Co-requisite: ENG111</td>
<td></td>
</tr>
<tr>
<td>IND103</td>
<td>Applied Geometry &amp; Trigonometry</td>
<td>3 Hrs.</td>
<td>(2+2) F, S, SU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND105</td>
<td>Industrial Safety</td>
<td>2 Hrs.</td>
<td>(2+0) S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND110</td>
<td>Industrial Computing I</td>
<td>3 Hrs.</td>
<td>(2+2) F</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
IND120  Industrial Electricity I  3 Cr. Hrs.
This is an introductory electricity course for skilled trade’s personnel. The course is a study of DC and AC electricity principles, with a practical approach to applications in an industrial environment. The learner will obtain a knowledgeable understanding of the key symbols and abbreviations associated with the electrical trade, acquire a comprehensive understanding of basic electrical terminology, apply Ohm’s Law to a number of relevant electrical applications, and synthesize a number of components into a working system involving series, parallel, and series parallel circuits.
(2+2) F
Prerequisite: MTH050

IND121  Industrial Electricity II  3 Cr. Hrs.
This course is an advanced study of Industrial Electricity providing comprehensive coverage of the control devices used in contemporary industrial electrical systems. The focus of this course is to provide the architecture for acquiring the knowledge and skills required in an advanced manufacturing environment. The course continues with electrical and motor theory, building on circuit fundamentals and reinforcing these with practical hands-on labs designed to reinforce the concepts and provide control systems design experience. These topics will be learned through text, presentations, various exercises, and hands-on labs.
(2+2) S
Prerequisite: IND120 or instructor permission

IND122  Industrial Wiring (NEC)  3 Cr. Hrs.
The primary purpose of this course is to acquaint the learner with a ready source of information relevant to the NEC (National Electric Code), IEC (International Electrotechnical Commission), AISI (American Iron and Steel Institute), NFPA, (National Fire Protection Association), ANSI (American National Standards Institute), UL (Underwriters Laboratories, Inc.), OSHA (Occupational Safety and Health Act), and various Local Codes. This information will focus primarily on the electrical design and engineering of most site work including, but not limited to, industrial, commercial, and residential occupancies.
(2+2) S
Prerequisite: IND120

IND130  Rigging and Erecting  2 Cr. Hrs.
This course incorporates the basic laws of physics to moving, setting-up, and securing machinery. Leverage and mechanical advantage, and the care and selection of equipment are taken in consideration while calculating load weights based on various shapes and types of material. Upon completion learners will be able to calculate sling angle tension and how to apply relevant information to different rigging hitches while determining the correct size of rigging tools needed for the job. Learners will apply lecture material to lab applications including mobile crane safety, inspection, hand signals, and proper load chart usage.
(2+0) F

IND131  Industrial Pipefitting  3 Cr. Hrs.
A study of the specifications, application, installation, and maintenance of various kinds of pipe, fittings, valves, pumps, and hand tools. The analysis of job requirements in terms of materials, time utilization and sequence of operation is discussed.
(2+2) F
Prerequisite: MTH050

IND132  Bench Work  2 Cr. Hrs.
This is the first basic machine shop course. Students learn the use of hand tools, hand work, and floor work. Students are required to read prints, layout, machine, and fabricate projects utilizing the lab environment with emphasis placed on safety, tooling, precision and accuracy. Topics include: materials, mechanical fasteners, measurement, tolerance, fit, layout, hand tools, power tools, drilling, grinding, sharpening, hardening, burring, filing, polishing, layout work on the bench, use of hand tools, and cutting threads with a die.
(2+0) F
Co-requisite: MET110

IND133  Applied Welding Techniques  3 Cr. Hrs.
Welding includes a discussion of the welding processes with emphasis on shielded metal arc welding (SMAW), oxy-acetylene welding, gas metal arc welding (MIG), metal inert gas), and gas tungsten arc welding (TIG tungsten inert gas). Safety, equipment, supplies, types of welds, welding symbols, welding procedures and techniques are some of the topics included. Hands on welding formulate the basis of the program which is geared to an introductory level.
(2+2) F
Co-requisite: MET110

IND134  Industrial Fluid Power I  3 Cr. Hrs.
Fluid power is an efficient way to move energy without mechanical belts, chains, or levers. The physics of fluids, components, and troubleshooting and design applications for hydraulic and pneumatic systems are covered in this class.
(2+3) F
Prerequisite: IND103

IND140  Principles of Machining  3 Cr. Hrs.
The focus of this course is to provide the student with a basic foundation in the skills needed to perform basic machining methods. The student will develop key techniques that will aid in proper selection, identification, and application of machines and machining methods. Hands-on laboratory work with the lathes, mills, drills, grinders, fixture utilization, feeds and speeds, is emphasized. Special emphasis will be placed on safety, precision, accuracy, and teamwork in completion of assigned lab projects. The student will be required to interpret basic blueprints and manufacture parts to print specifications.
(2+3) F
Co-requisite: MET110

IND141  Metallurgy & Heat Treatment  2 Cr. Hrs.
A basic course covering the nature and behavior of metals, crystalline structure, theory of alloys, principles of heat treatment, properties of metals and alloys and testing applications. The Rockwell and Brinell hardness testers will be used.
(2+0) S
Prerequisite: MTH080
IND220  Electrical Prints & Troubleshooting  3 Cr. Hrs.
This course is a study of the systematic elimination of the various parts of a system or process to locate a malfunctioning part. The learner will obtain a knowledgeable understanding of the key symbols and abbreviations associated with the electrical trade, acquire a comprehensive understanding of the various devices associated with an electrical circuit, synthesize a number of electrical components associated with a viable sequence of operation, recognize a malfunctioning circuit through proper meter application, and apply informed terminology while troubleshooting and restoring a malfunctioning system to its original intention promptly but safely.
(2+2) S
Co-requisite: IND121

IND221  Instrumentation & Controls I  3 Cr. Hrs.
This course is a study of the operation and troubleshooting of Industrial Instrumentation systems. The focus will be on analog monitoring and controlled devices, connected to stand alone and PLC based controller systems. The concepts of temperature, pressure, level and flow will be discussed, as well as the transmitters that connect the analog sensor signals to the analog I/O.
(2+2) S
Prerequisite: PLC200

IND223  Motors & Motor Controls  3 Cr. Hrs.
This course is an advanced study and laboratory for learners who have an understanding of electrical circuits, controls and desire practical hands-on experience of various motor and control devices. Coursework involves hands-on laboratory experience utilizing 120vac, 208/240 VAC as well as text study. Practical application of principles learned will be emphasized. Special topics in electricity will be introduced to the learners according to class interests. Topics of study will include ladder diagrams and their control of alternating and direct current motors. Motor starter sizing, circuit/overload protection, electrical motor branch wiring will also be introduced. The Variable Frequency Drive as a motor controller will also be introduced as well as the application of the programmable logic controller in motor control circuits. The learner will also be responsible for any outside assignments as well as the successful completion of all required laboratory demonstrations. These topics will be learned through text, presentations, various exercises, and hands on labs.
(2+2) F
Prerequisite: IND121

IND232  Machine Repair  3 Cr. Hrs.
Basic fundamentals of methods and means to rebuild a production machine such as realignment of columns of tables, scraping of ways, replacing spindles, gears, bearings, gibs, etc.
(2+2) S
Prerequisite: IND132

IND234  Industrial Fluid Power II  3 Cr. Hrs.
In this class the student will use electro-pneumatic and electro-hydraulic components controlled by a programmable logic controller (PLC). The student will be able to construct, write, and troubleshoot a complete electro-pneumatic or electro-hydraulic circuit controlled by a PLC. The students will build, design, and troubleshoot machines using pneumatics, hydraulics, and electrical components.
(2+2) S
Prerequisite: IND134

IND240  Machining Processes II  3 Cr. Hrs.
This class is intended to better the student’s skills learned in IND140. This class is focused on the student applying their ability to use machine shop equipment to machine projects that apply to the machining, tooling and print reading technologies. Students will focus on machining industrial parts from well documented and professional prints, as well as from documented sketches created on a factory floor on their own. Projects should be more advanced than projects developed in IND140. Students will be assessed by their accuracy, efficiency and finished product using their abilities.
(2+2) S
Prerequisite: IND140

IND241  Tooling & Fixtures – Lubricants & Coolants 3 Cr. Hrs.
Tooling, Jigs & Fixtures, Dies, Lubricants and Coolants are an integral part of modern machine practices. This course will provide the student with a basic foundation in Tooling, Jigs & Fixtures, and Die application and theory. Tool selection, tool application, tooling speeds and feeds will be emphasized. Jig & Fixture application will introduce the student to the use of Jigs & Fixtures in machining practices, datums of Jigs & Fixtures, and choice of Jigs & Fixtures for specific applications. Basic Die theory and design will be studied. The function, use, and types of lubricants and coolants will be covered in depth.
(2+2) S
Prerequisite: IND140

IND250  Capstone Project (CND Operations)  3 Cr. Hrs.
This course will focus on a comprehensive project that will require the student to utilize the knowledge and skill learned throughout the program, in order to prepare to work in a CNC production environment. This experiential learning will focus on an actual project setup by a company that would potentially hire students from this program. Students will interact with the instructor and possibly in a small group setting with other students in the class, yet be assessed independently. The end result will be the student setting up and maintaining a CNC machining process in a plant floor environment.
(2+3) F

INT120  HVACR I  3 Cr. Hrs.
An introductory Heating, Ventilation, Air Conditioning and Refrigeration course for skilled trades personnel. The course is a study of basic thermo-dynamic principles, with a practical approach to applications in a residential, commercial and industrial environment. The course will cover basic heating and cooling concepts, refrigerant properties, psychrometrics, terminology, safety, troubleshooting and applications of basic mechanical heating and cooling components and their electric / mechanical control.
(2+2) F
Prerequisite: IND120 or EET121
INT220  HVACR II  3 Cr. Hrs.  
An intermediate study of the HVAC field.  Studies will include commercial and industrial designs and equipment, Load Calculations and System Sizing.  Concepts of equipment control will be introduced featuring Low Voltage, High Voltage methodologies.  
(2+2) S  
Prerequisite: INT120

INT221  HVAC III Heating Systems  3 Cr. Hrs.  
Learning outcomes to be developed in this course focus on the heating aspect of climate control.  Topics to be covered would include “forced air” heating applications including natural gas, propane, fuel oil, electric resistance and heat-pump systems and their controls.  Other heating topics would include Hydronics applications; i.e. residential, commercial and institutional boiler systems and their controls.  Heat-pump technology will feature both “air-to-air” and geothermal technologies.  
(2+2) S  
Prerequisite: INT220

MEA101  Medical Assisting Clinical I  3 Cr. Hrs.  
This course is designed to provide the basic knowledge assisting physicians, or medical office staff with medical exam room preparation, routine patient examination preparation, as well as assisting with basic clinical procedures and in-office diagnostic testing.  
(1+4) F, S  
Co-requisites: BIO150 and MEA105

MEA105  Microbiology for Medical Assistants  3 Cr. Hrs.  
This course introduces basic laboratory principles and testing techniques.  Topics covered include the proper collection and processing of blood and non-blood specimens for therapeutic treatment, diagnostic procedures, or analysis.  Proper documentation procedures as well as common clinical complications associated with such practices will be reviewed.  
(2+2) F,S  
Prerequisite: High School Biology or BIO 101 with grade of “C” or better

MEA108  Administrative Medical Office Procedure  3 Cr. Hrs.  
This course will provide a basic understanding of the administrative duties and responsibilities that pertain to the medical office.  This includes instruction and medical correspondence and records, case histories of patients, filing, telephone procedures, appointment scheduling, receptionist duties, processing mail, collection practices, and financial practices.  This course will also familiarize the student with computer applications in the health care setting.  It is designed to provide the student with basics of operations and application of computer usage within the health care provider office.  This course includes simulated data entry for patient’s record, appointment scheduling and day sheet transactions.  
(2+2) S  
Prerequisites: ENG111 and OAS101 or CIS114

MEA110  Pharmacology for a Allied Health Professional  3 Cr. Hrs.  
The most common medications used and prescribed in a physician’s office are studied.  The actions, side effects, contraindications, and administration implications are emphasized.  Content related to writing prescriptions, storing of meds, handling of narcotics and searching of pharmaceutical references is included.  
(3+0) F  
Co-requisite: BIO150

MEA200  Medical Assisting Administrative Externship  4 Cr. Hrs.  
This course provides opportunities to observe, perform, and discuss various administrative competencies under supervision, with learning experiences obtained in selected physicians offices, clinics or hospitals.  
(2+6) F, S  
Prerequisites: MEA108, OAS111, and MEA/OAS227  
Co-requisite: OAS/MEA283

MEA201  Medical Assisting Clinical II  3 Cr. Hrs.  
Clinical II is a continuation of Clinical I.  Following the Clinical II experience students will be able to administer various forms of medication, demonstrate proper technique for venipuncture for purpose of obtaining blood specimens and preparing intravenous medications and fluids and demonstrate skills in assisting with minor surgical procedures.  
(1+4) S  
Prerequisites: MEA101, MEA105, MEA110, and MEA205

MEA202  Medical Assisting Clinical Externship/CMA Review  6 Cr. Hrs.  
This course provides opportunities to observe, perform, and discuss various clinical competencies under supervision, with learning experiences obtained in selected physicians offices, clinics or hospitals.  This course will also review the following basic principles of psychology as they apply to the medical assistant: developmental stages of the life cycle, hereditary, cultural and environmental influences on behavior, mental health and applied psychology.  In addition, this course addresses the preparation for the Certified Medical Assisting Exam, including a review of all three components of the CMA exam.  This course presents an explanation of how the exam is scored and provides opportunities to take practice exams.  
(4+6) F, S, SU  
Prerequisites: MEA101, MEA105, MEA110  
Co-requisite: MEA201

MEA205  Disease Conditions  3 Cr. Hrs.  
This course presents the basic concepts of diseases, their courses and function disturbances as they relate to body systems.  This course includes the precipitating risk factors and appropriate methods of patient education regarding various disease processes.  
(3+0) F, S  
Prerequisite: BIO150
MET100  Intro to Engineering Technology  2-3 Cr. Hrs.
This course introduces the field of engineering to the student who is interested in engineering technologies. It explores multiple disciplines and careers available. Additionally, the student will solidify knowledge of basic mathematics, measurement systems, and computer skills necessary to succeed in an engineering environment.
(2 or 3+0) F
Prerequisite: MTH080

MET103  Applied Geometry & Trigonometry  3 Cr. Hrs.
Geometry includes definitions and descriptions of geometric terms, axioms, theorems, propositions dealing with straight lines, triangles, polygons, and circles, as well as perpendicular and parallel relationships. Trigonometry includes definitions of basic trigonometric functions, use of trigonometric tables, solutions of right triangle and oblique triangle problems, use of sine, cosine, tangent and their reciprocals in the solutions of unknown angles, logarithms, and practical shop problems.
(2+2) F, S
Prerequisites: MTH080 or instructor permission

MET110  Print Reading & Sketching  3 Cr. Hrs.
Print reading and sketching includes the alphabet of lines, orthographic projection, ordinary views, auxiliary views, pictorial sketching, dimensioning, tolerancing, screw threads and fasteners, mathematics for design and an introduction to geometric dimensioning and tolerances.
(2+2) F, S

MET222  Programming Computer  3 Cr. Hrs.
Numerical Control
The student will view a blueprint of a mechanical part to determine the datum, the order of operations and appropriate fixtures to make the part in a CNC machine. G & M code programs will be written and loaded to the CNC mill or lathe which will create the machined surfaces of the part. Conversational programming will be demonstrated. A familiarity with geometry, trigonometry, computers, and CAD is helpful.
(2+3) S
Prerequisites: IND140, or instructor permission
MET223  CAM I  4 Cr. Hrs.
This course is a study in the basic fundamentals of Computer-Aided-Manufacturing-Machining (CAM). The student will become proficient in the use of manipulating CAM software in a hands-on environment. Datums, tool selection, speeds, feeds, and part identification will be emphasized.
(3+3) F
Prerequisites: MET222 or instructor permission

MET224  Strength of Materials  3 Cr. Hrs.
Learn how to analyze the mechanical and thermal loads on structures, beams, and columns, and how to calculate stress, strain, and deflection. Application of formulas and design considerations are stressed. Transfer Assurance Guide (TAG) approved effective spring 2008 (OET008 - Strength of Materials).
(3+0) F
Prerequisites: MET235 and PHY251

MET235  Statics  3 Cr. Hrs.
A study of resolution of forces on rigid bodies using conditions of equilibrium and vector analysis. Includes the analysis of trusses, friction, and moments of inertia. Transfer Assurance Guide (TAG) approved effective spring 2008 (OET007 - Statics).
(2+2) F
Prerequisite: PHY251

MET255  Fluid Mechanics  3 Cr. Hrs.
Fluid power is an efficient way to move energy without mechanical belts, chains, or levers. The physics of fluids, components, troubleshooting, and design applications for hydraulic and pneumatic systems are covered in this class. This class will introduce the student to both hydraulic and pneumatic components. This course will simulate an industrial environment; following all safety procedures will be required. Everyone will wear safety glasses while working in the lab! Failure to comply will result in not being able to work in lab and therefore lowering your lab grade(s). Transfer Assurance Guide (TAG) approved effective spring 2009 (OET009 - Fluid Mechanics).
(2+2) S
Prerequisite: PHY251

MET260  CAM II  3 Cr. Hrs.
CAM II is a continuation of CAM I. This is an advanced course that introduces the student to Advanced Milling, Solids, Surfaces, and 3D cutter-pathing. Lathe and 4th and 5th axis programming will be introduced as time allows. 3D drawings, solids and surfaces will be created by the student. Toolpaths and NC files will be created to the 3D drawings, solids and surfaces. The tool paths created will be used to create a part on a CNC machining center.
(2+2) S
Prerequisite: MET223

MET262  CAD/CAM Project  4 Cr. Hrs.
This is a capstone class that requires the student to design, fabricate and test a working machine component. Solid Modeling and CAM technology will be the focus, with supporting CMM technology. The students will be required to apply the technology they learned in individual technology classes.
(3+2) S
Prerequisites: CAD213, MET223, and QCT141

MET265  Machine Design  3 Cr. Hrs.
This course is designed to assist students with the basic approach to machine design through the analysis of static and dynamic stresses. The course will focus on the strength of materials and how they relate to machine design. Design projects will be included.
(3+0) S
Prerequisite: PHY251

MET290  Engineering Technology 1-4 Cr. Hrs.
Co-op/Internship
The Co-op/Internship is a job-related experience in which the student works in a position consistent with the program major. The student is expected to integrate skills learned in the educational program with job responsibilities, while applying work experience to classroom activities. Primary work duties are documented through a work log, incident summary, and a focused report. Enrollment only with permission of the instructor. F, S, SU

MGT110  Management  3 Cr. Hrs.
This course focuses on the principles of coordinating an organization’s objectives. Major emphasis is devoted to the four management functions: planning, organizing, leading, and controlling. Issues such as decision making, communication, motivation, leadership, diversity, social responsibility and ethics, and global management are addressed.
(3+0) F, S, SU

MGT120  Supervision  3 Cr. Hrs.
This course focuses on the supervisor/employee relationship. Primary topics include motivation, goal setting, performance appraisal, and management of a team of employees.
(3+0) F, S, SU

MGT210  Human Resource Management  3 Cr. Hrs.
This course is a study of personnel management. Major topics include planning, job design, recruitment, employee selection, training, performance appraisal, and contract administration. Safety and government regulations are included.
(3+0) F, S

MGT221  Entrepreneurship  3 Cr. Hrs.
This course is a study of opportunities and challenges facing entrepreneurs in a dynamic marketplace. Topics include recognizing and exploiting viable business opportunities, writing a business plan, managing inventory, cash management, employee management (including hiring, training, and evaluation), marketing, and using technology. Emphasis is placed on self-employment and the issues of efficiently and effectively running a business.
(3+0) S

MGT230  Retail Management  3 Cr. Hrs.
This course focuses on strategic and tactical issues for retailers, both large and small, domestic and international, selling both merchandise and services. Emphasis is placed on financial considerations and implementation through merchandise and store management.
(3+0) S
MGT280  Business Climate Analysis  3 Cr. Hrs.
This course includes research, analysis, and summary of the business climate in a specific region. Students will assess regional, cultural, political, commercial, and financial issues. They will also investigate availability of labor, manufacturing, transportation, and technological resources. Students work on a team to collect information and develop a report which answers the question, “How To Do Business?” in that region. The finished product will be presented by a team of students.
(3+0) F, S
Prerequisites: ACC111, ECO212, ENG112, MKT110, and MGT110 or BAN110
Co-requisite: MGT230

MGT281  Global Business Climate Analysis  3 Cr. Hrs.
This course includes research, analysis, and summary of the business climate in a specific region. Students will assess regional, cultural, political, commercial, and financial issues. They will also investigate availability of manufacturing, transportation, labor, and technological resources. Students are required to travel to the international region and develop a Business Climate Summary. The finished product will be developed and presented by a team of students.
(3+0) S

MGT290  Business Management Internship  1-3 Cr. Hrs.
This is a management experience related to the student’s program of study. The student is accepted on the basis of academic progress and available work site. Enrollment only with instructor permission.
(1+20) F, S, SU

MKT110  Marketing  3 Cr. Hrs.
Marketing is an introductory course that exposes the student to the “marketing mix” (product, price, promotion, distribution). Topics include the global environment and social and ethical responsibilities; using technology and information to build customer relationships; target markets and customer behavior; product decisions; distribution decisions; promotion decisions; and pricing decisions. The topics are looked at from the profit and nonprofit viewpoint. Global as well as domestic strategies are examined. The student is introduced to the above topics through lecture, textbook readings, electronic media presentations, classroom discussions, and a team marketing project. Transfer Assurance Guide (TAG) approved effective spring 2008 (OBU006 - Principles of Marketing Management).
(3+0) F, S, SU
Co-requisite: ECO212

MKT210  Advertising  3 Cr. Hrs.
This course is a comprehensive analysis of the world of advertising and sales promotion. An understanding of the various modes of communications used in an advertising campaign and the importance of integration for advertising success will be stressed.
(3+0) F

MKT230  Salesmanship  3 Cr. Hrs.
This course focuses on many aspects of personal selling including both customer and buyer relationships, communication skills, prospecting, sales presentations, and sales management.
(3+0) S

MTH050  Basic Mathematics  4 Cr. Hrs.
Designed to improve basic computational skills, as well as introduce the student to computational techniques related to their degree and preliminary algebraic concepts. The material will cover operations with whole numbers, fractions, decimals, ratio and proportions, percentages, integers, and application problems.
(4+0) F, S, SU

MTH078  Beginning Algebra I  3 Cr. Hrs.
This is the first part of a two-course sequence designed for students with no previous algebra experience or low confidence in their ability to succeed in an algebra class. The course introduces the properties, rules and basic techniques of algebra as well as translation between English and the language of algebra. Topics include integers and operations, variables and algebraic expressions, linear equations, graphing, and systems of equations. MTH078 and MTH079 cover the same material as MTH080, but at slower pace.
(3+0) F, S
Prerequisite: MTH050, high school equivalent, or satisfactory score on Course Placement Test.

MTH079  Beginning Algebra II  3 Cr. Hrs.
This is the second part of a two-course sequence designed for students with no previous algebra experience. New topics include exponents and polynomials, factoring, solving quadratic equations and applications, and rational expressions.
(3+0) F, S
Pre-requisite: MTH 050, high school equivalent, or satisfactory score on Course Placement Test.

MTH080  Review of Beginning Algebra  4 Cr. Hrs.
This is an intensive first course in algebra. It is recommended only for students who are confident in their math skills or need a review of basic algebraic techniques before taking MTH090. The course introduces the properties, rules and basic techniques of algebra as well as translation between English and the language of algebra. Topics include linear equations, polynomials, factoring, graphing, systems of equations, and rational expressions.
(4+0) F, S, SU
Pre-requisite: MTH050, high school equivalent, or satisfactory score on Course Placement Test.

MTH090  Intermediate Algebra  3 Cr. Hrs.
Intended for those students who have passed a previous algebra class. Designed to review topics introduced in MTH080 but at an accelerated pace and with more depth and rigor. Introduces many new topics including functions, several types of inequalities, radical expressions and equations, rational expressions, complex numbers, and quadratic equations including completing the square and the quadratic formula.
(3+0) F, S, SU
Pre-requisite: MTH079 or MTH080, high school equivalent, or satisfactory score on Course Placement Test.
MTH099 Engineering Math 3.5 Cr. Hrs.
The objective of this course is to increase students preparedness in basic algebra and trigonometry skills used in engineering. These concepts will be reviewed, refreshed, and mastered through application to engineering problems. This course is designed for students who have had some algebra and need a review of specific mathematical topics to prepare them for the engineering technologies course sequence. (3+1) F, S
Prerequisite: MTH080 or H.S. Algebra II with “C” or better

MTH109 College Algebra 3 Cr. Hrs.
Students taking this class should be able to solve quadratic equations by factoring, completing the square, and using the quadratic formula. They should also be familiar with complex numbers and solving rational equations. College Algebra topics include: polynomial, rational, exponential, and logarithmic functions and graphs. Equations and inequalities are covered including solutions of systems of equations, matrices and determinants. Application problems build skills in problem solving. (Ohio Transfer Module TMM001 approved) (3+0) F, S, SU
Prerequisite: MTH090 or satisfactory score on the Course Placement Test

MTH112 Trigonometry 3 Cr. Hrs.
This course is designed to follow MTH109 and replaces MTH110. Topics include both right triangle and circle definitions, solving all types of triangles, trigonometric identities and equations, selected vector and complex number problems, and the polar coordinate system. (Ohio Transfer Module TMM003 approved) (3+0) F, S
Co-requisite: MTH109 or satisfactory score on the Course Placement Test.

MTH151 Mathematics Review for Calculus 1 Cr. Hr.
This course is a review of algebra, trigonometry, and graphing calculator skills necessary for success in the Calculus sequence. Students completed MTH109 and MTH112 previously or a pre-calculus sequence in high school but have been away from the material for a time will have a chance to refresh their skills to make learning new material in Calculus easier. In addition students who are uncertain of the level of their preparation will benefit from taking this course before they attempt Calculus. Topics include an extensive review of algebraic manipulation skills, solving degree 1 and 2 equations, rational equations, exponential and logarithmic equations, functions and their graphs, composition and decomposition of functions, trigonometric functions and equations. (1+0) S, SU
Prerequisite: MTH109 and MTH112, high school equivalent pre-Calculus preparation, or permission of the instructor

MTH170 Survey of Mathematics 3 Cr. Hrs.
This course presents a variety of mathematical ideas and concepts to give students an idea of the breadth and vitality of mathematics. Among others, topics will include geometry, number theory, statistics and probability. Although some manipulative techniques will be reviewed, this course in not intended for improvement of algebra skills or other specific content. Instead the emphasis is on understanding how fundamental concepts of mathematics work together as a unified whole. This course is specific to education majors preparing for early childhood or middle grade teaching. (3+0) S
Prerequisite: MTH080, high school equivalent, or satisfactory score on Course Placement Test

MTH213 Calculus I 5 Cr. Hrs.
Designed for those students who have mastered algebra and trigonometry and who are planning to pursue a four-year degree program. Topics include a review of functions, limits, derivatives of algebraic and transcendental functions, applications of derivative, and an introduction to integrals. Transfer Assurance Guide (TAG) approved effective fall 2005 (OMT005 - Calculus I and OMT017 - Calculus I and II Sequence, Course 1 of 2). (Ohio Transfer Module TMM005 approved) (5+0) F
Prerequisites: MTH112 or MTH122, or satisfactory score on the Course Placement Test

MTH214 Calculus II 5 Cr. Hrs.
This course is designed for those students who have completed MTH213. Topics include techniques of integration, applications of integrals, sequences and series, introduction to differential equations, conics, and parametric and polar graphing. Transfer Assurance Guide (TAG) approved effective fall 2005 (OMT006 - Calculus II and OMT017 - Calculus I and II Sequence, Course 2 of 2). (Ohio Transfer Module TMM006 approved) (5+0) S
Prerequisite: MTH213

MUS120 Chorus 3 Cr. Hrs.
This course is a vocal ensemble for students, faculty, staff, and community members with an interest in singing. A variety of music is studied, emphasizing techniques of singing and musical concepts. The group performs several times each term. (3+0)

MUS121 Beginning Chorus 1 Cr. Hr.
This beginning course is a vocal ensemble for students, faculty, staff, and community members with an interest in singing. A variety of music is studied, emphasizing techniques of singing and musical concepts. The group performs several times each term. (1+0)

MUS122 Intermediate Chorus 1 Cr. Hr.
This intermediate course is a vocal ensemble for students, faculty, staff, and community members with an interest in singing. A variety of music is studied, emphasizing techniques of singing and musical concepts. The group performs several times each term. (1+0)
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Co-requisites</th>
<th>Course Fee</th>
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</thead>
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<tr>
<td>MUS123</td>
<td>Advanced Chorus</td>
<td>1 Cr. Hr.</td>
<td>This advanced course is a vocal ensemble for students, faculty, staff, and community members with an interest in singing. A variety of music is studied, emphasizing techniques of singing and musical concepts. The group performs several times each term.</td>
<td>(1+0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NRS100</td>
<td>Nurse Aide Certificate</td>
<td>4 Cr. Hrs.</td>
<td>This course will prepare students for employment as a nurse aide. Students are eligible to take the state certification exam upon successful completion of program. This course is taught in cooperation with Four County Career Center and Vantage Career Center and includes 24 clinical hours held at a local long term healthcare facility.</td>
<td>(3.5+0.5)</td>
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</tr>
<tr>
<td>NRS105</td>
<td>Math for Nurses</td>
<td>1 Cr. Hr.</td>
<td>This math course is designed for the student who will be in a nursing health care technology. It includes study of metric, apothecary, and household systems of weights and measures relating to the calculation and administration of medications. The course emphasizes solving oral and parenteral drug dosage problems as they might occur in the clinical area.</td>
<td>(1+0) F, S</td>
<td>Prerequisite: MTH080</td>
<td></td>
</tr>
<tr>
<td>NRS106</td>
<td>Nursing Perspectives</td>
<td>2 Cr. Hrs.</td>
<td>This course introduces the student to concepts related to the history of nursing, selected roles of the nurse, the nursing process, selected professional issues and educational trends. Included in this course is an examination of theory based nursing concepts with an emphasis on the Roy Adaptation Model.</td>
<td>(2+0) F, S</td>
<td>Prerequisite: Admission to the Nursing Program</td>
<td></td>
</tr>
<tr>
<td>NRS107</td>
<td>Basic Concepts In Nursing</td>
<td>6 Cr. Hrs.</td>
<td>This course introduces the student to concepts of theory based nursing with the emphasis on the nursing process and application of the Roy Adaptation Model. Included will be presentation and application of basic care concepts, use of computers in nursing and related medical terminology in dealing with common stimuli experienced by the adult client.</td>
<td>(3+9) F, S</td>
<td>Prerequisite: Admission to the Nursing Program</td>
<td></td>
</tr>
<tr>
<td>NRS108</td>
<td>Nursing Care of Clients with Physiological Health Needs I</td>
<td>6 Cr. Hrs.</td>
<td>The course provides for the development and application of concepts of nursing for assisting clients in adapting to the physiological mode and related health needs.</td>
<td>(3+9) F, S</td>
<td>Prerequisite: NRS106, NRS107, BIO231, ENG111, NRS106, and PSY110</td>
<td></td>
</tr>
<tr>
<td>NRS110</td>
<td>Pharmacology</td>
<td>3 Cr. Hrs.</td>
<td>This course focuses on pharmacological theory of broad classifications of common medications in current use with application to nursing. This course includes federal drug legislation and the responsibility of drug administration.</td>
<td>(3+0) F, S</td>
<td>Prerequisite: NRS106 and NRS107 or PNE120 or permission of Nursing Department</td>
<td></td>
</tr>
<tr>
<td>NRS111</td>
<td>Pharmacology I</td>
<td>1.5 Cr. Hrs.</td>
<td>Pharmacological theory of broad classifications of common medications in current use with application to nursing. Includes federal drug legislation and the responsibility of drug administration. This is the first part of a 2-course sequence equating to NRS110.</td>
<td>(1.5 + 0) SU</td>
<td>Prerequisite: PNE120</td>
<td></td>
</tr>
<tr>
<td>NRS112</td>
<td>Pharmacology II</td>
<td>1.5 Cr. Hrs.</td>
<td>Pharmacological theory of broad classifications of common medications in current use with application to nursing. Includes federal drug legislation and the responsibility of drug administration. This course is the 2nd part of a 2-course sequence equating to NRS110.</td>
<td>(1.5 + 0) F</td>
<td>Prerequisite: PNE120 and NRS111</td>
<td></td>
</tr>
<tr>
<td>NRS113</td>
<td>Cardiopulmonary Resuscitation</td>
<td>1 Cr. Hr.</td>
<td>A basic course in cardiopulmonary resuscitation for cardiac arrest and respiratory emergencies. Includes infant, child, adult, and two-man CPR. Certificate issued upon completion.</td>
<td>(1+3) F, S</td>
<td>Prerequisite: NRS106, NRS107, BIO231, and ENG111</td>
<td></td>
</tr>
<tr>
<td>NRS131</td>
<td>Health Assessment in Nursing</td>
<td>2 Cr. Hrs.</td>
<td>The course focuses on the application of the nursing process related to physical assessment and history taking skills with emphasis on the adult client.</td>
<td>(1+0) F, S</td>
<td>Co-requisite: BIO232</td>
<td></td>
</tr>
<tr>
<td>NRS133</td>
<td>Concepts in End of Life Care</td>
<td>1 Cr. Hr.</td>
<td>This course provides an overview of the knowledge necessary to provide optimal holistic care to clients at the end of life. Content covers the essential aspects of physical, psychosocial, and emotional nursing care as applied to clients and their families.</td>
<td>(1+0) F, S</td>
<td>Prerequisite: Admission to Nursing Program</td>
<td></td>
</tr>
<tr>
<td>NRS207</td>
<td>Nursing Care of the Family Throughout Pregnancy</td>
<td>2 Cr. Hrs.</td>
<td>This course will substitute for NRS213 for the LPN graduate who is not successful on the Nursing Care During Childbearing NLN NACE I Exam. This course focuses on the development and application of knowledge and skills in providing care for the pregnant woman and childbearing family throughout pregnancy: prenatal, intrapartal, postpartal and neonatal periods. The nursing process is used to assist in providing nursing care for clients and their families throughout the maternity cycle in adapting to their changing roles.</td>
<td>(2+0) SU</td>
<td>Prerequisite: Permission by Nursing Department</td>
<td></td>
</tr>
</tbody>
</table>

F = Fall    S = Spring    SU = Summer
NRS208 Nursing Care of the Family with Children 2 Cr. Hrs.
This course is designed for the LPN graduate who was not successful on the Nursing Care of the Child NLN NACE I Exam. This course will focus on the development and application of knowledge and skills in providing family-centered care for well and sick children as well as anticipatory guidance for their families. Application of Growth and Development principles within the nursing process is emphasized.
(2+0) SU
Prerequisite: Permission by Nursing Department

NRS209 Nursing Care During Childbearing and Childhood 3 Cr. Hrs.
This course will substitute for NRS213 & NRS214 for the LPN graduate who is not successful on the Nursing Care During Childbearing and Nursing Care of the Child NLN NACE I Exams. This course focuses on the development and application of knowledge and skills in providing care for the childbearing family. The nursing process is used to assist clients of the developing family to adapt to their changing role.
(3+0) S
Prerequisite: Permission by Nursing Department

NRS211 LPN to RN Transition 3 Cr. Hrs.
This three-credit hour course is designed to enable the student to explore integrative concepts in nursing and to assist the student in the transition from licensed practical nurse to registered nurse. Students refine and update previous learning in addition to identifying goals for a successful transition into the registered nursing program. Combined with classroom and nursing laboratory experience, the student learns through the application of concepts. The student will demonstrate the ability to solve problems through the use of the nursing process with a focus on client assessment and to communicate more effectively. This course meets requirements of the Ohio Nursing Articulation Model.
(2+2) F - Archbold, S - Van Wert
Prerequisite: Admission to the Nursing Program

NRS212 LPN to RN Bridge Course 1 Cr. Hr.
This course is designed to meet the needs of the LPN who will be entering the Associate Degree Program at the second level. The focus of the course will be on the Roy Adaptation Model for Nursing and its use within the nursing process, and utilization of computers within nursing.
(1+0) F - Archbold, S - Van Wert

NRS213 Nursing Care of the Childbearing Family 3 Cr. Hrs.
This course focuses on the development and application of knowledge and skills in providing care for the mother/parents and newborn. The nursing process is used to assist clients of the developing family to adapt to their changing role.
(3+9) SU
Prerequisites: NRS108, PSY230, NRS131 and NRS110

NRS214 Nursing Care of the Childrearing Family 3 Cr. Hrs.
This course focuses on the development and application of knowledge and skills in providing care for the child and the childrearing family. The nursing process is used to assist clients of the developing family to adapt to their changing role.
(3+9) SU
Prerequisites: NRS108, PSY230, NRS131, and NRS110

NRS215 Nursing Care of Clients with Psychosocial Health Needs 5 Cr. Hrs.
The focus is on the development and application of knowledge and skills in providing nursing care to clients with common psychological health needs within a variety of settings.
(3+6) F, S
Prerequisites: NRS131, PSY110, NRS110 and NRS108 or NRS211/212

NRS216 Nursing Care Of Clients with Physiological Health Needs II 3 Cr. Hrs.
The focus is on the development and application of knowledge and skills in providing nursing care to clients with common long-term physiological health needs within a variety of settings.
(1+6) F, S
Prerequisite: NRS131, NRS110 and NRS108 or NRS211/212
Co-requisite: BIO257 and PHI220

NRS217 Nursing Care of Clients with Physiological Health Needs III 5 Cr. Hrs.
The course provides for further development and application of concepts of nursing for assisting clients in adapting to the physiologic mode and related health needs.
(3+6) F, S
Prerequisites: NRS213, NRS214, NRS215, and NRS216
Co-requisite: STA120, ENG112

NRS218 Concepts in Management 4 Cr. Hrs.
Groups of Clients
This course provides an introduction to the skills and knowledge necessary to manage care of a group of clients in a cost effective manner. Content includes organization of care, principles of working with others, concepts of leadership, research, management and organizational structure. Current issues in the political and cultural systems which impact the nursing profession are examined. The transition from student to practitioner is facilitated through course concepts and clinical placement.
(1+9) F, S
Prerequisites: NRS213, NRS214, NRS215, and NRS216
Co-requisites: NRS217, STA120 and ENG112

NRS220 Special Problems in Nursing I 1-4 Cr. Hrs.
An independent study which focuses on a topic or selected problem in nursing, subject to the approval and supervision of an assigned nursing instructor. Content and methodology to be arranged on an individual basis. Credit will be determined by the nature and extent of the independent study.
F, S, SU
Prerequisite: Permission of the Dean of Nursing
OAS101 Business Document Formatting & Skillbuilding 3 Cr. Hrs.
This course introduces students to basic keyboarding and formatting techniques, editing and proofreading of keyed copy, and the development of keystroking accuracy and speed. Correct format for keying business documents will be stressed.
(3+0) F, S, SU
Prerequisite: CIS090 and OAS090 or Satisfactory Score on Course Placement Tests

OAS102 Advanced Business Document Formatting & Skillbuilding 3 Cr. Hrs.
This is a comprehensive course based on the knowledge and skills necessary to perform duties in a modern office. Advanced keyboarding, refinement of formatting and editing of business documents using computer software, improved communication skills, and the continued development of higher keystroking accuracy and speed will be stressed. Practical experiences and simulated work experiences are included.
(3+0) F, S, SU
Prerequisite: OAS101

OAS103 Office Accounting 3 Cr. Hrs.
This course is designed for Office Administrative Services and Early Childhood Development majors. It may not be used as a substitute for ACC111. The primary emphasis of this course will be on a sole proprietorship operating a service business and a merchandising business. The course includes a study of the accounting cycle, beginning with the business transaction and ending with the preparation of the financial statements and all of the necessary end of the period procedures. Other topics include bank reconciliations, petty cash funds, and cash change funds. Considerable emphasis will also be placed on payroll. Students will be able to calculate payrolls and be familiar with all of the necessary payroll forms.
(3+0) F-Day, S

OAS104 Voice Recognition 1 Cr. Hr.
This is a hands-on course introducing the student to the use of speech recognition technology in the office. Topics include but are not limited to setting up the speech recognition software, building vocabulary files, basic dictation skills, creating and editing documents, cursor control, and detecting recognition errors.
(0+2) F, S
Prerequisites: CIS090 and OAS090 or Satisfactory Score on Course Placement Tests

OAS110 Records Management 3 Cr. Hrs.
This is a course in the field of records management emphasizing principles and practices for manual and automated records systems. A practice set is used in which students practice card filing and correspondence filing using the alphabetic, subject, numeric and geographic filing systems. Computer applications are used in applying alphabetic indexing rules to a computer records database.
(3+0) F, SU

OAS111 Electronic Health Records 3 Cr. Hrs.
This course will give students an understanding of practical knowledge of managing Electronic Health Records (EHR). It will give students a hands-on experience using SpringCharts EHR. This course will also familiarize students with the basic operations utilizing managerial features of SpringCharts including patient scheduling, tracking patient activity, and sending and receiving reminders, messages, and emails.
(3+0) F, S
Prerequisite: OAS/MEA227

OAS160 Administrative Technology & Procedures 3 Cr. Hrs.
This is a comprehensive course based on the knowledge and skills necessary to perform duties in a modern office. Practical experiences and simulated work experiences are included. Telephone techniques, mail processing, creation of other business document information, and case studies are addressed. Development of the career professional will be included.
(3+0) F, S
Co-requisite: ENG111
OAS180  Medical Terminology  3 Cr. Hrs.
This is a study of prefixes, suffixes, and word roots used in developing a medical vocabulary. Special emphasis is placed upon the usage, spelling, and pronunciation of these terms as they apply to the major body systems in terms of health and disease. Transfer Assurance Guide (TAG) approved effective summer 2007 (OHL005 - Medical Terminology).
(3+0) F, S, SU

OAS200  Speedbuilding  1 Cr. Hr.
This course emphasizes the development of speed and accuracy at the keyboard through timed writings and corrective drills at the computer. It will provide intensive practice in speed and accuracy development through remediation, reinforcement, and skillbuilding. Students will also learn speed and accuracy development techniques and strategies.
(0+2) F, SU
Prerequisite: OAS102

OAS223  CCA Coding Exam Review  3 Cr. Hrs.
This course is for students who have already learned the basics of procedural and diagnostic coding. Students can utilize this course to review the subject matter briefly, as it relates to overall coding issues. A Certified Coding Associate candidate will want to take this course prior to the national CCS-P and CCS exam courses.
(3+0) S
Prerequisites: OAS180, OAS/MEA227, OAS/MEA228
Co-requisite: OAS/MEA283

OAS224  CCS Hospital Coding Exam Review  3 Cr. Hrs.
This course is for students who have already learned the basics of procedural and diagnostic coding. Students can utilize this course to review the subject matter briefly as it relates to the hospital reimbursement process, and complete abstracting exercises. The exercises will simulate the day-to-day coding in the hospital setting.
(3+0) S
Prerequisites: OAS180, OAS/MEA227, OAS/MEA228
Co-requisite: OAS/MEA283

OAS225  CCS-P Physician Office Code Exam  3 Cr. Hrs.
This course is for students who have already learned the basics of procedural and diagnostic coding. Students can utilize this course to review the subject matter briefly as it relates to the physician’s office, and then complete abstracting exercises. The exercises will simulate the day-to-day coding in a physician’s office.
(3+0) S
Prerequisites: OAS180, MEA/OAS227 and MEA/OAS228
Co-requisite: OAS/MEA283

OAS226  Home-Based Independent 3 Cr. Hrs.
Medical Coder
This course is for students who have already learned the basics of procedural and diagnostic coding. In addition, students should have earned the CCA, CCS, and/or CCS-P credential prior to attempting the material in this course. This course will provide useful information regarding business start-ups, resource and alternative coding opportunities for coding specialists to utilize while pursuing successful independent careers.
(3+0) S
Prerequisites: OAS180, OAS/MEA228, OAS/MEA227
Co-requisite: OAS/MEA283
Recommended: Certification as CCA, CCS, CCS-P

OAS227  Diagnostic Coding  3 Cr. Hrs.
This course gives the student an introduction to the process of diagnostic coding for health insurance reimbursement purposes using the International Classification of Diseases (ICD) system. Students learn the format and organization of the ICD system. They learn to identify abbreviations, symbols and modifiers used in the ICD coding system. Students learn to analyze medical documents to locate and identify primary, principle, secondary and concurrent diagnoses. Students then use their knowledge of anatomy, physiology, disease conditions, pharmacology, along with medical terminology with the ICD process to accurately assign diagnostic codes for insurance reimbursement and later correctly link diagnoses to procedures performed.
(3+0) F, S, SU
Prerequisite: OAS180
Co-requisite: BIO150

OAS228  Procedural Coding  3 Cr. Hrs.
This course gives the student an introduction of the process of procedural coding for health insurance reimbursement purposes using the CPT system developed and updated yearly by the American Medical Association. Students explore the history of and uses for procedural coding. They develop an understanding of the organization of the CPT manual and the conventions that guide its use. They then use their understanding of CPT along with knowledge of medical terminology, pharmacology, disease conditions, anatomy and physiology to correctly assign procedural codes that document and justify charges for procedures and treatments performed.
(3+0) F, S, SU
Prerequisite: OAS/MEA227
Co-requisites: MEA110 and MEA205

OAS230  Transcription  3 Cr. Hrs.
This course is designed to develop skill in listening and transcribing recorded dictation using the computer. A variety of business correspondence is transcribed at the computer with an emphasis on developing language arts skills such as grammar, spelling, word usage, and vocabulary. The importance of mailable documents is stressed.
(3+0) online only - S
Prerequisites: ENG111, OAS101, and CIS112
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>OAS249</td>
<td>Advanced Microsoft Suite</td>
<td>3 Cr. Hrs.</td>
</tr>
<tr>
<td>PAR100</td>
<td>Introduction to Paralegal</td>
<td>3 Cr. Hrs.</td>
</tr>
<tr>
<td>PAR101</td>
<td>Law Office Management</td>
<td>3 Cr. Hrs.</td>
</tr>
<tr>
<td>PAR110</td>
<td>Civil Procedures</td>
<td>3 Cr. Hrs.</td>
</tr>
<tr>
<td>PAR115</td>
<td>Family Law</td>
<td>3 Cr. Hrs.</td>
</tr>
<tr>
<td>PAR205</td>
<td>Real Estate Transactions</td>
<td>3 Cr. Hrs.</td>
</tr>
<tr>
<td>PAR210</td>
<td>Legal Research and Writing</td>
<td>3 Cr. Hrs.</td>
</tr>
<tr>
<td>PAR215</td>
<td>Tort Law</td>
<td>3 Cr. Hrs.</td>
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<tr>
<td>PAR220</td>
<td>Criminal Law</td>
<td>3 Cr. Hrs.</td>
</tr>
<tr>
<td>PAR221</td>
<td>Bankruptcy</td>
<td>3 Cr. Hrs.</td>
</tr>
</tbody>
</table>

This is a comprehensive course stressing the refinement of word processing, spreadsheet, database management, and presentation concepts and procedures; along with reviewing workplace requirements, updating of skills, and prioritizing work assigned. The assignments will go beyond the mechanics of the software. Students will learn design layout, writing, problem-solving, analysis, critical thinking, and information management skills. This course is based on prior experience in Microsoft Office: Word, Excel, Access, PowerPoint, Outlook; keyboarding; records management; and office procedures.

(3+0) S  
Prerequisites: CIS112 and CIS113

This is an introduction to the day-to-day operation of a law office. Emphasis is placed on the development of accurate management systems, common procedures and structures of various law firms emphasizing time keeping, client files, record maintenance and retrieval, planning, billing, collections, and software usage.

(3+0) F - day (odd years), eve (even years)

This is a study of the Federal and State Rules of Evidence and civil procedures. The basic elements of civil claims will be discussed and the initial phase of an action, the complaint, and the discovery process are examined. Emphasis is placed on the role and responsibilities of paralegals in discovery procedure and trial practice.

(3+0) S - day (even years), eve (odd years)

This course covers domestic relations law including marriage, divorce, annulment, separation, adoption, and the rights of children. The paralegal is introduced to the various documents and procedures used pertaining to these family matters.

(3+0) S - day (even years), eve (odd years)

This course introduces the student to the law and terminology involved in real estate and real estate conveyances. The course also examines various contracts, mortgages, deeds, and leases. A case project is included in which students prepare an abstract of title by examining recorded documents. The course is designed to acquaint students with basic real property law, ownership, easement, and mortgages. Course also covers problems arising from sales agreements.

(3+0) F - eve

This course provides the student with the basic research abilities which are necessary in law offices. Students use a law library including reporter systems, legal encyclopedias, codes, and computer searching systems.

(3+0) F - day (even years), eve (odd years)

This course covers the traditional civil wrongs, from both the plaintiff and defendant standpoints. Actual cases will be briefed and discussed. The course stresses the importance of preparation prior to trial.

(3+0) F - day (even years), eve (odd years)

The Ohio Criminal Code and Rules of Criminal Procedure will be the foundation of this examination of the pretrial procedures in a criminal case. Students are exposed to the criminal justice system from the elements of offenses through post-conviction remedies. The drafting of motions and other documents associated with criminal matters are included.

(3+0) S - day (even years), eve (odd years)

This course focuses on the procedures required and forms necessary to file in bankruptcy. The course identifies the skills necessary to gather information and assemble materials for a typical client file.

(3+0) S - eve

F = Fall  S = Spring  SU = Summer

PAR222 Estates, Trusts, & Wills 3 Cr. Hrs.
This is a practical examination of the procedures for drafting wills and probating estates in Ohio. It is a study of the law as applied to the more common forms of wills, trusts, and intestacy. Organization and jurisdiction of the probate court are examined. The documents that must be prepared for the courts, the mechanics of probating the estate, and related accounting matters are examined.
(3+0) S - day (odd years), eve (even years)

PAR290 Paralegal Internship 3 Cr. Hrs.
This is a legal work experience related to the student’s program of study. The student is accepted on the basis of academic progress and available work site. Enrollment only with instructor permission.
(1+20) F, S, SU

PET110 Principles of Plastics 4 Cr. Hrs.
This class is an overview of the plastics industry. Topics covered include basic polymer construction, types, and properties. Different plastic manufacturing processes and the equipment used both primarily and for secondary operations. Quality, defects, causes and monitoring methods including testing. Safety and environmental issues affecting the plastics industry will also be covered.
(3+2) F, S, SU

PET115 Plastics Processes I 4 Cr. Hrs.
This class is a basic overview of the injection molding, extrusion, blow molding, and thermoforming processes. Topics covered will include the materials and properties important to the processes. The injection molding machine, extrusion machine, blow molding machine, support equipment, and tooling used in all the processes will be covered. Job setting and establishing the process will be a large focus of the class.
(3+2) F
Co-requisite: PET110

PET215 Plastics Processes II 4 Cr. Hrs.
This class is a continuation of the Plastics Processes I class. Topics covered are process optimization, documentation and trouble shooting. Special Injection molding and extrusion processes including co-injection-compression, structural foam, corrugated pipe, blown film, compounding, and others will be discussed also. Knowledge of these topics will be gained through text computer simulation and hands-on lab exercises.
(2+4) S
Prerequisite: PET115

PET231 Plastic Materials Testing 4 Cr. Hrs.
This class is an overview of the more common plastic material properties and performance tests used in industry today. The properties covered will include: mechanical, physical optical, and other properties including a section on color specification and color testing. ASTM and ISO standard test methods will be used to establish and document tests and results. The class will also cover methods of determining an unknown material and general quality standards. Knowledge of these topics will be gained through text, demonstrations and hands-on lab exercises.
(3+2) F
Prerequisites: PET110 and MTH090

PET240 Injection Mold Tooling 4 Cr. Hrs.
An overview of the tooling used in injection molding. The study will cover general mold construction and materials used in the mold. Topics will include the different mold styles such as 2-plate, 3-plate, hot runner, and cold runner. The different systems of a mold including runners, gates, vents, cooling, and ejection will be studied. Part design for acceptable tooling along with tooling practices used in current industry will also be studied. Knowledge of these topics will be gained through text, lecture, and some lab time.
(3+2) F
Prerequisites: PET210 and IND103 with a “C” or better

PET250 Plastics Secondary Operations 4 Cr. Hrs.
This course is an overview of the different secondary processes and equipment used in the plastics industry. Topics will include thermoforming equipment and processes. Fabrication methods including welding and bonding will be covered. Processes such as hot stamping, pad printing, and other methods of decorating will be covered. Also, secondary operations such as trimming and forming will be discussed. The course will be taught as a lecture with some demonstration and hands-on labs.
(3+2) S
Prerequisite: PET110
Co-requisite: MTH090

PHI110 Critical Thinking & Logic 3 Cr. Hrs.
An introduction to the principles of valid reasoning, emphasizing both deductive and inductive logic. Includes analyzing and evaluating arguments, as well as creating arguments in the form of the short, argumentative essay. Writing Intensive.
(3+0) S
Co-requisite: ENG111

PHI201 Introduction to Philosophy 3 Cr. Hrs.
Examines enduring human concerns such as religion, science, knowledge, identity, morality, and justice, using a variety of philosophical perspectives. Transfer Assurance Guide (TAG) approved effective summer 2008 (OAH045 - Introduction to Philosophy). Writing Intensive.
(3+0) F
Co-requisite: ENG111

PHI210 Ethics 3 Cr. Hrs.
An introduction to basic ethical theories and their applications. Students examine the relationship between personal and social values in particular cultural contexts. Transfer Assurance Guide (TAG) approved effective summer 2008 (OAH046 - Introduction to Ethics). Writing Intensive.
(3+0) S
Co-requisite: ENG111

PHI220 Ethics in Health Care 3 Cr. Hrs.
Ethics in health-related issues will be explored. Includes the impact of scientific and technological advances on health care decisions. Writing Intensive.
(3+0) F, S
Co-requisite: ENG111

Students will learn to scrutinize and assess critically scientific information, historical and current, from popular information outlets. This is a science appreciation course (same as CHM100, PHY100). Course projects will be based on the course prefix chosen.

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<tr>
<td>PHY100</td>
<td>The World of Science</td>
<td>3</td>
<td>For non-science majors, assuming no background knowledge. Students will learn to scrutinize and assess critically scientific information, historical and current, from popular information outlets. This is a science appreciation course (same as CHM100, PHY100). Course projects will be based on the course prefix chosen.</td>
</tr>
<tr>
<td>PHY101</td>
<td>Principles of Physical Science</td>
<td>4</td>
<td>An introduction to the basic principles of the physical sciences. Includes subjects of physics, chemistry, geology, astronomy, and meteorology. Understanding of basic concepts is developed through emphasis on scientific methods and basic laboratory procedures and report writing. Includes simple problem solving, lab work and a research paper.</td>
</tr>
<tr>
<td>PHY140</td>
<td>Astronomy</td>
<td>4</td>
<td>An introduction to the science of astronomy. The course will cover elements of the history and development of astronomy, our new understanding of the solar system, stellar astronomy, the galaxies and the structure of the universe. Laboratory reinforces and supplements lectures.</td>
</tr>
<tr>
<td>PHY150</td>
<td>Principles of Geology</td>
<td>4</td>
<td>An introduction to the field of geology and the study of the earth. Covers minerals and rocks and their formation within the context of the earth's geologic history. Emphasis on rocks, soils, and land formations, plate tectonics and natural disasters such as earthquakes. Lab includes field trips and the identification of rocks and minerals. Some chemistry is recommended.</td>
</tr>
<tr>
<td>PHY251</td>
<td>Physics: Mechanics &amp; Heat</td>
<td>4</td>
<td>An algebra based course covering mechanics including force, work, energy, and simple machines, heat and basic thermodynamic concepts, wave motion and sound. It includes problem solving, laboratory work and the writing of technical lab reports. Transfer Assurance Guide (TAG) approved effective fall 2005 (OSC014 - General Physics I - Not for Physics majors and OSC021 - General Physics Sequence - Not for Physics Majors, course 1 of 2).</td>
</tr>
<tr>
<td>PHY252</td>
<td>Physics: Electricity &amp; Magnetism</td>
<td>4</td>
<td>An algebra based course covering electricity and magnetism, light and optical concepts, and basic concepts of modern physics. It includes problem solving, laboratory work and the writing of technical lab reports. Transfer Assurance Guide (TAG) approved effective fall 2005 (OSC015 - Gernal Physics II - Not for Physics majors and OSC021 - General Physics Sequence - Not for Physics Majors, course 2 of 2).</td>
</tr>
<tr>
<td>PLC200</td>
<td>Programmable Controller I</td>
<td>3</td>
<td>The course is a study of the installation, programming and troubleshooting of programmable controlled systems currently used in an industrial environment. The focus will be on Installation, Programming, Engineering and Maintenance tasks performed with PLC systems. The primary PLC used for this class will be the Allen Bradley SLC-500, using RSLogix 500 and RSLinx software. The topics presented will be learned through text, presentations, various exercises, and hands on labs.</td>
</tr>
<tr>
<td>PLC210</td>
<td>Programmable Controller II (AB)</td>
<td>3</td>
<td>This course is an advanced study of the Programmable Automation Controller (PAC) instruction set, and programming of Allen Bradley Control Logix Processors, and hardware interface systems. The PLCs used in this course will be the Allen Bradley Control Logix and Compact Logix Programmable Automation Controllers. PAC networks such as DeviceNet and ControlNet are discussed, as well as Ethernet interfaces. Students will study industrial applications of the PACs focusing on problem solving and project completion. The topics presented will be learned through text, presentations, various exercises, and hands on labs.</td>
</tr>
<tr>
<td>PLC220</td>
<td>PLC III</td>
<td>3</td>
<td>The class is a study of the Allen Bradley Panel View 600 hardware utilizing the Panel Builder 32 Programming software. PLC networks such as Ethernet and Device Net are discussed, as well as Ethernet interfaces. Students will study industrial applications of the Panel View, focusing on problem solving and project completion.</td>
</tr>
<tr>
<td>PLC230</td>
<td>Servo/Robotic Systems</td>
<td>3</td>
<td>Servo/Robotics Systems is an introductory course in industrial robotics with emphasis on the Fanuc R-J3 series robot. The course is intended for students who wish to gain insight into robot operations in order to setup, test, run, and refine application programs for production. Students successfully completing the course will be able to: power up and jog the robot, execute production operations and recover from common faults, create and modify material handling programs and macros, and utilize robot input and output signals. The course consists of lectures, demonstrations, and a series of laboratory exercises using the Fanuc CERT training modules.</td>
</tr>
</tbody>
</table>

F = Fall    S = Spring    SU = Summer

2015 - 2017

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNE105</td>
<td>Effective Communication Skills</td>
<td>1 Cr. Hrs.</td>
</tr>
<tr>
<td></td>
<td>The ability of health care professionals to communicate accurately and effectively in the context of a helping relationship is vital. The course provides tools with which to establish open therapeutic communication with clients, foster teamwork with colleagues, and deal with conflict and aggression in a constructive manner. (1+0) SU</td>
<td></td>
</tr>
<tr>
<td>PNE110</td>
<td>Special Topics in PN</td>
<td>1-4 Cr. Hrs.</td>
</tr>
<tr>
<td></td>
<td>An independent study which focuses on a topic or selected problem in nursing, subject to approval and supervision of an assigned nursing instructor. Content and methodology to be arranged on an individual basis. Credit will be determined by the nature and extent of the independent study. F, S, SU</td>
<td></td>
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<tr>
<td>Prerequisite: Permission of the Dean of Nursing</td>
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<td></td>
</tr>
<tr>
<td>PNE120</td>
<td>Essentials of Practical Nursing</td>
<td>8 Cr. Hrs.</td>
</tr>
<tr>
<td></td>
<td>An introduction to the body of nursing knowledge and skills essential for safe and accurate delivery of care utilizing the nursing process. Basic therapeutic communication, multicultural concepts, IV therapy, fluid and electrolyte balance, and ethical concepts are introduced. (4+12) F, S</td>
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<tr>
<td>Prerequisite: Admission to the Practical Nursing Program</td>
<td></td>
<td></td>
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<tr>
<td>Co-requisites: BIO150 or BIO232, ENG111, and PSY110</td>
<td></td>
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</tr>
<tr>
<td>PNE121</td>
<td>Nursing Care of the Mother and Newborn</td>
<td>2.5 Cr. Hrs.</td>
</tr>
<tr>
<td></td>
<td>This course focuses on nursing care of women related to reproductive health patterns. Emphasis is placed on pregnancy, childbirth, postpartum, and the newborn with nursing care directed in a family-centered holistic approach. Selected women’s health issues and potential complications are included that pertain to the childbearing cycle. Legal and ethical directives are reviewed. This is an eight week course. (3+6) F, S</td>
<td></td>
</tr>
<tr>
<td>Prerequisite: PNE120 and BIO150 or BIO232</td>
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<td></td>
</tr>
<tr>
<td>Co-requisites: PSY230, NRS110 or NRS111, and PNE122</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PNE122</td>
<td>Nursing Care of the Child</td>
<td>2.5 Cr. Hrs.</td>
</tr>
<tr>
<td></td>
<td>This course focuses on nursing care of the child from infancy through adolescence with health care needs. Emphasis is placed on growth and developmental concepts with nursing care directed in a family-centered holistic approach. Health promotion, maintenance, and restoration of the child are examined. Legal and ethical directives are reviewed. This is an eight week course. (3+6) F, S</td>
<td></td>
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<tr>
<td>Prerequisite: PNE120</td>
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<td></td>
</tr>
<tr>
<td>Co-requisites: PSY230, NRS110 or NRS111, and PNE121</td>
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</tr>
<tr>
<td>PNE123</td>
<td>Nursing Care: Adults I</td>
<td>4.5 Cr. Hrs.</td>
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<tr>
<td></td>
<td>Focuses on the care of adults with both acute and chronic medical and surgical conditions. A body systems approach is utilized. Mental health concepts and basic concepts of bioterrorism are introduced. Students continue to develop skills in problem solving through the use of the nursing process as applied to individual situations. This is an eight week course. (6+10) S, SU</td>
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<tr>
<td>Prerequisite: PNE120 and BIO150 or BIO232</td>
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<tr>
<td>Co-requisite: NRS110 or NRS111</td>
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<tr>
<td>PNE124</td>
<td>Nursing Care: Adults II</td>
<td>5.5 Cr. Hrs.</td>
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<tr>
<td></td>
<td>This course builds on previous knowledge and concepts. Acute and chronic conditions of adults are presented over the remaining body systems. Legal issues in practical nursing are discussed as well as the leadership/management role of the practical nurse in caring for groups of individuals. This is an eight week course. (6+15) F, S</td>
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<tr>
<td>Prerequisite: NRS110 or NRS112, PNE121, PNE122, PNE123</td>
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<tr>
<td>Co-requisite: BIO131</td>
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<tr>
<td>PSY110</td>
<td>General Psychology</td>
<td>3 Cr. Hrs.</td>
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<td></td>
<td>This course examines the complex individual, the many factors believed to drive the individual and the resulting behavior. Students discuss empirical investigation and learn how to use these methods as tools in the discovery of individual functioning. This class also explores specific area of inquiry such as cognition, social and developmental psychology, learning, perception, consciousness, organizational, and health psychology. Personality, abnormal behavior, and psychological therapies are discussed. Transfer Assurance Guide (TAG) approved effective summer 2007 (OSS015 - Introduction to the Fundamentals of Psychology). Writing Intensive. (3+0) F, S, SU</td>
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<tr>
<td>Co-requisite: ENG111</td>
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<tr>
<td>PSY210</td>
<td>Abnormal Psychology</td>
<td>3 Cr. Hrs.</td>
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<tr>
<td></td>
<td>This course is designed to provide students with an understanding of maladaptive behavior, its causes and consequences. Emphasis is on research methods and clinical assessment skills. Utilizing the DSMIV, special emphasis is placed on symptom recognition and treatment planning of psychological disorders. The impact of mental illness on the client’s interpersonal relationships as well as cultural differences and societal response to mental illness will be explored. Transfer Assurance Guide (TAG) approved effective spring 2007 (OSS017 - Abnormal Psychology). Writing Intensive. (3+0) F, S, SU</td>
<td></td>
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<tr>
<td>Prerequisite: PSY110, ENG111</td>
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<tr>
<td>PSY220</td>
<td>Social Psychology</td>
<td>3 Cr. Hrs.</td>
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<td></td>
<td>This course provides students with the opportunity to explore the influences of other people, groups, and situations on the individual. Students should also gain a basic understanding of the research process and how it is used to investigate social psychological issues. Topics covered in this class include social perception and cognition, social influence, social relationships and applied social psychology. Students will have many opportunities to apply their new knowledge to critical thinking exercises and group projects. Transfer Assurance Guide (TAG) approved effective fall 2005 (OSS016 - Social Psychology). Writing Intensive. (3+0) S</td>
<td></td>
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<tr>
<td>Prerequisite: PSY110, ENG111</td>
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</tbody>
</table>

**Notes:**
- **F** = Fall
- **S** = Spring
- **SU** = Summer

**Course Offerings:**
- **F, S, SU**
- **Writing Intensive**
- **Transfer Assurance Guide (TAG) approved**

**Curriculum: 2015 - 2017**

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PSY230 Human Growth & Development 3 Cr. Hrs.
This course addresses the study of human development over the entire life span. Topics included in this course are emotional, cognitive, moral, social, and biological development. In addition to these topics, this course offers an analysis of the interaction of human characteristics within the individual and the relationship between individuals, environment and culture at various stages of development. Transfer Assurance Guide (TAG) approved effective spring 2008 (OSS048 - Life Span). Writing Intensive. 
(3+0) F, S, SU
Prerequisite: PSY110, ENG111

PSY260 Forensic Psychology 3 Cr. Hrs.
This course allows students to appreciate the interaction between psychology and the criminal justice field. Students will become familiar with the application of psychological theory, principles, and concepts to both the civil and criminal justice system. 
(3+0)
Prerequisites: PSY110

QCT100 Quality Concepts 3 Cr. Hrs.
This class examines reasons for and philosophies leading to quality. We will look at quality from management, practitioner, and customer perspectives. Students concentrate on quality problem solving and process control tools. Course work includes measurement system analysis and control charting principles. In addition, the student is introduced to probability and studies philosophies espoused by Deming, Crosby, and Juran. 
(3+0) F
Prerequisite: MTH090

QCT111 Quality for Lean Manufacturing 3 Cr. Hrs.
This course deals with managing production operations in manufacturing plants. Two topics, “The 5S’s: Workplace Organization” and “Mistake-Proof It!” prepare the student for a “Lean Manufacturing” project. Course is web based. Instructor available for consultation via e-mail and telephone. Must have the ability to access web courses. 
(2+3) On Demand
Prerequisites: QCT100 and ability to access web courses

QCT141 Precision Measurement 3 Cr. Hrs.
This course provides the student with theory and skills needed to perform dimensional inspections. Students will learn to study a part print, select, and use the proper measuring tool(s). Concepts introduced include precision, discrimination, accuracy and calibration. Previously learned print reading skills are expanded to include Geometric Dimensioning and Tolerancing. 
(2+2) F, S, Prerequisites: MET110, IND103 with a “C” or better

QCT142 Advanced Concepts of GD & T 3 Cr. Hrs.
This second course in geometric dimensioning and tolerancing requires the student to already have an understanding of the basics of GD&T. There are more in depth discussions on select topics not covered in detail in fundamentals classes. Examples are more complex and include explanations of concepts that create problems in the workplace. A method for dealing with tolerance stacks, another layer of GD&T expertise, will be demonstrated and practiced. 
(2+2) On Demand
Prerequisite: MET110 or QCT141

QCT243 Advanced Quality Improvement 3 Cr. Hrs.
This course is one of a series of quality classes. The student learns more complex quality improvement methods by studying at least three of the following distinct topics: Advanced SPC; Six Sigma Start-Up; DOE: Screening Experiments; Measurement Systems Analysis; and Problem Solving. Topics are selected based on student’s work experience and previously completed quality course content. All but two sessions may take place via the internet. Two, 3-hour laboratory workshops, are planned for Design of Experiment and Cp, Cpk practice. Must have the ability to access web courses. 
(2+3) On Demand
Prerequisite: QCT100 and ability to access web courses

QCT250 Certified Quality Technician 3 Cr. Hrs.
Review of the requirements and topics to become certified as an American Society for Quality Control Technician or Mechanical Inspector. 
(3+0) On Demand
Prerequisites: QCT100 and QCT141

REA210 Real Estate Principles 3 Cr. Hrs.
This is an introductory course taught in accordance with guidelines set by the National and Ohio Real Estate Associations, and the Ohio Real Estate Commission. It is designed for professional real estate people, as well as the general public. The course covers elementary characteristics of real estate and various influences on real estate values and basic real estate math. It also is a foundation for further study and preparation of securing a sales license. 
(3+0) Weekends - F

REA220 Real Estate Law 3 Cr. Hrs.
This is a study of all the areas of law dealing with real estate. Emphasis is on the law of agency as applied to real estate brokers and salespersons. Law of fixtures, estates, leases, conveying of real estate, real estate managers, license laws of Ohio, zoning, cooperatives, and condominiums are also included. This prepares students for sales license testing. 
(3+0) Weekends - F

REA230 Real Estate Finance 3 Cr. Hrs.
This is an examination of the nature of financing real estate. Primary consideration is understanding mortgage loans and the mortgage market. The effects of governmental monetary and fiscal policies are also considered. Qualifying applicants and loan procedures are discussed throughout. This is a required course to prepare students for sales license testing. 
(3+0) Weekends - F

REA240 Real Estate Appraisal 3 Cr. Hrs.
Theory and principles of appraising urban real property using the three basic techniques of appraising are studied in depth. A term project is assigned to give the students practical experiences in applying these techniques. This is a required course to prepare students for sales license testing. 
(3+0) Weekends - F

F = Fall   S = Spring   SU = Summer
SCM200 Supply Chain Management 3 Cr. Hrs.
This course focuses on the flow of information and goods between a business, its suppliers and its customers. Special attention is given to the development of relationships with a firm and its suppliers. Both internal and external aspects of the supply chain are analyzed.
(3+0) S
Prerequisite: SCM220 or instructor permission

SCM210 Purchasing & Materials Management 3 Cr. Hrs.
This course focuses on supplier identification, evaluation, selection, and measurement. The relationship between the purchasing function and the rest of the organization is explored along with the correlation between supplier performance and inventory levels.
(3+0) F
Prerequisite: SCM220 or instructor permission

SCM220 Operations Management 3 Cr. Hrs.
This course focuses on the internal production process found in manufacturing facilities. Critical areas such as production planning, production line balancing, TOC analysis, lean, quality, MRP/MRPII, and inventory management are explored. The various modes of transportation are examined in detail.
(3+0) S
Prerequisite: SCM220 or instructor permission

SPN111 Spanish I 4 Cr. Hrs.
Introduction to Spanish through oral-aural drills, controlled conversations, reading and writing, with attention paid to grammatical structures and cultural awareness. Spanish I is the first half of a two-semester sequence designed primarily for beginners.
(4+0) F

SPN112 Spanish II 4 Cr. Hrs.
Continuation of Introduction to Spanish with practice in speaking, reading, writing, and listening comprehension conducted within a culturally significant framework.
(4+0) S
Prerequisite: SPN111 or instructor permission

SSC101 Sociology 3 Cr. Hrs.
An introduction to the sociological perspective with a focus on the United States. Order and conflict theories are applied to broad areas of sociological concern, such as social inequality, sexual inequality, work and family, law and crime, race and ethnic relations, education and popular culture, modern urbanism, politics of food, health care, and the global society. Transfer Assurance Guide (TAG) approved effective spring 2007 (OSS021 - Introduction to the Fundamentals of Sociology).
Writing Intensive.
(3+0) F, S
Co-requisite: ENG111

SSC102 Sociology - Sustainable World 3 Cr. Hrs.
This course introduces sociology through the lens of sustainability. How best can today’s societies sustain a flourishing of life on this planet? Natural scientists document soil loss, water scarcity, species extinction, diminishing fossil fuel supplies, and a human induced climate crisis. Meanwhile, social scientists track the social systems and cultural patterns that spur an expanding use of these diminishing resources, accelerating decline and disrupting the planet’s natural cycles. A broad array of sociological tools is employed in the study of culture, economy, politics, religion, race, gender, population and development, and social change to analyze unsustainable social patterns and explore new, more sustainable directions. Transfer Assurance Guide (TAG) approved effective spring 2011 (OSS021-Introduction to the Fundamentals of Sociology). As SSC102 is interchangeable with SSC101, students wishing to complete both introductory-level sociology courses should check with their advisor at the receiving institution. Writing Intensive.
(3+0) F, S
Co-requisite: ENG111

SSC110 General Anthropology 3 Cr. Hrs.
Introduction to anthropological theory and observation. Topics will include a range of cultural phenomena, including evolution, adaptation, ecology, language, kinship, religion, and status systems. Emphasis is placed on cross-cultural perspectives. Transfer Assurance Guide (TAG) approved effective spring 2008 (OSS001 - Cultural Anthropology). Writing Intensive.
(3+0) S
Co-requisite: ENG111

SSC113 Comparative Government 3 Cr. Hrs.
A study of power as it occurs in the formation and implementation of public policy in the United States; based on the recognition that politics is an activity that creates the “realm of we” and molds personal identities. Special attention is given to the concepts of politics, justice, and democracy as a basis for examining our responsibility in the public realm. Topics covered are media, interest groups, political parties and campaigns, federal government structure and process, effects of power in domestic and foreign affairs, and making democracy. Transfer Assurance Guide (TAG) approved effective spring 2007 (OSS011 - American Politics and Government). Writing Intensive.
(3+0) F, SU
Co-requisite: ENG111

SSC120 American Government 3 Cr. Hrs.
A study of contemporary political systems, processes and policies of Western and non-Western countries. This will include aspects of political processes such as interest groups, political parties, elections, political socialization, and political culture. Transfer Assurance Guide (TAG) approved effective spring 2007 (OSS013 - Comparative Government). Writing Intensive.
(3+0) S
Co-requisite: ENG111
SSC210  Cultural Diversity  3 Cr. Hrs.
Explores ways that our society has served as a context for either more or less “cultural diversity.” Emphasizes how historical relations among different people have affected images of “self” and “others” in U.S. society. Topics include thinking about culture, historical patterns and methods, the “American dilemma,” race and class, and culture and gender. **Writing Intensive.**
(3+0) F, S, SU
Co-requisite: ENG111

SSC220  Interpersonal Violence  3 Cr. Hrs.
Study the social reality of interpersonal violence within families, partnerships, dating, religious organizations, peer groups and the work place. Types of violence such as bullying, sexual violence, and hate crimes will be explored. Worldviews, and sociological theories are introduced and applied to understand the causes and perpetuation of interpersonal violence. In addition to understanding the social origins of interpersonal violence, students are introduced to assessment tools for use by allied health and public service professionals. Stories told through films, interviews, student presentations, and literature may be very graphic in nature. Every effort will be made to promote human dignity, yet students should be advised that the class content may be sobering and offensive. **Writing Intensive.**
(3+0) S – odd years
Co-requisite: ENG111

STA120  Introduction to Statistics  3 Cr. Hrs.
An introductory course introducing the student to the collection, analysis, and presentation of data. Presentation includes appropriate graphic, tabular, and numeric summaries of data. Major topics include Correlation and Regression, Hypothesis Testing, Analysis of Variance (ANOVA), and CHI Square analysis. Use the standard normal distribution to determine probabilities from z-values. Understand the Central Limit Theorem, and apply the addition and multiplication rules of probability.
(3+0) F, S, SU
Prerequisite: MTH090

STA222  Business Statistics  3 Cr. Hrs.
A course introducing the student to the collection, analysis, and presentation of data. Major topics include: Descriptive and Inferential Parameters, Probability, Binomial, and Hyper geometric Distributions, Confidence Intervals, Hypothesis Testing, CHI-Squared analysis, and Linear Correlation and Regression.
(3+0) F, S
Prerequisite: MTH109

TRN131  Tractor-Trailer Operations I  4 Cr. Hrs.
Introduces students to the trucking industry, federal and state regulations, records and forms, industrial relations, and other non-driving activities. This course provides an emphasis on safety that will continue throughout the program. Familiarizes students with truck instruments and controls and on performing basic maneuvers required to drive safely in a controlled environment. In addition, students acquire basic coupling and uncoupling skills.
(4+0) F, S, SU

VCT103  Introduction to Visual Communication 3 Cr. Hrs.
An overview designed to teach the student about the world of visual communication: how visual communication changes the world, how to use it effectively, and how it impacts the way we live.
(2+2) F
Co-requisite: VCT108

VCT108  Photo Editing  2 Cr. Hrs.
This course introduces the student to the fundamental process of creating camera-ready copy and art, color separation and proofing, image manipulation, scanning, and photo conversion methods. Various software packages, including Photoshop, will be investigated. Basic computer knowledge required. Recommend course be taken in conjunction with Photography. Lab Fee.
(1+2) F

VCT111  Layout & Design  3 Cr. Hrs.
This course covers the relationship among various design elements: balance, proportion, typography, and layout. Message composition, art presentation, copy layouts, the design process, and page makeup will be analyzed using current layout software. Lab Fee.
(2+2) S

VCT120  Vector Graphics  3 Cr. Hrs.
This course focuses on the creation and editing of resolution-independent images. Students use digital drawing techniques to create vector graphics for use in other interactive media projects or as independent compositions. Topics range from the creation of vector graphics through choosing the appropriate output method for their intended use.
(2+2) S

VCT182  Photography  3 Cr. Hrs.
An introductory course teaching basic photographic and digital editing techniques. Focus is on camera handling, lighting exposure, and composition. Experience includes creating digital files, digital editing, and image output techniques. Editing techniques will be limited to cropping, contrast and brightness, removal of unwanted flaws, and other correcting procedures. Photographic equipment required. Transfer Assurance Guide (TAG) approved effective summer 2008 (OAH002 - Photography, Digital).
(1+4) F, S

VCT204  Concepts of Visual Communication  3 Cr. Hrs.
Advanced visual communication concepts including problem solving, research, design, script writing, storyboard, training techniques, proposal preparation, cost estimating, and analysis. Overall project management techniques and environmental factors are covered in depth.
(2+2) S

VCT261  3D Computer Modeling  3 Cr. Hrs.
An introduction of computer modeling used to create 3-dimensional images. The student will be able to create realistic images using 3-dimensional modeling, textures, materials, lighting, and rendering. Computer experience required. Lab Fee.
(2+2) F
VCT266  Multimedia Production  3 Cr. Hrs.
Study of multimedia through student exploration and experimentation in various visual presentation technologies including digital media. Emphasis will be on design and production of total presentations by planning content and using a variety of software and hardware.
(2+2) S
Prerequisite: CIS129 or instructor permission

VCT268  Video Production  3 Cr. Hrs.
The study of video production is to provide a basic knowledge of the process used in pre-production, production, and post-production activities. Students plan, shoot, edit, and distribute a video as part of a production team. Topics include preparing a script, developing a shot list, videography, editing footage, adding sound tracks, and exporting and rendering video for various uses in various formats. Transfer Assurance Guide (TAG) approved effective summer 2007 (OCM008 - Introduction to Single Camera Production).
(2+2) F

VCT289  VCT Co-Op Experience  3 Cr. Hrs.
This is a work experience in visual communication. The student is accepted on the basis of academic progress and available work site at the College or an outside organization. Freelance work in the visual communication field also accepted. Enrollment with instructor permission.
(1+20) F, S, SU
Prerequisites: VCT103, VCT108, VCT111, VCT120, VCT182
Co-requisites: CIS129, VCT268

WLD100  Blue Print & Weld Symbols  2 Cr. Hrs.
This course covers basic engineering drawing principles, fundamental concepts of welding specifications, symbols, and blueprint reading as used in industry, and types of welding equipment and operational safety issues. The student will learn to interpret blueprint (welding) design, welding blueprint symbols, understand prints and everything that’s included in a print and to prepare ability of working with them. Also an understanding of standards set by American Welding Society will be taught.
(2+0) F, S, SU

WLD120  Gas Metal Arc Welding  3 Cr. Hrs.
This course provides a basic understanding of the Gas Metal Arc Welding process and key variables that affect the quality of welds. Hands-on lab is provided to give the student the opportunity to become proficient at welding on a variety of metals, carbon steel, stainless steel and aluminum. Welding will be done on square groove and fillet welds using single pass, and multiple pass welds.
(2+2) F, S, SU
Co-requisites: WLD100 and WLD110

WLD130  Flat and Horizontal Shield Metal Arc
This course is an introductory course where the student will develop the knowledge and skill thru theory and lab practice in the basic welding processes which include arc welding flat and horizontal positions. Safety will be emphasized throughout the class and will be accordance with industry standards for manufacturing.
(2+2) F, S, SU
Prerequisites: WLD100 and WLD110

WLD140  Gas Tungsten Arc Welding  3 Cr. Hrs.
This course covers the basic principles and practices of Gas Tungsten Arc Welding or GTAW. The student will discuss basic welding terminology, safety and demonstrate a good working knowledge of TIG (Tungsten Inert Gas) welding principles. This course will identify basic AC/DC welding equipment, various ferrous and nonferrous metals. The Student will perform flat and out-of-position GTAW using the correct shielding gas and filler rods.
(2+2) F, S, SU
Prerequisites: WLD100 and WLD110

WLD150  Advanced Gas Metal Arc Welding  3 Cr. Hrs.
This course provides an advanced understanding of the Gas Metal Arc Welding process and key variables that affect the quality of welds. Hands-on lab is provided to give the student the opportunity to become proficient at welding on a variety of metals, carbon steel, stainless steel and aluminum. Welding will be done on square groove and fillet welds using single pass, and multiple pass welds.
(2+2) F, S, SU
Prerequisite: WLD120

WLD220  Advanced Gas Tungsten Arc Welding  3 Cr. Hrs.
This course covers the advanced principles and practices of Gas Tungsten Arc Welding (GTAW). The student will learn advanced GTAW terminology, apply safety standards and develop a working knowledge of TIG (Tungsten Inert Gas) weld principles. This course will identify advanced AC/DC welding equipment used with stainless steel and aluminum metals.
(1+3) F, S, SU
Prerequisite: WLD140

WLD230  Welding Fabrications & Layout  3Cr. Hrs.
This course covers more engineering drawing principles, fundamental concepts of welding specifications, symbols, and blueprint reading as used in industry. Included are types of welding, welding equipment, and safety practices and precautions in the workplace. Emphasis is on print reading, interpretation, analysis, and demonstrations and uses of fabrication and knowledge of these skills.
(1+3) F, S, SU

WLD240  SMAW Plate Certification Procedures & Testing  3 Cr. Hrs.
This course provides instruction in welding and layouts to understand and achieve welder test methods. The students will work in a hands-on, instructor led environment, simulating actual manufacturing processes. Course evaluation will include a written assessment and psychomotor assessment of skills.
(1+3) F, S, SU

WLD250  Pipe Welding  3 Cr. Hrs.
This course provides instruction in welding and layout procedures for pipe welding. This will include pipe preparation, explanation and demonstration of pipe fit-up procedures, and discussion of pipe welding terms and definitions. The student will also demonstrate pipe welding acceptance criteria as related to the ASME Section IX welding code. Students will then apply welder certification code data, administer post plate procedure, and perform SMAW to certification skill level required to attempt for a welder certification.
(1+3) F, S, SU

WLD260  Pre-Pipe Certification  3 Cr. Hrs.
This course covers principles and practices used in the layout and welding and layout procedures involving Shielded Metal Arc Welding (SMAW) applications. Topics will include pipe layout, fit-up, preparation and welding. Pipe welding terms and welding procedures will be explored. Student laboratory experiences will include determining pipe welding acceptance criteria and fabrication to the ASME Section IX welding code prior to welder certification application.
(2+2) F, S, SU
Prerequisite: WLD250
Education is not the filling of a pail, but the lighting of a fire.

- William Butler Yeates