

COURSE DESCRIPTIONS

ACC0000 ACC Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the accounting program. 1 - 4 credit hours.

ACC1000 Fundamentals of Accounting

ACC1000 is a beginning accounting course that covers basic accounting topics. 2 Cr. Hrs. Prerequisite: MTH0980 or MTH0910

ACC1400 Financial Accounting

ACC 1400 offers an introduction to accounting, emphasizing how general purpose financial statements (Income Statement, Statement of Retained Earnings, Balance Sheet, and Statement of Cash Flows) communicate information about a business's performance and position to external stakeholders. Approximately one-third of the course emphasizes how the accountant processes and presents the information and includes exposure to recording transactions, adjusting entries, and preparing financial statements for service and merchandising firms according to established rules and procedures. The balance of the course examines major elements of the statements such as cash, receivables, inventory, long-lived assets, depreciation, current and long-term liabilities, and capital stock transactions. Basic financial statement analysis is also included. 4 Cr. Hrs. Prerequisites: Placement into MTH0910 or MTH1100 or TMT1110 or BUS1100; MTH0930 concurrent. Ohio TAG Course [OBU010].

ACC1500 Microcomputer Applications in Accountg

This course introduces the student to computerized applications for keeping accounting records. Both integrated accounting software and practical spreadsheet applications are explored. 3 Cr. Hrs. Prerequisites: ACC1400, OIS1240

ACC1700 Managerial Accounting

This course presents fundamental managerial accounting concepts and objectives, and cost data accumulation procedures using job order and process costing. Other topics include cost-volume-profit analysis, budgeting, performance evaluations, differential analysis and product pricing, and capital investment analysis. 4 Cr. Hrs. Prerequisite: ACC1400. Ohio TAG Course [OBU011].

ACC2210 Intermediate Accounting I

This course is a review of financial reporting and the accounting cycle. Students will also explore theory and applications in the preparation of income statements, balance sheets, and the statement of cash flows. This course also covers theories and applications of earnings management, cash, and receivables. The course includes a review and analysis of generally accepted accounting principles, and compares acceptable alternatives and other proposals. 3 Cr. Hrs. Prerequisites: ACC1400

ACC2220 Intermediate Accounting II

This course is a continuation of Intermediate Accounting I. The course includes the study of additional balance sheet items, primarily inventory, intangible assets, debt and equity financing, investing activities of business organizations, and acquisition, utilization, and retirement of non-current assets. 3 Cr. Hrs. Prerequisite: ACC2210

ACC2300 Federal Taxation

The course is designed to provide insight and application of the federal income tax regulations that apply to individuals, partnerships, and corporations. Emphasis will be placed on Individual tax returns and will include income realization and recognition, exclusions from income, business and personal deductions, credits from tax, business and personal gains and losses, depreciation, accounting periods and methods, and the alternative minimum tax. 3 Cr. Hrs. Prerequisite: ACC1400

ACC2400 Auditing

This course introduces and describes the rapidly changing audit function as it relates to the external auditor. Topics

include the professional responsibilities of auditors, audit tasks, planning and designing an audit, internal control procedures, control and substantive testing, and audit reporting. 3 Cr. Hrs. Prerequisite: ACC1400

ACC2500 Non-Profit Accounting

This course introduces accounting practices of not-for-profit organizations. Topics covered include fund accounting and the preparation, analysis, and interpretation of financial statements in a nonprofit organization. 3 Cr. Hrs. Prerequisite: ACC1400

ACC2600 Payroll Accounting

This course covers the laws that affect employers in their payroll operations and the procedures used in a typical payroll accounting system. A computerized payroll simulation will be completed in the course. 1 Cr. Hr. Prerequisite: ACC1400

ACC2980 Special Topics

This special course in the area of accounting is designed to give groups of students the opportunity to pursue studies not otherwise offered in the degree program. Graded on a Satisfactory/Unsatisfactory basis. 1-4 Cr. Hrs. Prerequisite: Department approval.

ACC2990 Individual Investigation

This course is an independent investigation of an appropriate problem in the field of Accounting. Graded on a Satisfactory/Unsatisfactory basis. 1-4 Cr. Hrs. Prerequisite: Department Approval.

AET1000 Intro to Alternative Energy

This course provides an introduction to alternative energy resources, with a scientific examination of their technology and application. An overview of the conventional energy sources will be given first and make the students aware of their problems. Then the course will focus on alternate energy sources such as solar, wind, biomass, geothermal, hydrogen, geothermal, and more. Other subjects that will be explored are the alternative energy generation, storage, transportation, and conservation. The students will be familiarized with scientific terms and concepts of the supply, use and efficiency of energy systems. 3 credit hours. Prerequisites: None. Ohio TAG Course [ORE001].

AET1100 Alternative Energy

This course focus on 3 basic areas of alternative energy: wind, solar thermal, and biofuels. It will also address but in less detail the areas of hydroelectric, geothermal, waves and tides. The course includes lab time each week using specialized trainers for the 3 basic areas of study. The current status and advancements in each area will be researched. Students will also be taught how both society's health and economics are impacted by alternative energy approaches. Equipment models and efficiencies will also be studied. 3.00 credit hours Prerequisites: Placement or ENG0970

AET1200 Wind Energy Technology

This course will provide a comprehensive introduction to various aspects of wind technology. It will explain wind turbines in term of the structure, types, aerodynamics and efficiency. Various components of turbines such as nacelle, generator, gearbox, controllers and generators will be explained. The operation of the turbine in the wide wind spectrum, for example, the yaw and pitch regulation will be discussed. Different techniques to connect the turbines to the grid and size the system will be covered. Then the procedure of wind site assessment and turbine installation will be explained and demonstrated. The students will also learn how to read electrical diagram and make electric connection and testing. The relevant NEC codes and wind safety will be introduced. Hands-on labs will be integrated into the course to help students better understand the site assessment, turbine installation and maintenance. 3 credit hours. Prerequisites: None

AET1510 Business of Energy

This course addresses an overall view of energy technologies, the trends of those technologies, and how such trends impact residential and commercial clients. Such concepts as energy efficiencies, energy gain/loss, and "green" energy developments are the subject areas of study. Research, lab exercises, and field trips will help students gain knowledge and understanding of various energy strategies and the societal and political climates that surround them. 2 Cr. Hrs. Prerequisite: ENG1000

AET2100 Photovoltaic Technology

This course will provide an overview of photovoltaic (PV) technology in various aspects including the principles, manufacturing, installation and maintenance. It will start from the introduction of the p-n junction. Different types of solar cells will be discussed and their characteristic compared. Details of the operation of solar systems will be taught as well as how they are connected to the grids. Components in a typical PV system will be explained in terms of their functions and performance. Then the procedure of PV installation will be explained, including the site assessment, panel installation and electric wiring. The relevant NEC codes and solar work safety will be introduced. Hands-on labs will be integrated into the course to help students better understand the PV installation and maintenance. 3 credit hours.

Prerequisites: None.

AET2200 Alternative Energy Control & Delivery

This course will provide an overview of energy transfer and control systems. In particular, the principles of power switching circuits for renewable energy applications, particularly solar and wind energy, will be introduced. Various power devices will be explained. Then, theory of rectifier (AC to DC conversion) and inverter (DC to AC conversion) will be explored to detail. Other protective and relay circuits that control the battery charging will be covered, as well as the control and voltage regulating circuits. 3 credit hours. Prerequisites: AET1070A or AET2010A or AET 1200 or AET2100.

AET2700 Alternative Energy Co-op Work Experience

Cooperative education is a learning experience which integrates the students' academic field of study with work experience in business and industry. An arrangement is established by which students receive college credit for structured, on-the-job learning experiences related to their academic field. 1 - 4 credit hours. AET2700 is repeatable to a maximum of 12 credit hours. Graded satisfactory/unsatisfactory. Prerequisite: Greater than 45 credit hours and permission from the Dean of Engineering Technologies.

AET2800 Alternative Energy Applied Project

This capstone course allows students to apply and integrate previous coursework by planning and designing an alternative energy system. 1 credit hour. Prerequisite: Department approval.

ALH0000 Allied Health Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an Allied Health elective. 1 - 4 credit hours.

ALH1050 Introduction to Exercise Science

This course provides the learner an introduction into what exercise science is and what types of careers one could pursue with education in this field. The course and text will allow the student to gain knowledge of different career path options, while also be introduced to key scientific components within the field of exercise science.

ALH1103 PTA Functional Anatomy

In this class, students will learn functional anatomy as it relates to the field of physical therapy. Emphasis is placed on the study of the skeletal system, arthrology, and the origin, insertion, action, and innervation of major muscles. 3 semester hours [2 hrs. lecture, 3 hrs. lab]. Pre-requisites: PTA 1000, PTA 1010, PTA 1100, PTA 1101, PTA 1102, SCI 1200 and completion of/or concurrent in SCI 1250.

ALH1110 Medical Terminology

This course builds a workable medical vocabulary applicable to all specialties of medicine. The student will learn definitions, pronunciations, spelling and abbreviations of anatomical structures, symptomatic diagnostic and procedural terms pertaining to each medical specialty and body system. Medical terms will also include pharmacology, clinical laboratory, radiology, and surgery. Basic anatomy and physiology and common human diseases will be covered for each body system. 3 semester hours. Pre-requisite: None. Ohio TAG Course [OHL020].

ALH1120 Human Diseases

This course provides the student with an introduction to the pathology of human disease including signs and symptoms, etiology, diagnostic tests, treatment, and prevention. Associated pathological conditions in each anatomical body system and medical specialty will be discussed. The student will be expected to define common terms and apply principles of normal anatomy and physiology of the human body systems to the disease processes of common health problems. 3 semester hours. Pre-requisite: ALH 1110. Ohio TAG Course [OHL019].

ALH1130 Healthcare Issues:Medical Professionalism

This course is a study of topics relevant to the health care environment including professional conduct, interpersonal and interdepartmental communication, and Health Insurance Portability and Accountability Act [HIPAA]. 1 semester hour. Pre-requisite: None.

ALH1140 Healthcare Issues:Medical Law and Ethics

This course is a study of topics relevant to the health care environment including ethics, confidentiality, patient rights, legal responsibilities, problem solving and critical thinking. 1 semester hour. Pre-requisite: None.

ALH1150 Healthcare Issues: Patient Communication

This course is a study of topics relevant to the health care student in providing effective therapeutic patient communications in the medical environment. Topics include communication barriers, gathering patient information, patient education, grief process, and diversity of patients. 1 semester hour. Pre-requisite: None.

ALH1160 Pharmacology for Allied Health

This course is an introduction to pharmacology to prepare the allied health student. Topics include indications for use of the most commonly prescribed medications and classifications of drugs and their effects on the human body systems. 2 semester hours. Pre-requisite: ALH1110

ALH1180 Healthcare Issues: Patient Education

This course is a study of topics relevant to the healthcare student involved in educating the patient in health and wellness. Topics include: current health issues; managing stress; mental and emotional health; resolving conflict; developing health relationships; sexual and reproductive wellness; physically active lifestyle; nutritional wellness; weight management; tobacco, alcohol and other drugs; infectious diseases; chronic diseases; safety and emergency preparedness; environmental wellness; and health and wellness through the life span. 1 semester hour. No pre-requisite.

ALH2000 Exercise in Special Populations

This course provides the learner a framework of how exercise prescription needs will vary based on specific populations. Included will be exercise needs for those with various cardiopulmonary, integumentary, neurological, metabolic, and orthopedic conditions. Students will have the opportunity to develop exercise plans and gain increased knowledge of exercise guidelines

ALH2500 Strength Training and Exercise Prescription

ALH2600 Exercise Science Seminar/Dir Practice

ALH3000 Strength Training and Exercise Prescription

This course provides the learner advanced knowledge of the physiology of strength development. Strength exercise design and testing will be a major focus. This course also provides instruction in muscle anatomy and kinesiology. Students will have the opportunity to develop and implement strength programs in a lab setting. This course specifically prepares the learner for the NSCA- CPT (personal trainer) examination which, upon passing, certifies the student as a personal trainer. Prerequisite SCI1050, SCI1100 and HLT1100 or Concurrent.

ALH3100 Exercise Science Seminar/Directed Practice

This course provides the learner an opportunity to complete one of several final projects in this certificate program

including: a final project, directed practicum experience, or research opportunity. This course also serves to prepare the student to prepare to take the NSCA-CPT certification examination. Prerequisite ALH2000, ALH2500 and ALH3000

ASC0000 Arts and Science Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the arts and science program. 1 - 4 credit hours.

ASC1000 Orientation To College

Orientation to College is a stepping stone for later success at the college. The course will provide students with information about technology access and function, development of an educational plan, library use, and interaction in the classroom, with faculty, and administrative offices. 1 credit hour. Prerequisite: None.

ASC1020 Skills for Success

Skills for Success is designed to increase college success. The course will focus on developing practical study skills and other techniques to enhance academic success. Topics include time management, test taking, communication skills, study techniques, and personal issues that face many college students. Graded satisfactory/unsatisfactory. 1 credit hour. Prerequisite: None.

ASC1100 Conversational Spanish for CJ

Conversational Spanish for Criminal Justice will introduce basic spoken Spanish in a variety of authentic law enforcement situations. By interpreting various situations involving cultural differences, students prepare themselves to effectively react to real-life law enforcement conditions. This course provides important and useful information, thereby preparing each student to effectively assist Spanish-speaking individuals in our changing world. 3 credit hours. Prerequisite: CJ and LE Major Only

BIO0000 Biology Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a biology elective for the arts and science program. 1 - 4 credit hours.

BIO1100 General Biology

This is a one semester course. This course has a laboratory component which emphasizes the principles of the lecture. The lecture will deal with scientific theory, chemistry, the cell, energy, genetics, principles of evolution, and basic anatomy and physiology. 4 credit hours. Prerequisite: SCI1050 or department approval. Ohio Transfer Module (OTM) Course [TMNS].

BIO1101Z Intro Biology I

Basic principles of biology; topics include the nature of science, organismal diversity, evolution, ecology, genetics, reproduction, and cellular structure and function. Not intended students majoring in one of the biological sciences. Prereq: Not open to students with credit for 1101E, 1113 (113), 1113H (115H), 101, Entmlgy 1101 (101), or MolGen 1101 (PlntBio101). This course is available for EM credit. GE nat sci bio course.

BUS0000 Business Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the business program. 1 - 4 credit hours.

BUS1010 Business English Skills

This course is designed to help students refine basic English skills that relate to business through the use of realistic learning materials. Punctuation, grammar, spelling, capitalization, vocabulary, and sentence structure are emphasized and reinforced through proofreading and editing business documents. 3 Cr. Hrs. Prerequisite: OIS1240 or Concurrent

BUS2100 Ethics

This course focuses on identifying and analyzing ethical and unethical behavior. The application of moral philosophies

and the ethical problem solving model are used to demonstrate how ethical dilemmas can be resolved. 3 Cr. Hrs.

Prerequisite: None

BUS2150 Legal Environment of Business

Legal Environment of Business provides an overview of law and its relationship to business. Topics include the Foundations, the Public and International Environment, the Commercial Environment, the Business Environment, the Employment Environment, and the Regulatory Environment. This is practical law that every business person should know. Topical discussions apply the readings to everyday situations. Written assignments complement the text and require outside research. 3 Cr. Hrs. Prerequisite: None. Ohio TAG Course [OBU004].

BUS2800 Cooperative Education Preparation

The purpose of this course is to help students transition from the classroom to the world of work. Each student will conduct a job search, learn selection strategies, practice interview techniques, improve upon personal and professional communication skills, and submit a plan for the cooperative education experience. Graded A-F. 1 Cr. Hr. Prerequisites: ENG1000 and 16 credits.

BUS2901 Cooperative Education Experience

This course places the student in a work setting related to his or her major field of study as developed in the co-op preparation course. Practical application of knowledge and skills acquired in the classroom are carried out in the work environment with supervision. Co-op students receive college credit for structured, on-the-job learning experiences related to their program. Graded satisfactory/unsatisfactory. 1 Cr. Hr. Prerequisite: BUS2800.

BUS2980 Special Topics

This is a special course in the area of business designed to give groups of students the opportunity to pursue studies not otherwise offered in the degree program. Graded on a Satisfactory/Unsatisfactory basis. 1-4 Cr. Hrs. Prerequisite: Department Approval.

BUS2990 Individual Investigation

This course is an independent investigation of an appropriate problem in the field of Business. No more than four credit hours will apply toward graduation. Graded on a Satisfactory/Unsatisfactory basis. 1-4 Cr. Hrs. Prerequisite: Department approval.

CHM0000 Chemistry Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a chemistry elective for the arts and science program. 1 - 4 credit hours.

CHM1000 General & Biological Chemistry

This elementary chemical concepts class is designed primarily for Medical Laboratory Science students. Students will first learn about chemical bonding, mixtures, acids, and bases. Then students will explore the structure and function of various types of organic compounds such as hydrocarbons, carbohydrates, lipids, proteins, and nucleic acids. 4 credit hours. Prerequisite: SCI1050 or equivalent, or department approval.

CHM1200 Chemistry I

This course is the first semester of a two-semester course in general chemistry appropriate for students interested in pursuing careers in science, medicine and engineering. Topics include matter and measurement; structures of atoms, molecules and ions; inorganic chemical nomenclature; chemical reactions and stoichiometry, acid-base and oxidation-reduction reactions and solution stoichiometry; gases; thermochemistry; electronic structure; periodic properties of the elements, chemical bonding, molecular geometry and chemical bonding theories. Laboratory exercises reinforce basic principles and emphasize analytical techniques. 4 credit hours. Prerequisites: high school Chemistry or SCI 1050. Ohio Transfer Module (OTM) Course [TMNS]; Ohio TAG Course [OSC008]; and, Ohio TAG Sequence Course CHM1200 & CHM1250 [OSC023].

CHM1250 Chemistry II

This course is the second semester of a two-semester course in general chemistry appropriate for students interested in pursuing careers in science, medicine and engineering. Topics include gases and the gas laws; intermolecular forces, liquids and solids; properties of solutions; chemical kinetics; chemical equilibrium, acid-base equilibria and aspects of aqueous equilibria. Laboratory exercises reinforce basic principles and emphasize analytical techniques. 4 credit hours. Prerequisite: CHM1200, or department approval. Ohio Transfer Module (OTM) Course [TMNS]; Ohio TAG Course [OSC009]; and, Ohio TAG Sequence Courses CHM1200 & CHM1250 [OSC023].

CIT0000 CIT Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the computer information program. 1 - 4 credit hours.

CIT1050 Computer Crime for Law Enforcement

The course is a study of the techniques employed by law enforcement investigators to recognize and investigate crimes involving computers and other electronic devices. Information Technology concepts include files and properties, hardware, networks and Internet and social media. Law enforcement topics include criminals, crimes, laws, procedures used at crime scenes, search warrants, writing search warrants, recognizing electronic evidence, seizing computers, and the laws of search and seizure. Additional topics included in this course are First Amendment rights as they pertain to computers and dealing with and arresting suspects involved in the violation of computer crime laws. 3 Cr. Hrs.

Prerequisite: OIS1240

CIT1351 IT Essentials / A+

Students are presented with the information required to take the CompTIA A+ Certification Exams based on the current requirements of the 2013 standards. CIT1351 introduces the student to the main concepts behind computer hardware and software. Customer service and computer troubleshooting and repair are the primary focus of this course. Students are introduced to the world of virtualization through the classroom use of VMWare.

Prerequisite: OIS1200 or successful completion of the Technology Skills Test (TST) (3 credit hours). Ohio CTAG Approved Course [CTIT003 & CTIT004].

CIT1370 Computer Security Fundamentals

This course will introduce students to the ever changing world of cyber security. Focus is centered on detection, identification, and prevention of cyber attacks. Additional topics covered in the course will include social media threats, development of security policies and procedures, training of personnel and community members, and structural security. This course provides the students with the information necessary to pass the COMPTia Security + (Code SYO-401) professional certification exam. This certificate is recognized industry-wide as an indication of knowledge in the security field. Prerequisite OIS1240.

CIT1410 Network Structure

This course will cover structured cabling systems that provide a comprehensive information technology infrastructure. Copper and fiber optic media will be studied, installed, and tested via lab exercises that demonstrate the student's proficiency. The course will emphasize safety practices, essentials of electrical and optical transmission, structured cabling standards, cabling standards organizations as well as cabling installation and testing. A combination of lecture, demonstrations and various on-line resources will provide the basic skills a technician requires. 3 credit hours.

Prerequisites: None

CIT1610 Networking Fundamentals Cisco I

This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. Students will build simple LANS, perform basic configuration of both switches and routers and implement IP addressing schemes using both IPv4 and IPv6.

CIT1610 is the first of two courses that will prepare students for the Cisco® Certified Entry-level Network [CCENT] exam.

Prerequisite: OIS1200 or successful completion of the Technology Skill Test (TST). (3 credit hours). Ohio CTAG Approved Course [CTIT007].

CIT1700 Intro to Visual Programming and Databases

In this course, the student will learn the basics of visual programming and design. The course will also introduce students to database concepts. The logical structure common to computer programs will be discussed. Students will learn to write, test, and debug applications. 3 Cr. Hrs. Prerequisite: OIS1200 or successful completion of the Technology Skills Test (TST). Ohio CTAG Approved Course [CTIT012].

CIT1750 ASP.NET Web Application Development

In this course, students will review techniques for implementing Websites using ASP.NET technology. Students will design and create Web applications that include Web forms, user management, and database access. Credit hours: 3 Cr. Hrs. Prerequisite: CIT1700

CIT1755 Intermediate Programming / Visual Studio

Building on skills learned in CIT1700, this course guides the student in the use of additional programming techniques. Students will learn to create computer software that utilizes data access and security techniques. The student will also be introduced to Object-Oriented design fundamentals. 3 Cr. Hrs. Prerequisite: CIT1700

CIT2200 Supporting a Microsoft Server OS/MCSE II

This course is intended for anyone who wants to learn how to install, configure, administer, and support the primary services in the Microsoft Windows Server operating system. It is also designed to help participants prepare for a Microsoft certification exam. Course topics include examining basic system administration procedures, the creation and management of Windows Server user, group, and computer accounts, sharing system resources, and using Web and Terminal Services. 3 Cr. Hrs. Prerequisite : CIT1351. Ohio CTAG Approved Course [CTIT013].

CIT2251 Administering Windows Server

This course teaches the fundamentals of deploying, supporting, and administering Windows systems. It is also designed to help participants prepare for a Microsoft certification exam. Course topics include deployment methods, management of user and service accounts, maintenance of Active Directory, configuration and troubleshooting of the DNS, Remote Access and Network Policy Server roles, working with file services and file system security, and implementing update management.

CIT2301 Config. Adv. Windows Server Services

This course teaches you the skills and the knowledge necessary to install, configure, and manage Windows Server. It is also designed to help participants prepare for a Microsoft certification exam. Course topics include Advanced Network Services, Advanced File Services, Dynamic Access Control, clustering, disaster recovery, Certificate servers, and AD FS.

CIT2520 Developing Databases / Msft SQL Server

Students completing this course will be able to design databases using Microsoft SQL Server. Skills developed in this course will include building a normalized database, designing queries, and database security. 3 Cr. Hrs. Prerequisite: CIT1700

CIT2530 Database Administration

In this course, students will learn how to install, configure, and troubleshoot SQL Server installations. Additional topics include backup and restore strategies, importing and exporting data, and working with security. Hands-on exercises will be included to enable the student to apply the concepts being discussed. Pre-requisite: CIT2200 Supporting a Microsoft Server.

CIT2540 Business Intelligence Data Warehousing

In this course, students will learn how to design and implement a data warehouse. Students will design and create SSIS solutions to extract, transform, and load data. Hands-on exercises will be included to enable the student to apply the concepts being discussed. Pre-requisite: CIT2520 Developing Databases with Microsoft SQL Server.

CIT2551 Java Programming

In this course, students will learn to develop programs using Java. Students will create programs that utilize decision-making, iteration, arrays, and data access. Common object-oriented techniques will be reviewed and implemented in program solutions. 3 Cr. Hrs. Prerequisite: CIT1700

CIT2561 Developing Mobile Apps

This course will teach students to design and develop mobile applications. Students will learn how to create the user interface and utilize built-in elements of the mobile device for application input. Additional course topics include processing input, working with data, and incorporating multimedia into a mobile application solution. Prerequisite: Java Programming or CIT1700

CIT2591 MCTS Test Preparation

This course is designed to assist the student in reviewing material in preparation for a current Microsoft exam. Hands-on exercises will be included to enable the student to apply the concepts being discussed. 3 Cr. Hrs. Prerequisite: CIT1755.

CIT2592 Emerging Technologies

This course will allow students to explore current technology topics. Participants will use hands-on activities to apply the concepts being discussed. Additional course activities will include evaluating and determining appropriate uses for the technology in a business solution and working in virtual teams. Prerequisite: BUS1010 or CIT1755 (3 credit hours).

CIT2621 Routing/Switching Essentials CISCO II

CIT2621 focuses on the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. Students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and Inter-VLAN routing in both IPv4 and IPv6 networks. CIT2621 is the second course that will prepare students for the Cisco Certified Entry-level Network Technician (CCENT) Exam. Prerequisite: CIT1610 (3 credit hours). Ohio CTAG Approved Course [CTIT008].

CIT2631 Scaling Networks CISCO III

CIT2631 focuses on the architecture, components, and operations of routers and switches in larger and more complex networks. Students will configure routers and switches for advanced functionality. Students will learn to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks. Students will also learn to implement a WLAN in a small-to-medium network. CIT2631 is the first of two courses that will prepare students to take the Cisco Certified Network Associate Routing and Switching (CCNA) Exam. Prerequisite: CIT2621 (3 credit hours). Ohio CTAG Approved Course [CTIT009].

CIT2641 Connecting Networks/Cisco IV

CIT2641 focuses on the WAN technologies and network services required by converged applications in a network. Students will discuss the selection criteria of network devices and WAN technologies to meet network requirements. Students will learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students will also learn to implement virtual private network (VPN) operations. CIT2641 is the second of two courses that will prepare students to take the Cisco Certified Network Associate Routing and Switching (CCNA) Exam. Prerequisite: CIT2631 (3 credit hours). Ohio CTAG Approved Course [CTIT010].

CIT2750 Information Technology Capstone

This capstone course brings together all the skills learned in the student's major. Students will incorporate information technology management, problem solving, communications, research, and teamwork skills while completing an instructor-assigned project. Students will meet virtually regularly with instructor, teammates and other needed personnel to update team project(s) status. Prerequisite: IT Major & over 30 hrs. of coursework, or CIT2592 and OIS1320, or OIS1520

CIT2980 Special Topics

This course presents a special project in the area Information Technologies designed to give groups of students the opportunity to pursue studies not otherwise offered in the degree program. 1-4 credit hours. Graded on a Satisfactory/Unsatisfactory basis. 1-4 Cr. Hrs. Prerequisite: Department approval.

CIT2990 Individual Investigation

This course is an independent investigation of an appropriate problem in the field of Computer Information. No more than four credit hours will apply toward graduation. Graded on a Satisfactory/Unsatisfactory basis. 1-4 Cr. Hrs. Prerequisite: Department Approval.

CJA0000 Law Enforcement Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a criminal justice elective for the criminal justice program. 1 - 4 credit hours.

CJA2801 Law Enforcement I

This is an Ohio Peace Officer Training Academy (OPOTA) certified course covering the administration (Unit 1) and legal (Unit 2) blocks of instruction. Students in this course will receive OPOTA instruction in police administration, ethics and professionalism, including an examination of the role of the American peace officer. The course will also cover criminal law, including substantive portions of the Ohio Revised Code and its application to real-life scenarios. Finally, the course examines the laws of arrest, search and seizure, the rules of evidence, the use of force, and civil liability for police agencies and the individual officer. Students may not have any type of felony conviction, a conviction for drugs of abuse, or a domestic violence conviction to be eligible for admission into the Marion Law Enforcement Academy. Prerequisite: Commander approval. (5 credit hours)

CJA2802 Law Enforcement II

This is an Ohio Peace Officer Training Academy (OPOTA) certified course covering the human relations (Unit 3) and first aid (Unit 7) blocks of instruction. Topics include: communication with the public, domestic violence, crisis intervention, child abuse and neglect, victim rights, crime prevention, and understanding cultural differences. Students also receive certification in cardio-pulmonary resuscitation (CPR) and automated external defibrillation (AED). Prerequisite: Commander approval. (4 credit hours)

CJA2803 Law Enforcement III (Firearms)

This is an Ohio Peace Officer Training Academy (OPOTA) certified course covering the firearms unit (Unit 4). Students will learn the proper law enforcement use of the handgun and shotgun, which will be furnished by the Criminal Justice Program. Prerequisite: Commander approval. (2 credit hours).

CJA2804 Law Enforcement IV

This is an Ohio Peace Officer Training Academy (OPOTA) certified course covering law enforcement techniques for subject control (Unit 6). Topics include: ground fighting, arrest, handcuffing techniques, frisking and searching, impact weapons, chemical weapons, taser, prisoner transport, use of force and civil liability. Prerequisite: Commander approval. (2 credit hours)

CJA2805 Law Enforcement V

This is an Ohio Peace Officer Training Academy (OPOTA) certified course covering the physical conditioning (Unit 12) and homeland security (Unit 13) blocks of instruction. Topics include: 30 mandatory hours of physical conditioning and assessment and preparation for the OPOTA timed 1.5 mile run, timed situps and timed pushups required for state certification. This is a physically demanding course focused on strength and cardio training. Students will learn how to maintain a physically fit and healthy lifestyle. This course will also cover hazardous materials and weapons of mass destruction, bombs and explosives, terrorism awareness, incident command systems, and national incident management systems. Prerequisite: Commander approval. (2 credit hours)

CJA2806 Law Enforcement VI

This is an Ohio Peace Officer Training Academy (OPOTA) certified course covering the driving (Unit 5) and traffic (Unit

10) blocks of instruction. Topics include: Defensive driving, pursuit driving, traffic accident investigation, motor vehicle offenses, traffic tickets, and field sobriety testing. Prerequisite: Commander approval. (6 credit hours)

CJA2807 Law Enforcement VII

This is an Ohio Peace Officer Training Academy (OPOTA) certified course covering the patrol (Unit 8) and investigations (Unit 11) blocks of instruction. Topics include: Patrol stops, building searches, civil disorders, crime scene investigation, photography, Ohio drug laws, interviewing and interrogation techniques, and report writing. Prerequisite: Commander approval (6 credit hours)

CJA2808 Law Enforcement VIII

This course is being added to the Law Enforcement program to incorporate the additional hours required for peace officer basic training by the Ohio Peace Officer Training Commission. This additional course is necessary to increase the credit hours of the peace officer training academy from 27 credit hours to 30 credit hours.

CJA2990 Individual Investigation

This course offers independent study designed to meet a specific student need in the field of Law Enforcement. Graded satisfactory/unsatisfactory. 1-4 credit hours. Prerequisite: Department approval.

CRJ0000 CRJ Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the criminal justice program. 1 - 4 credit hours.

CRJ1000 Introduction to Criminal Justice

This course is an overview of Criminal Justice Careers. Topics include federal, state, and local law enforcement agencies, corrections, and court systems. Students will also explore the role of the Homeland Security agency. CRJ1000 includes an overview of the jurisdiction, function, and the areas of enforcement of each agency. 3 Cr. Hrs. Prerequisite: None. Ohio TAG Course [OSS031].

CRJ1150 Introduction to Private Security

This course is a study of the development, philosophy, responsibility, and functions of private and homeland security. CRJ1150 includes a study of the roles and requirements of licensed private investigation, private security principles, the legal authority of private security, and career opportunities. The course also includes information about applying private security principles to everyday life. 3 Cr. Hrs. Prerequisite: None.

CRJ1200 Interviewing and Interrogation

This course is a study and practice of the art of communications as it relates to the field of Criminal Justice. Students will have a better understanding of behavior, symptom analysis, and will study the art of gaining the truth through successfully performing interviews and interrogation. This course incorporates the latest interrogation techniques. The course also covers written communication skills related to criminal justice. 3 Cr. Hrs. Prerequisite: None.

CRJ1500 Criminology

This course is an in-depth study of the nature of crime, its causes, and crime statistics. The course includes information about violent crime, property crime, morality crime, and organized crime. The course also includes a study of ways to prevent crime. 3 Cr. Hrs. Prerequisite: None. Ohio TAG Course [OSS034].

CRJ1600 Introduction to Corrections

This course provides a broad view of the American criminal justice system, and follows individuals from arrest and conviction to incarceration and parole. CRJ1600 surveys current philosophies and operations in/at all levels of modern corrections supported by an overview of relevant history. The course also provides the student with an in depth study of a wide range of court decisions that affect or have affected the offender and due process as it applies to the institution, parole, probation, probation hearings, and classification procedure. 3 Cr. Hrs. Prerequisite: None. Ohio TAG Course [OSS033].

CRJ1650 Gangs and Terrorism

This course is designed to give the student a basic understanding of both domestic and international terrorism and its impact on the American society and the world. Students will discuss the evolution of these groups and what strategies and tactics are being employed by both the military and law enforcement to combat and contain these terrorist organizations. 3 Cr. Hrs. Prerequisite: None.

CRJ1751 Probation & Parole

This course provides a basic study of the theory and practice of probation and parole, with an emphasis on offender risk assessment and evidence-based practices. Students will learn: the history and philosophy of probation and parole in the United States; how probation and parole integrates into the criminal justice system; how to classify offenders and the sentencing process; how to complete a pre-sentence investigation report; how to implement supervised probation, non-reporting probation, judicial release, electronic monitoring and other community-based corrections; legal rights of probationers and parolees; training and selection requirements for probation and parole officers; master evidence-based probation practices; and attain state certification in the Ohio Risk Assessment System (ORAS). Pre-requisite: CRJ 1000 Intro to Criminal Justice.

CRJ2050 Criminal Investigations

This course provides a basic study of the theory and practice of crime scene reconstruction with emphasis placed on criminal evidence processing. Further, the student will examine procedures used by law enforcement agencies and crime labs in crime scene processing to include investigative techniques needed for special criminal offenses involving violent offenses and/or property crimes. This course introduces the student to basic forensic procedures used by law enforcement during the investigative process. The course includes topics in basic biology and chemistry. 3 Cr. Hrs. Prerequisite: CRJ1500.

CRJ2150 Criminalistics

This course covers advanced techniques in the collection, identification, preservation, and transportation of physical evidence, as well as crime laboratory capabilities and limitations. A major portion of the course centers on discussions and labs involving common items of physical evidence encountered at crime scenes. The course includes descriptions of forensic analysis, techniques for the proper collection and preservation of evidence, and Biology concepts relating to the analysis of physical evidence. An introduction to fingerprinting and general classification of fingerprints, ballistics and firearms identification, photography, DNA, energy and matter as it applies to evidence, the human body, including typing and recognizing human blood, and other techniques necessary for law enforcement to successfully investigate and prosecute major crimes are included. 3 Cr. Hrs. Prerequisite: CRJ2050.

CRJ2200 Drugs and Narcotics

This course presents a study of the social and physical implications of legal and illegal drugs, drug abuse, the drug trade, and the domestic and foreign organizations involved in the trafficking of illegal narcotics and the effects these drugs have on society and law enforcement agencies. Students will learn how to recognize legal and illegal drugs and how to chemically/microscopically test legal and illegal drugs to identify the drug in question. 3 Cr. Hrs. Prerequisite: CRJ1000 or concurrent.

CRJ2250 Criminal and Constitutional Law

This course is a comprehensive study of the Ohio Revised Code. Students will learn to identify elements of offenses and apply these elements to hypothetical situations, enabling the student to apply the law and determine appropriate charges. Other topics include procedural law, courtroom testimony, and the laws governing Ohio's criminal justice system. This course also provides a thorough study of the constitutional basis for substantive and procedural law, with an emphasis is on the 1st, 4th, 5th, 6th, 7th, 8th, and 14th Amendments of the U.S. Constitution. Cases discussed in class will involve current legal decisions affecting the role of the criminal justice profession to include all components of the criminal justice system. 3 Cr. Hrs. Prerequisite: None.

CRJ2300 Defensive Tactics/Physical Conditioning

This self-defense course introduces students to the basic techniques used in defending oneself against an attack. Students learn various take-down moves, pressure points, and handcuffing techniques. Students will also learn the use-

of-force continuum and proper procedures for arresting, searching, and transporting prisoners. Students in this class may be exposed to the chemical mace. This is a physically demanding course that will include exercise, weight lifting, and running. CRJ2300 is graded on a satisfactory/unsatisfactory basis. 3 Cr. Hrs. Prerequisite: Major Only

CRJ2900 Internship

This is a structured learning experience in which students receive college credit for on-the-job learning experiences related to a criminal justice career interest. The internship experience will be jointly supervised by a member of the faculty and a designated person at the agency involved. This course is graded on a satisfactory/unsatisfactory basis. 1 Cr. Hr. Prerequisites: 30 credit hours BUS2800 and department approval.

CRJ2980 Special Topics

This special course in the area of Criminal Justice is designed to give groups of students the opportunity to pursue studies not otherwise offered in the degree program. Graded on a Satisfactory/Unsatisfactory basis. 1-4 Cr. Hrs. Prerequisite: Department approval.

CRJ2990 Individual Investigation

This course is an independent investigation of an appropriate problem in the field of Criminal Justice. No more than four credit hours will apply toward graduation. Graded on a Satisfactory/Unsatisfactory basis. Prerequisite: Department approval.

DMS1000 Introduction to Sonography

The student is introduced to the function of the clinical site and imaging/ultrasound department. School and clinical policies are reviewed. Career possibilities are discussed. Knobology is introduced. Patient care and safety is explained. Prepare student for scanning in the clinical setting. 3 semester hours. Pre-requisite: None

DMS1010 Methods of Patient Care

This course provides the student with basic concepts of patient care, including consideration for the physical and psychological needs of the patient and family. Emphasis is placed on obtaining vital signs and significance of abnormalities. Also included is an in-depth examination of patient history taking and information management. Routine and emergency patient care procedures will be discussed; as well as infection control procedures utilizing Universal Standard Precautions. Medical and professional ethics and medical law will be discussed. 2 semester hours. Pre-requisites: None

DMS1020 Sonography Procedures I

This course presents a comprehensive outline for normal anatomy, anatomical variations and basic pathologic entities in the abdominal structures that can be detected and evaluated by diagnostic ultrasound. Abdominal ultrasound procedures will be presented in lab. Breast, thyroid, prostate, and testicular ultrasound will be presented. 4 semester hours. Prerequisite: Sonography majors only

DMS1030 Sonography Procedures II

Learn about the comprehensive outline of normal anatomy, anatomical variations and basic pathologic entities in the gravid and non-gravid uterine cavities, which can be detected and evaluated by diagnostic ultrasound. OB/GYN ultrasound procedures will be presented in laboratory. 4 semester hours. Pre-requisite: Sonography majors only

DMS1051 Sonography Principles & Instrumentation

Learn about acoustic physics in terms of the characteristics and properties of sound energy and the manner in which very high-frequency sound (ultrasound) is used in imaging. Physical principles examined will include wave forms, propagation, relationship of velocity of propagation to frequency and wavelength, acoustic impedance, reflection, refraction, other types of attenuation, transducers and basic layout of a pulsed-echo imaging system. Applied ultrasound physics as related to ultrasound-system design and instrumentation are covered. Principles of fluid dynamics and the fundamentals of Doppler physics and instrumentation are covered. Quantitative methods used in acoustic output measurement and quality assurance are discussed, and the current data on the biological effects of ultrasound is reviewed. 3 semester hours. Pre-requisite: Sonography majors only & PHY 1000

DMS1101 Sonography Clinical I

This course is the first of five of clinical applications of ultrasound procedures. This includes scheduled clinical rotation assignments. All clinical courses include scheduled image analysis classes which will be held online. A clinical lab is required in most clinical courses. This course will provide the student with the necessary introductory clinical education needed to begin to practice sonography. The student will be evaluated for Lab competency. The student will be under direct supervision the entire quarter. The student will follow all policies and procedures of the program. 1 semester hour. Pre-requisite: Program Acceptance

DMS1201 Sonography Clinical II

This course is the second of five of clinical applications of sonographic procedures. This includes scheduled clinical rotation assignments. All clinical courses include scheduled image analysis classes which will be held online. A clinical lab is required in most clinical courses. This course will continue to provide the student with the necessary introductory clinical education needed to begin to practice sonography. This course takes place in sonography departments, with actual patient contact. The student will rotate through assigned clinical areas. The student will be evaluated for clinical competency of the semester. The student will be under direct supervision the entire quarter. The student will follow all policies and procedures of the program. 2 semester hours. Pre-requisite: DMS 1101

DMS1301 Sonography Clinical III

This course is the third of five of clinical applications of ultrasound procedures, and the last in the junior year of the program. This includes scheduled clinical rotation assignments. All clinical courses include scheduled image analysis classes. Students are actively involved in all clinical procedures in their assigned clinical rotation. This course will continue to provide the student clinical education needed to practice sonography. This course takes place in imaging departments, with actual patient contact. The student will rotate through assigned clinical areas. The student will be evaluated for clinical competencies of the semester. The student will perform under both direct and indirect supervision the entire quarter, depending on completed competency requirements. The student will follow all policies and procedures of the program. 3 semester hours. Pre-requisite: DMS 1201

DMS2040 Advanced Imaging Procedures

This course presents a comprehensive outline for abnormal anatomy, anatomical variations and basic pathologic entities in the abdominal structures that can be detected and evaluated by diagnostic ultrasound. Abnormal abdominal ultrasound procedures will be presented in laboratory. Learn about the comprehensive outline of abnormal anatomy, anatomical variations and basic pathologic entities in the gravid and non-gravid uterine cavities, which can be detected and evaluated by diagnostic ultrasound. Abnormal OB/GYN ultrasound procedures will be presented in laboratory. 2 semester hours. Pre-requisite: DMS 2050

DMS2050 Sonography Pathology

This course covers the principles and procedures of abdominal, OB/GYN, small parts, musculoskeletal, and neonatal sonography, focusing on pathology of those specific areas. Each system of the body is studied with regard to major pathological diseases and how the diseases are demonstrated sonographically. Different types of cancer and treatment options are discussed. Students are required to complete oral and written case presentations. 2 semester hours. Pre-requisite: DMS 1030

DMS2070 Sonography Review

DMS 2070 is a required course in the Sonography curriculum. The purpose of this course is to prepare students for the National Registry Test. This course is graded pass/fail. The grade for the course is based on completion of homework assignments, completion of mock registries, completion of physics registry, and class participation. 1 semester hour. Pre-requisite DMS 2400

DMS2400 Sonography Clinical IV

This course is the fourth of five of clinical applications of ultrasound procedures. This includes scheduled clinical rotation assignments. All clinical courses include scheduled image analysis classes which will be held online. A clinical lab is required in most clinical courses.

This course will provide the student with the necessary introductory clinical education needed to begin to practice sonography. This course takes place in sonography departments, with actual patient contact. The student will rotate through assigned clinical areas. The student will be evaluated for clinical competency of the semester. The student will be under direct supervision the entire semester. The student will follow all policies and procedures of the program. 3 semester hours. Pre-requisite: DMS 1301

DMS2500 Sonography Clinical V

This course is the last of five of clinical applications of sonographic procedures. This includes scheduled clinical rotation assignments. All clinical courses include scheduled image analysis classes which will be held online. A clinical lab is required in most clinical courses. This course will provide the student with the necessary clinical education needed to practice sonography. This course takes place in sonography departments, with actual patient contact. The student will rotate through assigned clinical areas. The student will be evaluated for clinical competency of the semester. The student will be under direct supervision the entire semester. The student will follow all policies and procedures of the program. 3 semester hours. Pre-requisite: DMS 2400

DMS2990 Individual Investigation

This course offers independent study designed to meet a specific student need in the field of Diagnostic Medical Sonography. Graded satisfactory/unsatisfactory. 1-4 semester hours. Prerequisite: Department approval.

ECN2000 Microeconomics

Students in ECN2000 will gain an understanding of the basic principles that underlie how people behave in today's economic world. Emphasis is placed on analyzing the individual's reaction to the price of a product or service, the issues of supply and demand, the level of competition for a business and its owner[s], the overall use of resources [natural resources, labor, machines, facilities, etc.], and the overall effect/impact of the government and international trade. (Online section: midterms and finals are online. Students are not required to come to campus.) 3 credit hours. Prerequisite: None. Ohio Transfer Module (OTM) Course [TMSBS]; and, Ohio TAG Course [OSS004].

ECN2100 Macroeconomics

An important and intriguing look at the overall U.S. economic system is the basis for this course. Students will study the background of economic forces that affect all citizens. U.S. economic history, the modern U.S. banking system, government spending, the Federal Reserve, GDP, unemployment, and inflation will be topics covered, as well as other vital aspects of the American economy. (Online section: Midterms and Finals are online. Students are not required to come to campus.) 3 credit hours. Prerequisite: None. Ohio Transfer Module (OTM) Course [TMSBS]; and, Ohio TAG Course [OSS005].

EET0000 Electrical Engineering Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the electrical engineering program. 1 - 4 credit hours.

EET1000 Introduction to Electricity

This course will present to the student an overview of the basic fundamental elements of electrical control devices and tools used in contemporary industrial electrical systems. The student will become familiar with the electrical symbols, and electrical line diagrams. Electrical circuits will be wired and tested in class lab exercises. Troubleshooting and safety is emphasized throughout the course. 2 credit hours. Prerequisites: ENG0970 or Placement

EET1210 Digital Circuits

This course will first cover the number systems and logic gates. Boolean algebra is taught and used to evaluate and simplify logic circuit applications. Then the configuration and operation of the combinational logic including adders, encoders/ decoders, and multiplexers will be introduced. Moreover, counters, shift registers and memory circuits will be discussed. The studies of these digital components lead into an investigation of the basic microprocessor architectures. Students get an introduction to assembly language and machine language to help them understand the dynamic interaction of components in the hardware architecture of microcomputers and their I/O connections to the

environment around them. The integrated circuits that fulfill the logic operation will be taught. 4 credit hrs. Pre-Req: Placement or MTH0990 or MTH0920; EET1000.

EET1300 Robot Handling Tool Operations & Program

This lab oriented course focuses on learning to program Yaskawa Motoman robots using the FS100 handheld controller and Motoman MHJF robots. Students will learn to create, modify, store, and call programs directly on the controller using Motoman-specific commands. Writing and calling subroutines will be covered as well so that students feel comfortable creating more complex programs. Upon successful completion of this course, students will be awarded an industry-backed credential from Yaskawa Motoman. Prerequisite EET2400

EET1500 Circuit Analysis I

This course will focus on the analysis of Direct Current circuits through applications of Ohm's Law, Watt's law, and Kirchoff's laws. Series, parallel, and series/parallel circuits will be analyzed. Circuit theorems such as superposition, Thevenin and Norton theorems will be used to solve the complex circuits. The effects of capacitors and inductors in direct current circuits will be studied. How to use basic electrical measuring instruments will be another component of the course. Hands- on labs are integrated in the course. 3 credit hours. Prerequisites: EET1000. Ohio TAG Course [OET001].

EET1550 Circuit Analysis II

This course continues studies in alternating current circuits with a focus on RC, RL, and RLC circuits. The properties and mathematic expression of sinusoidal waves that are used to describe the AC quantities will be introduced. Devices such as capacitor, inductor and transformer and their behavior under AC conditions will be studied. Circuit analysis methods such as Superposition and Thevenin's theorems will be further applied to AC circuits. Filter and three- phase circuits will also be included in this course. This course provides the student with an understanding of AC circuit dynamics that will be seen in later studies of industrial and electronic control applications. Hands- on labs are integrated in the course. 3 credit hours. Prerequisites: EET1500. Ohio TAG Course [OET003].

EET2010 Intro to Programmable Controllers

This course starts from the review of control systems such as relay logic control before the advent of PLC. The students will then be introduced to the fundamentals of PLC addressing, inputs and outputs configuration and interfacing to external devices such as switches, pushbuttons and motor starters etc. Basic programming skills are another important topic to be taught in this course. Various functions such as latch/ unlatch, timers and counters will be introduced. Hands- on labs are integrated in the course in which the students will design, construct, load, and run programs, simulating real applications such as motor reverse, seal-in, timed process and counters. 2 Cr. Hr. Pre-Req: EET1000

EET2050 Advanced Programmable Controllers

This course builds upon the student's fundamental knowledge of PLC wiring and programming. Students will be expected to wire and program PLC systems based on industrial applications. Labs will be set up for the students to learn the PLC troubleshooting. Other advanced studies will include math functions, fault location, diagnosis and repair, sequencers and shift registers, motor drive controllers, and counter applications. Prereq: EET2010.

EET2060 Advanced Programmable Controllers

This course builds upon the student's fundamental knowledge of PLC wiring and programming. Students will be expected to wire and program PLC systems based on industrial applications. Labs will be set up for the students to learn the PLC troubleshooting. Other advanced studies will include math functions, fault location, diagnosis and repair, sequencers and shift registers, motor drive controllers, and counter applications. Prerequisite: EET2010

EET2200 Electrical Distribution Systems

This course introduces industrial power distribution techniques and devices and how to properly interpret and use pertinent sections of the National Electrical Code. It includes the study and selection of conductors required for main trunk and branch circuits, service entrances, and grounding, with a focus on types of loads such as motor loads, lighting loads, and utility circuit loads and the required protective devices. The entire electric power systems including generation and transmission systems will also be introduced. 2 credit hours. Prerequisite: EET1500

EET2300 Electronics

This course introduces the student to basic semiconductor electronic devices such as diodes and transistors. Two types of transistors, the bi-polar transistor (BJT) and field effect transistors (FET), will be mainly covered. Their operation, biasing, amplifying circuits and frequency response will be introduced in detail. Other electronic devices and circuits such as thyristors, oscillators, op-amps and electronically regulated power supplies, as well as their operations and applications will be covered. Oscilloscopes and other types of test instruments will be used in lab exercises to support the theories taught. 4 credit hours. Prerequisite: EET1550. Ohio TAG Course [OET005].

EET2400 Robotics I

This course gives a project oriented introduction to the field of robotics. It will guide the student through the challenges of robotic construction and various methods and languages of programming. Since types of robots vary widely, the course will focus on common elements that are found in all robotic applications: drive train mechanisms, sensory mechanisms and circuits, manipulators and other external effectors, and control and programming methods. The course will begin studies of robotic manipulation, their characteristics, and how they are controlled. Each student will program a robot for prescribed assignments and apply various external effectors to accomplish design solutions to typical robotic problems. Humanoids and industrial applications and programming will be introduced and discussed in preparation for more advanced studies in specific robotic applications. Credit hours 2 hrs. Prereq: EET1000.

EET2460 Robotics II

This course is a continuation of Robotics I. Students will learn the application of pendant boxes. The control of the robot by both computer and pendant box will be practiced. Advanced programming skills such as subroutine and external input will be taught. This is a heavily hands-on involved course. The above skills will be exercised on various robot models including Scorbot, Vex and Mitsubishi in order to expose the students to a variety of robots. Students will learn how to program the industrial robot for it to properly respond to the external stimulation and react accordingly. 3 credit hours. Prerequisite: EET2400

EET2510 Automated Process Control

This course is designed to provide a comprehensive review of automated systems. Various aspects of the systems will be covered, such as the components, layouts and communication. The function and operation of various sensory and actuating devices will be explained. Industrial standards and communication protocols of the systems will be introduced. In addition to the hardware, popular automation software will be demonstrated as well as its applications. A selection of case studies is used to illustrate the key concepts of real world automation systems. Credit hours 3 hrs. Prereq: EET2010

EET2980 Special Topics

This course presents a special project in the area of Electrical Engineering Technology designed to give a group of students the opportunity to pursue studies not otherwise offered in the degree program. 1-5 credit hours; EET2980 is repeatable to a maximum of 10 credit hours. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Department approval.

EET2990 Individual Invstgtn

EET2990 is an independent investigation of an appropriate problem in the student's major field of interest. 1-5 credit hours; EET2990 is repeatable to a maximum of 10 credit hours. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Department approval.

ENG0000 English Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an english elective for the arts and science program. 1 - 4 credit hours.

ENG0920 My Foundation Lab

This course is for students who score within the decision zone range on the COMPASS placement test. Students work independently in this computer-assisted class. My Foundations Lab provides instruction, exercises, and activities to strengthen student skills in the areas of math, writing, and reading. All work is completed on-line and on the computer.

Students may work in all three areas of the course, or they may work only in the area(s) of need. Students must have basic computer skills to participate in this course. 1 credit hour. Prerequisite Advisor recommendation.

ENG0970 Reading Enrichment II

ENG0970 provides instruction and practice that will allow the student to have increased comprehension and retention of written communication. The concepts of main ideas, implied main ideas, location of main ideas, supporting details, inferences, transitions, relationships (involving examples, comparison and/or contrast, and cause and effect), organizational patterns, and argument evaluation are introduced and reinforced throughout the term. Using a word-in-context approach with abundant practice, the student will develop an increased vocabulary of 280 essential words. Prerequisite: ENG0960 or appropriate COMPASS score. 3 credit hours.

ENG0980 Preparation for College Writing I

This course focuses on helping students learn grammar, effective sentence writing, and effective paragraph composition. It addresses such areas as parts of speech, sentence patterns, punctuation, consistency, agreement issues, effective topic sentences, appropriate support, and logical conclusions. While the goal of the course is to assist students in writing clear and correct sentences, an equally important goal is to demonstrate how well constructed sentences add to the clarity and effectiveness of longer pieces of writing. Students will also learn to write a variety of paragraph types using different organizational patterns as well as developing the skills of prewriting, revising, and editing. 3 credit hours. Prerequisite: Appropriate placement test score

ENG0990 Preparation for College Writing II

This course provides instruction to enable students to develop writing skills necessary to succeed in college courses. It focuses on paragraph and essay writing, and it offers an intensive review of basic grammar and usage and a study of various sentence and paragraph patterns. It also provides experience in the composing process through the activities of drafting, revising, and peer review. 3 credit hours. Prerequisite: ENG0980 or placement test score.

ENG1000 English Composition I

In this composition course, you will write themes and essays based on your own experience. This class includes an analysis of the formality needs of Standard English, the study of effective organization and style, the analysis of writing for logic and reason, and a strong concentration on developing clear and concise writing skills. Online specifications: All assignments, including the midterm and final, are to be completed online. This course is part of the Ohio Transfer Module (OTM) and approved to transfer to any state college or institution. 3 credit hours. Prerequisites: OIS1220 or OIS 1240 or concurrent and qualifying score on placement assessment test. Ohio Transfer Module (OTM) Course [TME001].

ENG1100 English Composition II

As a continuation of English Composition I, students will expand their knowledge through reading, thinking, and writing assignments. Through essay writing, students will demonstrate their ability to analyze and evaluate ideas and integrate those ideas into their own writing. Students will engage in writing both independently and collaboratively while participating in discussions and reading assigned literature. The course places emphasis on the research essay as a fundamental form of writing in which students will document sources while integrating research into their writing. Online specifications: assignments, including tests, are submitted through CANVAS. All assignments are the same as the traditional class. This course is part of the Ohio Transfer Module (OTM) and will transfer to any state college or university in Ohio. 3 semester credit hours. Prerequisite: ENG 1000. Ohio Transfer Module (OTM) Course [TME002].

ENG1200 Business Communications

A focus on customer and reader needs is essential for effective business communication. In this course, you will learn how to write clear, friendly messages tailored to specific situations with the customer and reader in mind. You will also learn to write effective e-mail and a formal report with graphics based on primary research. Other lessons include information on conducting and arranging good business meetings and on creating good visual aids for presentations. In addition, you will construct a personal job package consisting of a resume, cover letter, and thank-you letter and you will study and practice interviewing skills. All of these projects are designed to develop vital job skills. Online section: All assignments, including the midterm and final, are online. 3 credit hours. Prerequisite: ENG1000. Ohio TAG Course [OBU005].

ENG1400 Oral Communications

This class prepares the student for communication for the job. Topics included are listening, questioning, nonverbal communication and business presentations. Students will give four speeches. 3 semester credit hours. Prerequisites: None. Ohio Transfer Module (OTM) Course [TMCOM]; and Ohio TAG Course [OCM004].

ENG1500 Interpersonal Communications

This course focuses on communication in all areas of life including family, community, and work. The role of creating, maintaining, and ending interpersonal relationships is emphasized. This course is part of the Ohio Transfer Module (OTM) and will transfer to any state college or university in Ohio. 3 semester credit hours. Prerequisites: None. Ohio TAG Course [OBU002].

ENG2000 Early American Literature

This course is one of two courses comprising a selected survey of American literature. In this course we will focus on the literature of British-influenced North America written in English during the 1700s and 1800s. The time period will be roughly 1600-1860. We will explore the invention and formation of "Americanness" and "American literature" during this time of change during the development of the United States as an early nation, examining some of the fundamental ideas, myths, assumptions, intellectual concepts, and popular perceptions that still influence the ways in which Americans think about themselves. Some of the authors that may be included are as follows: Anne Bradstreet, Ben Franklin, Thoreau, Emerson, Poe, Washington Irving, Hawthorne, Melville, and Longfellow. 3 credit hours. No prerequisite. Ohio Transfer Module (OTM) Course [TMAH]; and Ohio TAG Course [OSH053].

ENG2100 Modern American Literature

In this course, students will initially discuss the movement away from literary romanticism in American literature in the mid-1800s, and the mood for change in literary style. In this half of the course such works as *The Adventures of Huckleberry Finn* will be studied in detail. Students will then also explore the regional realists as a transition between the old romanticism and the new realism. Time will be spent on a discussion of the social and philosophical influences upon the American literary scene, especially through the rise of realism and naturalism in the late 1800s. Authors of note in this segment include Jack London, Stephen Crane, and Kate Chopin. Students will also explore the reevaluation of American values and the rise of social criticism through the extension of naturalism and the development of expressionistic and stream of consciousness techniques. Authors in this group include Robert Frost, Ernest Hemingway, and F. Scott Fitzgerald. An extended study of Fitzgerald's *The Great Gatsby* will be included. Some time will be also be spent on considering the alienation and dissatisfaction expressed during the 1920s and 1930s and the works that demonstrate that trend. Finally there will be a brief survey of recent trends in contemporary 20th and 21st century American fiction and poetry. Pre-requisite: None. Ohio Transfer Module (OTM) Course [TMAH]; and, Ohio TAG Course [OAH054].

ENR2100Z Intro to Environmental Science

FIN1000 Personal Finance

The course provides comprehensive coverage of personal financial planning in the areas of money management, career planning, taxes, consumer credit, housing and other consumer decisions, legal protection, insurance, investments, retirement planning, and estate planning. The goal of this course is to teach students the fundamentals of financial planning so they can make informed choices related to spending, saving, borrowing, and investing that lead to long-term financial security. 3 Cr. Hrs. Prerequisite: OIS1200 or successful completion of the Technology Skills Test (TST).

FIN2100 Corporate Financial Management

This course provides an introduction to the theory, the methods, and the concerns of corporate finance. Emphasis is placed on achieving wealth maximization through the use of the following analytical skill: financial analysis, forecasts, cash and capital budgeting, operating and financial leverage, the cost of capital, and dividend policy. 3 Cr. Hrs. Prerequisite: ACC1400

GET1000 Intro to Engineering

This course will cover the varied aspects of engineering from scientist to technician. It will explore the disciplines and functions within those disciplines. The course focuses on providing direction for the students in career choices within the engineering field. Student will understand structured problem solving steps including open ended type problems where constraints are required to develop solutions to be tested. Hands on skills will be developed by having a class project and through classroom demonstrations. The project will have members assigned to teams to work together to complete the project. The main goal is to develop an understanding of the various engineering disciplines and functions and to look at potential careers for a student. The computer will be a tool in this class used to do research and assist in problem solving. The various certifications and licenses will be addressed along with the professionalism required to meet the standards set forth in engineering ethics. It is a transferable course to other institutions. 2 credit hours. Prerequisite: ENG0970 or Placement. Ohio TAG Course [OES001].

GET1100 Industrial Safety

This course involves a study of safety as applied to the workplace. Students will learn how to recognize safety hazards and begin practicing safe work habits including use of Personal Protective Equipment, HAZMAT awareness, and First Aid and basic CPR awareness. This course is a blended series of textbook and hands-on activities modules. 2 credit hours. Prerequisite: None.

GET2200 Technical Writing

This course will teach students to communicate as technical professionals in business, industry, service, or government organizations. It will develop students' abilities to produce clear, concise correspondence, reports, instructions, proposals, and resumes that will be effective in a work setting. The course covers technical writing basics including typical formats, as well as special techniques, document design, and graphics. 3 credit hours. Prerequisite: ENG1100

GET2300 Engineering Statistics

This course will introduce the student to the relationship between statistical methods and process control by exposing the students to data collection techniques, organization, interpretation, and application. Although the course concentrates on the manufacturing environment, the concepts may be applied to a variety of situations in engineering and business alike. 2 Cr. Hr. Pre-Req: TMT1110 AND OIS1240. Ohio TAG Course [OES004].

GET2700 Engineering Cooperative Work Experience

Cooperative education is a learning experience which integrates the student's academic field of study with work experience in business and industry. An arrangement is established by which students receive college credit for structured, on-the-job learning experiences related to their academic field. 1-4 credit hours; GET2700 is repeatable to a maximum of 10 credit hours. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Department approval.

GET2800 Engineering Applied Project

This capstone course allows students to apply and integrate previous coursework by planning and designing a mechanical system. 2 credit hours. Prerequisite: Department approval

GET2990 Engineering Individual Investigation

This course offers independent study designed to meet a specific student need in the field of Engineering. Graded satisfactory/unsatisfactory. 1-4 credit hours. Prerequisite: Department approval.

HIT0000 HIT Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the health information program. 3 semester hours.

HIT1200 Health Record Management I

This course is an introductory course in Health Information Technology/Management. Topics include the evolution of the health information management profession, the purpose and function of the health record; data stewardship, ethical obligations and core values of the profession; healthcare delivery systems, and organizational principles and work planning. 2 semester hours. Prerequisite: Department Approval.

HIT1301 Clinical Classifications ICD10-CM/PCS

This course focuses on ICD-10-CM/PCS classification systems. The focus within this course will be on rules, conventions, instructions and coding guidelines for each body system (circulatory, injury, pregnancy), including criteria for assignment of principal and additional diagnoses in various patient settings. Healthcare case studies, manual and computerized coding methods, and coding references will be utilized in the coding process. 4 semester hours. Pre-requisite: HIT 1200.

HIT1302 Current Procedural Terminology

This course is designed as a comprehensive course for the student requiring advanced information in CPT-4 Coding. The student is introduced to the current purposes and uses of CPT-4, applying the basic coding guidelines in evaluation and management services along with surgical and ancillary coding and is completed with practical experience coding from case studies. Students will be introduced to the value of the quality of coded data within a data quality improvement plan and for the prevention of fraud and abuse. 3 semester hours. Pre-requisite: HIT 1200.

HIT1400 Healthcare Reimbursement

This course introduces the student to reimbursement policies and procedures in the use of clinical data, issues and systems, including the compliance environment; payers; reimbursement vocabulary and systems such as DRGs, RBRVS, APCs, CMS 1500 and UB92 billing forms; charge masters, EDI, billing technologies, and application programs. Students will learn the value of using established guidelines to comply reimbursement and reporting requirements, to perform data quality reviews to validate code assignments. 2 semester hours. Pre-requisite: HIT1200. Ohio TAG Course [OHL022].

HIT1450 Advanced Healthcare Reimbursement

This course is a continuation of HIT1400 Healthcare Reimbursement in which the student will continue to engage in actively applying the reimbursement policies and procedures in the use of clinical data, issues and systems, including the compliance environment; payers; reimbursement vocabulary and systems such as DRGs, RBRVS, APCs, CMS 1500 and UB92 billing forms; charge masters, EDI, billing technologies, and application programs. Students will learn the value of using established guidelines to comply reimbursement and reporting requirements, to perform data quality reviews to validate code assignments as well as the completion of the UB02 and CMS1500. 3 semester hours. Pre-requisite: HIT1400

HIT1500 Advanced Clinical Classification System

This course provides the student with advanced knowledge and coding practice in clinical classification systems; in-depth prospective payment system; data quality, fraud and abuse in coding; advanced case studies. This course builds upon concepts learned in ICD-10-CM/PCS and CPT coding course. It focuses upon the management of coded data in clinical databases, for use in reimbursement and decision-support in various healthcare settings. SNOMED and additional classification systems are also introduced. The student will also be introduced to the revenue cycle, data presentation and report generation as well as coding quality and coding compliance. 3 semester hours. Pre-requisite: HIT 1301.

HIT1900 HIT Professional Practice I

This course provides the student with practical experience in an affiliated healthcare facility or in a simulated environment in a health information technology lab. Students will apply their knowledge and skills of billing and coding under the instruction of health information professionals. Students will maintain contact and supervision with a full-time faculty through online discussions, assignments, and journaling. The student will also develop the skills necessary to communicate effectively across the full range of roles that will be encountered in health care and public health settings necessary to communicate effectively across the full range of roles that will be encountered in health care and public health settings. Students have an opportunity to prepare for a coding certification exam through the use of professional review guides. 1 semester hour. Pre-requisite: Department approval.

HIT2000 HIT Legal Issues

The student will study the policies and procedures for processing health records as a legal document based upon legal and regulatory requirements. The importance of maintaining confidentiality of health information, access to information, transfer of health information, subpoenas for patient information, legal terminology and court systems,

liability, and retention will be discussed. Students will learn about user access, logs and systems to track access to and disclosure of identifiable patient data, conduct privacy and confidentiality training programs, and how to investigate and recommend solutions to privacy issues and problems. Ethical standards of practice will be applied and promoted. 2 semester hours. Pre-requisite: HIT1200. Ohio TAG Course [OHL021].

HIT2100 Health Record Management II

This course is a continuation of HIT 1200 Health Records Management I. Topics include the content of the health record and documentation requirements; components of specialized records and content, different record formats, health record documentation requirements for accreditation and government review bodies; filing and storage systems; electronic health records; policies and procedures required to collect, analyze, interpret, report and maintain healthcare data including the different types of data sets and data abstracting, the purposes and uses of secondary data for internal and external use. Students will further understand the legal and ethical guidelines for the release of information. The student will perform chart reviews and will be introduced to the requirements for establishing, operating, and maintaining various indices and registries. 4 semester hours. Pre-requisite: HIT 1200 and Dept. approval.

HIT2200 Health Information Technology Systems

This course will provide an in-depth look at the use of information technology in the healthcare delivery system including the role, purpose and use of health information systems, computer-based patient record, various health information system applications, information system life cycle and future technologies. Topics include defining the EHR, identify early attempts at development, challenges to the adoption of the EHR, and relates current status of the EHR, hardware, software, proprietary applications used in Health Information Management, and clinical inpatient information systems, and learn new initiatives in healthcare computing such as health information exchange and the personal health record .4 semester hours. Pre-requisite: HIT 2100

HIT2301 HIT Statistical Analysis

The student is introduced to procedures for properly collecting, organizing, displaying, and interpreting healthcare data to meet the needs of various users while complying with standards of the healthcare facility. Topics include statistical formulas, spreadsheet applications, and data presentation. Pre Requisite HIT 1200.

HIT2350 Project Management for HIT

In this beginning course, you will learn the basic application of knowledge, skills and techniques to execute projects effectively and efficiently in health information technology. Project management processes fall into five groups: initiating, planning, executing, monitoring and controlling, and closing. 3 semester hours. Pre-requisite: HIT2200

HIT2400 HIT Quality Assessment

The student will be introduced to procedures for facility-wide quality management and performance improvement programs. Emphasis will be place on analyzing clinical data to identify trends that demonstrate healthcare quality, safety, and effectiveness utilizing performance improvement tools. 2 semester hours. Pre-requisite: HIT 2100.

HIT2500 Health Infor Mgt and Data Governance

The student is introduced to the evolution of health information systems and the complexities of data flow. Students will learn the roles, functions, and practices for successfully managing healthcare data as an enterprise set. Students will explore enterprise functions such as data governance, data architecture, metadata management, master data management, data security management, business intelligence, and terminology and classifications systems within healthcare departments or business unit context. Students will apply policies and procedures to ensure the accuracy and integrity of healthcare data.

HIT2900 HIT Professional Practice II

This course is a review of theory and practice in health information management in preparation for national examination. Case studies will be used to emphasize analytical skills of HIT processes and ethical/legal situations. Issues and concerns facing the graduate along with resume and interview skills will be discussed. After successful completion of this course, and graduation fulfillments, the student will be prepared to take the national certification exam through

the American Health Information Management Association. The student will also develop an e-Portfolio highlighting accomplishments for future use. 2 semester hours. Pre-requisite: Department Approval

HIT2980 Special Topics

This special course in the area of health information is designed to give groups of students the opportunity to pursue studies not otherwise offered in the degree program. Graded on a Satisfactory/Unsatisfactory basis. 1-4 semester hours. Pre-requisite: Department approval.

HIT2990 Individual Investigation

This course offers independent study designed to meet a specific student need in the field of Health Information. Graded satisfactory/unsatisfactory. 1-4 semester hours. Pre-requisite: Department approval.

HLT1100 Health Terminology

Health Terminology is a self-paced course designed for the student to learn medical terms, their uses, and pronunciations. Pre-requisite: None

HSS0000 HSS Elective 1

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the human and social services program. 1 - 4 credit hours.

HSS1000 Introduction to Addiction Studies

This introductory course is an overview of the addictions field including drug abuse, addictive disorders, and the prevention. Treatment approaches, service coordination, documentation, professionalism and ethics are also explored by the students. This course meets the content requirements for the Chemical Dependency Counselor Assistant Certificate issued by the Ohio Chemical Dependency Professionals Board. Students will study models of prevention and intervention strategies used with various populations. Risk factors associated with use, abuse, and dependence will be examined. This course must be completed with a grade of "C" or higher. Credit hours: 3. Prerequisite: HSS and CJ majors only or department approval, Placement or ENG0970.

HSS1010 Introduction to Social Welfare

In this course, the student will receive an overview of the dimensions, functions, and challenges of the contemporary social welfare system. The course addresses the various social problems that exist in America and the extensive human service networks that have been established to address these problems. The student will also investigate the values, ethical guidelines, and the legal regulations of the human services worker. There will also be an overview of the career options for human services workers. Credit hours: 3. Prerequisites: HSS majors and/or department approval, Placement or ENG0970. Ohio TAG Course [OSS030].

HSS1020 Substance Abuse

This introductory course is an overview of the addictions field including drug abuse, addictive disorders, and the prevention. Treatment approaches, service coordination, documentation, professionalism and ethics are also explored by the students. This course meets the content requirements for the Chemical Dependency Counselor Assistant Certificate issued by the Ohio Chemical Dependency Professionals Board. Students will study models of prevention and intervention strategies used with various populations. Risk factors associated with use, abuse, and dependence will be examined. This course must be completed with a grade of "C" or higher. Credit hours: 3. Prerequisite: HSS majors only and/or department approval.

HSS1030 Interviewing Techniques

Students will learn basic principles and practices of interviewing clients in a variety of human services settings. Students will demonstrate the ability to utilize active listening skills and the process of structuring an interview. The course introduces students to working with clients from a multicultural perspective, motivational interviewing, positive psychology, and wellness assessments in the interviewing process. Students will engage in role playing throughout the class. Credit hours: 3. Prerequisites: HSS majors only and department approval, Placement or ENG0970.

HSS1040 Intro to Social Work

This course introduces students to the history, values and ethics of social work practice. It will address social work practice as a wide range of value-guided, knowledge-based, change-oriented actions which help people to alleviate distress, accomplish life tasks, and achieve individual and collective aspirations. It introduces the systems perspective, examines professional values in the context of societal values, as well as to acquaint students with the generalist framework. Credit hours: 3 Prerequisites: Placement or ENG0970. Ohio TAG Course [OSS029].

HSS1050 Family Development

Students will explore issues related to family structures, dynamics and functioning, with an emphasis on family systems theory. Within this context, consideration will be given to how families deal with issues such as divorce, substance abuse, chronic illness and mental disorders, poverty and, death and dying. Credit hours: 3 Prerequisites: HSS1010, Placement or ENG0970.

HSS1060 Abnormal Psychology

In this course students will learn the basic concepts of abnormal psychology. The diagnostic criteria from the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) for the major categories of psychological disturbances will be presented. Facts about etiology, prognosis, and treatment modalities using the DSM-V as a basis will be presented and discussed. Credit hours: 3 Prerequisites: PSY1100, Placement or ENG0970. Ohio Transfer Module (OTM) Course [TMSBS]; and, Ohio TAG Course [OSS017].

HSS2010 Introduction to Counseling

This course is an introductory course in counseling designed to expand the students' understanding and knowledge of basic counseling theories, group process, and intervention strategies most commonly used by human services professionals. Additionally, students will explore the ethical issues related to the profession and will be introduced to issues concerning boundary setting, counter-transference and characteristics of effective helpers. Credit hours: 3. Prerequisites: HSS1030.

HSS2020 Ethnic and Cultural Diversity

This course will introduce the student to the richness of diversity within the United States. The course will examine the similarities and differences of people of various racial and cultural heritages. Topics that will be examined include: the origin and effects of prejudice and discrimination, and investigations into the historical experiences of the major racial and ethnic groups in America. Students will have the opportunity to assess their own attitudes regarding the diversity this nation offers. Students will gain information that will assist in improving their ability to relate to people of diverse backgrounds. Credit hours: 3. Prerequisite: ENG0970 or Placement. Ohio Transfer Module (OTM) Course [TMSBS]; and, Ohio TAG Course [OSS024].

HSS2030 Introduction to Case Management

This course serves as an introduction to the concept of case management; working with individuals from the intake interview to termination of services. There is an emphasis on documentation and the responsibilities and skills of the effective case manager. In addition, students will gain an awareness of the legal and ethical issues confronting case managers today. Credit hours: 3. Prerequisites: HSS1040.

HSS2040 Human Services-Practicum I

Students will begin to apply knowledge and skills obtained from the classroom setting to a field placement site within the human and social service community. Students will be involved in observational experiences that progress toward "hands-on" learning experiences. Each student will develop a practicum learning plan that will consist of goals and objectives, and maintain a log of practicum activities. Students will devote a total of 105 hours to their practicum and attend weekly lab. Credit hours: 4. Prerequisites: HSS1040 and HSS1060.

HSS2050 Human Services-Practicum II

Students will apply their knowledge and skills in structured, on-the-job placements in selected social service agencies, gaining educationally-supervised experiences. Students will develop a practicum plan with relevant goals and

objectives, and maintain a log of the practicum experiences. Students will devote a total of 25 hours to their practicum and attend weekly lab. Credit hours: 4. Prerequisite: HSS2040 and Department Approval.

HSS2610 Crisis Intervention

In this course students will be introduced to basic crisis intervention skills that will include an examination of the nature of crisis, and the use of models of assessment. Students will explore specific areas of crisis including lethality, post traumatic stress disorder, sexual assault, partner violence, chemical dependency, bereavement and grief, violent behavior in institutions, and issues related to burnout of human service workers. Credit hours: 3. Prerequisites: Department approval, Placement or ENG0970.

HSS2620 Aging

An introductory course in the study of adult development and aging pertaining to psychological and developmental issues, as well as changes and adjustments that occur physically, cognitively and socially during adulthood. The course covers current psychological and psychosocial theories and research findings relevant to adult development and aging. Credit hours: 3 Prerequisites: ENG0970 or Placement.

HSS2630 Chemical Dependency: Ethics

This is an online course in which ethical standards for counselors, particularly chemical dependency counselor assistants and licensed chemical dependency counselors, will be examined. Students will study a wide variety of ethical issues and topics. Topics include counselor values and attitudes, ethical dilemmas, ethical decision making, professional standards, client rights and counselor responsibilities, confidentiality, counselor competence, boundaries and dual relationships, ethical misconduct, and multicultural issues.

HSS2640 Chemical Dependency: Intro Pharmacology

Students will learn the pharmacology of drugs of abuse, as well as those used in detoxification, addiction treatments, and the treatment for mental and emotional disorders. There will be an emphasis on the action of pharmaceuticals and the physiological response, the interaction of pharmaceuticals, tolerance, the appropriate use of psychotropic medication with addicted persons, and the effects of drugs on sensation and perception, learning and memory, human growth and development, sexual functioning, and behavior. Credit hours: 3 Prerequisite: ENG0970, HSS1000 or Placement.

HSS2650 Juvenile Delinquency

Why do some juveniles become delinquent? This course examines the causes and effects of juvenile delinquency in American society. Students will learn the social and institutional factors influencing delinquent behavior. This course will also analyze a variety of intervention and treatment strategies. Credit hours: 3 Prerequisite: CRJ1000, or ENG0970, or Placement

HSS2660 Chemical Dep-Etlgy, Assmnt, Diagnosis

Students will study methods of diagnostic interviewing and the use of testing/screening instruments for psychoactive substance abuse. Emphasis includes criteria for determining diagnosis and the appropriate level of treatment, adapting treatment strategies to individual needs, and relapse prevention. Other areas of study include techniques utilized in the treatment of dysfunctional relationships, cultural influences, and dual diagnosis. Credit hours: 3 Prerequisite: Department approval.

HSS2670 Chemical Dependency: Ethics

Students will learn principles of the ethical codes pertaining to addictions counselors, specific knowledge of appropriate ethical codes, laws associated with addictions counseling and obligations and procedures that encourage the ethical conduct of addiction counselors. Credit hours: 3. Prerequisite: Department approval.

HSS2680 Orientation to Deafness

This course is designed to provide students with an overview of the deaf community. Students will explore social, cultural, and educational issues confronting the hearing impaired within our society. Additionally, students will learn basic sign language skills. Credit hours: 3 Prerequisite: Placement or ENG0970.

HSS2900 Field Placement I

Students will begin to apply knowledge and skills obtained from the classroom setting to a field placement site within the human and social service community. Students will be involved in observational experiences that progress toward "hands-on" learning experiences. Each student will develop a practicum plan that will consist of goals and objectives, and maintain a log of practicum activities. Students will devote a total of 105 hours to their practicum and attend weekly classes. Credit hours: 4. Prerequisites: Department approval.

HSS2910 Field Placement II

Students will apply their knowledge and skills in structured, on-the-job placements in selected social service agencies, gaining educationally-supervised experiences. Students will develop a practicum plan with relevant goals and objectives, and maintain a log of the practicum experiences. Credit hours: 4 Prerequisite: Department approval.

HSS2980 Special Topics

This special course in the area of human and social services is designed to give groups of students the opportunity to pursue studies not otherwise offered in the degree program. Graded on a Satisfactory/Unsatisfactory basis. 1-4 Cr. Hrs. Prerequisite: Department approval.

HSS2990 Individual Investigation

This course offers independent study designed to meet a specific student need in the field of Human and Social Services. Graded satisfactory/unsatisfactory. 1-4 credit hours. Prerequisite: Department approval.

HST0000 History Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a history elective for the arts and science program. 1 - 4 credit hours.

HST1500 Early American History

This course is an introduction to the political, social, and cultural development of the American nation. HST1500 studies American civilization from the Age of Exploration through the Civil War. In addition, this course will focus on central themes and issues noted in the growth of the U.S. with the enduring theme being Life in Early America. The student will be asked to read supplementary analyses and critiques, and apply historical issues to modern topics. HST1500 will investigate the various dreams held by early Americans for the new nation and how these notions are interpreted by contemporary historians. 3 credit hours. Prerequisite: None. Ohio Transfer Module (OTM) Course [TMSBS]; Ohio TAG Course [OHS043]; and, Ohio TAG Sequence Course HST1500 & HST1600 [OHS010].

HST1600 Modern American History

This history course is an introduction to the political, economic, and social (with an emphasis on race, gender, and class) development of the American nation starting with Reconstruction. The primary objectives of this course are to develop your skills as a critical reader and provide you with fundamental knowledge about the events, people and institutions that have influenced and created America. We will examine how the perceptions of freedom and equality shifted and thus shaped American History. In addition, the course will investigate the various "dreams" Americans had as the nation progressed and how these are interpreted by contemporary historians. Key topics include the rise of industrialism and capitalism, the impact of immigration and urbanization, the rise of the US as a global power (including foreign relations) and how populism, civil rights and feminism shaped our culture, political and social institutions. Credit hours: 3 Prerequisite: None. Ohio Transfer Module (OTM) Course [TMSBS]; Ohio TAG Course [OHS044]; and, Ohio TAG Sequence Course HST1500 & HST1600 [OHS010].

HST1700 Western Civilization I

This course is a survey of Western Civilization from the start of recorded history through the Eighteenth Century A.D. It deals mainly with the historical developments that took place in Europe and the colonial Americas, but it also touches on the Near East as the place of origin for the first civilizations. Although the main goal of this course is to study the political and social events, it also will place strong emphasis on the development of the arts, architecture and humanities as a direct consequence of the different historical movements. It will cover such topics as the rise of the first human settlements, the creation of the first human complex cultures in the Near East, and their influence over Greek

civilization. Greece's influence in philosophical thought and art, as well as its impact on future civilizations. It will also deal with the coming of the Roman Republic, its institutions and their impact on modern life, and its eventual transformation into the Roman Empire and its influence in religious thought through the rise of Christianity. The contributions of the Medieval world will be also studied here. This includes the rise of Christianity and the church as an organized hierarchy. Finally, this survey will explore the Early Modern period and the Renaissance. Credit hours: 3. Prerequisites: None. Ohio Transfer Module (OTM) Course [TMAH].

HST1800 Western Civilization II

This is the second in a series of two courses on Western Civilization. It begins during the mid Eighteenth Century A.D., on the eve of the French Revolution. This survey course will explore the most relevant events of the last 250 years, focusing on Europe and the Americas. This includes the Transatlantic Economy between Europe and the Americas during colonial times, as well as the Age of Enlightenment and its impact in philosophical and scientific thought. Although much of this course deals mainly with political and social events, special attention will be given to the development of the arts, architecture and humanistic thought, as these topics reflect and portray important historical trends. This course will cover the causes and consequences of the French Revolution and the Napoleonic Era and the advent of Romanticism. The Industrial Revolution and its enduring impact in Western culture. This course will also cover the rise of Western Imperialism and the birth of modern European thought. This course will conclude with the Twentieth Century, and the two World Wars that defined it, as well as the Cold War era and the process of European decolonization. Credit hours: 3. Prerequisites: None. Ohio Transfer Module (OTM) Course [TMAH].

HUM0000 Humanities Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a humanities elective for the arts and science program. 1 - 4 credit hours.

HUM1200 Critical Thinking and Problem Solving

Become a more experienced critical thinker by learning about your thought processes and producing and enhancing your ideas. Learn where you stand on personal and social issues, and understand why others have opposing stances. Skills learned in this course will apply to your academic and professional careers. Online specifications: weekly assignments are submitted online. Requirement to participate in weekly discussion board forums and submission of papers via CANVAS. 1 credit hour. Prerequisite: None.

HUM1400 Introduction to Logic

An introduction to symbolic analysis and logic. In this course, students will recognize basic logic, distinguish arguments from non-arguments, recognize mistakes in reasoning, understand the construction of logic problems, understand inductive and deductive reasoning, evaluation and criticism of current media and political sources, and the role of language in reasoning and logic. Credit hours: 3. Prerequisite: None. Ohio Transfer Module (OTM) Course [TMAH].

MED0000 Medical Assisting Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the medical assisting program. 1 - 4 semester hours.

MED1010 Medical Assisting Clinical Procedures I

This is the first of a two part series to instruct students in the clinical skills performed by an MA in a physician's office. These procedures may include preparing patients for procedures, height, weight, vital signs, first aid, respiratory testing, eye and ear testing and irrigation/instillation and patient history. 4 semester hours. Pre-requisite: Department approval. Ohio CTAG Approved Course [CTMAT008]; and, Ohio CTAG Sequence Courses MED1010 & MED1040 [CTMAT011].

MED1021 Medical Office Procedures

This course emphasizes the administrative duties of medical office personnel. Topics of instruction include HIPAA, medical ethics and law, patient records, scheduling appointments, credit and collection, bookkeeping, health insurance, office maintenance, telephone techniques and communications. Students will be utilizing electronic health records for patient demographics, messages and billing. 4 semester hours. Pre-requisite: Department approval.

MED1040 Medical Assisting Clinical Procedures II

This is the second of a two part series to instruct students in the clinical skills performed by a Medical Assistant in a physician's office. Students will prepare patients for procedures and/or treatments, calculate and administer oral and parenteral medications, and perform electrocardiograms and sterilization procedures. 4 semester hours. Pre-requisite: MED 1010, Medical Assisting majors, only. Ohio CTAG Approved Sequence Courses MED1010 & MED1040 [CTMAT011]; and, Ohio CTAG Sequence Courses MED1010, MED1040, MED1050 [CTMAT010].

MED1050 MA Lab Procedures

Medical assisting students will perform quality control and waived laboratory testing in chemistry, hematology, immunology, urinalysis, and microbiology. Students will also perform venipuncture and capillary punctures. Standard precautions, CDC regulations, laboratory/physician's office safety, and fire safety will be covered and practiced. 2 semester hours. Pre-requisite: MED1010 and Dept approval. Ohio CTAG Approved Course [CTMAT009]; and, Ohio CTAG Sequence Courses MED1010, MED1040, MED1050 [CTMAT010].

MED1061 Medical Asst. Insurance and Billing

Students will be able to identify types of insurance plans and apply third party guidelines. In this introductory course, ICD-10-CM diagnostic coding and CPT-4 procedural coding will be performed. Completion of CMS-1500 forms and claims processing along with the legal aspects of the insurance industry including Medicare, Medicaid, managed care plans, private and employer based insurance plans. Through case studies and role play, students will learn how to maximize physician reimbursement while learning proper communication with patients, providers, and third-party administrators. Coding, precertifications, and preauthorizations will be assessed. 3 semester hours. Pre-requisite: ALH1110 and Department approval.

MED1070 Medical Assisting Capstone

This course is in preparation for the Medical Assisting Practicum and preparation for the job search. Topics include health and wellness, performance evaluations, employment strategies, continuing education and completion of a professional portfolio. 1 semester hour. Pre-requisite: MED1040 concurrent.

MED1080 Medical Assisting Issues and Review

This course consists of review and correlation of knowledge taught in the technical courses, and preparation for the certification examination. 1 semester hour. Pre-requisite: Department approval.

MED1091 Medical Assisting Practicum

Students will complete a 196 hour practicum in a physician's office utilizing clinical, administrative, and affective skills learned. 2 semester hours. Pre-requisite: Department approval.

MED2990 Individual Investigation

This course offers independent study designed to meet a specific student need in the field of Medical Assisting. Graded satisfactory/unsatisfactory. 1-4 semester hours. Pre-requisite: Department approval.

MET0000 Mechanical Engineering Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the mechanical engineering program. 1 - 4 credit hours.

MET1010 Technical Drawing with CAD

Students will gain an understanding of engineering drawings of mechanical and electrical systems. Technical drawing will focus on the correct format of technical print layout, dimensioning, orthographic alignment, symbols and abbreviations used in various technical applications. Time will be spent understanding the ANSI Y14.5-M 1982 drawing standards and Geometric Dimensioning and Tolerancing(GD&T). Students will also learn the basic techniques of producing a technical sketch by hand drafting methods and will be introduced to computer aided drafting (CAD). 2 credit hours. Prerequisite: ENG0970 OR Placement

MET1100 General Aptitude Preparation

This course prepares students to take tests required for entry into apprenticeship programs. Covered are a wide range of basic concepts of physics, tools encountered in a traditional maintenance shop, basic concepts of geometry, freehand sketching, and spatial relationships. Successful completion of this course does not guarantee that students will be successful with industrial trades. Graded on a satisfactory/unsatisfactory basis. 1 credit hour. Prerequisite: None.

MET1200 Computer Aided Drafting (CAD)

This course covers isometric and orthographic drawings, placement of symbols on engineering drawings, dimensioning, sectioning, and axonometric projection drawings. The course includes with practical exercises in working and assembly drawings for electrical, mechanical, and other representative disciplines. The course also includes exercises using Geometric Dimensioning & Tolerancing and concludes with presentations in 3D CAD applications. 3 credit hours. Prerequisite: MET1010 OR MET1000. Ohio TAG Course [OET012]; and, Ohio CTAG Approved Course [CTMET005].

MET1300 CAD Parametric Parts and Assembly

This hands-on course introduces the basic concepts of parametric part and assembly modeling using the latest computer aided design [CAD] software. Students learn to create and modify three-dimensional [3-D] parts, and combine these parts into assemblies. Topics include producing fully dimensional 2-D detail drawings from 3-D parts, and using part assemblies to make exploded scene drawings. Students will create an assembly in virtual space as a project. The concepts covered and skills developed in this course can be easily applied to any parametric modeling program currently used in industry. 3 credit hours. Prerequisite: MET1000 or concurrent, and MET1200.

MET1400 Geometric Dimensioning and Tolerancing

Geometric Dimensioning and Tolerancing (GD&T) uses a system of reference planes and special symbols to communicate the relationship between the surfaces and features on manufactured parts. This course will focus on the symbology, terminology, and application of GD&T, as described in standards ASME Y14.5 1994 and ASME Y14.5 2009. Students will learn the role that GD&T plays in both design and manufacturing; will learn to recognize, interpret, and apply tolerances of form, location, and orientation; and will learn to build feature control frames and properly use modifiers. 2 credit hours Prerequisite: MET1010

MET1500 Mechanical Drives

A thorough understanding of mechanical devices is important for designing and troubleshooting equipment. This course will focus on mechanical drive mechanisms and components, such as chain and belt drives, gears, bearings, couplings, brakes, and clutches. Students will learn to size, select, and to some degree, design these components and the systems that utilize them. Additionally, students will get to know general design procedures, building-block mechanisms, mechanical fasteners, safety, and ergonomics. 3 credit hours Prerequisite: MET1010 TMT1110 Concurrently.

MET2100 Fluid Mechanics

In this course, hydraulic and pneumatic fluid power applications are used to cover many topics in the subject of fluid mechanics. Through the study of these systems and the various components involved, the student will not only gain an understanding of the basic principles of fluid statics and dynamics, but will also learn to create and read fluid power schematics, size and select components, and troubleshoot hydraulic and pneumatic systems. Regular hands-on lab exercises will reinforce classroom discussions. 3 Cr. Hrs. Prerequisite: MTH1100 OR TMT1100

MET2200 Statics

The term "static" means "at rest." This very important, fundamental MET course investigates how bodies at rest interact with one another, and how applied forces are distributed throughout structural members, machine components, and various other objects that are in a state of static equilibrium. Students will utilize mathematical tools and problem solving ability to analyze forces systems applied to trusses and frames, and determine the magnitude, direction and sense of forces seen in individual structural members. The concepts learned in this course will provide an important foundation for success in future MET courses. 3 Cr. Hrs. Pre-Req: PHY1100. Ohio TAG Course [OET007].

MET2300 Strength of Materials

This course builds on the concepts learned in MET2200 Statics, now analyzing the effects of forces on structural

members and machine components. These effects, seen in various forms of mechanical stress, will be studied by the students so that they may understand how to properly size components and select materials for particular design applications, including beams, columns, and shafts, as well as bolted, riveted, and welded connections. Students will also gain an understanding of the importance of safety, and how it plays a role in component design and selection. 3 Cr. Hrs. Pre-Req: MET2200. Ohio TAG Course [OET008].

MET2400 Machine Design

In this course, students will combine their accumulated knowledge and skill sets with new topics in design to better understand the design and selection of various mechanical components, including chain and belt drives, gears, shafts, bearings, couplings, brakes, and clutches. Other topics discussed will include general design procedure, building-block mechanisms, endurance strength, and methods of stress analysis. 3 Cr. Hrs. Pre-Req: MET2300

MET2800 Applied CAD/CAM Project

This capstone course allows students to apply and integrate previous coursework by planning and designing a mechanical system. 2 credit hours. Prerequisite: Department approval

MET2980 Mechanical Special Topics

This course offers a special project in Mechanical Engineering Technology designed to give students the opportunity to pursue special studies not otherwise offered. 1-5 credit hours; MET2980 is repeatable to a maximum of 10 credit hours. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Department approval.

MET2990 Individual Investigation

This course is an independent investigation of an appropriate problem in the field of Mechanical Engineering. 1-5 credit hours; MET2990 is repeatable to a maximum of 10 credit hours. Graded on a satisfactory/unsatisfactory basis. Prerequisite: Department approval.

MFT1000 Intro to Machine Tools

In this course students will study basic machine tool operations used in modern industry. Students will learn how to operate the lathe, vertical mill, horizontal mill, drill press, and surface grinder. They will also learn how to use precision measuring instruments. After studying various machining processes students will be given the opportunity to make several useful projects. This course has much hands-on emphasis. 3 credit hours. Prerequisite: None

MFT1100 Manufacturing Processes

This course is designed to give students an overview of the vast world of manufacturing. Many aspects of manufacturing will be discussed, including manufacturing methods, metrology, and material properties, in order to provide the students with a strong foundation of knowledge for use in future MET and MFT courses. 3 Cr. Hrs. Prerequisite: GET1000 AND MET1400. Ohio TAG Course [OET010].

MFT1400 CAD/CAM

This is an introductory course that demonstrates the integration of Computer-Aided-Design (CAD) and Computer-Aided-Manufacturing (CAM). It is a study of modern prototyping and machining methods, teaching the use of CAM software. This software converts 2D and 3D CAD drawing geometry directly into tool path information that is used to drive numerically controlled turning and milling machines 3 credit hours. Prerequisite: None

MFT1500 Basic Machinist Training

This course provides the basic machinist and CNC operator skills necessary for new employees to become productive more quickly. It contains five, relatively equal in length, modules of instruction in Blueprint Reading and GDT, Applied Technical Math, Metrology, Introduction to Machine Tools, and CNC Machining: Set-up and Operation. 14 credit hours. Prerequisite: None

MFT2100 Computer Numerical Control

This course will introduce the various types of machines that commonly use Computer Numerical Control (CNC) programming. Students will learn general concepts common to all CNC machines such as machine control systems,

machine and part coordinate systems, use of referencing, shifts and offsets, calculation of speeds and feeds, and word address (G and M code) programming. They will apply these concepts by completing actual programming, simulation, and machine projects using a CNC machining center with GE Fanuc 21 control. Other machines studied include: turning centers, Electric Discharge Machining (EDM), and abrasive water jet and laser cutting. Students will be able to see these machines in operation through the SME "Fundamental Manufacturing Process" video series. 3 credit hours. Prerequisite: MFT1100 AND MET1200

MGT0000 Management Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a management elective for the business program. 1 - 4 credit hours.

MGT1400 Introduction to Management

Students will learn the fundamental principles of first-line management and their application in different work situations. This course introduces the five functions of the management process: planning, organizing, staffing, leading, and controlling. The focus of MGT1400 is to prepare the student for a supervisory role, emphasizing communication, delegation, motivation, stress and time management, and problem solving. 3 Cr. Hrs. Prerequisite: None

MGT1410 International Business

This course applies a cross-functional, integrated approach to the study of international business. Using examples of companies from around the world, case studies, current events, videos, and classroom discussions, students will study business from an international perspective. Students will complete a research project to analyze a country for business opportunities. Topics include international business environments, culture, management, international trade, investment, as well as financial and political systems. 3 Cr. Hrs. Prerequisite: None

MGT1420 Principles of Industrial Distribution

This course will introduce students to the flow of industrial products and the role that wholesalers and distributors play in the supply chain. Topics will include Distribution careers; channels of distribution; inventory control and management; and how Industrial Distribution relates to the operational and financial effectiveness of an organization. Prerequisite: MGT1400 and OIS1240

MGT1430 Principles of Transport. and Logistics

This course focuses on transportation and logistics as part of supply chain management. An emphasis will be placed on intermodal transportation management. Students will be introduced to the development of the global transportation system, modes of transportation and how they interact with each other, shipper issues, and the future of transportation. Prerequisite None.

MGT2210 Human Resource Management

This course provides an understanding of the role and importance of strategic human resource management within organizations. Students will gain the necessary human resource management knowledge and skills to be effective supervisors or managers in their organizations. Topics covered include social and legal considerations, job analysis, recruitment, staffing, human resource development, performance management, compensation, safety and health, and effective employee relations. 3 Cr. Hrs. Prerequisite: MGT 1400.

MGT2230 Employee and Labor Relations

Provides an introductory analysis of the employment relationship and the interrelated interests of management, workers, unions, and the public. Includes an overview of basic legal principles underlying the employment relationship and their social, political, and economic bases. 3 Cr. Hrs. Prerequisite: MGT2210.

MGT2400 Training and Development

Training and Development focuses upon strategic planning to attract and retain organizational talent in alignment with organizational missions, goals, and objectives. Key topics include training and development design and delivery, as well as analysis of learner needs and styles. Social media and other technology tools will be utilized. Projects, lectures, case studies, and cross-course collaboration will be used. 3 Cr. Hrs. Prerequisite: MGT2210, OIS1240.

MGT2410 Organizational Behavior

This course is an advanced study of the field of management with an emphasis on the interaction between individuals and organizations. Topics covered include foundations of individual behavior, motivation and performance management, leadership, conflict and negotiation, organizational culture and change, power and politics in organizations and group/team dynamics. Case studies, current events, decision making models, and self-assessments are used to aid in application of organizational behavior theories. 3 Cr. Hrs. Prerequisite: MGT1400

MGT2500 Entrepreneurship and Small Business

In this capstone course a study of the special opportunities and risks relating to the small business is presented. Students will develop business plans geared toward entrepreneurial startups which will include organizational brand development, marketing plans, financial management plans. The course underscores the importance of planning and other informational resources for small businesses. Students will learn how to effectively leverage social media to promote small business through the development of a final project that includes cross-course collaboration. 3 Cr. Hrs. Prerequisite: MGT1400, MKT2030, ACC1400

MGT2510 Project Management

This course is an introduction to the discipline of project management in which students utilize a combination of general management techniques and project management-specific techniques to plan individual and team projects. Students will learn how to utilize project management software to allocate resources and track projects from the planning stage to project completion. Students will develop an understanding of project critical timelines, allocation of resources, task dependencies, and the impact of each of these elements on the successful project completion. 3 Cr. Hrs. Prerequisite: OIS1240

MGT2540 Leadership

This course is a study of leadership fundamentals essential for understanding, developing, strengthening, and practicing good leadership skills. Classroom focus is on enhancing the student's ability to lead, influence, motivate, empower, and foster positive attitudes through maximizing human relationships, effective communication, and key decision-making. Cases, exercises, self-assessments, and other interactive activities are included in this course. 3 Cr. Hrs. Prerequisite: MGT1400

MGT2980 Special Topics

This is a special course in the area of management designed to give groups of students the opportunity to pursue studies not otherwise offered in the degree program. Graded on a Satisfactory/Unsatisfactory basis. 1-4 Cr. Hrs. Prerequisite: Department approval.

MGT2990 Individual Investigation

This course is an independent investigation of an appropriate problem in the field of Management. No more than four credit hours will apply toward graduation. Graded on a Satisfactory/Unsatisfactory basis. 1-4 Cr. Hrs. Prerequisite: Department approval.

MKT0000 Marketing Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a marketing elective for the business program. 1 - 4 credit hours.

MKT2030 Principles of Marketing

This course is an analysis of marketing role in organizations and society. MKT2030 includes development of marketing concepts related to the four P's of marketing and the role of the marketing process in fulfilling consumer needs and the planning of marketing activities by the firm. Other topics include techniques for providing customer satisfaction and developing long-term customer relationships. Development of a marketing plan is included in this course. 3 Cr. Hrs. Prerequisite: OIS1240 or Concurrent & ECN2000 recommended Ohio TAG Course [OBU006]

MKT2150 Principles of Advertising and Promotion

In this class students will study the basic principles of advertising and promotion as they relate to the marketing mix and, in particular, the communication function of promotion. Students will comprehend the strategic function of advertising within the broader context of business and marketing. Basic advertising considerations will be introduced as well as writing advertising copy, design and layout, production, planning, and coordination. 3 Cr. Hrs. Prerequisite: MKT2030 or concurrent. Ohio TAG Course [OCM012].

MKT2200 Public Relations & Social Media

This course covers the role of public relations in today's business organizations. MKT2200 includes an examination of the nature of public relations and the various tools of the field, including social media. The course incorporates theory with case studies as well as the practical nature of public relations work - effectively communicating, writing, and solving PR problems. A public relations social media project is incorporated into this course. 3 Cr. Hrs. Prerequisite: MKT2030 or Concurrent

MKT2250 Consumer Behavior

This course examines the products and services we buy and use, and the ways these fit into our lives. It is the study of people and the products that impact our lives and society as a whole. Students will learn to critically analyze the consumer buying process and understand not only how marketers influence consumers, but how consumers influence the field of marketing as well. 3 Cr. Hrs. Prerequisite: MKT 2030

MKT2980 Special Topics

This is a special course in the area of marketing designed to give groups of students the opportunity to pursue studies not otherwise offered in the degree program. Graded on a Satisfactory/Unsatisfactory basis. 1-4 Cr. Hrs. Prerequisite: Department approval.

MKT2990 Individual Investigation

This course is an independent investigation of an appropriate problem in the field of Marketing. No more than four credit hours will apply toward graduation. Graded on a Satisfactory/Unsatisfactory bases. 1-4 Cr. Hrs. Prerequisite: Department approval.

MLT0000 MLT Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the medical laboratory program. 1 - 4 semester hours.

MLT1010 Basic Medical Laboratory Techniques

This course provides a basic introduction in the various areas of the clinical laboratory including phlebotomy, hematology, urinalysis, immunology, microbiology and chemistry. Pipettes, glassware, safety, metrics, quality assurance, medical ethics, and instrumentation are also discussed. Upon successful completion of this course, the student will be able to perform basic laboratory testing in the clinical/practicum experience. 2 semester hours. Pre-requisite: Department approval. Ohio TAG Course [OHL008].

MLT1020 Body Fluids

This course is a study of the physical, chemical and microscopic evaluation of urine and other non-blood body fluids and the correlation of results with disease. Upon successful completion of this course, the student will be able to recognize normal and abnormal results and will be able to perform routine urinalysis and evaluate the results in the clinical experience. 2 semester hours. Pre-requisite: Department approval. Ohio TAG Course [OHL010].

MLT1030 Phlebotomy Theory and Techniques

This course provides the student with the theory and hands-on training to perform venipunctures and capillary skin puncture. The student is instructed in the anatomy and physiology of the circulatory system, specimen collection, specimen processing and handling, safety and quality control. Upon successful completion of this course, the student will be able to perform phlebotomy in the clinical experience. 2 semester hours. Pre-requisite: Department approval.

MLT1040 Hematology and Coagulation

This course is a study of normal and abnormal blood cells. Blood smears are prepared and studied for the identification of blood cells that aid in the diagnosis of anemia, leukemia, hemoglobinopathies, and other disease states. Included is the study of coagulation and the routine procedures used to evaluate hemostasis. Upon successful completion of this course, the student will be able to perform routine hematology and coagulation procedures in the clinical experience. 4 semester hours. Pre-requisite: MLT1020. Ohio TAG Course [OHL009].

MLT1050 Clinical Chemistry

This course applies introductory chemistry theory to the clinical chemistry laboratory. Topics include analysis of the chemical constituents in blood and body fluids, application of this information to health and disease, basic statistical methods and quality assurance. Techniques performed include manual and automated chemistry procedures. Upon completion of this course, the student will be able to perform routine clinical chemistry procedures and evaluate the results in the clinical experience. 4 semester hours. Pre-requisite: MLT1020, CHM 1000, and MTH 1100.

MLT1400 Phlebotomy Practicum and Seminar

This course provides the student with 100 hours of clinical experience in phlebotomy. The student must perform 100 successful venipunctures and skin punctures and participate in clinical laboratory orientation. Included in the course is a review and correlation of knowledge taught in the curriculum and preparation for the Registry Exam. Students will investigate professional development opportunities. 2 semester hours. Prerequisite: Department approval

MLT2010 Immunology and Serology

This course provides a study of the immune system, the nature of immune responses and the application of this theory to laboratory testing, health and disease. Upon successful completion of this course the student will be able to perform routine immunological testing in the clinical experience. 2 semester hours. Pre-requisite: MLT1040 and MLT 1050.

MLT2020 Immunoematology

This course is an in-depth study of the serological procedures included in pre-transfusion testing. Procedures in ABO/Rh typing, antibody screen and identification, phenotyping of red blood cells and crossmatching will be presented and practiced. Additional topics included are: collection, processing, storage and shipment of blood, blood transfusion practices, adverse effects of blood transfusions, and fetal/maternal incompatibilities. Students who successfully complete this course will be prepared to perform routine clinical blood bank and transfusion service procedures and evaluate test results in the clinical experience. 4 semester hours. Pre-requisite: MLT1040 and MLT 1050.

MLT2030 Clinical Microbiology

This course is a study of the identification of microorganisms associated with disease. The student will learn to examine and culture various specimens, isolate, identify clinically significant microorganisms and perform antibiotic susceptibility tests. The student will also be introduced to medical mycology and parasitology. Upon completion of this course, the student will be able to perform routine clinical microbiology procedures and evaluate the results in the clinical experience. 4 semester hours. Pre-requisite: MLT1040, MLT 1050 and SCI 1300.

MLT2080 MLT Case Studies

This capstone course provides students with the opportunity to apply their technical knowledge to laboratory case studies and to review major areas of the curriculum. Students will take exams similar to the Registry Exam. 2 semester hours. Pre-requisite: Department approval

MLT2090 MLT Clinical Experience & Seminar

This course provides the student with practical clinical experience in an affiliated clinical laboratory. Students will practice clinical procedures and correlate their results in the laboratory setting under the guidance of laboratory professionals. Students will be required to journal activities and will complete professional development assignments and finalize their preparation for the Registry Exam. 10 semester hours. Pre-requisite: Department approval.

MLT2980 Special Topics

This special course in the area of medical laboratory is designed to give groups of students the opportunity to pursue

studies not otherwise offered in the degree program. Graded on a Satisfactory/Unsatisfactory basis. 1-4 semester hours. Pre-requisite: Department approval.

MLT2990 Individual Investigation

This course offers independent study designed to meet a specific student need in the field of Medical Laboratory Science. Graded satisfactory/unsatisfactory. 1-4 semester hours. Pre-requisite: Department approval.

MTH0000 Math Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a math elective for the Arts & Sciences program. 1-4 Cr. Hrs.

MTH0910 Mathematical Literacy

Mathematical Literacy is designed to prepare students for a course in Quantitative Reasoning, Statistics, or Algebraic Literacy. Numeracy, proportional reasoning, algebraic reasoning, and functions will be integrated throughout the course. 4 Cr. Hrs. Pre-Req.: Meet current placement guidelines.

MTH0920 Algebraic Literacy

Algebraic Literacy is designed to prepare students for College Algebra or another STEM focused mathematics course. Functions, quadratic equations, exponential functions, logarithmic functions, radicals, complex numbers, and an introduction to vectors will be covered. 4 Cr. Hrs. Pre-Req.: MTH1100 or MTH0910 or meet current placement guidelines.

MTH0930 Quantitative Reasoning Co-Requisite

This co-requisite course is designed to increase student success in MTH1230 Quantitative Reasoning. This course may include reviewing linear equations, percent, proportions, measurement, exponents, and descriptive statistics. Content may vary to meet students' needs. 2 Cr. Hrs. Must be taken concurrently with MTH1230 Quantitative Reasoning. Pre-Req.: Meet current placement guidelines.

MTH0940 Statistics Co-Requisite

This co-requisite course is designed to increase student success in MTH 1240 Statistics. This course may include reviewing properties of real numbers, basic algebra concepts, summation notation, sets, inequalities, and radicals. Content may vary to meet students' needs.

MTH0945 College Algebra Co-requisite

This co-requisite course is designed to increase student success in MTH 1245 College Algebra. This includes reviewing pre-requisite topics such as linear graphs, linear equations, solving quadratic equations and inequalities, radicals, and laws of exponents

MTH1075Z Precollege Mathematics II

Algebraic, rational, and radical expressions; functions and graphs; quadratic equations; absolute value; inequalities; and applications. Credit for this course will not count toward graduation in any degree program.

Prereq: 1074 or 075; or a grade of C- or above in 1050; or Math Skills Assessment Level R or S; or ACT math subscore of 22 or higher that is less than 2 years old. Not open to students with credit for any Math course above 1075, except for 1116; or for any quarter-system course above 075, except for 116. This course is available for EM credit. GE quant reason basic computation course.

MTH1100 Beginning Algebra

This is a course in beginning college algebra. Course content includes a review of real numbers, equations in one and two variables, graphs and functions, exponents, polynomials, and factoring polynomials. MTH1100 is designed to provide an introduction to algebra for students in all areas of study. Emphasis is given to solving applied application problems from the different curricula. ON-LINE: Three proctored exams given at MTC. 3 credit hours.

Prerequisite: MTH0990 or algebra placement test. Compass Score: 40 ACT: 19 or course equivalency.

MTH1149Z Trigonometry

MTH1200 College Algebra

This course covers Graphs, Functions and Their Graphs, Linear, Quadratic, Polynomial, Rational, Exponential, and Logarithmic Functions, and Systems of Equations and Inequalities. It is designed to prepare the student for Precalculus (MTH1250). This course not only covers basic concepts but emphasizes practical uses of the topics covered through applied problems. Students must complete 5 outside projects for the course that are applications of what is learned in class. Students are required to have a TI-83 Plus, TI-84 Plus, or equivalent graphing calculator. 4 Cr. Hrs.. Pre-Req.: MTH1150 or meet current placement guidelines. Ohio Transfer Module (OTM) Course [TMM001]; and, OTM Sequence Courses MTH1200 & MTH1250 [TMM002].

MTH1215 Excursions in Mathematics

This course is designed to expose students to a variety of modern mathematical ideas and to develop mathematical problem-solving skills. It is intended for students with interests in the liberal arts and social sciences. Topics covered include the mathematics of Elections, Apportionment, Getting Around, Touring, Networks, Population Growth, Symmetry, Fractal Geometry, Fibonacci Numbers, The Golden Rule, Graphs, Probabilities, Odds, and Expectations. 3 Cr. Hrs. Pre-Req.: MTH1150 or MTH0910 or meet current placement guidelines.

MTH1230 Quantitative Reasoning

Quantitative reasoning allows students to explore mathematical topics encountered on a day-to-day basis. Students will learn to communicate with numbers effectively through real-life problems and situations. Topics include ratios, rates, percentages, units, descriptive statistics, linear and exponential modeling, personal finance, and probability. 3 Cr. Hrs. Pre-Req.: MTH1100 or MTH0910 or meet current placement guidelines.

MTH1240 Statistics

Statistics is an introduction to descriptive and inferential statistical methods including sampling, probability, point and interval estimation, hypothesis testing, and regression. Real data and appropriate technology will be used. 3 Cr. Hrs. Pre-Req.: MTH1100 or MTH0910 or meet current placement guidelines.

MTH1245 College Algebra

College Algebra emphasizes the use of algebra and functions in problem solving and modeling. Appropriate use of technology and applying mathematics to real-world situations is emphasized. Topics include relations, functions, graphs, polynomial functions, rational functions, exponentials, logarithms, and systems of equations. 3 Cr. hrs. Pre-req.: MTH1150 or MTH0920 or meet current placement guidelines.

MTH1250 Precalculus

This course is a continuation of College Algebra (MTH1200). Topics covered include analytic trigonometry, applications of trigonometric functions, polar coordinates and vectors, analytic geometry, systems of equations and inequalities, sequences, induction, the binomial theorem and a preview of calculus. Students are required to have a TI-83 Plus, TI-84 Plus or equivalent graphing calculator. 3 Cr. Hrs. Pre-Req.: MTH1200 or MTH1245. Students cannot test into this class. It is a continuation of MTH1200. Ohio Transfer Module (OTM) Sequence Courses MTH1200 (MTH1245) & MTH1250 [TMM002].

MTH2000 Calculus I

This is the first course in Calculus. Topics include a) Functions including a review of functions, representing functions, and trigonometric functions; b) Limits including definitions and techniques for computing limits, infinite limits, limits at infinity, and continuity; c) Derivatives including the rules of differentiation, derivatives of trigonometric functions, implicit differentiation, and the chain rule; d) Applications of the Derivative including maxima and minima, graphing functions, optimization problems, the mean value theorem, and L'Hopital's rule; e) Integration including area under curves, definite integrals, the fundamental theorems of calculus, and the substitution rule; f) Applications of Integration including velocity and net change, regions between curves, volumes by slicing and shells, length of curves and physical applications. Students are required to have a TI-83 Plus, TI-84 Plus, or equivalent graphing calculator. 5 Cr. Hrs.

Prerequisite: MTH1250 or meet current placement guidelines. Ohio Transfer Module (OTM) Course [TMM005]; and, OTM Sequence Courses MTH2000 & MTH2050 [TMM017].

MTH2050 Calculus II

This is the second course in Calculus. Topics include a) Logarithmic and Exponential Functions including inverse functions, natural logarithmic and exponential functions, exponential models, inverse trigonometric functions, and L'Hopital's rule; b) Integration Techniques including integration by parts, trigonometric integrals, trigonometric substitution, partial fraction, numerical integration, improper integrals and an introduction to differential equations. c) Sequences including infinite series, divergence, integral, ratio, root, and comparison tests; d) Power Series including approximating function and polynomials, and Taylor series; e) Parametric and Polar Curves including parametric equations, polar coordinates, and conic sections, f) Vectors and Vector-Valued Functions including vectors in planes and three dimensions, dot and cross products, lines and curves in space, calculus of vector-valued functions, motion in space, length of curves, and curvature and normal vectors. Students are required to have a TI-83 Plus, TI-84 Plus, or equivalent graphing calculator. 5 Cr. Hrs. Prerequisite: MTH2050. Ohio Transfer Module (OTM) Course [TMM006]; and, OTM Sequence Courses MTH2000 & MTH2050 [TMM017].

MTH2990 Individual Investigation

This course offers independent study designed to meet a specific student need in the field of Mathematics. Graded satisfactory/unsatisfactory. 1-4 credit hours. Prerequisite: Department approval.

NTR1100 Nutrition

The emphasis of this course is placed on the physiological processes of digestion, absorption and transport of carbohydrates, lipids (fats), and proteins in the human body. The role of vitamins, minerals and water in metabolic processes will be discussed. Students will receive an introduction to nutritional research, dietary reference intakes, nutritional assessment, diet planning and food labeling. Scientific evidence of current topics in nutrition will also be addressed. 3 credit hours. Ohio TAC Course [OHL016].

NUR0000 Nursing Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the nursing program. 1 - 4 semester hours.

NUR1000 Nurse Aide Training

This course includes the guidelines set forth in the Omnibus Budget Reconciliation Act of 1987 (OBRA 1987) and focuses on care of elderly resident in the long-term care (LTC) facilities. Content includes an overview of the role of the nursing assistant, communication and interpersonal skills, infection control, safety and emergency procedures, promotion of residents' independence, protection of and respect for residents' rights, psychosocial needs and interactions, and basic nursing, personal care, and restorative care skills. Critical thinking situations are an integral part of each class discussion. 4 semester hours. Pre-requisite: None.

NUR1009 Basic Nursing Skills

This course is an introduction to the field of nursing. The course is based on an integrated approach of basic nursing content that is patient/family centered. Special emphasis is placed on the beginning skills of the nurse. Content includes communication and interpersonal skills, infection control, safety, promotion of patient's independence, protection of and respect for patient's rights, psychosocial needs, and interactions, and basic nursing, personal care, and restorative care skills. Critical thinking situations are an integral part of each class discussion. The clinical component of the course provides the student the opportunity to validate nursing skills and content for patients in a long-term facility. 2 semester hours. Pre-requisite: Formal acceptance into the Marion Technical College Nursing Program.

NUR1011 Foundations of Adult Nursing Care I

This course provides an introduction to the field of nursing. The course is based on an integrated approach of basic nursing content areas that is patient centered. Special emphasis is place on the roles of the nurse, utilization of the nursing process, and the categories of human functioning. This course also focuses on the needs of geriatric and adult acute-care medical-surgical patients. The student is assisted in the development of psychomotor skills for nursing care

of patients and pharmacology principles and skills. The clinical component of the course provides the student the opportunity to validate nursing skills and content for adults in long-term and/or acute care. 6 semester hours. Pre-requisite: NUR1009 or equivalent, or concurrent, formal acceptance into the Marion Technical College Nursing Program.

NUR1021 Foundations of Adult Nursing Care II

This course continues an introduction to the field of nursing. The course is based on an integrated approach of basic nursing content areas that is patient-family centered. Special emphasis is placed on the roles of the nurse, utilization of the nursing process, and the categories of human functioning. Students will also be assisted in the development of psychomotor skills and pharmacology principles/skills. The clinical component of the course provides the student the opportunity to validate nursing skills and content for medical-surgical patients in an acute care setting. 4 semester hours. Pre-requisite: NUR1011.

NUR1032 Nursing Care of Women and Children

This course contains two parts which include maternal/child and female reproductive health (OB) and pediatric nursing (PEDS). The student is assisted in the further development of psychomotor skills for nursing care of patients and pharmacology principles and skills. The clinical component of the course provides the student the opportunity to validate nursing skills and content for the pediatric and maternal/infant patients. 3 semester hours Pre-requisite: NUR 1021.

NUR1040 Transition

This blended course is designed to assist the Licensed Practical Nurse (LPN) in the transition into second year courses. This course will also assist the LPN to make the transition in the role from LPN to that associated with professional nursing. The contact will include the core threads from Nursing 1011,1021, and 1032. A review of basic skills and their clinical application will also be included. 6 semester hours. Pre-requisites: ATI tests, SCI 1200, unrestricted Ohio LPN License, and department approval.

NUR1111 Interpreting Basic Electrocardiograms

Interpreting Basic ECG's will prepare nurses, medical, allied health and nursing students, emergency medical technicians (EMT's) and EMT students, and telemetry monitor technicians to acquire the knowledge and skills essential for identifying basic arrhythmias. The student will learn to interpret and analyze normal rhythm strips and basic dysrhythmias. The ECG tracings serve as valuable diagnostic tools that allow the student to recognize potentially life-threatening situations. 1 semester hour. Pre-requisite: None.

NUR1112 Introduction to Critical Care Nursing

This course is designed for the student or current nurse interested in critical care. It provides an introduction into the field of critical care nursing and is based on an integrated approach of critical nursing concepts. These concepts are patient and family centered with special emphasis placed on the roles of the critical care nurse, utilization of the nursing process, and the categories of human functioning. 2 semester hours. Pre-requisite: NUR 2011 or concurrent. The NUR 2011 prerequisite will be waived if the student is currently a licensed RN.

NUR1150 CPR & First Aid

This CPR course will include background information about heart disease, risk factors, prudent heart, and heart/lung function. One and two rescuer cardiopulmonary resuscitation (CPR) and foreign body airway obstruction management for adult, child, and infant resuscitation will be taught. This course will consist of lecture and practice on CPR adult, child, and infant manikins. Satisfactory completion will result in certification in basic life support (CPR). The course will also have a lecture on Basic First Aid. The American Heart Association standards are used for both CPR and First Aid. 1 semester hour. Pre-requisite: None.

NUR1170 Dealing with Loss

Dealing with Loss examines the historical, cultural, spiritual, current societal trends and personal experiences as it relates to the topic of loss, grieving, and growing. How humans react to various forms of loss and the means and services available to better cope and heal are incorporated in the study. Guest speakers will be addressing some of the

loss issues impacting our society, i.e. suicide, domestic violence, hospice, assault, violent deaths, community resources, ethics in care, and spirituality. 2 semester hours. Pre-requisite: None

NUR1180 Intro to Pharm/Dosage Calculations

This course introduces students to fundamental principles of drug therapy and dosage calculations. Emphasis is placed on teaching pharmacology through prototypes and the use of medications for dosage problems. Physiology and pathophysiology for the following drug classifications will be included: cardiac, respiratory, renal, gastrointestinal, peripheral, central nervous system, infectious disease and anti-inflammatories. Students will apply basic principles of algebra to identify correct amounts of oral, topical and parenteral medications for pediatric and adult administration. Information for the appropriate administration, assessment, intervention, evaluation and patient teaching will be discussed. 3 semester hours. Pre-requisites: MTH 1100 or higher; NUR 1010 or concurrent.

NUR2001 Alterations in Mental Health Nursing

Mental Health Nursing is introduced from a historical perspective continuing through current treatment trends, often community-based. Clients' rights with mental health care, standards of mental health nursing practice, and types of therapies are presented. Student nurses will have the opportunity to apply knowledge to clients with mental illness such as mood disorders, anxiety-related disorders, substance abuse, anger and domestic violence, schizophrenia, cognitive disorders, personality disorders, and somatoform disorders. Additional information is provided by the study of children and adolescents with common mental health disorders, treatment, medications, and family issues. Behaviors associated with eating disorders are also discussed. Each area of study provides the student the opportunity to examine cultural considerations. The psycho-pharmacology and nutritional needs for each category of disruptions in mental health are also covered. Students will have the opportunity to examine their own feelings related to each topic. 3 semester hours. Pre-requisites: NUR 1021 & 1032 or NUR 1040 (if applicable), SCI 1250, PSY 2100.

NUR2011 Alterations in Functioning I

Nursing roles, nursing process, and categories of human functioning are emphasized for the client/family with common chronic alterations in functioning. Additional knowledge will be gained for the maintenance of high level wellness and the prevention of disease. Beginning management and leadership theory is introduced in the clinical experience. Students will practice advanced nursing skills in the campus laboratory. Students will have the opportunity to validate nursing knowledge in a variety of health care settings. Topics include diseases and surgical intervention for the respiratory, cardiac, gastrointestinal, and skeletal systems, as well as cancer. 8 semester hours. Pre-requisites: NUR 2001, NUR 1180, SCI 1300, NUR 1040 - LPN's only.

NUR2021 Alterations in Functioning II

Nursing roles, nursing process, and categories of human functioning are emphasized for the client/family with acute and chronic alterations in functioning. Additional knowledge will be gained for the maintenance of high level wellness and the prevention of disease. Students will practice advanced nursing skills in the campus laboratory. Students will have the opportunity to validate nursing knowledge in a variety of health care settings, including specialized areas such as ICU, ER, and a preceptorship. Topics include diseases, surgical intervention and emergency situations in the cardiac, respiratory, endocrine, and renal systems, burn therapy, and multi-system failure and blood dyscrasias. 8 semester hours. Pre-requisite: NUR 2011.

NUR2040 Nursing Issues

The change from student nurse to beginning practitioner of nursing will be assisted in this course. The student will develop an awareness of the historical influences, current status of the profession, professional relationships, ethics and accountability, legal ramifications, nursing organizations, career opportunities, and role expectations. The student will study professional resources and analyze management principles. 1 semester hour. Pre-requisites: ENG 1000, and concurrent enrollment in NUR 2021.

NUR2990 Individual Investigation

This course offers independent study designed to meet a specific student need in the field of Nursing. Graded satisfactory/unsatisfactory. 1-4 semester hours. Pre-requisite: Department approval.

OIS0000 Office Information Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the office information program. 1 - 4 credit hours.

OIS1200 Computer Basics

With learner-centered instruction in this beginning course, students will learn the Windows operating system and the fundamentals of touch keyboarding techniques. OIS1200 will teach students to use Windows to organize data using files and folders, manipulate menus, customize the desktop, and work with application programs. In addition, students will learn to navigate the Internet and use e-mail. 1 Cr. Hr. Prerequisite: None.

OIS1220 Healthcare and Nursing Informatics

This online course is offered to explore the field of technology and its use in health care. Health care and technology are both ever-changing fields. This course provides learning to pre-nursing and associate level nursing students related to the use of technology in the delivery of health care. Students will complete hands on projects using software applications including but not limited to: Microsoft Word, Excel, PowerPoint, and Access.

OIS1240 Computer Applications

This integrated, project-based course will help students use the software applications Microsoft® Word, Excel, PowerPoint, and Access for a PC, to solve business problems. Students will use the Internet and e-mail as they research topics and prepare documents using the appropriate software applications. Course topics include technology history, future trends in technology, and the role of technology in a professional environment. 3 Cr. Hrs. Prerequisite: OIS1200 or successful completion of the Technology Skills Test (TST). Ohio TAG Course (for HIT program only) [OBU003].

OIS1255 Business Integrated Technologies

Students will use business information management tools to communicate with others, manage information, meet virtually, and schedule daily activities. Digital tools including collaboration software applications, Cloud Computing, and mobile devices will be explored. Other emerging technologies used in the office environment will be integrated throughout the course. Prerequisites: OIS1240 and BUS1010. 3 Cr. Hrs.

OIS1260 PowerPoint

PowerPoint graphics software will be used to create multimedia presentations that capture an audience's attention. Students will create, design, and modify presentations; work with visual elements; integrate data from other sources; create output options; and deliver presentations both synchronously and asynchronously. 1 Cr. Hr. Prerequisite: OIS1240 or concurrent.

OIS1280 Records and Data Management

This course is the study of the life cycle of business records with emphasis on the principles and procedures of creation, maintenance, storage, retrieval, retention, and disposal of these business records. The principles and procedures include the operation and control of manual and database systems using tangible systems with simulated data. Students will integrate Microsoft® Office applications throughout the record control process and explore industry policies and procedures. 2 Cr. Hrs. Prerequisite: OIS1240

OIS1320 Word Advanced

Students will use advanced Microsoft® Word features to create a variety of business publications including brochures, fliers, and newsletters. This course also covers expert-user Word features such as creating fill-in forms; working with shared documents; and integrating Microsoft® Office applications for a PC. Students will create both traditional and e-portfolios. 3 Cr. Hrs. Prerequisite: OIS1240

OIS1340 Excel Advanced

Using Excel the student will organize, analyze, interpret, and present data. Expert Excel features covered include manipulating named ranges within formulas, using advanced functions, data validation, pivot tables, importing and exporting data, and integrating Microsoft® Office applications. 3 Cr. Hrs. Prerequisite: OIS1240, Placement or MTH098.

OIS1500 Web Page Authoring I

Students will learn to create, manage, and publish Web pages to the World Wide Web. Students will complete an extended study of audiences, design principles, copyrights, and accessibility concepts. Adobe Dreamweaver, a Web page authoring and site management software application will be introduced. Students will create an e-resume and a Web site as a final project. 3 Cr. Hrs. Prerequisite: OIS1240

OIS1520 Scripting

Web languages will be introduced and utilized to create and modify Web sites. You will use Hypertext Mark-up Language (HTML) to develop Web pages and Java Script to provide interactivity on Web sites. PHP, a general-purpose scripting language, will be introduced. Students create a final portfolio of Web assignments, demonstrating their skills. 3 Cr. Hrs. Prerequisites: OIS1500 or CIT1700

OIS1600 Design Fundamentals for Visual Media

In this introduction to design, you will explore the fundamentals and principles of art, and develop problem-solving skills. Music and visual arts are explored and critiqued. Students demonstrate an understanding of art and design concepts and principles through the use of visually oriented projects using Adobe Illustrator and drawing techniques. 3 Cr. Hrs. Prereq OIS1200 or successful completion of the Technology Skills Test (TST).

OIS1620 Digital Image Manipulation

The basics of Adobe Photoshop will be introduced and utilized in this class. You will use layering, channels, selection, and paint-related tools. Image correction and re-touching techniques are practiced. Students demonstrate their learning through mini-portfolio projects. 3 Cr. Hrs. Prerequisites: OIS1240 or concurrent.

OIS2011 Video and Photography Technologies

The principles and techniques of desktop video and photography production are explored in this course. You will utilize cameras, basic digital image manipulation software and movie editing software to create and edit multimedia projects. Planning for a video production is a focus topic, and includes audience evaluation, project proposal, and storyboarding. Principles of lighting, staging, camera use, post production, and distribution will be covered. Students plan, shoot, edit, and post several digital media projects to the Web. 3 Cr. Hrs. Prerequisite: OIS1240 or concurrent.

OIS2980 Special Topics

This is a special course in the area of office information designed to give groups of students the opportunity to pursue studies not otherwise offered in the degree program. Graded on a Satisfactory/Unsatisfactory basis. 1-4 Cr. Hrs. Prerequisite: Department approval.

OIS2990 Individual Investigation

This is an independent investigation of an appropriate problem in the field of Office Information. No more than four credit hours will apply toward graduation. Graded on a Satisfactory/Unsatisfactory basis. 1-4 Cr. Hrs. Prerequisite: Department approval.

OTA1000 Directed Clinical Practice Level 1

Level I academic fieldwork experience designed to provide the OTA student the opportunity to work in an OT setting, under the supervision of an OTR or COTA. Students must meet objectives designed by academic and clinical educators.

OTA1010 Conceptual Foundations of OTA

This course discusses knowledge on the nature, the history and the philosophy of occupational therapy in the United States. Students will also learn about meaningful occupation, purposeful activity, domains of practice and theoretical frameworks most commonly used in occupational therapy. Concepts like practice models and theoretical frameworks will be discussed. We will also discuss the basic tenets of occupational therapy and how they are applied, along with what roles meaningful occupation and purposeful activity have as related to health and human well-being. We also discuss and learn the ethics of practice, reimbursement procedures, best practices, promoting occupational therapy, the collaborative relationship between the occupational therapist and the occupational therapy assistant through the occupational therapy process, licensure, credentialing, and laws and policies regulating the practice of occupational

therapy. The Occupational Therapy Framework: Domain and Process will be studied. 3 semester hours (3 lecture). Pre-requisite: None

OTA1020 Fundamental Skills for the OTA

This course serves as the first building blocks for the OTA's professional foundations to include the teaching/learning process and therapeutic use of self. Social and cultural influences will be explored as they affect practice in occupational therapy. Students will explore the use of occupation, purposeful activity and activity/task analysis as means for assessment and intervention with clients. Students will also demonstrate competencies in the assessment of vital statistics, biomechanical components, professional communication skills, patient/caregiver/family education, body mechanics, documentation and other skills important for practice in clinical settings. Methods and techniques for screening, assessing and evaluation for occupational therapy performance strengths and problems will be introduced. The course will also study human performance and growth in areas of occupation (social participation, ADL, education, work, play and leisure) throughout the life span. 3 semester hours (2 lecture, 1 lab). Pre-requisite: OTA major only

OTA1530 Functional Anatomy

The course will present the basic principles of kinesiology, anatomy and the kinetics of human movement as they relate to occupational performance. Students will learn the musculoskeletal system, arthrology, origins, insertions, actions and innervations of major muscles. Topics include the musculoskeletal system, anatomical landmarks, joints, posture and balance, locomotion, and the in-depth analysis of functional movement required for performing ADL, work, play and leisure. 3 semester hours (2 lecture, 1 lab). Pre-requisite: OTA major only

OTA2000 Practicum Level II A

First eight-week fieldwork experience designed to provide the OTA student the opportunity to work in an OT setting, under the supervision of an OTR or COTA. Students must meet objectives designed by academic and clinical educators. Prerequisites: All academic coursework and program director approval are required. Students must earn a grade of "C" or better in all coursework and a satisfactory rating on the Professional Behavioral Competence document before approval for Level II placement.

OTA2001 Practicum Level II B

Second eight-week fieldwork experience designed to provide the OTA student the opportunity to work in an OT setting, under the supervision of an OTR or COTA. Students must meet objectives designed by academic and clinical educators. Prerequisites: All academic coursework and program director approval are required. Students must earn a grade of "C" or better in all coursework and a satisfactory rating on the Professional Behavioral Competence document before approval for Level II placement.

OTA2010 The Child and Occupational Performance

The course is a study of limitations and obstacles to occupational engagement (self-care, play, school) for persons from birth to age 22. Topics include common diagnoses, evaluation methods and treatment environments and treatment for areas of occupation. (ADL, IADL, education, work, play, leisure, and social participation), considering performance skills, performance patterns, client factors and context will be reviewed. Students will build practice skills in models of practice related to persons 0-22. 3 semester hours (3 lecture). Pre-requisite: OTA major only

OTA2020 Physical Disability & Performance

This course involves the study of physical health limitations and obstacles to occupational engagement for individuals and populations. Topics include common diagnoses and treatment environments, interventions and treatments under areas of occupation (BADL, IADL, education, work, leisure and social participation). Students will be required to develop applications for enabling function and physical well-being. Topics include major medical, orthopedic, and neurological diagnoses, with emphasis on symptoms, physical conditions, and medical and social supports related to those diagnoses. Evaluations and treatment planning for the physical health population are practiced. course will focus on the development of observation skills; assessment; documentation; teaching; adapting; grading self-care, work, and play/leisure occupations for individuals with physical challenges. Topics include techniques and equipment to maximize participation in meaningful occupations, improve independence, ensure safety, and prevent deformity. 3 semester hours (2 lecture, 1 lab). Pre-requisite: OTA major only

OTA2030 Psycosocial Intervention & Occ. Performance

The course is a study of mental health limitations and obstacles to occupational engagement for individuals and populations. Topics include common diagnoses and treatment environments, treatment for areas of occupation (ADL, IADL, education, work, play, leisure, and social participation), consideration of habits, performance patterns, component skills and context will be discussed. The course studies individuals who are limited in their ability to engage in life activities due to challenges to their mental health. Topics include major DSM IV diagnoses with emphasis on symptoms, behaviors, cultural influences, and medical and social supports related to those diagnoses. Evaluations and treatment planning for the mental health population are practiced. Students will research various psychosocial conditions with the focus on interventions, therapeutic activities, adaptations and compensations that can be made to facilitate human performance. Students will build practice skills in models of practice and treatment techniques related to psychosocial dysfunctions and will learn to apply therapeutic use of self, knowledge of group dynamics and other key techniques related to occupational therapy in mental health. 2 semester hours. Pre-requisite: OTA major only

OTA2040 BioMechanical Intervention & Occ. Performance

This course focuses on the structure, function and movement of the musculoskeletal system as they apply to occupations of daily living skills. Technical proficiency of manual muscle testing, goniometric skills, treatment techniques and modalities are incorporated into this course. The course will study the kinetics of human motion of the musculoskeletal system of torso and upper extremities. Topics include evaluation procedures for range of motion, functional muscle strength and coordination testing, principles and techniques of body mechanics, transfers, positioning and motor learning theory. Splinting, physical agent modalities and other orthopedic interventions will be studied as they relate to occupational therapy, occupational performance and the upper extremity. 4 semester hours (3 lecture, 1 lab). Pre-requisite: OTA major only

OTA2500 The Elderly and Occupational Performance

The course studies physical and mental health limitations and obstacles to occupational engagement for elderly individuals and populations living at home and in other geriatric settings. Topics include common diagnoses and treatment environments, treatment for areas of occupation. (ADL, IADL, education, work, play, leisure, and social participation), considering performance skills, performance patterns, client factors and context will be reviewed. Students will be required to develop applications for enabling function, as well as promoting mental health and physical well-being in the geriatric population. Driving and community mobility will be key topics discussed in the course. 2 semester hours (2 lecture). Pre-requisite: OTA major only

OTA2510 Clinical Conditions in Occ. Therapy

Students will learn about neoplastic, infectious, metabolic, genetic and inflammatory disorders affecting the cardiovascular, nervous, and musculoskeletal systems. Students will study the pathology of these common diseases and learn the role of the occupational therapy assistant in treating the most commonly seen disorders in the clinics. 3 semester hours. Pre-requisite: OTA major only

OTA2600 Neural Plasticity and Occupational Performance

Therapeutic techniques commonly used in rehabilitation to facilitate occupational performance and motor re-learning are discussed and applied in lab settings. The course contents are shared by PTA 3040. The concepts of neural plasticity and motor learning are studied. Students will gain knowledge and skills necessary to treat clients with neurological disorders from CVA, traumatic brain injury, spinal cord injury, and birth defects. Use of PNF and NDT techniques in the treatment of neurological patients are discussed. 2 semester hours (2 lecture). Pre-requisite: OTA major only

OTA2980 Special Topics

This special course in the area of occupational therapy is designed to give groups of students the opportunity to pursue studies not otherwise offered in the degree program. Graded on a Satisfactory/Unsatisfactory basis. 1-4 semester hours. Pre-requisite: Department approval.

OTA2990 Individual Investigation

This course offers independent study designed to meet a specific student need in the field of Occupational Therapy. Graded satisfactory/unsatisfactory. 1-4 semester hours. Pre-requisite: Department approval.

OTM0000 OTM Electives

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as an elective for the arts and science program. 1 - 4 credit hours.

PHY0000 Physics Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a physics elective for the arts and science program. 1 - 4 credit hours. Pre-requisite: department approval.

PHY1000 Principles of Electricity and Magnetism

This course introduces the student to the basic principles of physics with an emphasis on electricity and magnetism. The course is designed to provide the student with not only a basic knowledge of electricity and magnetism but also an understanding of real world applications. To prepare the student to understand electricity and magnetism, additional topics include forces, work, energy, power, sound, and the atomic nature of matter. Topics in electricity and magnetism include electrical forces and fields, currents, electrical circuits, magnetic forces and fields, capacitance, electromagnetic induction and transformers. 2 credit hours. Prerequisite: MTH0910.

PHY1110 Applied Physics

This is an applied engineering Physics course that includes much hands-on work via a lab. Topics include vectors, motion, force, momentum, concurrent and parallel forces, work and energy, rotational motion, matter, fluids, temperature and heat transfer, properties of gases, wave motion and sound, basic electricity, magnetism and alternating current. 4 Cr. Hr. Pre-Req: TMT1100

PHY1200 Physics I

This is the first in a two course series in algebra based physics. Topics include motion in one and two dimensions, projectile motion, circular motion, Newton's laws, drawing and analyzing free-body diagrams, gravity, torque, static equilibrium, elasticity, impulse, linear and angular momentum, work, kinetic energy, potential energy, power, heat, the first and second laws of thermodynamics, atomic model of matter, thermal expansion, pressure, specific heat, calorimetry, heat transfer, fluids, density, and buoyancy. Students are required to take Physics I Lab (PHY1210) with this course. 4 credit hours. Prerequisite: MTH1245 College Algebra (may be taken concurrently) or instructor permission. Ohio Transfer Module (OTM) Course [TMNS]; Ohio TAG Sequence Courses PHY1200 & PHY1210/Lab [OSC014]; and, Ohio TAG Sequence Courses PHY1200, PHY1210/Lab, PHY1250, PHY1260/Lab [OSC021]

PHY1210 Physics I Lab

This lab class supports topics and concepts covered in the Physics I (PHY1200) lecture class. Students will complete hands-on experiments that will help them verify physical principles like projectile motion, static and kinetic friction, Newton's laws, air resistance, work, rotation and moments of inertia, energy, momentum, and the law of cooling. Students are required to completely document each lab and keep a comprehensive notebook consisting of all data and reports. In these reports students will be required to show how the data supports each concept covered in that lab. Students must sign up for both the lecture class and this lab class during the same semester. 1 credit hour. Corequisite: Physics I (PHY1200). Ohio Transfer Module (OTM) Sequence Courses PHY1200 & PHY1210 [TMNS]; Ohio TAG Sequence Courses PHY1200 & PHY1210/Lab [OSC014]; and, Ohio TAG Sequence Courses PHY1200, PHY1210/Lab, PHY1250, PHY1260/Lab [OSC021].

PHY1250 Physics II

This is the second in a two course series in algebra based physics. Topics include harmonic motion, pendulum motion, traveling waves, sound waves, light waves, energy and intensity, Doppler effect, standing waves, interference of waves, beats, interference of light, reflection, refraction, ray diagrams, color, dispersion, images from mirrors and lenses, charges and forces, Coulomb's law, electric fields, electric potential energy, the electric potential, capacitance and

capacitors, polarization and dielectrics, direct current, resistors, Ohm's law, circuit elements and diagrams, Kirchhoff's laws, parallel and series circuits, complex circuits, magnetism, magnetic fields, forces on moving charges, induced currents, magnetic flux, Faraday's law, electromagnetic waves, photons, the electromagnetic spectrum alternating current, transformers, capacitor circuits, inductors, inductor circuits, RLC circuits, and oscillator circuits. Students are required to take Physics II Lab (PHY1260) with this course. 4 credit hours. Prerequisite: PHY1200. Corequisite: PHY1260. Ohio Transfer Module (OTM) Sequence Courses PHY1250 & PHY1260/Lab [TMNS]; Ohio TAG Sequence Courses PHY1250 & PHY1260/Lab [OSC015]; and, Ohio TAG Sequence Courses PHY1200, PHY1210/Lab, PHY1250 & PHY1260/Lab [OSC021].

PHY1260 Physics II Lab

This lab class supports topics and concepts covered in the Physics II (PHY1250) lecture class. Students will complete hands-on experiments that will help them verify physical principles like pendulums, simple harmonic motion, sound waves, the speed of sound, the polarization of light, Ohm's law, series and parallel circuits, capacitance, magnetic fields, and electric energy. Students are required to completely document each lab and keep a comprehensive notebook consisting of all data and reports. In these reports students will be required to show how the data supports each concept covered in each lab. Students are required to sign up for both the lecture class and this lab class during the same semester. 1 credit hour. Prerequisite: None. Corequisite: PHY1250. Ohio Transfer Module (OTM) Sequence Courses PHY1250 & PHY1260/Lab [TMNS]; Ohio TAG Sequence Courses PHY1250 & PHY1260/Lab [OSC015]; and, Ohio TAG Sequence Courses PHY1200, PHY1210/Lab, PHY1250, PHY1260/Lab [OSC021].

PSY0000 Psychology Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a psychology elective for the arts and science program. 1 - 4 credit hours.

PSY1100 General Psychology

This class is an introduction to theories and techniques used by psychologists for describing, explaining, predicting and influencing human behavior. Topics covered include learning, cognition, intelligence, motivation, emotion, personality and abnormal behavior. Also, available ONLINE: Completely online except for make-up tests must be proctored. 3 online tests over 3 separate units. Must be able to complete discussion board forums and submit assignments via CANVAS. 3 credit hours.

Prerequisite: Qualifying placement assessment score or course equivalency. Ohio Transfer Module (OTM) Course [TMSBS]; and, Ohio TAG Course [OSS015].

PSY1500 Social Psychology

This course is designed to balance research and application, covering social cognition, attitude formation and change, conformity/obedience, group processes, pro-social behavior, aggression, and stereotyping/prejudice. 3 credit hours. Corequisite: PSY1100. Also offered ONLINE. Ohio Transfer Module (OTM) Course [TMSBS]; and, Ohio TAG Course [OSS016].

PSY2100 Human Growth and Development

This class provides an advanced study of human development over the life span, from conception to death. Included are emotional, intellectual, moral, physical, and social development. PSY2100 offers an analysis of the interaction of human characteristics within the individual and the relationship between individuals and their environment at various stages in development. Also available On-Line. 3 credit hours. Prerequisite: PSY1100. Ohio Transfer Module (OTM) Course [TMSBS]; and, Ohio TAG Course [OSS048].

PTA1000 Introduction to Physical Therapy

The student will learn about the profession of physical therapy including its current and historical role within the healthcare system. Topics covered include the roles of the PT, PTA, and Aide; career exploration; standards of practice; evidence-based practice; communication; diversity; and the legal and ethical delivery of physical therapy services. 2 semester hours (2 hrs lecture). Pre-requisites: None

PTA1010 PTA Medical Documentation

The student will learn common medical abbreviations and will to perform basic documentation of common treatments rendered in physical therapy. The legal and professional ramifications of physical therapy documentation will also be discussed. 1 semester hour (2 hours lab). Pre-requisite: PTA program accepted

PTA1100 PTA Patient Care Skills

In this course students will learn basic patient care skills including infection control, vital sign assessment, patient positioning, draping, and transfer techniques. Students also learn and apply theories of physics in regards to proper body mechanics, gait instruction and postural analysis. Selection and fitting of assistive ambulatory devices is taught. 3 semester hours (2 hrs lecture, 3 hrs lab). Pre-requisites: PTA program accepted.

PTA1102 PTA Modalities

This course introduces students to modalities utilized in physical therapy including the physical properties, theory, indications and contraindication of each. This course utilizes a lab and lecture format to introduce the application of heat, cold, light, water, ultrasound, spinal traction, and electrical stimulation for pain relief and muscle stimulation. Ultrasound with electrical stimulation and iontophoresis techniques are also learned. 3 semester hours (2 hrs lecture, 3 hrs lab). Pre-requisites: PTA program accepted.

PTA1104 Therapeutic Exercise

This course covers the theory and skills of the practical application of Therapeutic Exercise. The application of manual muscle testing results and instruction in the areas of ROM, AROM, AAROM, Progressive Resistive Exercise, stretching, coordination, balance, relaxation, aquatic therapy, general fitness, and sports medicine are included. Continued study of posture and its relationship with exercise, as well as a multitude of orthopedic pathologies and appropriate therapeutic exercise programs, are included. 4 semester hours [3 hrs. lecture, 3 hrs. lab]. Pre-requisites: PTA 1000, PTA 1010, PTA 1100, PTA 1102, SCI 1200, and completion of or concurrent enrollment in SCI 1250.

PTA1105 PTA Kinesiology & Orthopedic Cnsdrtn

This course involves the review of basic functional anatomy and an in-depth analysis of human motion. The biomechanics of each joint will be discussed along with common orthopedic joint dysfunctions, pathologies and special tests. Students will examine the gait cycle and identify possible causes for abnormal gait. An overview of peripheral joint mobilization will be introduced. Detailed goniometry and manual muscle testing will be the focus of lab content. 4 semester hours [3 hrs lecture, 3 hrs lab]. Pre-requisites: PTA 1000, PTA 1010, PTA 1100, PTA 1102, SCI 1200, and completion of or concurrent enrollment in SCI 1250.

PTA2000 Directed Clinical Practice/Practicum I

Students perform clinical work off-campus under the supervision of a licensed physical therapist or physical therapist assistant serving as a clinical instructor and mentor. This course introduces the student to the practice of physical therapist assisting. 2 semester hours [40 clinical hours per week for 5 weeks]. Pre-requisites: PTA 1103, PTA 1104, PTA 1105, SCI 1250 and concurrent enrollment in PTA 2105.

PTA2010 Clinical Practicum I

Students perform clinical work off-campus under the supervision of a licensed physical therapist or physical therapist assistant serving as a clinical instructor and mentor. This course introduces the student to the practice of Physical Therapist Assisting. 1 semester hour [35-40 clinical hours per week for 5 weeks]. Pre-requisites: ALH 1103, PTA1104, PTA1105, SCI1250 and concurrent enrollment in PTA2105.

PTA2105 PTA Seminar I

Students relate clinical highlights and experiences through classroom presentations, share a collective diary of clinical experiences, and review journal notations. Students also participate in a written and oral case study and complete cumulative discussions regarding aspects of clinical education. 1 semester hour (12 contact hours of intensive study following PTA 2010). Pre-requisite: SCI 1250, ALH 1103, Program accepted only.

PTA2221 PTA Pathophysiology

This course involves study of common pathological disorders that often necessitate physical therapy intervention. Emphasis is placed upon inflammatory, metabolic, neoplastic, genetic and infectious disorders affecting the systems of the body. 3 semester hours. Pre-requisite: PTA 2010 and PTA 2105

PTA2223 Rehabilitation for Specific Populations

Orthopedic, cardiac, pulmonary, and integumentary dysfunctions are studied. The aging process is explored as well as its relationship to the practice of physical therapist assisting. Students will study postural drainage and percussion techniques, gain knowledge and skills in the topics of cardiac rehabilitation, wound care, prosthetics, orthotics, and women's health. 4 semester hours. (3 hrs. lecture, 3 hrs. lab). Pre-requisite.: PTA 2010 and PTA 2105

PTA2224 Neurological Rehabilitation

Students will gain knowledge and skills necessary to treat clients with neurological disorders from CVA, traumatic brain injury, spinal cord injury, and birth defects. The lecture and lab format is used to explore sensory and reflex integration, developmental sequence, and neonatal care. Use of PNF and NDT techniques in the treatment of neurological patients are discussed and practiced in a lab setting. 4 semester hours (3 hrs. lecture, 3 hrs. lab). Pre-requisite: PTA 2010 and PTA 2105

PTA2301 Directed Clinical Practice/Practicum II

A licensed physical therapist or physical therapist assistant clinician serves as mentor and clinical instructor. Students work in an off-campus clinical environment where they continue to apply skills gained from classroom instruction. 3 semester hours [40 clinical hours per week for 6.5 weeks]. Pre-requisites: PTA 2221, PTA 2223, PTA 2224 and concurrent enrollment in PTA 2305

PTA2302 Directed Clinical Practice/Practicum III

This course is a continuation of the clinical practice experience gained in PTA 2301. A licensed physical therapist or physical therapist assistant serves as a mentor and clinical instructor. This course offers the student the opportunity to use skills gained during classroom instruction in an off-campus setting. 3 semester hours [40 clinical hours per week for 6.5 weeks]. Pre-requisites: PTA 2221, PTA 2223, PTA 2224 and concurrent enrollment in PTA 2305

PTA2305 PTA Seminar II and III

This course serves to review the PTA curriculum in preparation for the National Physical Therapy Examination for licensure. Discussion of the experiences and learning encountered during the final clinical experiences is included. A mock licensure examination will be conducted. Students will also explore issues affecting the practice of physical therapist assisting within the modern health care system. Résumé, cover letter, and resignation letter composition is learned. Mock employment interviews will be conducted. A variety of related topics will be presented, including licensing procedures. 3 semester hours [40 contact hours of intensive study following completion of PTA 2302]. Pre-requisites: PTA 2221, PTA 2223, PTA 2224 and concurrent enrollment in PTA 2302

PTA2310 Clinical Practicum II

A licensed physical therapist or physical therapist assistant clinician serves as mentor and clinical instructor. Students work in an off-campus clinical environment where they continue to apply skills gained from classroom instruction. 2 semester hours [35-40 clinical hours per week for 6.5 weeks]. Pre-requisites: Program accepted only.

PTA2320 Clinical Practicum III

This course is a continuation of the clinical practice experience gained in PTA 2310. A licensed physical therapist or physical therapist assistant serves as a mentor and clinical instructor. This course offers the student the opportunity to use skills gained during classroom instruction in an off-campus setting. 2 semester hours [35-40 clinical hours per week for 6.5 weeks]. Pre-requisites: PTA 2221, PTA 2223, PTA 2224 and concurrent enrollment in PTA 2310 and PTA 2350.

PTA2350 PTA Seminar II & III

This course serves to review the PTA curriculum in preparation for the National Physical Therapy Examination for licensure. Discussion of the experiences and learning encountered during the final clinical experiences is included. A

mock licensure examination and cumulative written and practical examinations will be conducted. Students will also explore issues affecting the practice of physical therapist assisting within the modern health care system. Résumé, cover letter, and resignation letter composition is learned. Mock employment interviews will be conducted. A variety of related topics will be presented, including licensing procedures. 1 semester hour [16 contact hours of intensive study following completion of PTA 2320]. Pre-requisites: PTA 2221, PTA 2223, PTA 2224 and concurrent enrollment in PTA 2310 and PTA 2320.

PTA2990 Individual Investigation

This course offers independent study designed to meet a specific student need in the field of Physical Therapist Assisting. Graded satisfactory/unsatisfactory. 1-5 semester hours. Pre-requisites: Department approval

RAD1000 Introduction of Radiologic Technology

This is an orientation to radiologic technology. Student and technologist responsibilities are outlined, as well as their role in the health care delivery system. Basic principles of radiation protection are introduced. 3 semester hours. Pre-requisite: None.

RAD1001 Intro to Radiologic Technology

This is an orientation to Radiologic Technology. Student and Technologist responsibilities are outlined, as well as their role in the health care delivery system. Basic principles of radiation protection are introduced. 2 semester hours. Pre-requisite: None.

RAD1010 Methods of Patient Care

This course will provide the student with basic concepts of patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures will be described, as well as infection control procedures utilizing standard precautions. Methods and techniques of contrast administration, as well as categories will be discussed. Medical ethics is included. 2 semester hours. Pre-requisite: None.

RAD1020 Radiographic Positioning & Procedures I

This unit is designed to provide the student with the knowledge and skills necessary to perform standard radiographic procedures of the chest, abdomen, upper and lower extremities, pelvis and hip. Also spine and bony thorax are included. Positioning terminology is defined and applied clinically. 4 semester hours. Pre-requisite: RAD 1000 Program acceptance.

RAD1030 Radiographic Positioning & Procedures II

This course includes a study of procedures of the skeletal, digestive, biliary, urinary systems, mobile, surgical, headwork, pediatric, reproductive, and respiratory systems. Trauma situations are presented. Contrast media is discussed. 4 semester hours. Pre-requisite: RAD 1020.

RAD1052 Radiation Physics

This course will provide the student with knowledge of basic physics. Fundamentals of x-ray generating equipment are discussed. Information on x-ray generating equipment is discussed. Information on x-ray production, beam characteristics, and units of measurement is provided. 2 semester hours. Pre-requisite PHY 1000.

RAD1061 Principles of Radiographic Exposure

This course will provide the student with knowledge of factors that govern and influence the production of the radiographic image on the image receptor. Processing the image and computed radiography are included. Concepts in exposure technique are discussed. 2 semester hours. Pre-requisite RAD 1052

RAD1100 Radiologic Technology Clinical I

This course is the first of five of clinical applications of radiographic procedures. This includes scheduled clinical rotation assignments. All clinical courses include scheduled image analysis classes. A clinical lab is required in most clinical courses.

This course will provide the student with the necessary introductory clinical education needed to begin to practice radiography. This course takes place in imaging departments, with actual patient contact. The student will rotate through assigned clinical areas. The student will be evaluated for clinical competency of the semester. The student will be under direct supervision the entire semester. The student will follow all policies and procedures of the program. 3 semester hours. Pre-requisite: RAD 1000.

RAD1200 Radiologic Technology Clinical II

This course is the second of five of clinical applications of radiographic procedures. This includes scheduled clinical rotation assignments. All clinical courses include scheduled image analysis classes; clinical lab is required in most clinical courses, and student meetings. This course will provide the student with the necessary clinical education needed to continue to practice radiography. This course takes place in imaging departments, with actual patient contact. The student will rotate through assigned clinical areas. The student will be evaluated for clinical competency during the semester. The student will be under direct and indirect supervision during the semester. The student will follow all policies and procedures of the program. 3 semester hours. Pre-requisite RAD 1100

RAD1300 Radiologic Technology Clinical III

This course is the third of five clinical applications of radiographic procedures. Students are assigned scheduled clinical rotation assignments. All clinical courses include scheduled image analysis classes. Students are actively involved in all clinical procedures in their assigned clinical rotation. A clinical lab is required in all clinical courses. This course provides the student clinical education needed to practice radiography. This course takes place in imaging departments, with actual patient contact. The student will rotate through assigned clinical areas. The student will be evaluated for clinical competencies in the semester. In the senior year students are primarily under indirect supervision, however direct supervision still continues depending on completed competency requirements. The student will follow all policies and procedures of the program. Students will be assessed by technologists and school faculty. 4 semester hours. Pre-requisite: RAD 1200

RAD2000 Advanced Imaging Procedures & Equipment

This course provides an in depth description of diagnostic procedures within the following areas: cardiovascular/interventional, computed tomography, mammography, MRI, ultrasound, nuclear medicine, and radiation therapy. Emphasis is placed on anatomy and the diagnostic and therapeutic value of each examination. Venipuncture and sectional anatomy are included. This course will provide the student with knowledge of equipment routinely utilized to produce a diagnosis. The course includes explanation and discussion on conventional and digital fluoroscopy, tomography, computed tomography, magnetic resonance imaging, interventional and mammography equipment. Quality assurance is included. 2 semester hours. Pre-requisite: RAD1061 and RAD1030.

RAD2030 Principles of Radiobiology

This is an advanced study of the interaction of radiation on living systems. Included with biological responses are chronic and acute radiation effects, and a more in-depth look at radiation safety practices. 1 semester hour. Pre-requisite: RAD 2000.

RAD2050 Radiographic Pathology

Each system of the body is studied with regard to major pathological diseases and how the diseases are demonstrated radiographically. Different types of cancer and treatment are discussed. Students are required to give a case presentation. 1 semester hour. Pre-requisite: RAD 2000.

RAD2060 Radiographic Review

Radiographic review of all required program courses. A comprehensive test is used to evaluate comprehension of course material at the end of each semester. The comprehensive tests from previous semester are averaged for a final grade. Students will be required to take mock registry tests. RAD2060 is graded on a satisfactory/unsatisfactory basis. 1 semester hour. Pre-requisite: RAD 2000.

RAD2071 CT: Principles and Protocol

This course provides an in depth description of diagnostic procedures within computed tomography. Emphasis is placed on anatomy, and the diagnostic and therapeutic value of each examination. Patient care interactions and management. Administration of contrast media. Practicing ALARA. Image production, physics, and instrumentation. Venipuncture and sectional anatomy are included. This course also includes a review to prepared student for the ARRT National Registry. This course meets requirements of the ARRT regarding structured education for post primary Computed Tomography. Students completing this course must have successfully completed the ARRT National Registry for Radiography.

RAD2101 Radiologic Technology Clinical IV

This course is the fourth of five of clinical applications of radiographic procedures. Students are assigned scheduled clinical rotation assignments. All clinical courses include scheduled image analysis classes. Students are actively involved in all clinical procedures in their assigned clinical rotation. A clinical lab is required in all clinical courses. This course provides the student clinical education needed to practice radiography. This course takes place in imaging departments, with actual patient contact. The student will rotate through assigned clinical areas. The student will be evaluated for clinical competencies of the semester. In the senior year students are primarily under indirect supervision, however direct supervision still continues depending on completed competency requirements. The student will follow all policies and procedures of the program. Students will be assessed by technologists and school faculty.
2 semester hours. Pre-requisite RAD 1300

RAD2201 Radiologic Technology Clinical V

This is a continuation of Clinical IV. In this final clinical rotation, the students may be tested randomly over any required competency. This is done to ensure that the student is retaining the necessary skills required of a radiographer. Clinical rotations are scheduled. 2 semester hours. Pre-requisite: RAD 2101

RAD2301 CT: Clinical

This is a clinical course for Computed Tomography. This course provides the student the clinical education needed to practice Computed Tomography. This course takes place in imaging departments, with actual patient contact. The student will rotate through assigned clinical areas. The student will be completing clinical competencies. The student will follow all policies and procedures of the program.

RAD2990 Individual Investigation

This course offers independent study designed to meet a specific student need in the field of Radiography. Graded satisfactory/unsatisfactory. 1-4 semester hours. Pre-requisite: Department approval.

REA0000 Real Estate Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a real estate elective for the business program. 1 - 4 credit hours.

REA1010 Real Estate Principles and Practices

This is an introductory course designed for those interested in entering the real estate field as sales persons or brokers as well as for the general public. REA1010 covers the general background of real estate sales, licensure, terminology, mathematics, practice, and procedures. 3 Cr. Hrs. Prerequisite: None

REA1100 Real Estate Law

REA1100 focuses on the areas of law pertinent to real estate and those interested in becoming sales persons and brokers as well as the general public. This includes land as property, fixtures, estates and interests in land, deeds, contracts, finance, foreclosure, liens, the real estate closing, proof of title, agency, fair housing, zoning, landlord-tenant law, ethics, and decedents' estates. 3 Cr. Hrs. Prerequisite: None

REA1200 Real Estate Finance

REA1200 explores the financial aspects of real estate with primary consideration being toward the fundamentals of mortgage banking, sources of funds for mortgage lending, loan application procedures and processing, inspection and

appraisal of collateral, attracting new business, investing, and the effects of governmental monetary and fiscal policies. 2 Cr. Hrs. Prerequisite: REA1010 recommended.

REA1300 Real Estate Appraisal

This class includes definitions and terminology of real estate appraising, analyzing the real estate market, and explaining the appraisal process. Students will explore basic approaches to an estimate of value-cost, income and market data as well as the mechanics of inspecting and measuring improvements, and cost estimating. A term case study project is assigned providing practical experience in writing an appraisal report for a single family residence. 2 Cr. Hrs. Prerequisite: REA1010 recommended.

SCI0000 Science Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a science elective for the arts and science program. 1 - 4 credit hours.

SCI1050 Principles of Biology & Chemistry

This introductory science course covers basic concepts in chemistry and biology. The chemistry includes atomic structure, periodic table, chemical formulas, chemical bonds, organic compounds, acids/bases, and nuclear chemistry. The biology includes cell structure, mitosis and an overview of the following body systems: skeletal, muscular, nervous, digestive, respiratory, and circulatory. 3 credit hours. Prerequisite: None.

SCI1100 Basic Anatomy & Physiology

The student will learn to recognize the structure, understand the physiology and use the correct terminology to describe components of each of these body systems: integumentary, skeletal, articular, muscular, nervous, cardiovascular, immune/lymphatic, endocrine, respiratory, digestive, urinary, and reproductive. Online section: Students must be able to use discussion board and submit assignments online. Assignments must be submitted in a readable format. Students must consistently check MTC email. 4 credit hours. Prerequisite: ALH1110 or HLT1100

SCI1150 Introduction to Exercise Science

SCI1200 Anatomy & Physiology I

This is the first of a two-semester sequence. This course has a laboratory component which relates chemistry to anatomy. The lab then focuses on the structures of tissues and the skeletal, muscular and nervous systems. The lecture component emphasizes the physiology of these systems. 4 credit hours. Prerequisite: SCI1050 or equivalent. Ohio Transfer Module (OTM) Course [TMNS].

SCI1250 Anatomy & Physiology II

This is the second of a two-semester sequence. The laboratory emphasizes the anatomy of the respiratory, endocrine, cardiovascular, urinary, digestive and reproductive systems. The lecture covers the physiology of all of the above plus special senses, metabolism, acid base balance, and fluid and electrolytes. 4 credit hours. Prerequisite: SCI1200. Ohio Transfer Module (OTM) Course [TMNS].

SCI1300 Microbiology

This is an introductory course designed to give the student an understanding of microorganisms which have a relation to the health sciences. Principles of infection and resistance will be included. The laboratory component allows the student to become proficient in basic microbiological techniques. 4 credit hours. SCI1250 (required prerequisite); taken concurrently or department approval. Ohio Transfer Module (OTM) Course [TMNS].

SCI2000 Advanced Human Physiology

This course consists of units dealing with cellular organization, homeostasis, intercellular communication, and acid/base chemistry. The physiology of the respiratory, excretory, digestive, cardiovascular, and endocrine systems will also be presented. The lab will demonstrate physiologic principles. 4 credit hours. Prerequisite: SCI1250. Ohio Transfer Module (OTM) Course [TMNS].

SOC0000 Sociology Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a sociology elective for the arts and science program. 1 - 4 credit hours.

SOC1200 Sociology

This course will introduce students to the sociological study of society. Sociology focuses on the systematic understanding of social interaction, social organization, social institutions, and social change. Major themes that will be examined in this course include the interplay between the individual and society, how society is both stable and changes, the causes and consequences of social inequality, and the social construction of human life. Students will be able to identify and explain social patterns and how such patterns change over time and in different settings. Upon completion, students should be able to demonstrate knowledge of sociological concepts as they apply to the interplay among individuals, groups and societies. Online Classes: Students must have regular access to a computer, the Internet and be able to use discussion boards and to submit assignments online. Assignments must be submitted in a readable format. Students need to consistently check MTC email/Canvas. 3 Cr. Hrs. Pre-Req.: None. Ohio Transfer Module (OTM) Course [TMSBS]; and, Ohio TAG Course [OSS021].

SOC1400 Personal and Family Relations

This course is an exploration of the development and maintenance of effective intimate relationships. SOC1400 includes a study of the effect of role expectations, attitudes, values, socioeconomic factors and stress on joint decision making and conflict resolution in dating, marriage, and family relations. By taking this course, students will increase their knowledge about developing, maintaining, and changing relationships in their personal and family life. SOC1400 will explore the numerous choices individuals make throughout the different stages of relationships, and the potential consequences of those choices. 3 Cr. Hrs. Pre-Req.: None. Ohio Transfer Module (OTM) Course [TMSBS]; and, Ohio TAG Course [OSS023].

SOC2200 Social Problems

This class will examine a variety of contemporary social problems. Topics may include drug abuse, crime, juvenile delinquency, divorce and other family challenges mental illness, and other health problems, social class and selected social issues. Upon completion, students will be able to identify how sociologists define, study and interpret social problems and be able to discuss some of the causes and consequences as well as some of the potential interventions to alleviate some of the problems identified. Online Classes: Students must have regular access to a computer, the Internet and be able to use discussion boards and to submit assignments online. Assignments must be submitted in a readable format. Students need to consistently check MTC email/Canvas. 3 Cr. Hrs. Pre-Req.: None. Ohio Transfer Module (OTM) Course [TMSBS]; and, Ohio TAG Course [OSS025].

SOC2400 Gender Studies

This course is designed to introduce students to the sociological study of gender identity and gendered representation. It will explore sex and gender as they relate to the major social institutions and how the experiences differ for men and women. In addition, this course illuminates the intersection of gender, race, social class and sexual orientation in our diverse world. Online Classes: Students must have regular access to a computer, the Internet, and to be able to use discussion boards and submit assignments online. Assignments must be submitted in a readable format. Students need to consistently check MTC email/Canvas. 3 Cr. Hrs. PreReq.: None. Ohio Transfer Module (OTM) Course [TMSBS].

STE1011 Level One Electrician

Level One Electrician is a course designed to give the student a comprehensive overview of the electrical trade as well as overall grounding in electrical fundamentals, the National Electrical Code, electrical safety issues, applied mathematics, and many other details involved in becoming an electrician. The course emphasizes hands-on activities in electrical labs that simulate real world problems and projects. 9 credit hours. Prerequisites: None

STE1012 Level Two Electrician

Level Two Electrician is a course designed to give the student a comprehensive understanding of electrical fundamentals, the National Electrical Code, electrical safety, applied mathematics, electrical motors, basic control

systems, circuit installation, and many other details involved in becoming an electrician. The course emphasizes hands-on activities in electrical labs that simulate real world problems and projects. 9 credit hours. Prerequisites: STE1011

STE2013 Level Three Electrician

Level Three Electrician is a course designed to give the student a comprehensive understanding of the National Electrical Code, electrical safety, applied mathematics, circuit design and installation, electrical distribution systems, electric motor controls, electrical installations in hazardous locations, and many other details involved in becoming an electrician. The course emphasizes hands-on activities in electrical labs that simulate real world problems and projects. 9 credit hours. Prerequisites: STE1012

STE2014 Level Four Electrician

Level Four Electrician is a course designed to give the student a comprehensive understanding of the National Electrical Code, electrical safety, service design, fire alarm installation, standby and emergency generators, advanced motor controls, HVAC Controls, and high voltage terminations and splicing. The course emphasizes hands-on activities in electrical labs that simulate real world problems and projects. 9 credit hours. Prerequisites: STE2013

STL1011 Level One Line Erector

This course prepares the student for Linework by beginning with rigorous wood pole training. It continues with an introduction to the Electrical Power Industry. Students will then learn basic electrical theory, applied mathematics, and transformer basics. The course concludes with an introduction to the basic construction forms used in electrical power distribution. 9 credit hours. Prerequisite: None

STL1012 Level Two Line Erector

Safety is always a primary concern in line erector work and is emphasized in this course. The Personal Protective Equipment (PPE), rigging methods, equipment used in live line construction are all components of this course. After intensive classroom studies students will build a test line and learn about the specifications required for these lines. Students will compete with other apprentices in a rodeo that will emphasize excellence in line worker training. 9 credit hours. Prerequisite: STL1011

STL2013 Level Three Line Erector

Students will learn about the protective fusing systems, electrical power metering, and other special elements in the distribution infrastructure. Crew leadership, trouble investigation, and vegetation management studies will follow. The course concludes with studies of pad mount transformers, underground distribution systems (URD) and the construction of various three-phase transformer configurations. 9 credit hours. Prerequisite: STL1012.

STM1011 Level One Sheet Metal

This course begins with a summary of the history and development of the sheet metal trades. It continues by describing the tools and materials, machines, and processes used in the industry. Students are taught the math and geometry needed to successfully install all forms of architectural ductwork. The course emphasizes hands-on activities that simulate real world problems and projects. 9 credit hours. Prerequisites: None

STM1012 Level Two Sheet Metal

This course continues with math applications and practical instruction in the use of protractors, calipers, and micrometers in solving field problems in sheet metal work. The principles of radial line layout are used to develop the forms required for specific applications. Other studies include blueprint and specification reading, properties of air distribution, and bend allowances. 9 credit hours. Prerequisites: STM1011

STM2013 Level Three Sheet Metal

More advanced math applications, methods of field measuring, and triangulation are the focus of this course. Included also is the welding and brazing of some metal joints. The principles of refrigeration and the role of heat pumps and detailed studies of blueprints and specifications complete these studies. The course emphasizes hands-on activities that simulate real world problems and projects. 9 credit hours. Prerequisites: STM1012

STM2014 Level Four Sheet Metal

Students complete their studies in this program by participating in advanced projects covering air balance, fume and exhaust system design, and installation of access doors, louvers, and dampers. This course also prepares students in shop organization and crew leadership skills. 9 credit hours. Prerequisites: STM2013

STP1011 Level One Pipefitting

This program of study begins with an introduction to the tools of this trade and instruction on how to properly inspect, use, and maintain them. Students will be taught fundamental oxyfuel cutting and welding as well as operation of power equipment and scaffolding procedures. 9 credit hours. Prerequisites: None

STP1012 Level Two Pipefitting

Piping systems that include chemical, fuel oil, compressed air, steam, and water are studied in the beginnings of this course. Technical studies include applied math and drawing and detail interpretations. Underground installation and excavation are also a part of this course. 9 credit hours. Prerequisites: STP1011

STP1211 Level One Plumbing

Level One Plumbing introduces trainees to the many career options available in today's plumbing profession, discusses plumbing safety and the causes of accidents and their consequences, and instructs trainees in the care and use of the different types of hand and power tools they will use on the job. The course reviews basic math concepts, plumbing drawings and demonstrates how they apply on-the-job. Level One Plumbing also introduces trainees to the different types of plastic, copper, cast-iron, carbon steel, corrugated stainless pipes and tubes, and associated fittings, fixtures and faucets. The course concludes with an introduction to drain, waste, vent, and water distribution systems. 9 credit hours. Prerequisite: None

STP1212 Level Two Plumbing

Level Two Plumbing discusses and reviews methods for calculating angles, offsets, and for hanging, supporting, penetrations, and applying fire stopping materials on the various piping systems. The course teaches trainees how to interpret and use civil, architectural, structural, mechanical, and plumbing drawings and how to locate, install, connect, and test the various piping systems in residential and commercial applications. The course concludes with methods of installing and servicing fixtures, valves, faucets, fuel gas systems, and water heaters. 9 credit hours. Prerequisite: STP1211

STP2013 Level Three Pipefitting

This course begins with studies in rigging practices including slings, wire rope, chains, crane load charts, and load balancing. Advanced math uses trigonometry to calculate solutions to piping problems. The course concludes with studies in pipe hanger fixtures and supports and the testing of piping systems. 9 credit hours. Prerequisites: STP1012

STP2014 Level Four Pipefitting

Level Four Pipefitting covers the skills needed to layout and fabricate mitered bends, laterals, wyes, and many other challenging connections. More advanced studies focus on pipe misalignment and the resulting strain, stress relief, and other pipefitting concerns. The course concludes with studies in the basic requirements of supervisors as well as investigation into ethical issues. 9 credit hours. Prerequisites: STP2013

STP2213 Level Three Plumbing

Level Three Plumbing introduces trainees to math concepts they will use on the job including area and volume, temperature, pressure, and force. The course also teaches techniques for sizing water supply lines including calculating system requirements and demand, backflow preventer devices, sizing drain, waste, venting installation techniques, and sizing of storm systems. The course concludes with discussion of sewage pumps, sump pumps, corrosive-resistant waste piping and compressed air systems. 9 credit hours. Prerequisite: STP1212

STP2214 Level Four Plumbing

Level Four Plumbing introduces trainees to business principles for plumbers including concepts and practices that are essential for successful plumbing businesses and to the knowledge and skills required for team leadership. The course

also explains code requirements and discusses the practices of installing water pressure booster and recirculation systems, indirect and special waste treatment, hydronic and solar heating systems, private water supply and waste disposal systems, swimming pools and hot tubs, and describes the location and layout of plumbing systems for mobile homes and mobile home parks. The course concludes with instruction on diagnosis and repair of piping systems. 9 credit hours. Prerequisite: STP2213

STS1011 Level One Substation

The Substation Technician training program begins with studies in core skills: Safety, Power Tools, Basic Communication Skills, and Blueprint reading. The course continues with an introduction to electrical power delivery, substation equipment, and substation infrastructure. Cad welding of the grounded grid concludes this portion of substation training. 9 credit hours. Prerequisite: None

STS1012 Level Two Substation

The rules found in OSHA 1910.269 begin the focus of this substation training course. Safely clearing equipment for maintenance and repair, overhead and underground conductors, and rigging are essential subjects reviewed in this year. Substation construction and the essential elements of construction such as interpreting drawings and standards, transformers and regulators receive major emphasis in this second year of study. 9 credit hours. Prerequisite: STS1011

STS2013 Level Three Substation

The third year of study continues with emphasis on safety in the substation. The operation of the substation system apparatus such as circuit breakers, regulators, disconnects, and transformer configurations are a focus of the course. The load infrastructure that the substation serves is featured so students have an understanding of the nature of power load demands. 9 credit hours. Prerequisite: STS1012

STS2014 Level Four Substation

More advanced studies of system automation, circuit breakers and protective devices, relays and regulators are at the beginning of this last year. Typical construction requires pulling of wire, high voltage terminations and splices, crew leadership, and build of emergency systems which the students will practice during these studies. The course concludes with studies in electronics and state-of-the-art control and data handling systems. 9 credit hours. Prerequisite: STS2013

TEC0000 Technical Elective

This course is used for the transfer-in of a course from another institution that does not equate to a course in our course inventory but could be used as a Technical Elective. 1 - 4 credit hours.

TMT1110 Applied Technical Math

This course will immerse students into the world of technical problem solving. Various mathematical principles will be investigated through the use of applied problems that occur in the fields of Physics, Engineering Mechanics, Electronics, and Alternative Energy. Neatness and organization will be emphasized as students utilize algebra, geometry, trigonometry, and systems of equations equations to both hone their skills and develop confidence in their ability to understand and solve technical problems. 3 Cr. Hrs. Prerequisite: Placement or MTH0920.

TMT1150 Applied Technical Math II

In this the second and final course of the series, students are introduced to new applications of algebra, geometry, and trigonometry by solving problems involving sets of three or more linear equations, quadratic equations, complex numbers, exponential functions, and logarithms. Students will also learn to understand the formation of sine waves by graphing sine and cosine functions. Just as in TMT1100, the application of these concepts is emphasized to increase the students' problem solving ability. 3 Cr. Hrs. Pre-Req: TMT1100