

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - ACCOUNTING TECHNOLOGY
2014-2015 ACADEMIC YEAR**

ACCT-111 Financial Accounting

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course focuses on the rules of financial accounting and reporting for the corporate form of business. The course begins with basic accounting procedures including journalizing transactions, adjusting accounts and preparing the trial balance. The course will then cover the preparation and analysis of the corporate balance sheet, income statement, statement of stockholders' equity and the statement of cash flows. Material covered will include receivables, inventory methods, internal control, plant and equipment and depreciation, current liabilities, long-term debt financing, equity financing, analysis of financial statements and investments in other corporations.

ACCT-111 replaces ACC-2113 Principles of Accounting–Financial and ACC-2114 Financial Accounting in the Quarter system. ACCT-111 meets the Ohio Transfer Assurance Guide standards for course OBU001.

ACCT-122 Introductory Managerial Accounting

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ACCT-111. Course is graded A-F.

This is a course of study that introduces managerial accounting for business entities. The course focuses on the role that accounting plays in managing a business and distinguishes between the differing information needs of internal management and external users of financial information. More specifically, the course begins by looking at an overview of managerial accounting as it relates to the management contexts of planning, control, decision making, and performance evaluation. Basic managerial accounting terminology and concepts are defined and applied to problems of management planning, control, decision making, and performance evaluation. In addition, an understanding of the relevance of other disciplines and how this understanding factors into the process of providing information for management planning, control, decision making, and performance evaluation is critical and must be identified, discussed, and explained as part of the course.

ACCT-122 replaces ACC-2120 Managerial Accounting in the Quarter system. ACCT-122 meets the Ohio Transfer Assurance Guide standards for course OBU002.

ACCT-123 Principles of Finance

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ACCT-122. Course is graded A-F.

This course begins with an examination of the goals and functions of financial management. In addition, the course covers the following topics: financial analysis and planning; financial forecasting; operating and financial leveraging; working capital management; the time value of money and how it relates to the valuation process; the cost of capital; and the capital budgeting process.

ACCT-123 Principles of Finance replaces ACC-2132 Principles of Finance in the Quarter system.

ACCT-127 Computerized Accounting

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in ACCT-111. Beginning in academic year 2015-2016, course prerequisite will be C grade (2.00) or better in ACCT-231. Course is graded A-F.

This course utilizes spreadsheets and one or more general ledger accounting software packages with text-workbooks to provide experience to the student in building accounting spreadsheets and operating computerized, integrated accounting systems. The student will learn formula development and model building skills that may be used in a variety of accounting applications. The student will also use general ledger software to work with the general ledgers, accounts receivable systems, accounts payable systems, financial statement analysis, depreciation, and payroll systems as an integrated whole. The student will work with all steps in the accounting cycle of a business. In this way, the student's knowledge of accounting principles and the accounting procedures learned in previous courses will be reinforced and given a practical focus.

ACCT-127 Computerized Accounting replaces ACC-2116 Data Applications in Accounting and ACC-2136 General Ledger Software in the Quarter system.

**COTC COURSE DESCRIPTIONS - ACCOUNTING TECHNOLOGY
2014-2015 ACADEMIC YEAR****ACCT-231 Intermediate Accounting I**

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ACCT-111. Course is graded A-F.

This course continues development of the theory and processes of accounting. Accounting functions emphasized include: balance sheets; income and retained earnings statements; analysis of working capital; methods of valuations; balance sheet presentation of cash, temporary investments, receivables, inventories, special valuation and cost measurement flow issues related to inventories; acquisition, disposal, depreciation, and other issues related to property, plant, and equipment; and acquisition, disposal, depletion, and other issues related to natural resources.

ACCT-231 Intermediate Accounting I replaces 2172 Intermediate Accounting I and 2173 Intermediate Accounting II in the Quarter system.

ACCT-232 Cost Management

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ACCT-122. Course is graded A-F.

This course takes a proactive contemporary approach to cost accounting that focuses on cost management. While the traditional approach is presented, a contemporary proactive approach is emphasized up front, and an integrated perspective of cost management is presented. This approach to cost management focuses on the impact of management decisions on cost drivers, costs, and profits. Although procedures will be presented, the topics will be discussed in a decision-making context. The focus in this course is clearly on providing leadership for management decisions.

ACCT-232 Cost Management replaces ACC-2128 Cost Management: A Contemporary Approach in the Quarter system.

ACCT-235 Payroll Accounting

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ACCT-111. Beginning in academic year 2015-2016, course prerequisite will be ACCT-231. Course is graded A-F.

This course covers fundamentals of payroll operations, the federal legislation relating to payment of wages and salaries, the computing and paying of wages and salaries, the calculation of payroll taxes, and tax reporting, payroll accounting concepts and professional payroll skills and responsibilities.

ACCT-235 Payroll Accounting replaces ACC-2127 Payroll Accounting in the Quarter system.

ACCT-239 Fraud Examination

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ACCT-231. Course is graded A-F.

Fraud examination will cover the principles and methodology of fraud detection and deterrence. The course includes such topics as skimming, cash larceny, check tampering, register disbursement schemes, billing schemes, payroll and expense reimbursement schemes, non-cash misappropriations, corruption, accounting principles and fraud, fraudulent financial statements, and interviewing witnesses.

ACCT-239 Fraud Examination replaces FOR-5553 Fraud Examination in the Quarter system.

**COTC COURSE DESCRIPTIONS - ACCOUNTING TECHNOLOGY
2014-2015 ACADEMIC YEAR****ACCT-241 Intermediate Accounting II**

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ACCT-231. Course is graded A-F.

This course is a continuation of Intermediate Accounting II and concludes the in-depth study of the balance sheet in the following areas: intangibles; classification, valuation, and other issues related to investments; current liabilities and contingencies; long-term liabilities; contributed capital; earnings per share and retained earnings; accounting for leases; and an exploration of the statement of cash flows.

ACCT-241 Intermediate Accounting II replaces ACC-2173 Intermediate Accounting II and ACC-2174 Intermediate Accounting III in the Quarter system.

ACCT-244 Individual Taxation

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course presents the theory and practice of federal individual income taxation, and presents an in-depth study of gross income, inclusions, exclusions, deductions and losses, business expenses, depreciation and cost recovery, employee expenses, property transactions, tax credits and payment procedures. The student will prepare federal, state and city income tax returns for individuals.

ACCT-244 Individual Taxation replaces ACC-2126 Individual Taxation in the Quarter system.

ACCT-246 Governmental Accounting

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ACCT-231. Course is graded A-F.

This course introduces the student to fund accounting and the accounting practices of state and local governments. The basic accounting and recording procedures for governmental units will be discussed. Specific topics introduced include the following: development and use of budgetary data, the concept of the modified accrual basis of accounting, accounting for general fund operations and other funds, inter-fund relationships and combined financial statements, and interpreting financial statements. The course also will provide an introduction to accounting for public colleges and universities.

ACCT-246 Governmental Accounting replaces ACC-2139 Governmental Accounting in the Quarter system.

ACCT-247 Auditing

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ACCT-231. Course is graded A-F.

This course covers the theory and processes of auditing. Areas of study include the following: professional standards, professional ethics, legal liabilities, auditors' reports, work papers, the audit planning process, internal control evaluations, integrated audits, audit sampling, and fraud awareness auditing. Audit applications relating to the revenue and collection cycle and the acquisition and expenditure cycle will be discussed.

ACCT-247 Auditing replaces ACC-2161 Auditing in the Quarter system.

ACCT-249 Forensic Accounting

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ACCT-231. Course is graded A-F.

This course covers the theory and processes of forensic accounting. Areas of study include the following: the legal environment, the auditing environment, information technology, forensic investigation, financial fraud, employee fraud, tax fraud, bankruptcy, business valuation and litigation services.

ACCT-249 Forensic Accounting will be a new course in the Semester system.

**COTC COURSE DESCRIPTIONS - ACCOUNTING TECHNOLOGY
2014-2015 ACADEMIC YEAR****ACCT-B2114 Financial Accounting** (Bridge Course)

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ACC-2113 (Quarter system course). Course is graded A-F.

This course focuses on the rules of financial accounting and reporting. Topics of study include receivables, inventory methods, plant and equipment and depreciation, current liabilities, formation and operation of a corporation, corporate income statements and the statement of cash flows.

ACCT-B2114 is a Semester bridge course for students coming out of the Quarter system with previous Quarter credit for ACC-2113 Principles of Accounting. Successful completion of ACC-2113 and ACCT-B2114 (with a C grade [2.00] or better) will fulfill the Semester requirement for ACCT-111 Financial Accounting.

ACCT-B2116 Data Applications in Accounting (Bridge Course)

1 credit hour, 3 contact hours (0 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in (ACC-2114 or ACCT-B2114) and (BMS-2037 or BUS-B2037). Course is graded A-F.

This course utilizes spreadsheet software with a text-workbook to provide experience to the student in organizing and accumulating accounting information. The course will utilize spreadsheets and traditional accounting information systems. The student will learn how to build worksheets and utilize them to do accounting work. In this way, the student's knowledge of accounting principles and the accounting procedures will be reinforced and given a practical focus.

ACCT-B2116 is a Semester bridge course for students coming out of the Quarter system with previous Quarter credit for ACC-2136 Data Applications in Accounting. Successful completion of ACC-2136 General Ledger Software and ACCT-B2116 (with a C grade [2.00] or better) will fulfill the Semester requirement for ACCT-127 Computerized Accounting.

ACCT-B2136 General Ledger Software (Bridge Course)

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ACC-2113 (Quarter system course). Course is graded A-F.

This course utilizes one or more accounting software packages with text-workbooks to provide experience to the student in operating computerized, integrated accounting systems. The student will work with the general ledgers, accounts receivable systems, accounts payable systems, financial statement analysis, depreciation, and payroll systems individually, and then as an integrated whole. The student will work with all steps in the accounting cycle of business. In this way, the student's knowledge of accounting principles will be reinforced and given a practical focus.

ACCT-B2136 is a Semester bridge course for students coming out of the Quarter system with previous Quarter credit for ACC-2116. Successful completion of ACC-2116 and ACCT-B2136 (with a C grade [2.00] or better) will fulfill the Semester requirement for ACCT-127 Computerized Accounting.

ACCT-B2173 Intermediate Accounting II (Bridge Course)

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (ACC-2172 or ACCT-B2172). Course is graded A-F.

This course is a continuation of ACC-2172 Intermediate Accounting I (in the Quarter system) and presents an in-depth study in the following areas of the balance sheet: inventories, cost measurement, flow assumptions, and special valuation issues: acquisition, disposal, depreciation and depletion of property, plant and equipment; intangibles; and investments.

ACCT-B2173 is a Semester bridge course for students coming out of the Quarter system with previous Quarter credit for ACC-2172. Successful completion of ACC-2172 and ACCT-B2173 (with a C grade [2.00] or better) will fulfill the Semester requirement for ACCT-231 Intermediate Accounting I.

**COTC COURSE DESCRIPTIONS - ACCOUNTING TECHNOLOGY
2014-2015 ACADEMIC YEAR****ACCT-B2174 Intermediate Accounting III (Bridge Course)**

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (ACC-2173 or ACCT-B2173). Course is graded A-F.

This course is a continuation of ACC-2173 Intermediate Accounting II (in the Quarter system) and concludes the in-depth study of the balance sheet in the following areas: current liabilities and contingencies; long-term liabilities and receivables; contributed capital; earnings per share and retained earnings; accounting for leases. In addition, the statement of cash flows will be explored.

ACCT-B2174 is a Semester bridge course for students coming out of the Quarter system with previous Quarter credit for ACC-2173. Successful completion of ACC-2173 and ACCT-B2174 (with a C grade [2.00] or better) will fulfill the Semester requirement for ACCT-241 Intermediate Accounting II.

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CENTRALOHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS – ENGINEERING TECHNOLOGY, ARCHITECTURAL ENGINEERING
2014-2015 ACADEMIC YEAR

ARCH-110 CAD Fundamentals

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course covers two-dimensional drawing, viewing and editing commands of the CAD system. The student will learn to construct dimensioned orthographic and will gain familiarity with the system hardware, peripherals and software.

ARCH-110 CAD Fundamentals replaces DDT-3706 Introduction to CAD and DDT-3707 Intermediate CAD in the Quarter system. Completion of ARCH-110 and ARCH-111 Advanced CAD meet the Ohio Transfer Assurance Guide standards for course OET012 and also meet the Career Technical Credit Transfer (C-TAG) standards for course CTMET005.

ARCH-111 Advanced CAD

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ARCH-110. Course is graded A-F.

This course, the second in a series, builds on the concepts of CAD Fundamentals and covers advanced topics including customizing various aspects of the CAD drawing environment and the third dimension.

ARCH-111 Advanced CAD replaces DDT-3707 Intermediate CAD and DDT-3708 Advanced CAD in the Quarter system. Completion of ARCH-111 and ARCH-110 CAD Fundamentals meet the Ohio Transfer Assurance Guide standards for course OET012 and also meet the Career Technical Credit Transfer (C-TAG) standards for course CTMET005.

ARCH-115 3D Design with SketchUp

1.50 credit hours, 2.50 contact hours (0.50 hours lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course covers techniques for conceptualizing, creating and presenting three-dimensional ideas quickly and easily using SketchUp software. The student will gain a sound foundation and working knowledge of SketchUp with the primary focus being on the creation of objects, buildings, and landscapes through 3D computer modeling.

ARCH-115 3D Design with SketchUp replaces DDT-3759 3D Design with SketchUp.

ARCH-125 Revit Architecture

1.50 credit hours, 2.50 contact hours (0.50 hours lecture and 2 hours lab). Prerequisite: Prior CAD experience recommended or permission of the instructor. Course is graded A-F.

This course introduces Revit, an object based “Building Information Modeling” (BIM) computer program used by Architects and building designers. In this lab based course the student will explore Revit and gain experience in its concepts and capabilities. Through a series of hands-on lessons the student will create a detailed computer model of a building. The student will then use the program to develop a set of construction drawings generated from the building model.

ARCH-125 Revit Architecture replaces DDT-3705 Revit Architecture in the Quarter system.

ARCH-135 Technical Drawing

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: None. Course is graded A-F.

This course is an introduction to basic techniques used to communicate with technical drawings utilizing both sketching and drafting with instruments. The course presents information and skill building in the graphic language of orthographic views, auxiliary views, dimensioning, sections and pictorial views.

ARCH-135 Technical Drawing replaces DDT-3728 Drafting II and DDT-3758 Engineering Sketching in the Quarter system.

**COTC COURSE DESCRIPTIONS – ENGINEERING TECHNOLOGY, ARCHITECTURAL ENGINEERING
2014-2015 ACADEMIC YEAR****ARCH-150 Design I**

2.50 credit hours, 4.50 contact hours (0.50 hours lecture and 4 hours lab). Prerequisite: None. Course is graded A-F.

This course introduces theories and practices used in drafting and design. The course focuses on a series of hand drafted drawings, creative projects, and models that explore concepts integral to CIVL and architectural design technology.

ARCH-150 Design I replaces DDT-3757 Architectural Design I in the Quarter system.

ARCH-168 Construction Materials

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

In this course, the fundamental characteristics of the most frequently used materials in modern construction are presented. Materials research, selection, proper use of materials, construction methods, and detailing practices are investigated.

ARCH-168 Construction Materials replaces DDT-3748 Materials of Construction in the Quarter system. ARCH-168 meets the Ohio Transfer Guide standards for course OET016.

ARCH-176 Architecture History Survey

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course is a survey of architectural traditions from early Civilization to the modern architecture of the 21st Century, including buildings, landscape and planning.

ARCH-176 Architecture History Survey replaces DDT-3718 Architectural History Survey in the Quarter system. ARCH-176 meets the Ohio Transfer Module standards requirements for course THAH.

ARCH-190 Architecture I

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in ARCH-110 and ARCH-135. Course is graded A-F.

In this course the student is given a sequence of drafting and design projects involving the development of a set of residential working drawings. In addition, the course explores residential design and the history of American house styles. Computer Aided Drafting is introduced and used in the production of assigned drawings.

ARCH-190 Architecture I replaces DDT-3766 Architectural Design II in the Quarter system.

ARCH-230 Building Mechanical Systems

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in ARCH-110. Course is graded A-F.

Plumbing, electrical and HVAC systems for buildings are the focus of this course, as well as, standard drafting practices for plumbing, electrical and HVAC plans.

ARCH-230 Building Mechanical Systems replaces DDT-3737 Building Mechanical Systems in the Quarter system.

ARCH-249 Construction Compliance

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: None. Course is graded A-F.

This course is an overview of codes, regulations and initiatives governing the modern construction project. The course also explores construction management and its relationship to the process of building.

ARCH-249 Construction Compliance is a new course in the Semester system.

**COTC COURSE DESCRIPTIONS – ENGINEERING TECHNOLOGY, ARCHITECTURAL ENGINEERING
2014-2015 ACADEMIC YEAR****ARCH-290 Architecture II**

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in ARCH-125 and ARCH-135. Course is graded A-F.

This Architectural design and drafting course focuses on commercial construction. BIM software is used to produce a series of working drawings as typically found for a small commercial project. The design process is reinforced and building codes are investigated as they apply to the design of the project.

ARCH-290 Architecture II replaces DDT-3776 Architectural Design III in the Quarter system.

ARCH-297 SPECIAL TOPICS: HISTORIC PRESERVATION

2 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: C grade (2.00) or better in ARCH-190 or CIVL-270. Course is graded A-F.

This is a special topics course structured to give the student exposure to Historic Preservation through hands-on documentation, measured drawings, and design for reuse. The student will apply skills and theories learned in previous course work to complete projects.

ARCH-297 is a new course in the Semester system.

ARCH-B3707 Intermediate CAD (Bridge Course)

1.00 credit hour, 2.00 contact hours (0.50 hours lecture and 1.50 hours lab). Prerequisite: C grade (2.00) or better in DDT-3706 (Quarter course). Course is graded A-F.

This is the second in a series of three CAD courses building on a foundation of Introduction to CAD. Advanced concepts in CAD will be explored including symbol libraries, isometric constructions, using the block commands, and creation of bill of materials.

ARCH-B3707 is a semester bridge course for students coming out of the quarter system with previous quarter credit for DDT-3706. Successful completion of DDT-3706 and ARCH-B3707 (with a C grade [2.00] or better) will fulfill the semester requirement for ARCH-110 CAD Fundamentals.

ARCH-B3708 Advanced CAD (Bridge Course)

1.00 credit hour, 2.00 contact hours (0.50 hours lecture and 1.50 hours lab). Prerequisite: C grade (2.00) or better in (DDT-3707 or ARCH-B3707) within the previous year. Course is graded A-F.

This course, the third in a series, builds on the concepts established in the first two CAD courses in which the student uses LISP routines, creates and modifies custom menus, and manipulates system variables. The concepts of 3-D are taught including wire-frames, surfaced models, solid models, and rendering.

ARCH-B3708 is a semester bridge course for students coming out of the quarter system with previous quarter credit for DDT-3707. Successful completion of DDT-3707 and ARCH-B3708 (with a C grade [2.00] or better) will fulfill the semester requirement for ARCH-111 Advanced CAD.

**COTC COURSE DESCRIPTIONS – ENGINEERING TECHNOLOGY, ARCHITECTURAL ENGINEERING
2014-2015 ACADEMIC YEAR****ARCH-B3728 Drafting II** (Bridge Course)

2 credit hours, 4 contact hours (0 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in DDT-3758 (quarter course). Course is graded A-F.

Developing the techniques learned in DDT-3758 (quarter system course), continues the study of drafting with the main emphasis on orthographic projection, sectioning, isometric drawings, perspectives, geometric constructions, auxiliary views, and lettering. Correct use of drafting instruments in the production of these types of drawings is stressed.

ARCH-B3728 is a semester bridge course for students coming out of the quarter system with previous quarter credit for DDT-3758. Successful completion of DDT-3758 and ARCH-B3728 (with a C grade [2.00] or better) will fulfill the semester requirement for ARCH-135 Technical Writing.

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**CENTRAL OHO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - BIOLOGICAL SCIENCES
2014-2015 ACADEMIC YEAR**

BIO-005 Introduction to Scientific Principles

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Recommend completion of or concurrent enrollment in pre-college or college-level composition course. *This course will count neither for elective credit nor toward meeting minimum credit hours for graduation.* Course is graded A-F.

Introduction to Scientific Principles is a pre-college course designed for the student who needs additional skills or background in science to be successful in college-level science courses. In this course, the student will develop a general understanding of scientific principles for physics, chemistry and biology. Successful completion of this course will prepare the student to enter biology courses.

BIO-005 is a new course in the Semester System. BIO-005 is a pre-college course. Credit for this course will count neither for elective credit nor toward meeting minimum credit hours for graduation.

BIO-010 Introduction to Human Biology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Recommend completion of or concurrent enrollment in pre-college or college-level composition course. *This course will count neither for elective credit nor toward meeting minimum credit hours for graduation.* Course is graded A-F.

This pre-college course is an introduction to human biology as presented through the study of the human body. The course is designed for students planning entry into a technology requiring an understanding of human structure and function or familiarity with anatomical and physiological terminology.

BIO-010 replaces BIO-1705 Introduction to Human Biology in the Quarter System. BIO-010 is a pre-college course. Credit for this course will count neither for elective credit nor toward meeting minimum credit hours for graduation.

BIO-105 Environmental Science

4 credit hours, 5 contact hours (3 hours lecture, 2 hours lab). Prerequisite: None. It is highly recommended that a pre-college or college-level composition course be completed prior to enrolling in BIO-105. Course is graded A-F.

The course is an introduction to environmental science with an emphasis on the complexity and interrelatedness of environmental issues, concerns, problems and economics. The impact of humans on ecosystems, resources, energy and the environment are presented. Special reference is made to the significance of sustainability and the problems of pollution, waste management, hazardous and toxic materials. The roles of business, industry and government related to the environment will be addressed.

BIO-105 replaces BIO-1730 Environmental Science in the Quarter System. BIO-105 meets the Ohio Transfer Module standards for course TMNS.

BIO-110 Medical Terminology

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Recommend completion of or concurrent enrollment in pre-college or college-level composition course. Course is graded A-F.

This course is designed to introduce students to medical vocabulary as it relates to structure, function, physiology, diseases, diagnostics and treatment associated with all body systems. Course is graded on an A-F basis.

BIO-110 replaces BIO-1760 Medical Terminology in the Quarter System. BIO-110 meets the Ohio Transfer Assurance Guide standards for course OHL020.

**COTC COURSE DESCRIPTIONS - BIOLOGICAL SCIENCES
2014-2015 ACADEMIC YEAR****BIO-115 Human Nutrition**

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. Recommend completion of high school chemistry and completion of or concurrent enrollment in a pre-college or college-level composition course. Course is graded A-F.

This course is an introduction to the principles of nutrition with emphasis on food composition and the functions of nutrients. This course includes digestion, absorption, metabolism of nutrients, food safety and nutritional needs during the life cycle.

BIO-115 replaces BIO-1764 Human Nutrition in the Quarter System. BIO-115 meets the Ohio Transfer Assurance Guide standards for course OHL016.

BIO-120 General Biology

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in high school biology or BIO-005 or BIO-010. Recommended completion of this course for the student who must take BIO-130 and BIO-131. Recommend completion of or concurrent enrollment in pre-college or college-level composition course. Course is graded A-F.

This course introduces the major concepts and principles of biology, emphasizing inorganic, organic and biochemistry processes and concepts, cell structure and function, DNA function and technology, genetics, diversity of all living organisms, and ecology. The laboratory portion enhances the theories and concepts presented in lecture.

BIO-120 replaces BIO-1740 General Biology in the Quarter System. BIO-120 meets the Ohio Transfer Module standards for course TMNS.

BIO-121 Human Biology

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in high school biology or (BIO-005 or BIO-010). Recommend completion of high school chemistry. Recommend completion of or concurrent enrollment in a pre-college or college level composition course. Course is graded A-F.

Human Biology examines anatomy, function, and physiology for all body systems and components as well as reviews human development, aging, principles of inheritance and genetic disorders. Laboratory studies will involve the application of lecture materials through the use of a variety of laboratory learning resources.

BIO-121 replaces BIO-1745 Human Biology in the Quarter System. BIO-121 meets the Ohio Transfer Module standards for course TMNS.

BIO-130 Anatomy and Physiology I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in high school biology or BIO-010] and in [C grade (2.00) or better in high school chemistry or CHEM-010]. Recommend completion of or concurrent enrollment in a pre-college or college level composition course. Course is graded A-F.

Anatomy and Physiology I is the first course in a two semester sequence that explores the structure and function of the human body. Laboratory studies will involve the application of lecture materials through the use of microscopy, dissection, and examination of anatomical models.

BIO-130 replaces BIO-1772 Human Anatomy and Physiology I in the Quarter System. BIO-130 meets the Ohio Transfer Module standards for course TMNS.

**COTC COURSE DESCRIPTIONS - BIOLOGICAL SCIENCES
2014-2015 ACADEMIC YEAR****BIO-131 Anatomy and Physiology II**

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in BIO-130. Recommend completion of or concurrent enrollment in a pre-college or college level composition course. Course is graded A-F.

Anatomy and Physiology II is the final course in a two semester sequence that explores the structure and function of the human body. Laboratory studies will involve the application of lecture materials through the use of microscopy, dissection, and examination of anatomical models.

BIO-131 replaces BIO-1773 Human Anatomy and Physiology II in the Quarter System. BIO-131 meets the Ohio Transfer Module standards for course TMNS.

BIO-140 General Ecology

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: None. It is highly recommended that a pre-college or college-level composition be completed prior to enrolling in General Ecology. Course is graded A-F.

This course introduces the major concepts and principles of ecology, emphasizing the physical environment, adaptations to the environment, populations, species interactions, community and ecosystem dynamics, and human impacts on ecology. The laboratory portion enhances the theories and concepts presented in lecture.

BIO-140 is a new Semester course.

BIO-160 Biology I

5 credit hours, 7 contact hours (4 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in high school biology or (BIO-005 or BIO-010); C grade (2.00) or better in high school chemistry or CHEM-010; and C grade (2.00) or better in (MATH-070 or MATH-080) or appropriate Compass Placement. Recommended completion of or concurrent enrollment in a pre-college or college level composition course. Course is graded A-F.

This course explores general biological problems and processes as they are experienced by all living organisms: the chemistry and energetics of life, molecular genetics, cellular reproduction, and evolution. The laboratory portion enhances the theories and concepts presented in lecture. This is the first of a two-semester sequence – Biology I (BIO-160) and Biology II (BIO-161).

BIO-160 replaces BIO-1780 Biology I in the Quarter System. BIO-160 meets the Ohio Transfer Assurance Guide standards for courses OSC003 and OSC024.

BIO-161 Biology II

5 credit hours, 7 contact hours (4 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in BIO-160. Course is graded A-F.

The course explores general biological relationships and processes for all living organisms: plant and animal diversity, evolution, basic plant and animal systems, hormones, and immunology. The laboratory portion enhances the theories and concepts presented in lecture.

BIO-161 replaces BIO-1781 Biology II in the Quarter System. BIO-161 meets the Ohio Transfer Assurance Guide standards for courses OSC004 and OSC024.

**COTC COURSE DESCRIPTIONS - BIOLOGICAL SCIENCES
2014-2015 ACADEMIC YEAR****BIO-200 Microbiology**

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (BIO-120 or BIO-130 or BIO-160). Recommend completion of or concurrent enrollment in a pre-college or college level composition course. Course is graded A-F.

This course is a survey of the microbial world including types of microbes, microbial metabolism, genetics, growth, host/microbe interactions, immunology, and diseases of the body systems. The laboratory portion of this course enhances the theories and concepts presented in the lecture portion of the course. Course is graded on an A-F basis.

BIO-200 replaces BIO-1755 Microbiology in the Quarter System. BIO-200 meets the Ohio Transfer Module standards for course TMNS.

BIO-210 Pathophysiology of Human Diseases

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in BIO-131. Recommend completion of or concurrent enrollment in a pre-college or college level composition course. Course is graded A-F.

This course investigates the imbalances caused by disease, examines signs and symptoms of disease, explores various tests used to detect disease and analyzes treatment options necessary to maintain homeostasis.

BIO-210 replaces BIO-1778 Pathophysiology I and BIO-1779 Pathophysiology II in the Quarter System. BIO-210 meets the Ohio Transfer Assurance Guide standards for course OHL019.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - BUSINESS MANAGEMENT TECHNOLOGY
2014-2015 ACADEMIC YEAR**

BUS-105 Introduction to Business

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This introductory course explains the principles, terminology, and concepts necessary for interpreting business. Activities and presentations are provided to the student that will allow him or her to identify business environments, business ownership, ethical issues, global business awareness, organizational structures, management and marketing principles, technology information and financial implications in society. Upon completion of the course, the student will have a better understanding of the various elements of the business process, with this assisting in both the student's personal and professional life.

BUS-105 Introduction to Business replaces BMT-2014 Principles of Business in the Quarter system.

BUS-110 Introduction to Management

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

The basic functions of management are planning, organizing, leading and controlling. The course examines these four functions in considerable detail, and attempts to give the student insight and perspective on management in action. There is an emphasis on current case material so the student can relate principles to real-world management problems.

BUS-110 Introduction to Management replaces BMT-2021 Principles of Management in the Quarter system.

BUS-115 Introduction to Marketing

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ECON-105.

This course introduces the student to the marketing field and the components of the marketing process. The course focuses on the creation of value through a product or service, as well as the benefits of the product or service to consumers. The importance of advertising and branding through both traditional and emerging media/technologies will be emphasized in this course, and the class will culminate with the student creating and presenting a marketing plan.

BUS-115 Introduction to Marketing replaces BMT-2022 Principles of Marketing in the Quarter system. BUS-115 meets the Ohio Transfer Assurance Guide standards for course OBU006.

BUS-120 Business Law

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course presents the student with a survey of the legal environment for business in today's world. Topics of study include civil law and torts, criminal law, constitutional law, cyber law, contract law, sales law, corporate law and securities regulation, negotiable instruments, consumer law, and employment law. The focus of the course will be for the student to identify the relevance of various types of law and legal issue in the current business environment.

BUS-120 Business Law replaces BMT-2074 Business Law Today in the Quarter system. BUS-120 meets the Ohio Transfer Assurance Guide standards for course OBU004.

**COTC COURSE DESCRIPTIONS - BUSINESS MANAGEMENT TECHNOLOGY
2014-2015 ACADEMIC YEAR****BUS-125 PC Applications in Business**

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. Basic computer and keyboarding skills strongly recommended. Course is graded A-F.

This course is designed to give the student standardized, progressive, detailed, hands-on instruction and application in the most popular personal computer software applications used today by business and industry. The student will demonstrate the ability to integrate word processing, spreadsheet, database and presentation design and development through projects and exercises. Current topics that have an impact on information systems, such as cyber security, will be addressed, as well as how to choose the best electronic mail option available. The course combines demonstration and self-paced instruction along with team projects and exercises.

BUS-125 PC Applications in Business replaces BMT-2464 Applications in Business in the Quarter system. Bus-125 meets the Ohio Transfer Assurance Guide standards for course OBU003.

BUS-130 Team Building

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This introductory course explains the principles, terminology, and concepts necessary for developing team building skills in business relationships and environments. Activities and presentations are provided to the student that will allow him or her to learn group-processing skills vital to effective team work; including communication, decision making, and problem solving with conflict resolution. Upon completion of the course, the student will have a better understanding of the effects of individual behavior on group productivity, this awareness assisting in both the student's personal and professional life.

BUS-130 Team Building replaces BMT-2071 Team Building in the Quarter system.

BUS 135 Introduction to Human Resource Management

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This introductory course explains the vital role of human resource management in determining the success of an organization. Activities and presentations are provided to the student that will allow him or her to develop an awareness of the complexity of the issues surrounding the management of today's employees. Upon completion of the course, the student will have a better understanding of employee rights, employee responsibilities, equal employment opportunities, right to work laws, legal environments, performance appraisal, and the training and development of employees. This awareness will assist in both the student's personal and professional life.

BUS 135 Introduction to Human Resource Management replaces BMT-2876 Introduction to Human Resource Management in the Quarter system.

BUS-140 Advertising and Public Relations

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course looks at past and current campaigns, contemporary trends, and updated online venues through a theoretical lens of advertising. The student will review journal articles, websites, and videos to identify the trends and updates in the ever-evolving field of advertising. The student will study the importance of public relations and its purpose during organizational crisis. The course will emphasize the importance of effective communications in the field of both advertising and public relations.

BUS-140 Public Relations and Advertising replaces BMT-2483 Advertising Concepts/ Procedures and BMT-2485 Public Relations in the Quarter system. BUS-meets the Ohio Transfer Assurance Guide standards for course OCM012.

**COTC COURSE DESCRIPTIONS - BUSINESS MANAGEMENT TECHNOLOGY
2014-2015 ACADEMIC YEAR****BUS-150 Document Applications**

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. Basic computer and keyboarding skills are strongly recommended. Course is graded A-F.

This course develops the student's knowledge of basic document production techniques used in business correspondence and other business documents. Course instruction in proper formatting, including but not limited to, using margins and tab settings and various printing and editing techniques is included. Some emphasis is placed on production timelines.

BUS-150 Document Applications replaces BMS-2028 Word Processing Applications II and BMS-2029 Document Production I in the Quarter system.

BUS-155 Spreadsheet Applications

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. Basic computer and keyboarding skills are strongly recommended. Course is graded A-F.

This course provides the student the opportunity to develop the skills necessary to create and use spreadsheets efficiently in a business environment. It is designed to take the student step-by-step through the features of Microsoft Excel, from basic through advanced. Numerous practical in-depth spreadsheets will be completed throughout the course including creating, editing and formatting spreadsheets and workbooks as well as the creation and application of basic and advanced formulas and functions. The course will also explore advanced spreadsheet development techniques, chart and graph development and enhancement, working with templates and workbooks and team collaboration and file sharing.

BUS-155 Spreadsheet Applications replaces BMS-2037 Spreadsheet Application I and BMS-2038 Spreadsheet Applications II in the Quarter system.

BUS-165 Presentation Applications

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: None. Basic computer and keyboarding skills are strongly recommended. Course is graded A-F.

This course provides the student the opportunity to develop the comprehensive skills necessary to create and use electronic presentation software (PowerPoint) efficiently. It is designed to take the student step-by-step through the features of Microsoft Power Point, from basic to advanced. Numerous, practical and in-depth presentations will be completed by the student, both individually and in teams.

BUS-165 Presentation Applications replaces BMS-2205 MS PowerPoint I in the Quarter system.

BUS-170 Business Portfolio I

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None. Course is graded S/U.

This course was designed to help the student prepare for entry or advancement in the workplace by utilizing the latest in career tools and resources. The student will gain a thorough understanding of the value of a career portfolio as well as how to utilize the latest tools for compiling key information relevant to their learning and future career exploration opportunities, including electronic portfolios(webfolios). The projects and activities started in this course were designed to be used as a foundation for future artifact additions during the student's tenure in the business program. Field assignments, such as informational interviews and simulations will further enhance and reinforce job preparedness skills. This course is graded on a Satisfactory/ Unsatisfactory basis.

BUS-170 Business Portfolio I replaces BMT-2428 Business Portfolio I in the Quarter system.

**COTC COURSE DESCRIPTIONS - BUSINESS MANAGEMENT TECHNOLOGY
2014-2015 ACADEMIC YEAR****BUS-175 The Business Environment**

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

The design of this course is a comprehensive examination of the business environment and provides a review in all the areas that comprise business. The student will study current terminology of the business world by analysis of factors such as culture, communication, ethics, economics, and law. The student will approach the identification of current trends and contemporary workplace through a global and virtual lens. The student will review fundamental concepts and theories that are central to understanding today's business environment.

BUS-175 The Business Environment is a New Course in the Semester system.

BUS 205 Global Business

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Recommend successful completion of BUS-105 prior to enrolling in BUS-205. Course is graded A-F.

This course explains the foundational principles of global trade and includes a thorough examination of economics, politics, investments, and trade as they relate to a local and world economy. The student will evaluate integrated strategies and structures of global business within monetary, political, and legal systems as currently established in and among leading countries in the global market.

BUS 205 Global Business replaces BMT-2075 Global Business in the Quarter system.

BUS-210 Entrepreneurship

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

The student will be introduced to the concepts, theories and skill set requirements of entrepreneurship. The student will participate in the steps of creating and implementing a small business venture. During the process, the student will develop entrepreneur skills by recognizing business opportunities, identifying sources of financial support, and labeling constraints of implementing and marketing the new venture.

BUS-210 Entrepreneurship replaces BMT-2710 Entrepreneurship in the Quarter system.

BUS-215 E-Commerce

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Recommend successful completion of BUS-105 and BUS-110 prior to enrolling in BUS-215. Course is graded A-F.

This course explores the definition, concept and technology of E-Commerce. The course material identifies the required skills, knowledge and practices necessary to participate in E-Commerce. The student will review E-Commerce systems, regulatory, legal and Internet issues, and be able to identify resources in both traditional and web-based business. The student will study both organizational and external factors that create the environment in which E-Commerce systems operate.

BUS-215 E-Commerce replaces BMT-2712 E-Commerce in the Quarter system.

BUS-220 Human Resource Law, Policies and Procedures

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course will develop the student's skills regarding safety, security, and the legal requirements that govern the workplace. The student will interpret and analyze security and safety solutions used in an organization, along with employment law as it pertains to human resources within an organization. Upon completion of the course, the student will have a complete assessment of the role of safety, security and employment law within an organization.

BUS-220 Human Resource Law, Policies and Procedures replaces BMT-2856 Human Resource Law and BMT-2871 Health, Safety and Security in the Quarter system.

**COTC COURSE DESCRIPTIONS - BUSINESS MANAGEMENT TECHNOLOGY
2014-2015 ACADEMIC YEAR****BUS-225 Personnel Interviewing and Counseling**

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course will construct the personnel interviewing models with counseling, legal and wellness concepts to develop the students' knowledge, skills and abilities. There will be an emphasis on developing usable interviewing techniques and skills from the management and employees or probable employee perspective. Upon completion of the course, the student will have a better understanding of the combinations of employee interviews, counseling, wellness and productivity in the workforce.

BUS-225 Personnel Interviewing and Counseling replaces BMT-2860 Personnel Interviewing in the Quarter system.

BUS-230 Compensation and Benefits

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course will provide an in-depth study of the history, principles, and theory of compensation. This course will also examine the laws governing compensation, and the processes and methods used to develop compensation and benefit policies, and packages.

BUS-230 Compensation and Benefits replaces BMT-2846 Compensation and Benefits in the Quarter system.

BUS-235 Labor Relations

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course addresses the traditional areas of labor relations (history of the labor movement, collective bargaining, and contract administration) and current issues. The student will develop usable analytical skills suitable for assessing the issues confronting management and labor in today's environment.

BUS-235 Labor Relations replaces BMT-2850 Employee Relations in the Quarter system.

BUS-240 Retail Management

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course will categorize the important developments in retailing and service marketing concerning concepts and strategies. There will be an emphasis on retail operations, decision making tools for the supply chain, how merchandise is purchased, how customer databases are established, decision support systems, service quality and customer service in the retailing industry.

BUS-240 Retail Management replaces BMT-2482 Retail Management and BMT-2480 Service Marketing in the Quarter system.

BUS-245 Cases in Marketing Research

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in BUS-115. Course is graded A-F.

This course will interpret the scope of marketing research concerning applied research approaches with practical applications. Upon completion of the course, the student will have a complete justification of research and its applications within the marketing field.

BUS-245 Cases in Marketing Research replaces BMT-2486 Cases in Marketing/Research in the Quarter system.

**COTC COURSE DESCRIPTIONS - BUSINESS MANAGEMENT TECHNOLOGY
2014-2015 ACADEMIC YEAR****BUS-250 Managerial Problem Solving**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Recommend successful completion of BUS-105 and BUS-110 prior to enrolling in BUS-250. Course is graded A-F.

This course will provide an opportunity for the student to integrate knowledge and skills gained in previous courses in management, marketing, human resources, and finance. Emphasis is placed upon familiarization with the types of decisions that managers must make and the development of skills necessary to make them.

BUS-250 Managerial Problem Solving replaces BMT-2855 Problem Solving/Managerial Decision Making in the Quarter system.

BUS-255 Strategic Management

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

Strategies an organization pursues have a major impact upon its performance relative to that of its competitors. This course identifies and describes the various strategies a company can pursue to achieve superior performance. Strategies apply to all types of organizations. A thorough understanding of the analytical techniques and skills necessary by managers to identify and exploit long term strategies successfully will be applied.

BUS-255 Strategic Management replaces BMT-2019 Strategic Management in the Quarter system.

BUS-270 Business Portfolio II

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Satisfactory grade in BUS-170. It is recommended that this course be taken in the student's last semester before completion of the Business Management Technology program. Course is graded S/U.

A studio course in which the student will apply skills learned from previous courses and use the knowledge, skills and abilities obtained to compile a professional business portfolio which showcases their artifacts and career preparedness skills. The student will organize, refine and amend their professional business portfolios and/or webfolios and arrange for review and comment from instructor and peer groups. The student will perform interview simulations pertaining to the contents and applications of works compiled. The student will publish their final career portfolio for peer group review as well as for final instructor evaluation and comment. This course is graded on a Satisfactory/ Unsatisfactory basis.

BUS-270 Business Portfolio II replaces BMT-2448 Business Portfolio II in the Quarter system.

BUS-280 Social Media Marketing

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Recommend successful completion of BUS-115 prior to enrolling in BUS-280. Course is graded A-F.

The course will reflect on society's immersion into social media and its effect on the field of marketing. The course is appropriate for the student who is interested in marketing communication through the tools of social media. The student will reflect on current and emerging trends in social media, and how this impacts a strategic marketing framework. The course will attempt to capture the essence of social media at its present state, realizing the field is also linked with technology that rapidly transforms through phases of growth.

BUS-280 Social Media Marketing is a New Course in the Semester system.

**COTC COURSE DESCRIPTIONS - BUSINESS MANAGEMENT TECHNOLOGY
2014-2015 ACADEMIC YEAR****BUS-285 Advertising Campaign**

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Recommend successful completion of BUS-140 prior to enrolling in BUS-285. Course is graded A-F.

The course continues the student's study of the advertising campaign process through the planning and execution of a comprehensive advertising campaign. The course emphasizes the formulation of effective advertising techniques by requiring the student to conduct an ad campaign for a local business. The student will work in teams to create, plan and execute the campaign, which will meet the needs of the local business.

BUS-285 Advertising Campaign replaces BMT-2980 Advertising Portfolio and DMD-3880 Advertising Portfolio in the Quarter system.

BUS-290- Business Field Experience I

1.50 credit hours, 7.00 contact hours (1 hour lecture, 0 hours lab and 6 hours field experience per week). Prerequisite: BUS-105; BUS-110; BUS-115; BUS-125; BUS-135. Course is graded S/U

The Business Management Technology program field experience requirement mandates that a student complete 12 total contact hours per week in a field experience setting. BUS-290 has 6 hours per week field experience for one semester and can be taken once along with BUS-291 to complete the entire field experience requirement., or a student could elect to take BUS-292 in one semester to complete the field experience requirement instead.

This course assesses the concepts and ideals learned in an actual management field. Activities and responsibilities will measure self-directed applications of learning. Upon completion of the course, the student will have an evaluation of and validity to the knowledge, skills and abilities within the workforce. This appraisal will assist in both the student's personal and professional life. This course is graded on a Satisfactory/ Unsatisfactory basis.

BUS-290 replaces BUS-293 Business Internship/Service Learning in the Semester system; Both BUS-201 and BUS-293 replace BMT-2994 Internship/Service Learning I in the Quarter system.

BUS-291 Business Field Experience II

1.50 credit hours, 7.00 contact hours (1 hour lecture, 0 hours lab and 6 hours field experience per week). Prerequisite: BUS-105; BUS-110; BUS-115; BUS-125; BUS-135. Course is graded S/U

The Business Management Technology program field experience requirement mandates that a student complete 12 total contact hours per week in a field experience setting. BUS-291 has 6 hours per week field experience for one semester and can be taken once along with BUS-290 to complete the entire field experience requirement., or a student could elect to take BUS-292 in one semester to complete the field experience requirement instead.

This course assesses the concepts and ideals learned in an actual management field. Activities and responsibilities will measure self-directed applications of learning. Upon completion of the course, the student will have an evaluation of and validity to the knowledge, skills and abilities within the workforce. This appraisal will assist in both the student's personal and professional life. This course is graded on a Satisfactory/ Unsatisfactory basis.

BUS-291 replaces BUS-294 Business Internship/Service Learning in the Semester system; Both BUS-291 and BUS-294 replace BMT-2995 Internship/Service Learning II in the Quarter system.

**COTC COURSE DESCRIPTIONS - BUSINESS MANAGEMENT TECHNOLOGY
2014-2015 ACADEMIC YEAR****BUS-292 Business Field Experience III**

2 credit hours, 13 contact hours (1 hour lecture, 0 hours lab and 12 hours field experience per week). Prerequisite: BUS-105; BUS-110; BUS-115; BUS-125; BUS-135. Course is graded S/U.

The Business Management Technology program field experience requirement mandates that a student complete 12 total contact hours per week in a field experience setting. BUS-292 taken in one semester fulfills the field experience requirement, or a student could take BUS-290 and BUS-291 over two semesters to complete the field experience requirement instead.

This course assesses the concepts and ideals learned in an actual management field. Activities and responsibilities will measure self-directed applications of learning. Upon completion of the course, the student will have an evaluation of and validity to the knowledge, skills and abilities within the workforce. This appraisal will assist in both the student's personal and professional life. This course is graded on a Satisfactory/ Unsatisfactory basis.

BUS-292 replaces BUS-295 Business Internship/Service Learning in the Semester system; Both BUS-292 and BUS-295 replace BMT-2996 Internship/Service Learning III in the Quarter system.

BUS-B2028 Document Production II (Bridge Course)

2 credit hours, 3 contact hours (1 hour lecture and 2 hours of lab). Prerequisite: C grade (2.00) or better in BMS-2029 (quarter system course). Course is graded A-F.

This course is a continuation of BMS-2029 Document Production I (quarter course). Emphasis is placed on development of advanced document production skills. This includes formatting of business correspondence, forms, and reports, collaboration for document creation, version control. Some emphasis is placed on production speed.

BUS-B2028 is a semester bridge course for students coming out of the quarter system with previous quarter credit for BMS-2029. Successful completion (with a C grade [2.00] or better) of both BMS-2029 and BUS-B2028 will fulfill the semester requirement for BUS-150 Document Applications.

BUS-B2038 Spreadsheet Applications II (Bridge Course)

3 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in BMS-2037 (quarter course). Course is graded A-F.

This course is a continuation of Spreadsheet Applications I. The course covers formatting worksheets using advanced techniques; working with templates and workbooks; using advanced spreadsheet functions; working with lists and analysis tools; managing and auditing worksheets; and collaborating with work groups

BUS-B2038 is a semester bridge course for students coming out of the quarter system with previous quarter credit for BMS-2037. Successful completion of BMS-2037 and BUS-B2038 with a C grade (2.00) or better will fulfill the semester requirement for BUS-155 Spreadsheet Applications.

BUS-B2480 Service Marketing Management (Bridge Course)

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F

This course will categorize the important developments in retailing and service marketing concerning concepts and strategies. There will be an emphasis on retail operations, decision making tools for the supply chain, how merchandise is purchased, how customer databases are established, decision support systems, service quality and customer service in the retailing industry.

BUS-B2480 is a semester bridge course for students coming out of the quarter system with previous quarter credit for BMT-2482. Successful completion of BMT-2482 and BUS-B2480 (with a C grade [2.00] or better) will fulfill the semester requirement for BUS-240 Retail Management.

**COTC COURSE DESCRIPTIONS - BUSINESS MANAGEMENT TECHNOLOGY
2014-2015 ACADEMIC YEAR****BUS-B2482 Retail Management**

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in BMT-2022. Course is graded A-F.

This course will respond to various important developments in retailing. The student will learn, explore and develop competencies in retail operations, decision making tools for the supply chain, how merchandize is purchased, how customer databases are established, decision support systems that are tailored to local markets, scheduling, pricing and target promotions in the retailing industry.

BUS-B2482 is a semester bridge course for students coming out of the quarter system with previous quarter credit for BMT-2480. Successful completion of BMT-2480 and BUS-B2482 (with a C grade [2.00] or better) will fulfill the semester requirement for BUS-240 Retail Management.

BUS-B2483 Advertising Concepts/Procedures (Bridge Course)

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in BMT-2022 (quarter course). Course is graded A-F.

This course allows the student to discover advertising including coverage of industry organization, customers' buying behavior, segmenting and targeting, and positioning, along with explanations of the marketing communication functions and media. A thorough treatment of the practices critical to building customer relationships and brands will be presented and explored.

BUS-B2483 is a semester bridge course for students coming out of the quarter system with previous quarter credit for BMT-2485. Successful completion of BMT-2485 and BUS-B2483 (with a C grade [2.00] or better) will fulfill the semester requirement for BUS-140 Public Relations and Advertising.

BUS-B2485 Public Relations (Bridge Course)

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in BMT-2022 (quarter course). Course is graded A-F.

This course will allow the student all the most effective planning techniques in public relations. How to execute the entire range of programming possibilities, from investor relations and employee relations to cause marketing programs, and all of the important skills, including speech writing, image management, and crisis management. The student will also learn how to measure the effectiveness of public relation programs and their tactics.

BUS-B2485 is a semester bridge course for students coming out of the quarter system with previous quarter credit for BMT-2483. Successful completion of BMT-2483 and BUS-B2485 (with a C grade [2.00] or better) will fulfill the semester requirement for BUS-140 Public Relations and Advertising.

BUS-B2856 Human Resource Law (Bridge Course)

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in BMT-2876 (quarter course). Course is graded A-F.

This course describes and explains employment law and the set of legal requirements that govern the workplace. Students will learn the major issues and rules of employment law and an understanding of what employment law means in the human resource practice.

BUS-B2856 is a semester bridge course for students coming out of the quarter system with previous quarter credit for BMT-2871. Successful completion of BMT-2871 and BUS-B2856 (with a C grade [2.00] or better) will fulfill the semester requirement for BUS-220 Human Resource Law Policies and Procedures.

**COTC COURSE DESCRIPTIONS - BUSINESS MANAGEMENT TECHNOLOGY
2014-2015 ACADEMIC YEAR****BUS-B2871 Health, Safety, and Security** (Bridge Course)

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course explores how health, safety and security are an essential element in the workplace. The student will study OSHA concepts and procedures, analyze employee productivity and wellness, recognize security issues and understand emergency preparedness.

BUS-B2871 is a semester bridge course for students coming out of the quarter system with previous quarter credit for BMT-2856. Successful completion of BMT-2856 and BUS-B2871 (with a C grade [2.00] or better) will fulfill the semester requirement for BUS-220 Human Resource Law Policies and Procedures.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - CHEMISTRY
2014-2015 ACADEMIC YEAR**

CHEM-020 Introduction to Chemistry Principles

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: None. Recommend completion of or concurrent enrollment in a pre-college or college-level composition course. Course is graded A-F.

Introduction to Chemistry Principles is a pre-college course designed to serve as a foundation for the student about to enter the study of allied health sciences or college-level science courses. Credit for this course will count neither for elective credit nor toward meeting minimum credit hour requirements for graduation.

CHEM-020 replaces CHEM-010 Introduction to Chemistry Principles in the Semester system. CHEM-010 was a new course in the Semester system. CHEM-020 and CHEM-010 are a pre-college level courses. Credit for these courses will count neither toward elective credit nor toward meeting minimum credit hour requirements for graduation.

CHEM-100 Basic Chemistry

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (MATH-070 or MATH-080) or appropriate COMPASS placement. Course is graded A-F.

This course discusses measurement systems, atomic and nuclear structure, bonding, chemical reactions and energy, and concludes with discussions of gasses and the gas laws, solutions, equilibrium, and acids and bases.

CHEM-100 is a new course in the Semester System. CHEM-100 meets the Ohio Transfer Module standards for course TMNS.

CHEM-101 General Organic Chemistry

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in CHEM-100. Course is graded A-F.

The course discusses the structures, reactions, properties and naming of simple organic compound classes, including hydrocarbons, working up to the more complex biological compounds. The laboratory portion of this course enhances the theories and concepts presented in lecture. Course is graded on an A-F basis.

CHEM-101 is a new course in the Semester system. CHEM-101 meets the Ohio Transfer Module standards for course TMNS.

CHEM-102 Fundamental Chemistry

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in high school chemistry (or CHEM-010 or CHEM-020) and C grade (2.00) or better in (MATH-070 or MATH-080) or appropriate COMPASS placement. Course is graded A-F.

This General, Organic, and Biochemistry course is primarily designed to serve the student entering the Nursing and Allied Health programs. The course is the study of the general chemistry principles with a focus on identification of functional groups, understanding the properties of each functional group, the naming rules for simple molecules, and key reactions for each functional group; and biochemistry principles with a focus on the properties carbohydrates, lipids, proteins, enzymes, nucleic acids, and basic metabolic pathways. The laboratory portion of this course enhances the theories and concepts presented in lecture.

CHEM-102 Fundamental Chemistry replaced CHM-1713 Fundamental Chemistry in the Quarter system.

**COTC COURSE DESCRIPTIONS - CHEMISTRY
2014-2015 ACADEMIC YEAR****CHEM-110 General Chemistry I**

5 credit hours, 7 contact hours (4 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in high school chemistry (or CHEM-010 or CHEM-020) and C grade (2.00) or better in MATH-140 or appropriate COMPASS Placement. Course is graded A-F.

An introduction to the basic concepts of chemistry designed for the student pursuing an Associate of Science degree and/or interested in transfer credit. The course includes the following topic areas: matter and measurement, significant figures, atomic and molecular structure, chemical formulas and equations, stoichiometry, solutions, thermochemistry, quantum theory, periodic properties, chemical bonding theory and gasses. Problem solving during the course will develop analytical and interpretive skills and apply algebraic techniques. Laboratories will apply the principles learned in lecture, develop safety awareness, and enhance analytical, preparative and interpretive skills. Safety training and goggles are required for laboratory sessions.

CHEM-110 replaces CHM-1790 General Chemistry I and CHM-1791 General Chemistry II in the Quarter System. CHEM-110 meets the Ohio Transfer Assurance Guide standards for courses OSC008 and OSC023.

CHEM-111 General Chemistry II

5 credit hours, 7 contact hours (4 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CHEM-110. Course is graded A-F.

A continuation of General Chemistry I designed for the student pursuing an Associate of Science degree and/or interested in transfer credit. The course includes the following topic areas: intermolecular forces, properties of solutions, chemical kinetics, chemical equilibrium, chemical thermodynamics, acid-base equilibria, buffers and electrochemistry. Problem solving during the course will develop analytical and interpretive skills and application of algebraic techniques. Laboratories will apply the principles learned in lecture, develop safety awareness, and enhance analytical, preparative and interpretive skills. Safety training and goggles are required for laboratory sessions.

CHEM-111 replaces CHM-1790 General Chemistry I and CHM-1791 General Chemistry II in the Quarter System. CHEM-111 meets the Ohio Transfer Assurance Guide standards for courses OSC009 and OSC023.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - INFORMATION TECHNOLOGY
2014-2015 ACADEMIC YEAR**

CIT-101 User Support Concepts

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course introduces the student to help desk concepts including operations, processes, procedures, tools and technologies. In addition, the help desk setting, roles and responsibilities of help desk personnel, and end user conflicts and resolution are discussed. Real-world scenarios and hands-on exercises allow the student to practice implementing help desk and user support techniques.

CIT-101 replaces CMP-2501 Help Desk Concepts in the Quarter system.

CIT-102 Computer Applications for Technology Specialists

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: None. Course is graded A-F.

In this course, the student will be introduced to the use of computer applications, emerging technology applications, and project planning applications, as well as gain insight into how to assist other users with application settings and options, and integration capabilities. The student will also learn about the components and peripherals of a computer (PC) and how they function and communicate as a system. Hands-on lab experience using the Windows operating system is emphasized.

CIT-102 replaces CMP-2502 Computer Applications-Technology Professionals in the Quarter system.

CIT-103 Technology Integration support

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: None. Course is graded A-F.

This course introduces the student to the installation, integration and troubleshooting of home computer systems, audio/video, cable/ satellite, telecommunication, security and lighting systems. This course prepares the student for the Comp TIA DHTI+ certification.

CIT-103 replaces CMP-2505 Technology Integrate Support in the Quarter system.

CIT-105 Principles of Computer Programming

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course introduces the student to the logic of computer programming. Through the use of flowcharts, pseudo-code, and the C++ programming language, the student develops algorithms for solutions to real world programming problems. Introductory topics in Object Oriented programming will be discussed. Hands-on lab exercises allow the student to apply the algorithms to real computer programs.

CIT-105 Principles of Computer Programming replaces CMP-2596 Principles of Computer Programming in the Quarter system.

CIT-110 Operating Systems & Security

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: None. Course is graded A-F.

This course offers a broad survey of common Operating Systems including the history, types, and functions of operating systems. The student will be introduced to command line statements used for configuring operating systems. System security issues will be covered, including the skills needed for planning, implementing and auditing a system's security.

CIT-110 replaces CMP-2592 Operating Systems and Security in the Quarter system.

**COTC COURSE DESCRIPTIONS - INFORMATION TECHNOLOGY
2014-2015 ACADEMIC YEAR****CIT-115 Math for Information Technology**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (MATH-070 or MATH-080) or appropriate COMPASS placement. Course is graded A-F.

This course presents the terminology and concepts necessary for understanding some of the important mathematical ideas used in computer programming for business applications. Areas of study include numeration systems, matrix and Boolean algebra, probability, mathematics of finance, and other mathematical topics used in programming.

CIT-115 replaces MTH-2553 Mathematics for Programming in the Quarter system.

CIT-120 PC Hardware Troubleshooting and Maintenance

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course covers the study of microcomputer systems. Both hardware and software aspects of a microcomputer system and the theory behind them are studied. These topics are reinforced by hands on lab experiments. The student will gain knowledge and experience to take the Comp TIA A+ Essentials certification exam.

CIT-120 replaces EET-3039 PC Hardware: Troubleshooting and Maintenance in the Quarter system. CIT-120 meets the Ohio the Career Technical Credit Transfer (C-TAG) standards for course CTIT003.

CIT-125 Networking

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: None. Course is graded A-F.

This course introduces the student to networking with an emphasis on the basic infrastructure. Subjects covered include cabling, connectors, Ethernet Standards, networking components and devices, OSI Model and protocols, TCP/IP routing and addressing, LAN and WAN technologies, wireless networking, security, and troubleshooting. The student will install a network and setup the working environment. In addition, the student will learn to detect and correct software and hardware errors associated with network components and applications. This course prepares the student to study and take the CompTIA® Network+ certification exam.

CIT-125 replaces EET-3306 Local Area Networks and EET-3326 Local Area Networks-Microsoft in the Quarter system. CIT-125 meets the Ohio the Career Technical Credit Transfer (C-TAG) standards for course CTIT002.

CIT-130 Visual Basic I

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CIT-105. Course is graded A-F.

The student will design and write programs using Visual Basic programming features which include the ability to create and integrate text and graphics in an interactive environment. File handling will include the creation and maintenance of sequential and indexed files as well as the integration of databases. Object oriented programming concepts are introduced and structured programming techniques are emphasized with the student writing and executing a variety of programs for business and scientific applications.

CIT-130 replaces CMP-2576 Visual Basic in the Quarter system.

CIT-135 Programming in C

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course is an introduction to programming using the C language for developing object-oriented applications. With a focus on Objective C, the student will develop solutions to practical examples that execute on multiple platforms including iOS and Mac OS X.

CIT-135 is a new course in the Semester system.

**COTC COURSE DESCRIPTIONS - INFORMATION TECHNOLOGY
2014-2015 ACADEMIC YEAR****CIT-140 Java Programming**

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CIT-105. Course is graded A-F.

This course introduces the student to the Java programming language. Java data types, control structures and classes will be covered. The student will write console and window application programs to solve problems as well as applets to add animation to web pages.

CIT-140 Java Programming replaces CMP-2564 Java Programming in the Quarter system.

CIT-145 XHTML, CSS & HTML5

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course is an introduction to webpage design and development for static and dynamic content. The student will be introduced to XHTML, CSS, and HTML5. Several webpages will be created including elements such as text, links, images, tables, forms, and multimedia. CSS will be used for formatting and positioning the webpage elements as well as establishing site-wide style settings.

CIT-145 is a new course in the Semester system.

CIT-150 Internet Programming I

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CIT-105. Course is graded A-F.

This course is an introduction to webpage design and development for static and dynamic contents. The student will be introduced to HTML/XHTML, CSS, and a scripting language such as JavaScript or VBScript. The emphasis is on client-side webpage programming.

CIT-150 replaces CMP-2598 Internet Programming I in the Quarter system.

CIT-160 Database

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course emphasizes the principles and procedures of how records are created, stored, retrieved, retained, and disposed of using standard database software programs. The student will gain an understanding of the basics of database design and the very specific relationships among objects which comprise a database.

CIT-160 replaces CMP-2594 Database II in the Quarter system.

CIT-165 Database for the Web

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course introduces the student to relational databases, a database management system such as MySQL, the Structured Query Language (SQL) and the concept of database-driven websites. The course focuses on web database applications and includes website security issues such as preventing unauthorized access to the data and the need for regular backups. A programming language such as PHP, Perl or C will be used to write programs that allow websites to connect and interact with a database.

CIT-165 is a new course in the Semester system.

**COTC COURSE DESCRIPTIONS - INFORMATION TECHNOLOGY
2014-2015 ACADEMIC YEAR****CIT-170 Data Modeling**

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course introduces the student to data modeling which allows complex data to be analyzed, manipulated, extracted and reported accurately. The course includes techniques for gathering data requirements and using them to produce conceptual, logical and physical database designs. Basic UML concepts, normalization techniques and the impact of unstructured data are also covered. The student will complete hands-on labs which include the use of modeling software, templates, and relational database software.

CIT-170 is a new course in the Semester system.

CIT-175 Medical Informatics

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course is an introduction to Medical Informatics. The course will focus on the role of computers in the provision of medical services. The course is designed to familiarize the student with methods for addressing the core concepts and issues confronting health practitioners and researchers in planning, implementation, and evaluation of information systems. The student will use data analysis tools, such as spreadsheets and databases for analyzing clinical, medical, biological and other health-related data.

CIT-175 is a new course in the Semester system.

CIT-205 Advanced C++

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CIT-105. Course is graded A-F.

This course introduces the student to the advanced features of C++ and object oriented programming. Issues such as defining and using classes, declaring and defining objects and functions are covered. The concepts and techniques of class hierarchy and inheritance are studied. Structured programming concepts are emphasized with the student writing and executing a variety of programs.

CIT-205 replaces CMP-2587 Advanced C++ in the Quarter system.

CIT-210 Systems Analysis and Design

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in CIT-105. Course is graded A-F.

This course is an overview of the systems development methodology and its use in the implementation of new computer systems. The student plays a role as a systems analyst using data modeling, process modeling, feasibility analysis, information system modeling, and input and output design. The student learns and applies normalization, uses various modeling structures and examines the pros and cons of conventional file systems in comparison to a distributed database. Students learn and analyze various client/server architectures.

CIT-210 replaces CMP-2593 System Analysis and Design in the Quarter system.

CIT-215 IT Project Management

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

The student will learn about the design, development and management aspects of various IT related projects. This course introduces the student to IT project management including business concepts, interpersonal skills and project management techniques required to successfully manage IT projects. Topics and projects incorporate project management principles, conflict resolution, negotiation, communication, team building/leadership and expectation setting and management.

CIT-215 replaces CMP-2540 IT Project Management in the Quarter system.

**COTC COURSE DESCRIPTIONS - INFORMATION TECHNOLOGY
2014-2015 ACADEMIC YEAR****CIT-230 Visual Basic II**

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CIT-130. Course is graded A-F.

This course expands on the fundamentals of Visual Basic.Net as presented in CIT-130 Visual Basic. Learning in a hands-on computer lab environment, the student gains an advanced understanding of the controls, calculation methods, condition structures, menu options, functions, looping structures, array construction and usage, Web form issues, accessing database files, saving objects in files, graphics and animation, and programming for mobile technologies offered through Visual Basic.Net.

CIT-230 replaces CMP-2580 Visual Basic II in the Quarter system.

CIT-240 IT Specialist Capstone

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CIT-215. Course is graded A-F.

This course is designed to allow the student to work individually or in small groups to complete a major, independent project or group of projects that builds upon and summarizes elements of the IT Professional plan of study.

CIT-240 replaces CMP-2544 IT Professional Capstone in the Quarter system.

CIT-250 Internet Programming II

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CIT-150. Course is graded A-F.

This course is a continuation of CIT-150 Internet Programming I with an emphasis on Server-Side programming and e-commerce. The course focuses on using Active Server Pages (ASP) to create dynamic, interactive web content. Course content includes the introduction of the extensible Markup Language (XML) and database communication mechanisms using ActiveX Data Objects (ADO).

CIT-250 replaces CMP-2599 Internet Programming II in the Quarter system.

CIT-255 Internet Programming III

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CIT-250. Course is graded A-F.

This project-based course is a continuation of the Internet Programming series with an introduction to web content management systems (CMS), and the integration of web services. The course includes the design, creation, testing, use and management of web application programming interfaces (APIs) for integrating end-user applications such as Google Maps, Twitter, Facebook, etc. into websites. A server-side scripting language such as PHP will be used to implement interactive features on the websites.

CIT-255 is a new Semester course.

CIT-265 Disaster Recovery and Business Continuity

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course examines the aspects of contingency planning operations with an emphasis on IT related business continuity plans. Demonstrations and hands-on practice will reinforce topics such as incident response-prevention, detection, reaction, disaster recovery, and business continuity. Upon completion, the student will be able to provide documentation for a disaster recovery plan.

CIT-265 replaces CMP-2541 Disaster Recovery and Business Continuity.

**COTC COURSE DESCRIPTIONS - INFORMATION TECHNOLOGY
2014-2015 ACADEMIC YEAR****CIT-270 Programming & Software Development Capstone**

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CIT-160. Course is graded A-F.

This course introduces the student to the application of computer programming using a relational database and system development concepts, principles and practices to create a comprehensive system development project. The student is required to analyze, design, program, test and document realistic systems using a specified current database technology. The student works on an independent-study basis with the guidance of the faculty.

CIT-270 replaces CMP-2565 Directed Studies in Computers in the Quarter system.

CIT-291 IT Internship (Practicum)

2 credit hours, 8 contact hours (1 hour lecture, 0 hours lab, and 7 hours per week of practicum [internship] experience). Prerequisite: None. Course is graded S/U.

This course offering is composed of a non-paid internship (Practicum work experience) chosen by the student and coordinated with the assigned faculty advisor and/ or Division Academic leader. The internship must be related to the student's academic program and should reinforce concepts and processes related to the Information Technology field. This course is graded on a Satisfactory/ Unsatisfactory basis.

CIT-291 replaces CIT-293 IT Internship in the Semester system; both (CIT-291 and CIT-293) and (CIT-292 and CIT-294) replace CMP-2551 Internship in the Quarter system.

CIT-297 IT Cooperative Work Experience

2 credit hours, 11 contact hours (1 hour lecture, 0 hours lab, and 10 hours per week of cooperative education experience). Prerequisite: None. Course is graded S/U.

This course offering is composed of a paid work experience chosen by the student and coordinated with the assigned faculty advisor and/or Division Academic leader. The work experience must be related to the student's academic program and should reinforce concepts and processes related to the Information Technology field. This course is graded on a Satisfactory/ Unsatisfactory basis.

CIT-297 replaces CIT-295 IT Cooperative Work Experience in the Semester system; both (CIT-297 and CIT-295) and (CIT-297 and CIT-295) replace CMP-2552 IT Cooperative Work Experience in the Quarter system.

CIT-298 Internet Programming II (Bridge Course)

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CMP-2598 (quarter system course). Course is graded A-F.

This course is a continuation of CMP-2598 Internet Programming I (quarter system course) with an emphasis on Server-Side programming. The course focuses on using Active Server Pages (ASP) to create dynamic, interactive web content. Practical, real-world lab exercises provide students with hands-on experience. The course includes the use of web tools and web servers, and introduces the student to E-commerce. Database communication mechanisms are included.

CIT-298 is a semester bridge course for students coming out of the quarter system with NO previous quarter credit for CMP-2599; the semester course equivalent for CMP-2599 or CIT-298 is CIT-250 Internet Programming II.

**COTC COURSE DESCRIPTIONS - INFORMATION TECHNOLOGY
2014-2015 ACADEMIC YEAR****CIT-B2586 C++ Object Oriented Programming** (Bridge Course)

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CMP-2596 (quarter course). Course is graded A-F.

This course introduces the basic concepts of Object Oriented programming techniques using the C++ programming language. Topics include an introduction to arrays, structure, and classes. Object oriented programming concepts are emphasized with the student writing and executing a variety of programs for business, scientific and text processing applications.

CIT-B2586 is a semester bridge course for students coming out of the quarter system with NO previous quarter credit for CMP-2586, a course that has no Semester equivalent course.

CIT-B2587 Advanced C++ Programming (Bridge Course)

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CMP-2586 (quarter course). Course is graded A-F.

This course is a continuation of CMP-2586 C++ and incorporates advanced features of C++ and object oriented programming. Issues such as declaring, defining, and using classes, declaring and defining objects and functions are covered. The concepts and techniques of class hierarchy and inheritance are studied. Structured programming concepts are emphasized with the student writing and executing a variety of programs for business scientific and text processing applications.

CIT-B2587 is a semester bridge course for students coming out of the quarter system with NO previous quarter credit for CMP-2587; the semester equivalent for CMP-2587 is CIT-205 Advanced C++.

CIT-B3326 Local Area Networks – Microsoft (Bridge Course)

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in EET-3306 (quarter course). Course is graded A-F.

This course teaches the students to construct and maintain Microsoft networks. The students will install a Microsoft network and set up the working environment. The students will learn how to detect and correct software and hardware errors associated with network components.

CIT-B3326 is a semester bridge course for students coming out of the quarter system with previous quarter credit for EET-3306. Successful completion of EET-3306 and CIT-B3326 (with a C grade [2.00] or better) will fulfill the semester requirement for CIT-125 Networking.

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS – ENGINEERING TECHNOLOGY – CIVIL ENGINEERING
2014-2015 ACADEMIC YEAR**

CIVL-120 Autodesk Civil 3D

1.50 credit hours, 2.50 contact hours (0.50 hours lecture and 2.00 hours lab). Prerequisite: None. Course is graded A-F.

This introductory level course covers the fundamentals of AutoCAD Civil 3D and gives the student comprehensive experience with the three-dimensional, interactive, dynamic design features of AutoCAD Civil 3D.

CIVL-120 replaces CIVIL-120 Autodesk Civil 3D in the Semester system. Both CIVL-120 and CIVIL-120 replace DDT-3704 AutoCAD Civil 3D in the Quarter system.

CIVL-160 Introduction to Civil Engineering Technology

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course is an introduction to the methods and practices of civil engineering drafting, including mapping, plot plans, contours, profiles, highway layouts and GIS.

CIVL-160 replaces CIVIL-160 Introduction to Civil Engineering Technology in the Semester system. Both CIVL-160 and CIVIL-160 replace DDT-3731 Introduction to Civil Drafting/Design in the Quarter system.

CIVL -170 Site Engineering

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in ARCH-110. Course is graded A-F.

This course covers the following engineering aspects of site development: site grading, earthwork and hydraulics and hydrology for storm and wastewater management, as well as the projection of related construction documents.

CIVL-170 replaces CIVIL-170 Site Engineering in the Semester system. Both CIVL-170 and CIVIL-170 replace DDT-3733 Civil Drafting /Design II in the Quarter system.

CIVL-235 Structural Steel and Concrete

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in ARCH-110; successful completion of CIVL-240 is strongly recommended prior to enrollment in this course. Course is graded A-F.

This course covers the fundamentals of structural steel and reinforced concrete designing and drafting. Focus is on practices and methods used in the graphical representation of structural steel and reinforced concrete structures. Basic stress calculations and design concepts are studied for use in simplified design and detailing.

CIVL-235 replaces CIVIL-235 Structural Steel and Concrete in the Semester system. Both CIVL-235 and CIVIL-235 replace DDT-3771 Structural Steel and Concrete in the Quarter system.

CIVL-240 Statics & Strengths of Materials I

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MATH-150 and PHYS-100 (or concurrent enrollment in PHYS-100). Course is graded A-F.

This course includes the study of static forces and equilibrium and the resultant stress, strain, deformation, failure and strength requirements in straight line tension structures, compression and bearing members, shear elements, torsion elements, and angled structures.

CIVL-240 replaces CIVIL-240 Statics & Strengths of Materials I in the Semester system. Both CIVL-240 and CIVIL-240 replace DDT-3257 Statics & Strengths of Materials I in the Quarter system.

**COTC COURSE DESCRIPTIONS – ENGINEERING TECHNOLOGY – CIVIL ENGINEERING
2014-2015 ACADEMIC YEAR****CIVL-241 Statics and Strengths of Materials II**

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in CIVL-240. Course is graded A-F.

This course includes the study of static forces and equilibrium and the resultant stress, strain, shear and bending considerations in the design and selection of trusses, rectangular beams, built up beams and standard structural members.

CIVL-241 replaces CIVIL-241 Statics & Strength of Materials II in the Semester system. Both CIVL-241 and CIVIL-241 replace DDT-3258 Statics & Strengths of Materials II in the Quarter system.

CIVL-245 Surveying

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (MATH-070 or MATH-080) or appropriate COMPASS placement. Course is graded A-F.

This surveying course will cover basic concepts of surveying, surveying equipment and field methods, and surveying applications. The student will use measurement techniques and apply mathematical relationships in solving problems.

CIVL-245 replaces CIVIL-245 Surveying in the Semester system (there is no Quarter course equivalent for either). CIVL-245 and CIVIL-245 both meet the Ohio Transfer Assurance Guide standards for course OET015.

CIVL-260 Construction Materials and Testing

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in MATH-060 or appropriate score on COMPASS placement exam.

This course covers the properties, use and testing of heavy construction materials.

CIVL-260 is a new Semester course.

CIVL-265 Soil Mechanics and Foundations

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CIVL-240. Course is graded A-F.

This course covers fundamental engineering properties and mechanical behavior of soil materials and correlation to foundation design and construction. Standard field and lab testing procedures are covered.

CIVL-265 replaces CIVIL-250 Soils, Asphalt, and Concrete in the Semester system. Both CIVL-265 and CIVIL-250 replace DDT-3717 Materials for Engineering Technicians in the Quarter system.

CIVL-270 Land Development Drafting and Design

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in CIVL-160. Course is graded A-F.

This course focuses on residential and commercial land development. Topics covered include design process, regulations, transportation systems, parking facilities, and survey controls used in design and layout.

CIVL-270 replaces CIVIL-270 Land Development Drafting & Design in the Semester system. Both CIVL-270 and CIVIL-270 replace DDT-3736 Civil Drafting/Design III in the Quarter system.

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - CULINARY SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR**

CUL-101 Introduction to Culinary Science

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course is an introduction to and synopsis of the science of the culinary world involving historical and social context and societal responsibility in the evolution of culinary science. The student will develop the ability to calculate culinary ratios, percents, unit conversion estimates, properly scale and cost recipes, and project and analyze yields. Course work will involve reading, discussion, and reporting on culinary advancements, including the development of appropriate technology. The student will familiarize him/herself with tools, and equipment commonly used in kitchens, including their use and care. Principles of cooking techniques, understanding taste, and principles of flavor development are introduced.

CUL-101 Introduction to Culinary Science replaces CUL-6000 Introduction to Culinary Science in the Quarter system.

CUL-102 Product Knowledge and Purchasing

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course is an introduction to the identification and use of vegetables, fruits, herbs, nuts, grains, dry goods, prepared goods, dairy products, and spices in various forms. The student will identify, taste and explore each item with emphasis on local sustainability. In addition, he/she will evaluate products for taste, texture, smell, appearance, and other quality attributes. Food service purchasing, receiving, handling, storage, and issuing and evaluation processes are discussed and practiced. Purchasing automation, computerized purchasing and HACCP (Hazard Analysis Critical Control Points) systems are discussed and demonstrated in this course.

CUL-102 Product Knowledge and Purchasing replaces CUL-6010 Product Knowledge and Purchasing in the Quarter system.

CUL-103 Food Service Safety

1.00 credit hour, 1.50 contact hours (0.50 hours lecture and 1.00 hours lab). Prerequisite: None. Course is graded A-F.

This course is a full study of sanitation practices and principles involving food sanitation and safety. Topics covered include the providing of safe food, food-borne illnesses, microbial dangers, allergens, contaminants, personal hygiene, management practices of hygiene, HACCP principles, facility management and safe design, and food safety laws. The student will take the National Restaurant Association ServSafe® examination in this course.

Approved by the COTC Curriculum Committee on June 21, 2013. CUL-103 Food Service Safety replaces CUL-6020 Food Service Safety in the Quarter system. CUL-103 meets the Career Technical Credit Transfer (C-TAG) standards for course CTCF001.

CUL-110 Culinary Skills Development I

3 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: C grade (2.00) or better in CUL-101, CUL-102 and CUL-103. Course is graded A-F.

This course provides an introduction to and application of fundamental cooking theories and techniques. Topics of study include tasting, kitchen equipment, knife skills, classical vegetable cuts, stock production, thickening agents, grand sauces, soup preparation, timing, station organization, palate development, culinary French terms, and food costing. Skills development includes the basic skills necessary to prepare breakfast in a foodservice operation, how to organize and maintain a smooth work flow on the breakfast line, present and garnish food, and the basic methods of egg cookery, quick breads, grains, fruit plates, breakfast beverages, meats, and potatoes.

CUL-110 Culinary Skills Development I replaces CUL-6030 Culinary Skills Development I in the Quarter system.

**COURSE DESCRIPTIONS - CULINARY SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****CUL-111 Culinary Fabrication**

3 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: C grade (2.00) or better in CUL-101, CUL-102 and CUL-103. Course is graded A-F.

This course is an introduction to meat, poultry, and seafood fabrication for foodservice operations. The student learns the fundamentals of purchasing, receiving, handling, and storing meat, poultry, and seafood; techniques for fabricating cuts for professional kitchens, meat grinding, brining, curing, and smoking, and basic sausage making. Identification will involve primal, subprime, and portion cuts of beef, veal, pork, lamb, various game, poultry, fish, crustaceans, and shellfish. Topics include nutritional qualities, as well as knife skills, yield results, quality checking, flavor profiles, storage techniques, and special storage equipment.

CUL-111 Culinary Fabrication replaces CUL-6040 Culinary Fabrication in the Quarter system.

CUL-120 Culinary Skills Development II

3 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: C grade (2.00) or better in CUL-110 and CUL-111. Course is graded A-F.

This course provides continued instruction in fundamental cooking theories and techniques, including product tasting, stock production, vegetable cookery by color and family, potato cookery, grain cookery, rice cookery, fresh pasta cookery, dry legumes, and an overview of traditional and contemporary dishes served in casual foodservice operations. The course also explores timing, station organization, basic principles of production layout and quantity food preparation. Emphasis will be on individual and team food production, serving, and tasting/evaluating. Skills of efficiency, organization, speed, timing, and quality volume production will be stressed. Specialty diets will be introduced.

CUL-120 Culinary Skills Development II replaces CUL-6031 Culinary Skills Development II in the Quarter system.

CUL-121 Garde Manger

3 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: C grade (2.00) or better in CUL-110 and CUL-111. Course is graded A-F.

An introduction to three main areas of the cold kitchen: reception foods, plated appetizers, and buffet arrangements. The student will learn to prepare canapés, hot and cold hors d'oeuvre, appetizers, forcemeats, pâtés, galantines, terrines, salads, and sausages. Curing and smoking techniques for meat, seafood, and poultry items will be practiced. The student will plan, organize and set up buffets. This course also concentrates on the practical techniques of platter design and presentations.

CUL-121 Garde Manger replaces CUL-6050 Garde Manger in the Quarter system.

CUL-186 Culinary Practicum

2 credit hours, 9 contact hours (1 hour lecture, 0 hours lab, and 8 hours per week of practicum experience). Prerequisite: Permission of the Culinary Science Technology Program Director. Course is graded S/U

This course will assist the student in applying the principles, methods and practices learned in technical courses. The student will participate in a supervised, on/off campus, culinary experience, in a setting that has been prearranged and approved by the CUL Practicum Site Coordinator. During the practicum, the student will receive feedback from his/her supervisor and submit journal entries that record and reflect upon his/her work experience. The student is required to meet with the program director at least four weeks prior to enrolling in this course (no fewer than 4 weeks prior to the semester beginning). This course is graded on a Satisfactory / Unsatisfactory basis.

CUL-186 Culinary Co-op is a new course in the Semester system.

**COTC COURSE DESCRIPTIONS - CULINARY SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****CUL-201 International Cuisines**

1.50 credit hours, 3.50 contact hours (0.50 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CUL 120 and CUL-121. Course is graded A-F.

The student will look at the cuisines of several continents and countries and how they have developed and evolved. Each cuisine is explored in terms of its history, topography, cooking methods, common foods, flavor profiles, and general characteristics. Through lectures, and demonstrations the student is introduced to the cultural aspects of food with an emphasis on flavor components and traditional and contemporary cookery. During production the student will prepare, taste and evaluate dishes from the major world cuisines.

CUL-201 International Cuisines is a New Course in the Semester system.

CUL-202 Cuisines Across America

1.50 credit hours, 3.50 contact hours (0.50 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CUL 120 and CUL-121. Course is graded A-F.

The student will explore the varying culinary regions of the United States and how they have developed and evolved. Each cuisine is experienced in terms of its historic cultural influences, flavor profiles, prevalent foods and ingredients, and cooking techniques. During production the student will prepare, taste, serve and evaluate dishes from across America.

CUL-202 Cuisines Across America is a New Course in the Semester system.

CUL-203 Menu Planning and Cost Controls

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in CUL-102. Course is graded A-F.

This course is an analysis of menu development for various foodservice establishments and a detailed study of how to create and maintain control systems for food, beverage, and labor costs. Focus is placed on the importance of data collection and analysis. Menu topics discussed include the following: menu trends, the market survey, nutrition and menu planning, foodservice menus, yield tests, standard recipes, recipe costing, menu development and design, sale history, merchandising, and equipment analysis. Cost control topics covered include the following: the complete flow of goods; the relationships among sales, costs and profit; income statements; and sales forecasting. Emphasis is placed on developing the skills necessary to effectively create a professional menu and establish the controls needed to maintain menu profitability.

CUL-203 Menu Planning and Cost Controls replaces CUL-6070 Menu Planning and Cost Controls in the Quarter system.

CUL-210 Techniques of Banqueting and Catering

3 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: C grade (2.00) or better in CUL-203. Course is graded A-F.

This course introduces the various techniques and styles of service, their histories and applications, and the characteristics that distinguish an outstanding dining experience. The student will examine the various ways in which banquet and catering menus are developed and prepared, with emphasis placed on maintaining quality and contemporary appeal. The importance of sanitation and appearance, merchandising concepts, reservation systems, and priority seating are introduced. The student will organize, plan, and execute a large-scale banquet operation and smaller catering events, demonstrate how to properly set up displays for successful presentations, and focus on the methodology and recipes to understand how to succeed in today's culinary environment.

CUL-210 Techniques of Banqueting and Catering replaces CUL-6071 Techniques of Banqueting and Catering in the Quarter system.

**COTC COURSE DESCRIPTIONS - CULINARY SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****CUL-211 Baking, Pastry, and Desserts**

3 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: C grade (2.00) or better in CUL 103. Course is graded A-F.

This course is an introduction to the principles of baking and the techniques used in the preparation of breads, pastries, and desserts. Study topics include formulas and proper measuring techniques, identification and use of various baker's tools and equipment, and ingredient functions. Student production will include basic and artisan breads and pastries, pies, tarts, cakes, cookies, custards and puddings, frozen desserts, fruit desserts, and chocolates. Emphasis is placed on development and understanding of the fundamental techniques and evaluation of quality characteristics and presentation.

CUL-211 Baking, Pastry, and Desserts replaces CUL-6080 Baking, Pastry, and Dessert in the Quarter system.

CUL-212 Wine and Beverage Services

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course combines the introduction to and application of beverages, bartending, and service. The course emphasizes the various styles of wines produced around the world, and the theory of pairing wine with food. The student is also introduced to the identification, production, and service of beers, spirits, cordials, cocktails, and coffee and tea. The student examines the roles of beverages in professional foodservice operations including purchasing, storing, issuing, pricing, merchandising, and serving wines, beers, spirits, and coffees and teas.

CUL-212 Wine and Beverage Services replaces CUL-6085 Wine and Beverage Services in the Quarter system.

CUL-286 Culinary Co-op Work Experience

2 credit hours, 11 contact hours (1 hour lecture, 0 hours lab, and 10 hours of co-operative education experience per week). Prerequisite: Satisfactory grade in CUL-186 and permission of the Culinary Science Program Director. Course is graded S/U

This course will assist the student in gaining work experience in an approved foodservice establishment while applying the principles, methods and practices learned in technical courses. The student will participate in a supervised work experience designed to expand career knowledge while increasing speed, timing, organization, and ability to handle various situation. During the co-op, the student will receive feedback from his/her supervisor and submit journal entries that record and reflect upon his/her work experience. The student is required to meet with the program director at least four weeks prior to enrolling in this course (no fewer than 4 weeks prior to the semester beginning). This course is graded on a Satisfactory / Unsatisfactory basis.

CUL-286 Culinary Co-op is a new course in the Semester system.

PUBLISHED MARCH, 2014

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - DIGITAL MEDIA DESIGN TECHNOLOGY
2014-2015 ACADEMIC YEAR**

DMD-100 Fundamentals of Drawing

3 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: None. Course is graded A-F.

This course explores the basic techniques of drawing, focusing on composition, proportion, perspective and the basic fundamentals of line, shape, contrast, texture, balance, and unity. Projects include studies of figures, nature and interiors, with the purpose of developing an understanding of how to communicate rapidly with basic analog tools before using digital media.

DMD-100 Fundamentals of Drawing replaces DMD-3831 Fundamentals of Drawing in the Quarter system. DMD-100 meets the Ohio Transfer Assurance Guide standards for course OAH001.

DMD-101 Digital Software Fundamentals

1 credit hour, 3 contact hours (0 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This is an overview course, covering the background and formats of digital media and an introduction to digital media software tools. In preparation for further classes, the student will explore the layout of the interface for digital software programs most commonly used in digital media. This course should be taken before any digital media design course requiring the use of digital software.

DMD-101 Digital Software Fundamentals replaces DMD-3860 Digital Software Fundamentals in the Quarter system.

DMD-103 Typography

1 credit hour, 3 contact hours (0 hours lecture and 3 hours lab). Prerequisite: None. DMD-101 or concurrent enrollment in DMD-101 is *strongly* recommended. Course is graded A-F.

This course is an introduction to the history of type and the use of the letterform in digital design. The student will use software tools to develop a creative understanding of and a technical competence in using type as both a holder of content and an integral part of digital design.

DMD-103 Typography replaces DMD-3826 Fundamentals Typography in the Quarter system.

DMD-104 Design Fundamentals

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in DMD-101. Course is graded A-F.

This course is an introduction to digital design with emphasis on the basic principles, methodologies, and skills important to 2D digital design using key computer graphics tools and software. This course is designed to prepare the student for the next level in his/her selected discipline.

DMD-104 Design Fundamentals replaces DMD-3820 Design Fundamentals in the Quarter system..

DMD-105 Digital Photography I

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: None. Course is graded A-F.

This course provides an introduction to the techniques and theories of digital photography. The course covers pre-visualization, composition, image capture, simple digital editing of the image and final digital output. The student will learn to use photography as part of the communication process of design. A DSLR camera is recommended.

DMD-105 Digital Photography I replaces DMD-3822 Digital Photography I and DMD-3825 Digital Photography I in the Quarter System. DMD-105 meets the Ohio Transfer Assurance Guide standards for course OAH002.

**COTC COURSE DESCRIPTIONS - DIGITAL MEDIA DESIGN TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMD-106 Mass Media Communications**

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course is an introduction to the history, development, and future of mass media and its affect on cultures and society. The student also will study how communication has developed and will integrate theory with practical exercises in developing communication strategies and implementations. The student will gain experience in creating copy and content for various digital media.

DMD-106 Mass Media Communications replaces DMD-3836 Mass Media Communications in the Quarter system. DMD-106 meets the Ohio Transfer Assurance Guide standards for course OCM006.

DMD-107 Intro to e-Life: The Evolving Web

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course focuses on the recent history of the Internet and the growth of the World Wide Web from a simple broadcast medium into a platform that fosters communities of users—empowering them to create, share, and participate in the virtual community. Topics covered include social networking, social utilities, collaborative technologies, and various applications including mobile, desktop, television and web.

DMD-107 Intro to e-Life: The Evolving Web replaces DMD-3862 Introduction to E-Life: the Evolving Web in the Quarter system.

DMD-108 Multimedia Production I

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course is exploration into the design and programming of interactive media with an emphasis on Flash. The student will explore both hand-animated graphics and more complex ActionScript projects.

DMD-108 Multimedia Production I replaces DMD-3832 Multimedia Production I in the Quarter system.

DMD-109 Multimedia Production II

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in DMD-108. Course is graded A-F.

Continuing the exploration of interactive media, this course expands multimedia production with integrating audio and video into text, graphics, and animation in a single program under interactive control. Topics covered include interactive multimedia for the web.

DMD-109 Multimedia Production II replaces DMD-3833 Multimedia Production II in the Quarter system.

DMD-110 Photoshop for the Web

1 credit hour, 1.50 contact hours (0.50 hour lecture and 1 hour lab). Prerequisite: None. Course is graded A-F.

This course provides an introduction to the techniques of designing web pages using Photoshop and preparing images for the web.

DMD-110 Photoshop for the Web will be a new course in the Semester system.

**COTC COURSE DESCRIPTIONS - DIGITAL MEDIA DESIGN TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMD-111 Web Typography**

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course provides an overview of web typography. The student will be introduced to the concept of information hierarchy, the function of typography on a website or application.

DMD-111 Web Typography will be a new course in the Semester system.

DMD-112 Information Architecture

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course provides an introduction to the theory and concepts of information architecture for the web and its applications.

DMD-112 Information Architecture will be a new course in the Semester system.

DMD-120 Web Design & Development I

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: None. Course is graded A-F.

This course is an introduction to Web site design and development. Using WYSIWYG software, the student will be introduced to the principals of web design, page layout including CSS formatting and the use of current scripting languages. Familiarity with Photoshop or other image-editing tool for manipulation of JPEGs and GIFs is highly recommended.

DMD-120 Web Design & Development I replaces DMD-3839 Web Design & Development I in the Quarter System.

DMD-121 Web Design & Development II

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in DMD-120. Course is graded A-F.

Building on the concepts and skills learned in Web Design and Development I, the student will continue to examine website design, using interactive tools. Emphasis switches in this class from the basics of construction to an understanding of the Web visitor. Beginning with usability, the course will focus on interactivity employing scripting languages such as javascript.

DMD-121 Web Design & Development II replaces DMD-3840 Web Design & Development I in the Quarter system.

DMD-201 Graphic Design I

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in DMD-100, DMD-101, and DMD-104. Course is graded A-F.

Graphic Design I begins the exploration of graphic design and the digital print publishing world. The course covers the history of graphic communication from man's earliest attempts at self expression through visual media to the creation of writing, the printing press, the computer, and modern graphic design. This course also covers designing for the printed page and the use of page-layout software to create printed documents. The course will serve as an overview to graphic design publishing, including working with traditional as well as digitally based design tools.

DMD-201 Graphic Design I replaces DMD-3843 Design for Print I in the Quarter system.

**COTC COURSE DESCRIPTIONS - DIGITAL MEDIA DESIGN TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMD-202 Graphic Design II**

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in DMD-201. Course is graded A-F.

This course continues the exploration of the technology, principles and processes of digital publishing and how they relate in application to actual publishing projects. Special emphasis will be given to information architecture through static and dynamic projects that emphasize visual problem solving. The student will learn to translate complex data and/or information into clear, visually compelling solutions.

DMD-202 Graphic Design II replaces DMD-3845 Design for Print II in the Quarter system.

DMD-203 Interactive and Mobile Site Design

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in DMD-120. Course is graded A-F.

This project-based course continues the exploration of Web design, focusing on developing interactive and mobile web sites. The actual design tools will remain flexible to reflect the latest industry standards. Emphasis is on creating the elements that convert a static site into an interactive mobile website.

DMD-203 Interactive and Mobile Site Design replaces DMD-3864 Interactive Site Design in the Quarter system.

DMD-205 Portrait Photography

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in DMD-105. Course is graded A-F.

This course further explores digital photography with a concentration on portrait photography utilizing natural, studio and strobe lighting. Instruction will include methods to create photographs that capture a subject's personality and/or document an event i.e. a wedding or graduation. Includes shooting outdoors and indoors with both natural/existing light and professional lighting equipment.

DMD-205 Portrait Photography replaces DMD-3854 Photography III in the Quarter system.

DMD-206 Product Photography

1 credit hour, 3 contact hours (0 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in DMD-105. Course is graded A-F.

This course continues the development of design oriented photography in DMD-105, and expands into manipulating studio tools to develop product and commercial photography. The student will continue developing technically aesthetic photography with emphasis on design and lighting techniques with various subjects intended for commercial use. The student will explore how to develop client ready commercial photography for multiple media outlets. Lectures and assignments will cover how to develop photographs with pre-visualization, intention of integration, clarity of purpose, and overall development of visual impact.

DMD-206 Product Photography is a New Course in the Semester system.

**COTC COURSE DESCRIPTIONS - DIGITAL MEDIA DESIGN TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMD-210 Motion Graphics**

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in DMD-240. Course is graded A-F.

This course will focus on advanced projects in video compositing and motion graphics. Building on non-linear editing, the course explores compositing computer graphics, live video, special effects, and the design of titles and animated graphics. The work of professional animators will be used to demonstrate techniques.

DMD-210 Motion Graphics replaces DMD-3852 Motion Graphics in the Quarter system.

DMD-222 Web Design & Development III

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in DMD-120 and DMD-121. Course is graded A-F.

This project-based course continues the exploration of web development, expanding from XHTML with an introduction to server-side programming and content management systems. The development of business-oriented web sites often requires the web designer to plan for accessing, storing and retrieving information from the server. The actual programming and scripting languages will remain flexible to reflect the latest industry standards. Emphasis is not on the syntax of programming but on problem solving, specifically as a course for web designers.

DMD-222 Web Design & Development III replaces DMD-3866 Designing Dynamic Websites and DMD-3850 Web Design & Development III in the Quarter system.

DMD-240 Digital Video I

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in DMD-100 and DMD-105. Course is graded A-F.

This course provides an introduction to the envisioning, planning, shooting, editing and post-production of digital video.

DMD-240 Digital Video I replaces DMD-3828 Digital Video Production I in the Quarter system.

DMD-241 Digital Video II

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in DMD-240. Course is graded A-F.

This course continues the exploration of digital video production and the focus of this course is on production of longer-format productions with complex audio and graphics. Topics covered include audio, video, and transitional effects, title compositing, and video compression for digital media.

DMD-241 Digital Video II replaces DMD-3829 Digital Video Production II in the Quarter system.

DMD-242 e-Publishing and Interactive Documents

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in DMD-201. Course is graded A-F.

In this course the student will explore the motivations, means, and methods of developing and distributing graphic design content digitally through the Internet and mobile applications. The student will also research and explore the ways and methods authors interact with their readership in the digital forum and how this interaction is different from graphic design content distributed through traditional print channels.

DMD-242 e-Publishing and Interactive Documents is a New Course on the Semester system.

**COTC COURSE DESCRIPTIONS - DIGITAL MEDIA DESIGN TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMD-250 Digital Media Design Capstone**

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in DMD-100, DMD-104, and DMD-105. Course is graded A-F.

The Digital Media Design Project course completes the study of digital media design with a semester long project focused on the digital media specialty of the student's choice. The student will choose a project or projects, preferably in partnership with a community business or association, to produce production quality work for his or her portfolio. The student is expected to work closely with the instructor and the project client.

DMD-250 Digital Media Design Capstone replaces DMD-3835 Digital Media Senior Project in the Quarter system.

DMD-251 Digital Media Portfolio

1 credit hour, 3 hours lab (0 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in DMD-100, DMD-104 and DMD-105. Course is graded A-F.

A studio course in which the student will apply skills learned from previous courses to solve real world problems. At least one project will be assigned. The student will choose at least one major design problem. Projects may include signage, corporate identity, brochures, ad campaigns, interactive venues, or Web sites.

DMD-251 Digital Media Portfolio replaces DMD-3842 Digital Media Portfolio in the Quarter system.

DMD-260 Advertising Portfolio

1 credit hour, 3 hours lab (0 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in BUS-115, BUS-140, DMD-121 and DMD-201. Course is graded A-F.

This is capstone course. The student will apply skills learned in previous course work to develop additional portfolio-level pieces and gather and prepare previous work for inclusion in their final finished portfolio. The student will learn how to create an appropriate resume and portfolio for the advertising industry.

DMD-260 Advertising Portfolio is a New Course in the Semester system.

DMD-270 iPhone App Development

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in DMD-109 and DMD-121. Course is graded A-F.

This course is an introduction to iPhone application development. The student will be introduced to the iPhone and the foundation of iPhone Applications. The student will explore the iPhone SDK environment and apply principals of iPhone application interface design to develop basic applications using Xcode.

DMD-270 iPhone App Development is a New Course in the Semester system.

DMD-271 Droid App Development

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in DMD-109 and DMD-121. Course is graded A-F.

This course is an introduction to Droid application development. The student will be introduced to the Android operating system and the foundation of Droid Applications. The student will explore the Droid SDK environment and apply principles of application interface design to develop basic applications using current software for Android App development.

DMD-271 Droid App Development is a New Course in the Semester system.

**COTC COURSE DESCRIPTIONS - DIGITAL MEDIA DESIGN TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMD-294 Digital Media Practicum**

2 credit hours, 8 contact hours (1 hour lecture, 0 hours lab, and 7 hours practicum). Prerequisite: C grade (2.00) or better in DMD-100, DMD-104, ENGL-113 and SPCH-100. Course is graded A-F.

This course provides the student with the practical application of skills in graphic design, Web design, digital video production, interactive development, and/or other digital media design production at a business or agency. The internship correlates academic preparation with professionally supervised work experience.

DMD-294 replaces DMD-293 Digital Media Internship in the Semester system. Both DMD-294 and DMD-293 replace DMD-3855 Digital Media Internship in the Quarter system.

DMD-B3819 Graphic Design History (Bridge Course)

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is grade A-F.

A survey of the historical developments of graphic design communications including pivotal people and events that led to current methods and theories of digital media communication. The student will learn the rich history of graphic communications and how it relates to society.

DMD-B3819 is a semester bridge course for students coming out of the quarter system with NO previous quarter credit for DMD-3819, a course that has no Semester course equivalent.

DMD-B3824 Fundamentals of Color (Bridge Course)

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better DMD-3820 (quarter course). Course is graded A-F.

This course provides an introduction to the theory and applications of color and color perception, including hue, saturation and value and both additive and subtractive color as used in design and digital output for screen and print.

DMD-B3824 is a semester bridge course for students coming out of the quarter system with NO previous quarter credit for DMD-3824; there is no semester equivalent for DMD-3824.

DMD-B3825 Digital Photography II (Bridge Course)

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in DMD-3822 (quarter course). Course is graded A-F.

This course continues the exploration of digital photography begun in Digital Photography I, expanding into uses of digital software tools to manipulate the image. The student will continue to explore his or her own creative vision in capturing and manipulating photographic images using digital technology. Students will focus on extending the photographic image beyond what the camera can see through the use of filters (physical and software), image compositing and physical deconstruction of the original image.

DMD-B3825 is a semester bridge course for students coming out of the quarter system with NO previous quarter credit for DMD-3825; there is no semester equivalent course for DMD-3825.

**COTC COURSE DESCRIPTIONS - DIGITAL MEDIA DESIGN TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMD-B3850 Web Design & Development III** (Bridge Course)

1 credit hour, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in DMD-3832 and DMD-3840 (quarter courses). Course is graded A-F.

This project-based course continues the exploration of Web development, expanding from XHTML with client-side languages, such as Javascript, with an introduction to server-side programming, such as CGI or PHP. The actual programming and scripting languages will remain flexible to reflect the latest industry standards. Emphasis is not on the syntax of programming but on problem solving, specifically as a course for Web designers.

DMD-B3850 is a semester bridge course for students coming out of the quarter system with previous quarter credit for DMD-3866. Successful completion of DMD-3866 and DMD-B3850 (with a C grade [2.00] or better) will fulfill the semester requirement for DMD-222 Web Design and Development III.

DMD-B3853 Information Design (Bridge Course)

1 credit hour, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course provides an overview of information architecture through static and dynamic projects that emphasize visual problem solving. Students will learn to translate sometimes complex data into clear, visually compelling solutions.

DMD-B3853 is a semester bridge course for students coming out of the quarter system with NO previous quarter credit for DMD-3853; there is no semester equivalent course for DMD-3853.

DMD-B3866 Designing Dynamic Websites (Bridge Course)

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in DMD-3840 (quarter course). Course is graded A-F.

This project-based course continues the exploration of Web design, focusing on how the designer works with server-side resources. The design of business-oriented web sites often requires the web designer to plan for accessing, storing and retrieving information from the server. Emphasis is on integrating the design with current web technology.

DMD-B3866 is a semester bridge course for students coming out of the quarter system with previous quarter credit for DMD-3850. Successful completion of DMD-3850 and DMD-B3866 (with a C grade [2.00] or better) will fulfill the semester requirement for DMD-222 Web Design and Development III.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - DIAGNOSTIC MEDICAL SONOGRAPHY TECHNOLOGY
2014-2015 ACADEMIC YEAR**

DMS-100 Introduction to Sonography and Patient Care

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program, or permission of the Program Director. Course is graded A-F.

During this course, the Sonography student will discuss introductory topics of Sonography history, health care delivery system, professional communication and conduct, and the sonographer's role in patient care. The student is introduced to basic aspects of patient care including evaluating and meeting the physical needs of patients, infection control practices, dealing with acute situations and special-care unit patients.

DMS-100 Introduction to Sonography & Patient Care replaces DMS-4050 Patient Care in Sonography and DMS-4514 Principles of Diagnostic Medical Sonography in the Quarter system.

DMS-110 Cross-Sectional Anatomy

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Enrollment in Diagnostic Medical Sonography Technology or Radiologic Science Technology programs. C grade (2.00) or better in BIO-131, or permission of the Program Director. Course is graded A-F.

This course is designed to provide the student with specific knowledge of relational and sectional anatomy of the head, thorax, abdomen, pelvis and extremities. The college laboratory sessions are utilized to study human material and to correlate with radiologic and/or sonographic images.

DMS-110 Cross-Sectional Anatomy replaces DMS-4511 Cross-Sectional Anatomy in the Quarter system.

DMS-115 Current Issues in Healthcare

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program, or permission of the Program Director. Course is graded A-F.

This course covers current issues relevant to imaging departments and personnel. During the course, topics such as ethics, professionalism, death and dying, organ and tissue donation, transplantation, medical research and new techniques and procedures will be reviewed. Upon completion of the course the student will be prepared to address similar issues encountered as a sonographer.

DMS-115 Current Issues in Healthcare replaces RAD-4046 Current Issues in Allied Health in the Quarter system.

DMS-180 Sonography Scan Lab I

2 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, General Major Program. Course is graded A-F

This course will introduce basic sonography scanning techniques. The student will learn basic protocols for liver, gallbladder, pancreas, kidney, aorta, thyroid and trans-abdominal pelvic sonograms. The student will have the opportunity to practice these techniques in a college laboratory setting.

DMS-180 Sonography Scan Lab I replaces DMS-4545 Sonography Scan Lab in the Quarter system.

DMS-181 Sonography Scan Lab II

2 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, General Major Program. Course is graded A-F.

This course will reinforce basic sonography scanning techniques. The student will learn advanced applications such as color Doppler, pulsed wave Doppler and spectral analysis for liver, kidney, aorta, thyroid and trans-abdominal pelvic sonograms. The student will have the opportunity to practice these techniques in a college laboratory setting.

DMS-181 Sonography Scan Lab II is a New Course in the Semester system.

**COTC COURSE DESCRIPTIONS - DIAGNOSTIC MEDICAL SONOGRAPHY TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMS-182 Cardiovascular Scan Lab I**

2 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, Cardiovascular Major program, or permission of the Program Director. Course is graded A-F.

This course will introduce basic cardiovascular sonography scanning techniques. The student will learn basic protocols for adult echocardiography, cerebrovascular and lower extremity venous sonograms. The student will have the opportunity to practice these techniques in a college laboratory setting.

DMS-182 Cardiovascular Scan Lab I replaces DMS-4552 Cardiovascular Sonography Scan Lab in the Quarter system.

DMS-183 Cardiovascular Scan Lab II

2 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, Cardiovascular Major program, or permission of the Program Director. Course is graded A-F

This course will introduce basic cardiovascular sonography scanning techniques. The student will learn basic protocols for upper and lower extremity arterial and venous duplex examinations, ABI examinations, cerebrovascular imaging and adult echocardiograms. The student will have the opportunity to practice these techniques in a college laboratory setting.

DMS-183 Cardiovascular Scan Lab II is a New Course in the Semester system.

DMS-185 Principles of Clinical Sonography

4 credit hours, 16 contact hours (1 hour lecture, 0 hours lab, and 15 hours directed practice [clinical]). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, General Major program; C grade (2.00) or better in DMS-100 and a valid CPR card. Course is graded A-F.

This course provides an introductory experience to the clinical setting in which the student will have an opportunity to apply learned concepts and techniques related to sonographic imaging and patient care. The student will function under the close supervision of qualified Sonographers or physicians in hospitals and other health related facilities. Weekly on-line discussions focusing on clinical experiences will be conducted.

DMS-185 Principles of Clinical Sonography replaces DMS-4541 Principles of Clinical Sonography and DMS-4543 Clinical Sonography I in the Quarter system.

DMS-186 Principles of Clinical Cardiovascular Sonography

4 credit hours, 16 contact hours (1 hour lecture, 0 hours lab, and 15 hours directed practice [clinical]). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, Cardiovascular Major program; C grade (2.00) or better in DMS-100 and a valid CPR card. Course is graded A-F.

This course is an introductory experience to the clinical setting in which the student has an opportunity to observe concepts and techniques related to sonographic imaging and patient care. The student will function under the close supervision of qualified sonographers or physicians in hospitals and other health related facilities.

DMS-186 Principles of Clinical Cardiovascular Sonography replaces DMS-4560 Principles of Cardiovascular Clinical in the Quarter system.

**COTC COURSE DESCRIPTIONS - DIAGNOSTIC MEDICAL SONOGRAPHY TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMS-200 Sonographic Physics and Instrumentation I**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program; C grade (2.00) or better in PHYS-100, or permission of the Program Director. Course is graded A-F.

The course introduces the fundamental principles of sonographic physics. Topics include the nature of waves, wave properties, interaction of ultrasound with tissue, and ultrasonic beam parameters. Hemodynamics and basic Doppler principles are also discussed.

DMS-200 Sonographic Physics and Instrumentation I replaces DMS-4515 Sonographic Physics and Instrumentation I in the Quarter system.

DMS-201 Sonographic Physics and Instrumentation II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program; C grade (2.00) or better in DMS-200, or permission of the Program Director. Course is graded A-F.

This course applies the fundamental principles of sonographic physics to specific ultrasound instrumentation. Topics such as transducer construction and design, equipment controls and instrumentation for static, real-time and Doppler systems will be discussed. Additional topics such as artifacts, storage devices, biological effects of ultrasound, and quality assurance testing will be discussed.

DMS-201 Sonographic Physics and Instrumentation II replaces DMS-4519 Sonographic Physics and Instrumentation II and DMS-4517 Sonographic Physics and Instrumentation III in the Quarter system.

DMS-210 Obstetrical and Gynecological Sonography I

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program; C grade (2.00) or better in DMS-110, or permission of the Program Director. Course is graded A-F.

This course emphasizes the fundamental principles of sonographic imaging of the female pelvis. Anatomy, physiology, pathology, interpretation of clinical data, differential diagnosis, and ultrasound techniques relative to the gynecological patient are presented. This course provides an extensive study of the anatomy, physiology, pathology, and sonographic appearance of the developing fetus with emphasis placed on the first trimester. Specific sonographic protocols for obstetrical ultrasound are included. Clinical presentation and maternal complications associated with pregnancy are also emphasized.

DMS-210 Obstetrical and Gynecological Sonography I replaces DMS-4507 Gynecological Sonography and DMS-4529 Obstetrical Sonography I in the Quarter system.

DMS-211 Obstetrical and Gynecological Sonography II

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program; C grade (2.00) or better in DMS-210, or permission of the Program Director. Course is graded A-F.

This course provides an extensive study of the anatomy, physiology, pathology, and sonographic appearance of the developing fetus with emphasis placed on the second and third trimester. Clinical presentation and maternal complications associated with pregnancy are also emphasized.

DMS-211 Obstetrical and Gynecological Sonography II replaces DMS-4529 Obstetrical Sonography I and DMS-4530 Obstetrical Sonography II in the Quarter system.

**COTC COURSE DESCRIPTIONS - DIAGNOSTIC MEDICAL SONOGRAPHY TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMS-220 Abdominal Sonography I**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program, or permission of the Program Director. Course is graded A-F.

This course covers sonographic and related imaging techniques of the liver, gallbladder, biliary tree, pancreas, abdominal vascular system, spleen, lymphatic system and abdominopelvic cavities. Emphasis is on anatomy, physiology, pathology, interpretation of clinical data, differential diagnosis, and ultrasound techniques relative to the abdomen.

DMS-220 Abdominal Sonography I replaces DMS-4536 Abdominal Sonography I and DMS-4537 Abdominal Sonography II in the Quarter system.

DMS-221 Abdominal Sonography II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program; C grade (2.00) or better in DMS-220, or permission of the Program Director. Course is graded A-F.

This course covers sonographic and related imaging techniques of the kidneys, adrenal glands, GI tract, thyroid and parathyroid glands, male reproductive system, prostate, musculoskeletal system, peripheral and cerebrovascular systems and the neonatal brain. Emphasis is on anatomy, physiology, pathology, interpretation of clinical data, differential diagnosis, and ultrasound techniques relative to the abdomen and superficial structures.

DMS-221 Abdominal Sonography II replaces DMS-4537 Abdominal Sonography II and DMS-4538 Superficial Structures in the Quarter system.

DMS-222 Breast Sonography

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program; C grade (2.00) or better in DMS-220, or permission of the Program Director. Course is graded A-F.

This course will cover the normal anatomy, physiology and pathology of the breast. Sonographic appearance of the normal breast, benign breast disease and malignancies will be introduced. Various invasive and related imaging modalities will also be discussed. Emphasis is on correlation of clinical data, related imaging techniques and sonographic appearance to determine differential diagnosis.

DMS-222 Breast Sonography replaces DMS-4581 Breast Sonography in the Quarter system.

DMS-230 Echocardiography I

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, Cardiovascular Major program, or permission of the Program Director. Course is graded A-F.

This course will review the echocardiographic examination and the electrical components of the cardiac system. Mitral, Aortic, Tricuspid and Pulmonic valvular disease will be discussed. Cardiomyopathies, Pericardial Heart Disease and Ischemic Heart Disease will also be studied.

DMS-230 Echocardiography I replaces DMS-4571 Echocardiography I and DMS-4572 Echocardiography II in the Quarter system.

**COTC COURSE DESCRIPTIONS - DIAGNOSTIC MEDICAL SONOGRAPHY TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMS-231 Echocardiography II**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, Cardiovascular Major program; C grade (2.00) or better in DMS-230, or permission of the Program Director. Course is graded A-F.

This course will continue the sonographic evaluation of cardiac pathophysiology including the specialty examinations of transesophageal, stress, and contrast studies.

DMS-231 Echocardiography II replaces DMS-4573 Echocardiography III in the Quarter system.

DMS-232 Introduction to Pediatric Echocardiography

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, Cardiovascular Major program; C grade (2.00) or better in DMS-230, or permission of the Program Director. Course is graded A-F.

This course covers the sonographic imaging of the pediatric heart with emphasis on embryology, anatomy, physiology, pathology, interpretation of clinical data, differential diagnosis and sonographic techniques relative to the pediatric cardiac patient in an adult cardiac facility. Topics such as congenital pathology, acquired pathology, surgical repair of congenital heart disease, and fetal echocardiography will be discussed.

DMS-232 Introduction to Pediatric Echocardiography replaces DMS-4570 Introduction to Pediatric Echocardiography in the Quarter system.

DMS-240 Vascular Sonography I

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, Cardiovascular Major program, or permission of the Program Director. Course is graded A-F.

This course emphasizes the sonographic evaluation of the peripheral vascular system. Noninvasive testing of the upper and lower extremity vessels and disease processes will be studied. Plethysmography, duplex, pulsed and continuous wave Doppler testing will be introduced. This course emphasizes the principles and procedures involved in transcranial and extracranial sonography as well as abdominal vascular sonography. Spectral analysis, color Doppler, pulsed and continuous wave Doppler will be discussed. The disease mechanisms of the cerebrovascular and abdominal areas will be discussed and contrasted with normal anatomy.

DMS-240 Vascular Sonography I replaces DMS-4577 Vascular Sonography I and DMS-4578 Vascular Sonography II in the Quarter system.

DMS-241 Vascular Sonography II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, Cardiovascular Major program; C grade (2.00) or better in DMS-240, or permission of the Program Director. Course is graded A-F.

This course discusses miscellaneous vascular pathologies and advanced imaging techniques. Spectral analysis, color Doppler, pulsed and continuous wave Doppler will be discussed. The disease mechanisms of the abdominal areas will be discussed and contrasted with normal anatomy. Test validation and statistical comparisons will be introduced with an effort to establish a quality assurance program. A brief summary of vascular laboratory accreditation will also be discussed.

DMS-241 Vascular Sonography II replaces DMS-4578 Vascular Sonography II and DMS-4579 Vascular Sonography III in the Quarter system.

**COTC COURSE DESCRIPTIONS - DIAGNOSTIC MEDICAL SONOGRAPHY TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMS-285 Clinical Sonography I**

6 credit hours, 26 contact hours (1 hour lecture, 0 hours lab, and 25 hours directed practice [clinical]). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, General Major program; C grade (2.00) or better in DMS-181, and a valid CPR card. Course is graded A-F.

This course will provide an extended clinical experience in which the student will display an advanced skill set in techniques related to sonographic imaging. The student will function under the close supervision of qualified Sonographers or physicians in hospitals and other health related facilities. A weekly one hour seminar focusing on specific case studies will be conducted.

DMS-285 Clinical Sonography I replaces DMS-4543 Clinical Sonography I and DMS-4544 Clinical Sonography II in the Quarter system.

DMS-286 Clinical Sonography II

6 credit hours, 26 contact hours (1 hour lecture, 0 hours lab, and 25 hours directed practice [clinical]). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, General Major program; C grade (2.00) or better in DMS-285, and a valid CPR card. Course is graded A-F.

This course provides the final clinical experience emphasizing mastery of skills in all areas of medical sonography. The course is designed to challenge the student to function independently within the supervised clinical setting, tailoring each examination according to the specific guidelines of each case. The student will function under the supervision of qualified Sonographers or physicians in hospitals and other health related facilities. A weekly one hour seminar focusing on specific case studies will be conducted.

DMS-286 Clinical Sonography II replaces DMS-4546 Clinical Sonography III and DMS-4549 Clinical Sonography IV in the Quarter system.

DMS-287 Clinical Cardiovascular Sonography I

6 credit hours, 26 contact hours (1 hour lecture, 0 hours lab, and 25 hours directed practice [clinical]). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, Cardiovascular Major program and a valid CPR card. Course is graded A-F.

The initial scanning experience in the clinical setting provides the students with the opportunity to apply learned concepts and techniques related to cardiovascular imaging. Students will function under the close supervision of qualified sonographers or physicians in hospitals and other health related facilities. A weekly one hour seminar focusing on specific case studies will be conducted.

DMS-287 Clinical Cardiovascular Sonography I replaces DMS-4551 Cardiovascular Clinical I in the Quarter system.

DMS-288 Clinical Cardiovascular Sonography II

6 credit hours, 26 contact hours (1 hour lecture, 0 hours lab, and 25 hours directed practice [clinical]). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology, Cardiovascular Major program; C grade (2.00) or better in DMS-287, and a valid CPR card. Course is graded A-F.

This course provides the final clinical experience emphasizing mastery of skills in all areas of medical sonography. The course is designed to challenge the student to function independently within the supervised clinical setting, tailoring each examination according to the specific guidelines of each case. The student will function under the supervision of qualified Sonographers or physicians in hospitals and other health related facilities. A weekly one hour seminar focusing on specific case studies will be conducted.

DMS-288 Clinical Cardiovascular Sonography II replaces DMS-4562 Cardiovascular Clinical II and DMS-4563 Cardiovascular Clinical III and DMS-4564 Cardiovascular Clinical IV in the Quarter system.

**COTC COURSE DESCRIPTIONS - DIAGNOSTIC MEDICAL SONOGRAPHY TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMS-301 Cardiovascular Physiology**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the DMS program or permission of the Program Director. Course is graded A-F.

This course details the biophysics and physiology of the circulatory system. Hemodynamics, the anatomical difference in types of blood vessels, the relationship between pressure gradients and blood flow, resistance, and fluid viscosity are discussed. Blood flow through the circulatory system is explained as well as how the body can regulate blood flow to specific regions of the body through cardiovascular regulation. The heart and its function as the pressure generator in the system are discussed. Specific focus is placed on cellular cardiac electrophysiology and the electrical system of the heart.

DMS-301 is a new course in the Semester system.

DMS-302 Abdominal Vascular Disease & Testing

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the DMS program or permission of the Program Director. Course is graded A-F.

This course focuses on abdominal vascular disease and diagnostic sonographic parameters. Normal abdominal vasculature of the liver, portal venous system, aorto-iliac, renal and mesenteric is discussed. Pathologies associated with the abdominal vascular system with emphasis on renal artery stenosis, portal hypertension, mesenteric ischemia and abdominal aortic disease. The diagnostic process including patient history, clinical signs and symptoms and physical assessments associated with abdominal testing will be discussed.

DMS-302 is a new course in the Semester system.

DMS-303 Survey of Abdominal Sonography

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the DMS program or permission of the Program Director. Course is graded A-F.

This course is an introduction to basic abdominal sonography with emphasis on normal abdominal anatomy and abnormal disease states. Sonographic imaging techniques of the liver, gallbladder, biliary tree, pancreas, abdominal vascular system, spleen, lymphatic system and abdominopelvic cavities is discussed. Emphasis is on anatomy, physiology, pathology, interpretation of clinical data, differential diagnosis, and ultrasound techniques relative to the abdomen.

DMS-303 is a new course in the Semester system.

DMS-304 Survey of Echocardiography

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the DMS program or permission of the Program Director. Course is graded A-F.

This course will introduce cardiac anatomy, physiology and pathology. B-mode, M-mode, and CW, PW and Color Doppler testing in the detection of valvular disease and cardiac function will be discussed. Cardiac electrophysiology will also be studied. Transthoracic echocardiography as well as correlation with invasive testing will be discussed.

DMS-304 is a new course in the Semester system.

**COTC COURSE DESCRIPTIONS - DIAGNOSTIC MEDICAL SONOGRAPHY TECHNOLOGY
2014-2015 ACADEMIC YEAR****DMS-305 Survey of Vascular Technology**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the DMS program or permission of the Program Director. Course is graded A-F.

This course emphasizes the sonographic evaluation of the peripheral vascular system and cerebrovascular system. Noninvasive and invasive testing of the upper and lower extremity vessels and cerebrovascular disease processes will be studied. Plethysmography, spectral analysis, duplex, pulsed and continuous wave Doppler testing will be introduced.

DMS-305 is a new course in the Semester system.

DMS-306 Fetal, Neonatal & Pediatric Echocardiography

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the DMS program or permission of the Program Director. Course is graded A-F.

This course focuses on congenital heart disease and sonographic cardiac imaging during fetal, neonatal and pediatric periods. Congenital defects including abnormal cardiac situs, ventricular morphology, trunk origin abnormalities, valvular and subvalvular obstruction, atrial septal defects, endocardial cushion defects, coarctation and ventricular septal defects.

DMS-306 is a new course in the Semester system.

PUBLISHED MARCH, 2014

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - BUSINESS MANAGEMENT TECHNOLOGY - ECONOMICS
2014-2015 ACADEMIC YEAR**

ECON-105 Principles of Microeconomics

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

Dealing with fundamentals of microeconomics, this course is designed to give the student a basic understanding of individual firms, and how they allocate their resources, price goods and services, and the factors of production in our economic system. How individual firms organize themselves and meet the competition, and behaviors of customers and suppliers as well as government relative to supply and demand will be discussed. Elasticity and substitutions along with total revenue, total costs, marginal revenue, marginal costs, and profit analysis are researched.

ECON-105 Principles of Microeconomics replaces BMT-2025 Microeconomics in the Quarter system. ECON-105 meets the Ohio Transfer Module standards for course TMSBS and also meets the Ohio Transfer Assurance Guide standards for course OSS004.

ECON-110 Principles of Macroeconomics

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None; Recommended preparation for this course is ECON-105. Course is graded A-F.

Introduction to macroeconomic terminology and concepts, theory, and analysis, with emphases on national income accounts, fiscal policy and monetary policy, unemployment and inflation, money supply and interest rates, economic stability and business cycles, productivity and economic growth, the Federal Reserve System and the financial intermediaries, and aggregate supply and aggregate demand. The purpose of the course is to provide students with an introduction to major issues facing the world economies and to expose students to the methods that economists use to study and solve those issues and economic policy problems of the 21st century.

ECON-110 Principles of Macroeconomics replaces BMT-2046 Principles of Macroeconomics in the Quarter system. ECON-110 meets the Ohio Transfer Assurance Guide standards for course OSS005.

PUBLISHED MARCH, 2014

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - EARLY CHILDHOOD EDUCATION TECHNOLOGY - ECE
2014-2015 ACADEMIC YEAR**

ECE-110 Observation and Assessment Practices

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Eligible to enroll in GENR-095 (COMPASS Placement or C grade (2.00) or better in GENR-094). Course is graded A-F.

This course is designed to help prepare the student, to observe, record and assess young children's development and learning for the purposes of planning appropriate programs, environments, interactions, and adapting for individual differences. Informal, authentic assessment will be highlighted and formal techniques will be introduced. Ten hours of observation will be required in various early childhood programs and include reflective practices across the curriculum that encompasses the developmental continuum.

ECE-110 Observation and Assessment Practices replaces EAR-5610 Observation and Assessment of Young Children in the Quarter system.

ECE-120 Fundamentals of Reading and Writing

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course will focus on research-based principles and practices that will provide children birth to age 8 with a solid foundation in developmentally appropriate early reading and writing. The student will explore and evaluate the concepts in practice. Ten hours of into-practice experiences are required with preschool age children.

ECE-120 Fundamentals of Reading and Writing replaces EAR-5684 Fundamentals of Reading and Writing.

ECE-130 Health and Safety in Education

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course will provide the student with the opportunity to obtain the following certifications in preparation for employment in a licensed child care and education program: First Aid, Communicable Disease Recognition and Management, Child Abuse and Neglect Recognition, Adult, Child and Infant CPR. The student will also conduct an environmental checklist in an approved child care facility.

ECE-130 Health and Safety in Education replaces EAR-5656 Family, Child, Community, Health and Safety in the Quarter system.

ECE-140 Introduction to Child Development

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course will include student understanding of young children's characteristics, needs, multiple influences on development and learning. The student will utilize knowledge of development to create healthy, respectful, supportive and challenging learning environments. Birth through adolescent development will be examined. Ten hours of observation and contact with a family and an early childhood program is required to complete a comprehensive Family and Child Study.

ECE-140 Introduction to Child Development EAR-5679 Infant and Toddler Development. and Care and EAR-5686 Child Development.

**COTC COURSE DESCRIPTIONS - EARLY CHILDHOOD EDUCATION TECHNOLOGY - ECE
2014-2015 ACADEMIC YEAR****ECE-150 Guidance and Group Management**

3 credit hours, 6 contact hours (2.50 hours lecture [seminar], 0 hours lab, and 3.50 hours per week practicum experience). Prerequisite: C grade (2.00) or better in ECE-110, ECE-120, EDU-100 and EDU-115, completed Student Practicum File and approved placement with preschool children, or by permission of ECD Program Director. Course is graded A-F.

This course will focus on the principles and methods of guiding young children. Emphasis will be on the use of individual and group guidance and problem solving techniques to develop positive and supportive relationships with children. The student will explore and reflect on strategies that promote positive conflict resolution, self-control, self-esteem within a nurturing, safe community classroom environment. As a participant observer, the student will apply the principles of active positive guidance with young children under the supervision of a qualified cooperating teacher. Referral sources, parental participation and program collaboration will be an important focus for children with challenging behaviors.

ECE-160 Guidance and Group Management replaces EAR-5615 Managing Children in Groups in the Quarter system.

ECE-160 Integrated Curriculum

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in EDU-100 and EDU-115, or by permission of ECD Program Director. Course is graded A-F.

The student will explore the theories, techniques and approaches to planning and implementing learning experiences for young children. Concepts of play, appropriate practices, documentation, assessment and inquiry based learning experiences will be addressed and practiced. The student will be required to work collaboratively with peers and children in a child care setting.

ECE-160 Integrated Curriculum replaces EAR-5624 Curriculum Planning in the Quarter system.

ECE-170 Children' Literature

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ECE-120 or by permission of the ECD Program Director. Course is graded A-F.

This course will explore and evaluate children's literature by genre for children birth to early school age. The integration of family literacy and cultural background will be included as students develop plans for integrating children's literature across curricular areas including links to social studies. The student will assess, critique and reflect how to integrate meaningful literature related experiences within early childhood programs. The student will be required to practice assignments with specific age groups.

ECE-170 Children's Literature replaces EAR-5638 Children's Literature in the Quarter system.

ECE-180 Engaging Children in Projects

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ECE-150 or ECE-160 or by permission of the ECD Program Director. Course is graded A-F.

This course is designed to assist the student in learning the fundamentals of project-based learning with children. The student will review completed projects to assess the children's learning outcomes and teaching strategies. Documentation processes will be explored and practiced. Collaborative groups will be assigned to practice project-based learning and document the progress of a project topic.

ECE-180 Engaging Children in Projects replaces EAR-5617 Engaging Children in Projects in the Quarter system.

**COTC COURSE DESCRIPTIONS - EARLY CHILDHOOD EDUCATION TECHNOLOGY - ECE
2014-2015 ACADEMIC YEAR****ECE-190 Professionalism in ECE**

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ECE-150, ECE-160 and EDU-100, or by permission of the ECD Program Director. Course is graded A-F.

This course is designed to provide the student with the opportunity to analyze and evaluate what it means to become a professional teacher. The student will explore the principles and practices of mentors and protégés in the early childhood field, the stages of teacher development, ways of working towards collegiality, conflict resolution, personal assessment of educational knowledge, skills and dispositions and complete a collaborative advocacy project.

ECE-190 Professionalism in ECE replaces EAR-5665 Mentoring and Supervision in the Quarter system.

ECE-198 Special Topics in Early Childhood Education

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Permission of ECE Program Director. Course is graded A-F.

The student will explore a topic of interest approved by a designated ECE faculty member related to the early childhood education field. The student will conduct research and prepare and present a portfolio of the topic that will include documentation and evidence of the connections to learning standards.

ECE-198 Special Topics in Early Childhood Education is a new course in the Semester system.

ECE-210 Family, School and Community

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course will include knowledge and understanding family and community characteristics, family structures and social and cultural backgrounds. Explore how to support and empower families and communities through relationship building. Involve families and communities in children's development and learning. The student will be required to connect with a family and research community resources to assist in strengthening the family, the schools and the community in relation to children's development and care.

ECE-210 Family, School and Community replaces EAR-5640 Parenting and Parent Education and EAR-5685 Family Development in the Quarter system.

ECE-220 Math and Science for ECD

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ECE-110, ECE-120, ECE-130, ECE-140, ECE-150, ECE-160, ECE-170, ECE-180, ECE-190, ECE-285, EDU-100 and EDU-115, and concurrent enrollment in ECE-289, or by permission of the ECD Program Director. Course is graded A-F.

This course will explore various ways to assist young children in developing specific concepts in the areas of math and science. The focus will be on guiding developmentally appropriate learning experiences, which enable children to develop critical thinking and problem solving skills. Attention will be given to various methods of documentation of children's learning.

ECE-220 Math and Science for ECD replaces EAR-5649 Math and Science for ECD in the Quarter system.

**COTC COURSE DESCRIPTIONS - EARLY CHILDHOOD EDUCATION TECHNOLOGY - ECE
2014-2015 ACADEMIC YEAR****ECE-230 Creative Arts Across the Curriculum**

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ECE-110, ECE-120, ECE-130, ECE-140, ECE-150, ECE-160, ECE-170, ECE-180, ECE-190, ECE-285, EDU-100 and EDU-115, and concurrent enrollment in ECE-289, or by permission of the ECD Program Director. Course is graded A-F.

This course will emphasize the aesthetic development of children through creative experiences in art, music, drama and movement. The student will explore, practice and reflect on the integration of meaningful learning experiences across the curriculum. The principles of project-based work will be introduced and practiced within an early childhood program.

ECE-230 Creative Arts Across the Curriculum replaces EAR-5637 Creative Arts Across the Curriculum in the Quarter system.

ECE-260 Issues in Education

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ECE-210, ECE-289, EDU-100 and EDU-200, or by permission of the ECD Program Director. Course is graded A-F.

In this course the student will explore issues affecting children, families, community and the early childhood professional. Topics may include societal views of children, early childhood professionalism, current research, and future implications. Student-lead research will pose an ethical dilemma and reflect on implications for practice.

ECE-260 Issues in Education replaces EAR-5674 Trends and Issues in ECD in the Quarter system.

ECE-279 Administration in ECE Programs

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ECE-289; or by permission of the ECD Program Director. Course is graded A-F.

This course is designed for the student interested in the administration of early childhood care and education programs. The focus will be on operational planning to include curriculum, parent programs, staff management, community involvement, legal responsibilities, and hiring requirements. Establishing and maintaining effective fiscal practices will be explored. The student will be required to complete 10 hours within a licensed program or center to shadow the administrator.

ECE-279 Administration in ECE Programs replaces EAR-5680 Administration of Early Childhood Programs in the Quarter system.

ECE-285 Infant and Toddler Practicum

2 credit hours, 8 contact hours (1 hour lecture [seminar], 0 hours lab and 7 hours per week practicum experience). Prerequisite: C grade (2.00) or better in (ECE-140 or ECE-150 or ECE-160) and completion of ECE Student Practicum/Field Experience file and by permission of the ECD Program Director. Course is graded A-F.

The student will engage in meaningful learning experiences in a program that cares for infants and toddlers. A seven hour a week practicum is required to plan and implement learning experiences with the guidance and supervision of a qualified cooperating teacher. The student will complete numerous required reports and bring to the practicum site developmentally appropriate learning experiences. The student must have a current *Student Work Experience File*.

ECE-285 Infant and Toddler Practicum replaces EAR-5668 Infant and Toddler Practicum in the Quarter system.

**COTC COURSE DESCRIPTIONS - EARLY CHILDHOOD EDUCATION TECHNOLOGY - ECE
2014-2015 ACADEMIC YEAR****ECE-289 ECE Field Experience**

2 credit hours, 7 contact hours (1 hour lecture [seminar], 0 hours lab and 6 hours per week field experience). Prerequisite: C grade (2.00) or better is required in ECE-110, ECE-120, ECE-130, ECE-140, ECE-150, ECE-160, ECE-170, ECE-180, ECE-190, ECE-285, EDU-100 and EDU-115, permission of the ECD Program Director, and concurrent enrollment in ECE-220 and ECE-230. Course is graded A-F.

This course will assist the student in applying the principles, methods and practices learned in content method courses. The student will participate in a licensed, supervised early childhood setting that has been prearranged and approved by the ECE Practicum Site Coordinator. The *Student Work Experience File* must be current.

ECE-289 replaces ECE-287 Practicum Experience in the Semester system. Both ECE-289 and ECE-287 replace EAR-5621 ECD Field Practicum, EAR-5631 ECD Field Practicum and EAR-5641 ECD Field Practicum in the Quarter system.

ECE-290 ECE Student Teaching Field Experience

3 credit hours, 14 contact hours (2 hours lecture [seminar], 0 hours lab and 12 hours per week field experience). Prerequisite: C grade (2.00) or better in all ECE/EDU 100-200 level courses; Concurrent enrollment (or previously earned C grade [2.00] or better) in ECE-260, ECE-279 and EDU-250, and permission of the ECD Program Director. Course is graded A-F.

This course is designed to meet the final requirements for ODE Pre-kindergarten Associate Licensure by providing the opportunity for the student to assume responsibility for planning and assessing children's learning. Under the guidance and supervision of a qualified early childhood teacher and supervising faculty, the student will actively assume the role of teacher with in an early childhood program. A portfolio will be completed for review by faculty. The student will participate in seminar sessions to reflect on the teaching and learning process. To register, the student must meet with the ECD Program Director at least one month prior to the start of the semester. The student will be required to complete practicum hours in an approved early childhood preschool classroom.

ECE-290 replaces ECE-288 ECE Student Teaching in the Semester system. Both ECE-290 and ECE-288 replace EAR-5667 ECD Student Teaching in the Quarter system.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - EARLY CHILDHOOD EDUCATION TECHNOLOGY - EDU
2014-2015 ACADEMIC YEAR**

EDU-100 Introduction to Education

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: BCI & I State and Federal with no convictions that would prevent participation with children in a school or center based setting. Course is graded A-F.

This is a survey course for the introduction to the teaching profession. The student will engage in a variety of experiences that will broadly explore the purposes of schools in society and the knowledge, dispositions and skills required to be an effective teacher. The student will demonstrate familiarity with the major themes of the teaching profession and explain how these issues impact the field of education. Observation sessions will be required in various grade levels.

EDU-100 Introduction to Education replaces EAR-5614 Introduction to Early Childhood Education in the Quarter system.

EDU-115 Educational Technology

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course encompasses effectively identifying, locating, evaluating, designing, preparing and efficiently using educational technology as instructional resources in the classroom related to principles of learning and teaching. The student will develop increased classroom communication abilities through lectures, discussions, modeling, laboratory experiences and completion of a comprehensive project. This course is offered early in the student's program of study and will be a prerequisite for other courses.

EDU-115 Educational Technology replaces EAR-5616 ECD Instructional Technology in the Quarter system.

EDU-200 Educational Psychology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course will present the major theories of human development, learning, motivation, instructional strategies, assessment and examine the similarities and differences in learners. The influences of school, home, community and culture in the student's learning and development will be examined. The student will be expected to demonstrate a disposition that all students can learn.

EDU-200 Educational Psychology will be a new course in Semester system.

EDU-250 Exceptional Individuals

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ECE-140 or equivalent; or by permission of the ECD Program Director. Course is graded A-F.

This is a survey course covering the identification, developmental characteristics and intervention strategies for exceptional children and youth across education and community settings. The student will complete a comprehensive Family and Child Study requiring field work with a family and the child's educational program.

EDU-250 Exceptional Individuals replaces EAR-5671 Exceptional Children in the Quarter system.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - ENGINEERING TECHNOLOGY, ELECTRICAL ENGINEERING
2014-2015 ACADEMIC YEAR**

ELEC-113 Circuits I

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in MATH-150. Course is graded A-F.

This introductory course presents the terminology and concepts necessary for understanding electrical units and laws and circuit analysis. Topics of study include direct current sources, series and parallel circuits, Ohm's law, Kirchoff's Laws, resistance, power, mesh analyses, capacitance, and inductance. Laboratory sessions include experiments, both simulated and bread boarded, verifying the lecture material through the proper use of voltmeters, ammeters, ohmmeters, and DC power supplies.

ELEC-113 Circuits I replaces ENGRTECH-113 Circuits I in the Semester system. Both ELEC-113 and ENGRTECH-113 replace EET-3028 Circuits I in the Quarter system.

ELEC-213 Circuits II

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in (ELEC-113 or ENGRTECH-113). Course is graded A-F.

The concepts introduced in Circuits I are reviewed and applied to AC circuits. AC phasers, AC series and parallel networks, impedance, resonance, transformers and three phase power are new topics covered in this course. Laboratory experience includes use of function generators and oscilloscope, both simulated and real.

ELEC-213 Circuits II replaces ENGRTECH-213 Circuits II in the Semester system. Both ELEC-213 and ENGRTECH-213 replace EET-3029 Circuits II in the Quarter system.

ELEC-225 Communication Electronics I

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in MATH-150. Course is graded A-F.

This course covers the theory and operation of commonly used analog and digital communications systems and introduces the operation of power supplies, oscillators, AF and RF amplifiers, AM Transmitters and Receivers, and SSB devices. Fundamental theory, design and construction issues and troubleshooting techniques are discussed. Laboratory experiments consist of the construction and operation of basic circuits, and test and repair, using specialized test equipment.

ELEC-225 Communication Electronics I replaces ENGRTECH-225 Communication Electronics I in the Semester system. Both ELEC-225 and ENGRTECH-225 replace EET-3132 Communication Electronics I and EET-3320 Data Communications in the Quarter system.

ELEC-235 Communications Electronics II

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in (ELEC-225 or ENGRTECH-225). Course is graded A-F.

This course builds on the concepts presented in Communications Electronics I and introduces AM-FM broadcasting, stereo, wave propagation, antennas, directional antennas, transmission lines and special communication techniques, satellite, fiber optic, microwave and data communications. The laboratory work consists of testing and troubleshooting existing equipment and systems.

ELEC-235 Communications Electronics II replaces ENGRTECH-235 Communications Electronics II in the Semester system. Both ELEC-235 and ENGRTECH-235 replace EET-3152 Communications Electronics II in the Quarter system.

**COTC COURSE DESCRIPTIONS - ENGINEERING TECHNOLOGY, ELECTRICAL ENGINEERING
2014-2015 ACADEMIC YEAR****ELEC-241 Digital Electronics I**

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in (ELEC-113 or ENGRTECH-113). Course is graded A-F.

This course emphasizes the study of digital logic elements and circuits, as well as the mathematics used in digital circuitry.

ELEC-241 Digital Electronics I replaces ENGRTECH-241 Digital Electronics I in the Semester system. Both ELEC-241 and ENGRTECH-241 replace EET-3154 Digital Electronics I in the Quarter system.

ELEC-250 Programmable Logic Controllers

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in PHYS-100. Course is graded A-F.

This course examines control of electrical systems with relay ladder diagrams, relay ladder logic and concentrates on PLCs and their use in control of on/off electrical devices. Sensing devices such as limit and temperature switches and control switches and their use in ladder circuits are reviewed. Timing and counting devices as well as event driven and timer driven sequencing schemes are studied. Architecture, use, and programming of PLCs are covered and reinforced using related lab work.

ELEC-250 Programmable Logic Controllers replaces ENGRTECH-250 Programmable Logic Controllers in the Semester system. Both ELEC-250 and ENGRTECH-250 replace EMT-3252 Programmable Logic Controllers in the Quarter system.

ELEC-251 Digital Electronics II

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in (ELEC-241 or ENGRTECH-241). Course is graded A-F.

The architecture of a microprocessors and microcontrollers is studied in this course. This includes busses, memory devices, CPUs, I/O, and memory devices. Microcontroller programming will be introduced through laboratory projects which focus on the practical application of these devices.

ELEC-251 Digital Electronics II replaces ENGRTECH-251 Digital Electronics II in the Semester system. Both ELEC-251 and ENGRTECH-251 replace EET-3164 Digital Electronics II and EET-3167 Digital Electronics III in the Quarter system.

ELEC-260 Electric Motors

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in (ELEC-213 or ENGRTECH-213). Course is graded A-F.

This course covers the use and control of industrial electronic power. Control of AC loads with semiconductor devices used in conjunction with phase-shift, timing, and opto-electronics is explored and reinforced with laboratory experiments. Types of DC and AC single and three phase motors and their operating characteristics are studied. Basic motor control devices and circuits as well as current electronic motor control technology are studied and then used in the lab. These laboratory experiences will reinforce proper wiring practices and selection of protection devices.

ELEC-260 Electric Motors replaces ENGRTECH-260 Electric Motors in the Semester system. Both ELEC-260 and ENGRTECH-260 replace EMT-3244 Industrial Power in the Quarter system.

**COTC COURSE DESCRIPTIONS - ENGINEERING TECHNOLOGY, ELECTRICAL ENGINEERING
2014-2015 ACADEMIC YEAR****ELEC-267 Linear Integrated Circuits**

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in (ELEC-113 or ENGRTECH-113). Course is graded A-F.

The student will pursue the study of the theory and operation of semiconductor diode and transistor circuits. Equivalent circuits, large and small signal analysis, and biasing circuits are discussed, as well as junction field effect transistors, MOSFET, linear integrated circuits, operational amplifiers and optoelectronic devices. Laboratory sessions, both bread boarded and simulated, compliment study.

ELEC-267 Linear Integrated Circuits replaces ENGRTECH-267 Linear Integrated Circuits in the Semester system. Both ELEC-267 and ENGRTECH-267 replace EET-3133 Electronics I and EET-3144 Linear Integrated Circuits in the Quarter system.

ENGRTECH-B3132 Communication Electronics I (Bridge Course)

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Concurrent enrollment in MATH-110 (semester course). Course is graded A-F.

This course covers the theory and operation of commonly used analog and digital communications systems and introduces the operation of power supplies, oscillators, AF and RF amplifiers, AM Transmitters and Receivers, and SSB devices. Fundamental theory, design and construction issues and troubleshooting techniques are discussed. Laboratory experiments consist of the construction and operation of basic circuits, and test and repair, using specialized test equipment.

ENGRTECH-B3132 is a semester bridge course for students coming out of the quarter system with previous quarter credit for EET-3320. Successful completion of EET-3320 and ENGRTECH-B3132 (with a C grade [2.00] or better) will fulfill the semester requirement for ENGRTECH-225 Communications Electronics I.

ENGRTECH-B3144 Linear Integrated Circuits (Bridge Course)

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Concurrent enrollment in ENGRTECH-251, or C grade (2.00) or better in ENGRTECH-251 (semester course). Course is graded A-F.

The student will pursue the study of linear integrated circuits, operational amplifiers and optoelectronic devices. Laboratory sessions, both bread boarded and simulated, compliment study.

ENGRTECH-B3144 is a semester bridge course for students coming out of the quarter system with previous quarter credit for EET-3133. Successful completion of EET-3133 and ENGRTECH-B3144 (with a C grade [2.00] or better) will fulfill the semester requirement for ENGRTECH-267 Linear Integrated Circuits.

ENGRTECH-B3167 Digital Electronics III (Bridge Course)

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in EET-3154 (quarter course) or equivalent. Course is graded A-F.

The study of circuit elements used in microprocessor systems. Includes the study of microprocessor busses, memory devices, series and parallel output devices and programmable peripheral interface devices. Laboratory projects focus on the application of these devices and the associated control software.

ENGRTECH-B3167 is a semester bridge course for students coming out of the quarter system with previous quarter credit for EET-3164. Successful completion of EET-3164 and ENGRTECH-B3167 (with a C grade [2.00] or better) will fulfill the semester requirement for ENGRTECH-251 Digital Electronics II.

**COTC COURSE DESCRIPTIONS - ENGINEERING TECHNOLOGY, ELECTRICAL ENGINEERING
2014-2015 ACADEMIC YEAR****ENGR TCH-B3320 Data Communications (Bridge Course)**

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Concurrent enrollment in MATH-110 (semester course). Course is graded A-F.

This course covers the theory and operation of commonly used analog and digital communications systems. Fundamental theory, design and construction issues and troubleshooting techniques are discussed. Laboratory experiments consist of the construction and operation of basic circuits, and test and repair, using specialized test equipment.

ENGR TCH-B3320 is a semester bridge course for students coming out of the quarter system with previous quarter credit for EET-3132. Successful completion of EET-3132 and ENGR TCH-B3320 (with a C grade [2.00] or better) will fulfill the semester requirement for ENGR TCH-225 Communications Electronics I.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - EMERGENCY MEDICAL SERVICES TECHNOLOGY
2014-2015 ACADEMIC YEAR**

EMS-100 Basic Life Support (CPR) for the Healthcare Provider

0.5 credit hours, 8 total contact hours (2 total contact hours lecture and 6 total contact hours lab). Prerequisite: None. Course is graded S/U.

This course will provide instruction and practice in adult, child and infant CPR, and use of an AED for healthcare providers. This is a one-day (8 total contact hours) course. Course is graded on a Satisfactory/ Unsatisfactory basis.

EMS-100 Basic Life Support (CPR) for the Health Provider replaces EMS-4331 Adult, Child, and Infant CPR in the Quarter system.

EMS-105 First Aid

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

The student will study the emergency techniques utilized by persons rendering first aid prior to the arrival of emergency medical services providers. Training also includes American Heart Association BLS for Healthcare Providers (2010 standards) and the use of an Automated External Defibrillator (2010 standards). Course includes 40 hours of instruction.

EMS-105 First Aid replaces EMS-4052 First Aid in the Quarter system.

EMS-110 Emergency Medical Responder

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

The student will study a combination of subject matter and laboratory experiences designed to prepare him/her to become a member of the pre-hospital health care team, working under the direction of a physician. Instruction includes patient assessment, airway management, CPR, automated defibrillation, epinephrine auto-injector administration, illness and injury management, and delivery and newborn care.

EMS-110 replaces EMS-4330 Nationally Registered First Responder in the Quarter system.

EMS-120 Emergency Medical Technician

7 credit hours, 9 contact hours (6 hours lecture and 3 hours lab). Prerequisite: CPR Certification (Recommended), C grade (2.00) or better in GENR-091 and MATH-080 or appropriate score on COMPASS placement; Course is graded A-F.

This Emergency Medical Services course covers all aspects of emergency medical care in the field including equipment, controlling the situation, anatomy and physiology, medical and trauma emergencies, and airway control. This course at its successful completion allows the student to take the national registry exam to become certified at the EMT. This course provides a first phase of training in the career structure of the Emergency Medical Technician (EMT). The course covers all the knowledge and skills required for the state certification examination. Course includes 15 clock hours of clinical experience. A student must pass this course with a B- grade (3.00) or better and score a minimum of 70 percent on the final exam in order to graduate and be eligible to sit for the NREMT exam.

EMS-120 replaces EMS-4332 EMS- Basic in the Quarter system. EMS-120 meets Ohio Career Technical Credit Transfer (C-TAG) standards for course CTEMTB002.

**COTC COURSE DESCRIPTIONS - EMERGENCY MEDICAL SERVICES TECHNOLOGY
2014-2015 ACADEMIC YEAR****EMS-150 Advanced EMT**

8 credit hours, 10 contact hours (7 hours lecture and 3 hours lab). Prerequisite: Must be a State Certified EMT; C grade (2.00) or better in GENR-091 and MATH-080 or appropriate score on COMPASS placement. Course is graded A-F.

Advanced EMT offers specialized subject matter, laboratory, clinical and vehicle experiences designed to prepare EMTs to provide advanced life support in the pre-hospital phase of an emergency. Instruction includes patient assessment, trauma-triage, airway management, intravenous, intramuscular, and subcutaneous administration of medications, intravenous therapy, EKG monitoring and defibrillation, advanced study of the pathophysiology of illness and injuries, delivery and newborn care. The personnel trained may be members of fire departments, police departments, or other agencies that are involved in the emergency treatment and rescue of people. In this course, a student must earn a B-grade (3.00) or better and pass the final exam with a minimum of 70 percent in order to be eligible to sit for the National Registry of EMTs exam.

EMS-150 replaces EMS-4333 EMS-Intermediate in the Quarter system. EMS-150 meets Career Technical Credit Transfer (C-TAG) standards for course CTEMT1003.

EMS-190 EMT Experience Practicum

2 credit hours, 8 contact hours (1 hour lecture, 0 hours lab and 7 hours practicum). Prerequisite: Ohio EMT certification, CPR Certification, Background Check passage, necessary immunizations and health physical on file with the EMS Program Director, and drug test passage. Course is graded S/U.

This course provides practical experience in pre-hospital EMS for EMTs who need experience to begin paramedic school. The student will work in a clinical setting where he/she will learn agency procedures and demonstrate the required emergency medical techniques to meet all EMS standards for the EMT. This course is graded on a Satisfactory/Unsatisfactory basis.

EMS-190 is a New Course in the Semester system.

EMS-200 Paramedic I

8 credit hours, 12 contact hours (6 hours lecture and 6 hours lab). Prerequisite: Ohio EMT certification; C grade (2.00) or better in BIO-110 (or concurrent enrollment in BIO-110); C grade (2.00) or better in BIO-121; C grade (2.00) or better in GENR-091 and MATH-080 or appropriate COMPASS placement. Background Check passage, necessary immunizations and health physical on file with the EMS Program Director, and drug test passage. Course is graded A-F.

The student will study the roles, responsibilities, and duties of an EMT-P including professional ethics and behavior. The preparatory stages related to the functioning of an EMT-Paramedic will be presented. The course will include instruction in the management of endocrine emergencies, allergies, anaphylaxis, gastrointestinal emergencies and respiratory emergencies.

EMS-200 replaces EMS-4391 Paramedic I and EMS-4392 Paramedic II in the Quarter system.

EMS-225 Paramedic II

8 credit hours, 12 contact hours (6 hours lecture and 6 hours lab). Prerequisite: B grade (3.00) or better in EMS-200 and a satisfactory grade in both EMS-280 and EMS-290; C grade (2.00) or better in BIO-110; Background Check passage, necessary immunizations and health physical on file with the EMS Program Director, and drug test passage. Course is graded A-F.

This course will provide instruction in cardiology, major incident response, stress management, and the recognition, management and care of nervous system emergencies, emergencies, reproduction system emergencies, toxicology and substance abuse, infectious diseases, environmental emergencies, obstetrical and gynecological emergencies, neonatal emergencies, and behavioral and psychiatric emergencies, geriatric and pediatric emergencies.

EMS-225 replaces EMS-4392 Paramedic II and EMS-4393 Paramedic III in the Quarter system.

**COTC COURSE DESCRIPTIONS - EMERGENCY MEDICAL SERVICES TECHNOLOGY
2014-2015 ACADEMIC YEAR****EMS-250 Paramedic III**

8 credit hours, 12 contact hours (6 hours lecture and 6 hours lab). Prerequisite: B- (2.70) or better in EMS-225 and satisfactory grade in both EMS-281 and EMS-291; concurrent enrollment in EMS-282 and EMS-292; Background Check passage, necessary immunizations and health physical on file with the EMS Program Director, and drug test passage. Course is graded A-F.

This course will include instruction in the assessment and management of shock, trauma emergencies, burns, and common cardiac emergencies in the pre-hospital setting, as well as review of all paramedic knowledge and skills in preparation for national registry testing.

EMS-250 replaces EMS-4393 Paramedic III and EMS-4394 Paramedic IV in the Quarter system.

EMS-260 Paramedic Refresher

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course is a review of essentials of paramedicine that meets both Ohio and National Registry standards for paramedic refresher education.

EMS-260 is a new course in the Semester system.

EMS-280 Paramedic I – Clinical Lab

1.50 credit hours, 4.50 contact hours (0 hours lecture and 4.50 hours lab). Prerequisite: Concurrent enrollment in both EMS-200 and EMS-290; Background Check passage, necessary immunizations and health physical on file with the EMS Program Director, and drug test passage. Course is graded S/U.

This course provides an introductory clinical patient contact experience. The student will work in a clinical setting where he/she will learn agency procedures and demonstrate the required emergency medical techniques to meet all EMS standards for EMS-Paramedic. This course is graded on a Satisfactory/ Unsatisfactory basis.

EMS-280, along with EMS-290 Paramedic I – Directed Practice, replaces EMS-4395 Paramedic II Practicum in the Quarter system.

EMS-281 Paramedic II – Clinical Lab

1.50 credit hours, 4.50 contact hours (0 hours lecture and 4.50 hours lab). Prerequisite: Concurrent enrollment in EMS-225 and EMS-291; Background Check passage, necessary immunizations and health physical on file with the EMS Program Director, and drug test passage. Course is graded S/U.

This course provides extended clinical patient contact experience in which the student will display an advanced skill set. The student will work in a clinical setting where he/she will learn agency procedures and demonstrate the required emergency medical techniques to meet all EMS standards for EMS-Paramedic. This course is graded on a Satisfactory/ Unsatisfactory basis.

EMS-281, along with EMS-291 Paramedic II – Directed Practice, replaces EMS-4396 Paramedic III Practicum in the Quarter system.

**COTC COURSE DESCRIPTIONS - EMERGENCY MEDICAL SERVICES TECHNOLOGY
2014-2015 ACADEMIC YEAR****EMS-282 Paramedic III – Clinical Lab**

1.50 credit hours, 4.50 contact hours (0 hours lecture and 4.50 hours lab). Prerequisite: Concurrent enrollment in EMS-250 and EMS-292; Background Check passage, necessary immunizations and health physical on file with the EMS Program Director, and drug test passage. Course is graded S/U.

This course is designed to provide the final clinical patient contact experience where the student will demonstrate mastery of skills. The student will work in a clinical setting where he/she will learn agency procedures and demonstrate the required emergency medical techniques to meet all EMS standards for EMS-Paramedic. This course is graded on a Satisfactory/ Unsatisfactory basis.

EMS-282, along with EMS-292 Paramedic III – Directed Practice, replaces EMS-4397 Paramedic IV Practicum in the Quarter system.

EMS-290 Paramedic I – Directed Practice

1.50 credit hours, 7.50 contact hours (0 hours lecture, 0 hours lab, and 7.50 hours directed practice [clinical]). Prerequisite: Concurrent enrollment in EMS-200 and EMS-280; Background Check passage, necessary immunizations and health physical on file with the EMS Program Director, and drug test passage. Course is graded S/U.

This course is designed to provide introductory clinical patient contact experience. The student will work in a clinical setting where he/she will learn agency procedures and demonstrate the required emergency medical techniques to meet all EMS standards for EMS-Paramedic. This course is graded on a Satisfactory/ Unsatisfactory basis.

EMS-290, along with EMS-280 Paramedic I - Clinical Lab, replaces EMS-4395 Paramedic II Practicum in the Quarter system.

EMS-291 Paramedic II – Directed Practice

1.50 credit hours, 7.50 contact hours (0 hours lecture, 0 hours lab, and 7.50 hours directed practice [clinical]). Prerequisite: Concurrent enrollment in EMS-225 and EMS-281; Background Check passage, necessary immunizations and health physical on file with the EMS Program Director, and drug test passage. Course is graded S/U.

This course provides extended clinical patient contact experience in which the student will display an advanced skill set. The student will work in a clinical setting where he/she will learn agency procedures and demonstrate the required emergency medical techniques to meet all EMS standards for EMS-Paramedic. . This course is graded on a Satisfactory/ Unsatisfactory basis.

EMS-291, along with EMS-281 Paramedic II-Clinical Lab, replaces EMS-4396 Paramedic III Practicum in the Quarter system.

EMS-292 Paramedic III – Directed Practice

1.50 credit hours, 7.50 contact hours (0 hours lecture, 0 hours lab, and 7.50 hours directed practice [clinical]). Prerequisite: Concurrent enrollment in EMS-250 and EMS-282; Background Check passage, necessary immunizations and health physical on file with the EMS Program Director, and drug test passage. Course is graded S/U.

This course is designed to provide the final clinical patient contact experience where the student will demonstrate mastery of skills. The student will work in a clinical setting where he/she will learn agency procedures and demonstrate the required emergency medical techniques to meet all EMS standards for EMS-Paramedic. This course is graded on a Satisfactory/ Unsatisfactory basis.

EMS-292, along with EMS-282 Paramedic III – Clinical Lab, replaces EMS-4397 Paramedic IV Practicum in the Quarter system.

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS – ENGLISH AND COMMUNICATIONS
2014-2015 ACADEMIC YEAR**

ENGL-112 Composition I

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: COMPASS placement or C grade (2.00) or better in (GENR-091 or GENR-095 or GENR-099). Course is graded A-F.

Composition One is a writing intensive theme-based course that facilitates the development of college-level writing skills. The student will compose papers using expository writing while incorporating one's own thinking with credible research using MLA format. The student also will be introduced to APA format guidelines. The course emphasizes critical thinking, analytical reading, thesis development and deep revision of one's own compositions. The course also includes analysis of audience and theme in one's own writing and the writings of others, while developing the student's critical reading skills.

ENGL-112 replaces ENGL-110 Composition I in the Semester system. Both ENGL-112 and ENGL-110 replace COM-1535 Composition I in the Quarter System. Both ENGL-112 and ENGL-110 meet the Ohio Transfer Module standards for course TME001.

ENGL-113 Composition II

3 credit hours, 4 contact hours (2 hours of lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (ENGL-112 or ENGL-110). Course is graded A-F.

In this course, using the framework of the American experience theme, the student will continue to develop proficiencies in analytical reading, critical thinking, thesis development, deep revision, and research of credible sources. Composition II emphasizes problem solving with writing-intensive assignments grounded in argumentation. The student will evaluate readings from historical, social, and political perspectives. Examination of one's own position in relation to audience and evidence facilitates awareness of a writer's ethical responsibilities. Research of multiple sources using APA format is required.

ENGL-113 replaces ENGL-111 Composition II in the Semester system. Both ENGL-113 and ENGL-111 replace COM-1536 Composition II in the Quarter System. Both ENGL-113 and ENGL-111 meet the Ohio Transfer Module standards for course TME002.

ENGL-207 Business and Professional Communication

3 credit hours, 4 contact hours (2 hours of lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (ENGL-112 or ENGL-110). Course is graded A-F.

Business and Professional Communication strengthens the student's composition skills and provides the student with a comprehensive view of communication, its scope and impact in the real-world workplace. The course emphasizes the role and complexities of both written and spoken communications. The student will analyze a variety of internal and external business communications and determine the appropriate channels to convey information, to persuade an audience, and to compose inter- and out-of-office business correspondence. Various types of business media will be utilized, including the Internet, PowerPoint, and emerging technology. The course will culminate in a Web 2.0-based portfolio.

ENGL-207 replaces ENGL-205 Business and Professional Communication in the Semester system. Both ENGL-207 and ENGL-205 meet the Ohio Transfer Assurance Guide standards for course OBU005.

**COTC COURSE DESCRIPTIONS – ENGLISH AND COMMUNICATIONS
2014-2015 ACADEMIC YEAR**

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ENGL-208 Technical Writing

3 credit hours, 4 contact hours (2 hours of lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (ENGL-112 or ENGL-110). Course is graded A-F.

Technical Writing strengthens the student's composition skills in technical communications employed in information technology, engineering, industry and health and social sciences. The student will examine the various contexts for employing technical communications, the available and appropriate means of conveying technical information, and the needs and goals of various audiences in reading and employing technical communications. The course emphasizes both concise and effective technical writing strategies and the ability to present this information clearly using oral communication. The course also stresses the value of collaborative projects in the workplace. The student will employ a variety of technological resources, including websites, research databases, PowerPoint, and Microsoft Publisher to analyze and create documents and presentations both individually and collaboratively.

ENGL-208 replaces ENGL-206 Technical Writing in the Semester system. Both ENGL-208 and ENGL-206 replace COM-1525 Technical Writing in the Quarter system.

ENGL-211 Survey of American Literature I

3 credit hours, 3 contact hours (3 hours of lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (ENGL-112 or ENGL-110). Course is graded A-F.

Survey of American Literature I is designed to expose students to a wide range of early American literature. In this course, the student will examine the works of major writers in the U.S., from the early settlements to 1865. The student will read and critically analyze various genres, including essays, short stories, fiction, and the novel. The student will also use literary criticism and theories including, but not limited to, biographical criticism, gender criticism, historical criticism, psychological theories, and reader-response theories. Through a series of close readings, discussions, reader responses, critical essays, and argumentative papers, the student will trace the development of both literary and cultural movements such as Puritanism, Romanticism and Transcendentalism.

ENGL-211 replaces COM-1551 Survey of American Literature I in the Quarter System. ENGL-211 meets the Ohio Transfer Module standards for course TMAH. ENGL-211 meets the Ohio Transfer Assurance Guide standards for course OAH053.

ENGL-212 Survey of American Literature II

3 credit hours, 3 contact hours (3 hours of lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (ENGL-112 or ENGL-110). Course is graded A-F.

Survey of American Literature II is designed to expose the student to a wide range of later American literature. In this course, the student will examine the works of major writers in the U.S., beginning with the years following the Civil War and leading up to the present day. The student will read and critically analyze various genres, including essays, short stories, fiction, drama, and the novel. The student will also use literary criticism and theories including, but not limited to, biographical criticism, gender criticism, historical criticism, psychological theories, and reader-response theories. Through a series of close readings, discussions, reader responses, critical essays, and argumentative papers, the student will trace the development of both literary and cultural movements such as Realism and Modernism.

ENGL-212 replaces COM-1552 Survey of American Literature II in the Quarter System. ENGL-212 meets the Ohio Transfer Module standards for course TMAH. ENGL-212 meets the Ohio Transfer Assurance Guide standards for course OAH054.

**COTC COURSE DESCRIPTIONS – ENGLISH AND COMMUNICATIONS
2014-2015 ACADEMIC YEAR**

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ENGL-216 Writing About Literature

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (ENGL-112 or ENGL-110). Course is graded A-F.

This course concentrates on further development of the student's college-level writing skills, including the writing process and MLA format, while providing fundamental exposure to the following genres: nonfiction, historical fiction, poetry and drama. Through analysis and interpretation of literary themes, close readings, discussions, critical essays, and expository and argumentative papers, the student will apply various critical approaches to reading and responding to literature, including reader-response, biographical, historical, psychological, and cultural. The student will engage in these individual and collaborative experiences to enhance self-understanding and deepen perspectives about the world as portrayed through the written word.

ENGL-216 replaces ENGL-215 Writing About Literature in the Semester system. Both ENGL-216 and ENGL-215 replace COM-1553 Writing About Literature in the Quarter System. Both ENGL-216 and ENGL-213 meet the Ohio Transfer Module standards for course TME002.

ENGL-221 Survey of British Literature I

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (ENGL-112 or ENGL-110). Course is graded A-F.

This course provides the student with a general background in the literary, philosophical, and historical trends from the Middle Ages through the eighteenth century in Britain. The student will examine representative works from this historical period, tracing developments in style, language, and genre. The student will also make connections between the literature and the social and political events that contributed to its production. The student will use literary criticism and theories including, but not limited to, biographical criticism, gender criticism, historical criticism, psychological theories, and reader-response theories. Through a series of close readings, discussions, reader responses, critical essays, and argumentative papers, the student will trace the development of historical, cultural, and literary movements, such as the Middle Ages, Renaissance, Restoration, and Enlightenment.

ENGL-221 replaces COM-1556 Survey of British Literature I in the Quarter System. ENGL-221 meets the Ohio Transfer Module standards for course TMAH and also meets the Ohio Transfer Assurance Guide standards for course OAH055.

ENGL-222 Survey of British Literature II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (ENGL-112 or ENGL-110). Course is graded A-F.

This course provides the student with a general background in the literary, philosophical, and historical trends from 1800 to the present in Britain. The student will examine representative works from this historical period, tracing developments in style, language, and genre. The student will also make connections between the literature and the social and political events that contributed to its production. The student will use literary criticism and theories including, but not limited to, biographical criticism, gender criticism, historical criticism, psychological theories, and reader-response theories. Through a series of close readings, discussions, reader responses, critical essays, and argumentative papers, the student will trace the development of historical, cultural, and literary movements, such as the Romantic period, Victorian period, and the Twentieth Century.

ENGL-222 replaces COM-1557 Survey of British Literature II in the Quarter System. ENGL-222 meets the Ohio Transfer Module standards for course TMAH and also meets the Ohio Transfer Assurance Guide standards for course OAH056.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - ENGINEERING TECHNOLOGY
2014-2015 ACADEMIC YEAR**

ENGR-100 Introduction to Engineering Technologies

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

The course is an introduction to engineering technologies. The course will cover different areas of engineering technology, professional opportunities, College resources, ethical decision-making, teamwork, problem-solving approaches, the relationship of engineering technology to the wider world, and communicating to diverse audiences.

ENGR-100 is a new Semester course.

ENGR-105 Introduction to the Oil and Gas Industry

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in MATH-060 or by COMPASS placement. Course is graded A-F.

This course offers a survey of the oil and gas industry, covering geologic formations, the history, employment, and potential economic impact of the oil and gas industry, major government regulations and safety procedures applied to the industry, and the technology, techniques, and processes of discovery and production.

ENGR-105 replaces ENGR-105 Introduction the Oil and Gas Industry in the Semester system.

ENGR-106 Computer Applications for Engineering Technicians

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course equips the students with skills to create professional engineering documents with a personal computer. Emphasis is to enable students to effectively communicate in writing for personal and in professional engineering work place. Upon completion, students would be able to create professional engineering documents such as proposals and spreadsheets for various types of presentations.

ENGR-106 is a new Semester course.

ENGR-205 Engineering Technology Leadership and Supervision

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ENGL-112. Course is graded A-F.

The course surveys topics related to supervision and leadership in engineering technologies, including management of persons and projects, team building, quality control, productivity, public relations, problem-solving, decision-making, and legal aspects of supervision.

ENGR-205 is a new Semester course.

ENGR-279 Engineering Technology Capstone

2 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: Completion of a minimum of 24 semester hours from an Engineering Technologies Plan of Study or permission of the instructor. Course is graded A-F.

This is the design capstone course for students in the Architectural, Civil, Electrical and Mechanical Engineering Technologies programs. The course emphasizes small group projects requiring interaction between students from various engineering technology disciplines. The students will use knowledge acquired during the completion of the courses for their engineering technology major, as well as gained knowledge from project work with from other disciplines. The projects will require planning, group participation and collaboration, and efficient use of lab time. Student groups will present their project, both orally and in report form.

ENGR-279 replaces courses ENGR-278 Electromechanical Design Capstone, ENGR-279 Electronics Design Capstone and ARCH-255 Architectural and Civil Design Capstone in the Semester System.

**COTC COURSE DESCRIPTIONS - ENGINEERING TECHNOLOGY
2014-2015 ACADEMIC YEAR****ENGR-296 Engineering Technology Cooperative**

3 credit hours, 21 contact hours (1 hour lecture, 0 hours lab and 20 hours per week co-op experience). Prerequisite: Completion of a minimum of 24 semester hours from an Engineering Technologies Plan of Study or permission of the instructor. Course is graded A-F.

This course offering is composed of work experience in industry under the supervision of an architect, engineer, plant manager, or equivalent, in the student's major area of study. The facility may be chosen by the student with approval of, and coordination with the Engineering Technologies faculty member. This course, to be taken toward the end of the student's two-year program, is designed to give the student real-world, office or industry work experience utilizing the skills acquired earlier in the program. The course acts as a capstone, tying the concepts of the technology together and giving the student valuable job experience before graduation.

ENGR-296 replaces ARCH-295 Co-op Experience and ARCH-296 Co-op Experience in the Semester system.

PUBLISHED MARCH, 2014

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS – ELECTRICAL TRADES TECHNOLOGY
2014-2015 ACADEMIC YEAR**

ETA-101 Overview of the Electrical Trades Industry

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

This course is an overview of the Electrical Trades Industry that focuses on the apprentice's responsibility, industry structure, and safety on the job. The course also introduces the apprentice to common materials and equipment typically found on a commercial or industrial work site.

ETA-101 Overview of the Electrical Trades Industry replaces ETA-3060 Overview of Electrical Trades Industry in the Quarter system.

ETA-102 National Electrical Code I

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

In this first course on national electrical codes (NEC), the student will be introduced to the code and its importance on the job site. The student will also cover code topics in wiring and wiring devices.

ETA-102 National Electrical Code I replaces ETA-3062 National Electrical Code I in the Quarter system.

ETA-104 Blueprint Reading and Conduit Fabrication

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

This course includes conduit fabrication and common installations of conduit plus the introduction to blueprints. The student will use actual blueprints and construction specifications for a job and will augment their knowledge of hand bending conduit with the use of mechanical benders. The student will learn how to effectively use blueprints on the job to estimate materials, layout installations, and install fixtures.

ETA-104 Blueprint Reading and Conduit Fabrication replaces ETA-3061 Blueprint Reading and Conduit Fabrication and ETA-3062 National Electrical Code I in the Quarter system.

ETA-105 Test Instrumentation and Safety

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

An introduction to basic test instruments and transformers, this course covers the theory of operation and use of analog meters, digital multimeters, and oscilloscopes. Emphasis will be placed on accurate and safe measurement techniques. The student will also learn basic transformer theory.

ETA-105 Test Instrumentation and Safety replaces ETA-3065 Test Instrumentation and Safety in the Quarter system.

ETA-106 Electrical Grounding

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

In this course, students examine grounding and bonding requirements for industrial and commercial electrical installations. The student explores all facets of grounding and bonding and is introduced to a variety of real world applications requiring a fundamental understanding of electrical theory, codes, and installation practices. Topics include grounding requirements for AC systems, service equipment, ground faults, and testing.

ETA-106 Electrical Grounding replaces ETA-3066 Electrical Grounding in the Quarter system.

**COTC COURSE DESCRIPTIONS – ELECTRICAL TRADES TECHNOLOGY
2014-2015 ACADEMIC YEAR****ETA-107 OSHA 30**

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course provides in-depth coverage of OSHA policies, procedures, and standards, as well as construction safety and health principles. Topics include scope and application of the OSHA construction standards, fall protection, electrical safety, excavations, trenching, personal protective equipment, ladders, lockout/ tagout and scaffolds, as well as hazard communication, fire protection, hand tools, power tools, welding, cranes, hoists, power transmission, asbestos, mechanized equipment, and concrete. Special emphasis is placed on areas that are the most hazardous, using OSHA standards as a guide. Upon successful course completion, the student will receive an OSHA construction safety and health 30-hour course completion card.

ETA-107 OSHA 30 replaces ETA 3071 OSHA 30 in the Quarter system.

ETA-108 National Electrical Code II

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-102. Open to students accepted into the Electrical Trades Technology program only. Course is grade A-F.

In a continued study of the national and local electrical codes for wiring, the student will learn wiring design and production, methods, materials, general use equipment, special occupancies, equipment and tables and diagrams for the solution of wiring problems.

ETA-108 National Electrical Coding II replaces ETA-3063 National Electrical Code II in the Quarter system.

ETA-110 Electrical Math and Conduit Fabrication

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Open to students accepted into the ETA program only. Course is graded A-F.

This course includes a review of the math skills that are required of the electrician and how they apply to fabricating conduit, making electrical meter readings, and understanding the principles of electrical theory. The students will then apply this knowledge to the actual fabrication of conduit, learning how to construct some of the foundational conduit bends.

ETA-110 replaces ETA-104 in the Semester system. Both ETA-110 and ETA-104 replace ETA-3061 Blueprint Reading and Conduit Fabrication and ETA-3062 National Electrical Code I in the Quarter system.

ETA-121 DC Theory for Electricians

3 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

An introduction to direct current fundamentals, electron physics, current and voltage, work, power series and parallel resistances, electrical measurement devices, and circuit analysis.

ETA-121 DC Theory for Electricians replaces ETA-3081 DC Theory for Electricians in the Quarter system.

ETA-122 AC Theory for Electricians

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in ETA 121; Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

Properties of alternating current, AC measurements, inductance and inductive, reactance, capacitance, impedance, series and parallel circuits, resonance, power and power factor correction, single-and three- phase transformers and load analysis are discussed.

ETA-122 AC Theory for Electricians replaces ETA-3082 AC Theory for Electricians in the Quarter system.

**COTC COURSE DESCRIPTIONS – ELECTRICAL TRADES TECHNOLOGY
2014-2015 ACADEMIC YEAR****ETA-124 Digital Electronics for Electricians**

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

In this course, the student begins an in-depth study of digital electronics. The student is exposed to Boolean algebra, along with some characteristics of logic circuits, while building upon the binary number system and computer mathematics to explore memory, RS, flip-flops, binary arithmetic circuits, clock circuits, and digital switching circuits.

ETA-124 Digital Electronics for Electricians replaces ETA-3085 Physics-Digital Electronics for Electricians in the Quarter system.

ETA-125 Electronics for Electricians

2 credit hours, 4 contact hours (1 hour of lecture and 3 hours lab). Prerequisite: Open to students accepted into the ETA program only. Course is graded A-F.

In this course, students are introduced to electronic theory that applies to industrial and commercial electrical systems. Students are exposed to basic components found in electronic circuits and are introduced to a variety of real-world applications requiring a fundamental understanding of electronics and electronic components. Topics include semiconductors, diodes, SCRs, transistors, rectifiers, amplifiers, integrated circuits, oscillators, and timers.

ETA-125 Electronics for Electricians replaces ETA-3084 Electronics for Electricians in the Quarter system.

ETA-201 Industrial Blueprints and Advanced Transformers

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-104; Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

In this course the student using grounding and bonding skills from previous courses will apply the knowledge to common industrial and commercial electrical applications. The student will explore the mathematics and science of three-phase grounded systems. Topics include advanced three-phase (WYE & DELTA) transformers, calculating ground faults, and using complex industrial blueprints.

ETA-201 Industrial Blueprints and Advanced Transformers replaces ETA-3067 Industrial Blueprints and Advanced Transformers in the Quarter system.

ETA-202 Advanced Codes and Practices

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

In a continued study of the national and local electrical codes for over-current, ground fault, and short circuit protective devices, the student will learn the fundamentals of circuit protection, how to calculate the load, and how to apply the correct circuit protection for various applications.

ETA-202 Advanced Codes and Practices replaces ETA-3068 Advanced Codes and Practices in the Quarter system.

ETA-203 Motors and Motor Control

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in ETA-121; Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

In this course, the student begins an in-depth study of motors and industrial motor control systems. The student first learns the operation and construction of polyphase AC motors and DC Motors, then applies those skills to commercial and industrial operations. Topics include polyphase motors and basic motor control applications.

ETA-203 Motors and Motor Controls replaces ETA-3069 Motors and Motor Controls I in the Quarter system.

**COTC COURSE DESCRIPTIONS – ELECTRICAL TRADES TECHNOLOGY
2014-2015 ACADEMIC YEAR****ETA-204 Lightning Protection and HVAC**

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-202; Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

In this course, the student begins a study of HVAC fundamentals, lightning protection systems, and locating cable faults pertaining to applications found in modern commercial and industrial environments.

ETA-204 Lightning Protection and HVAC replaces ETA-3070 Lightning Protection and HVAC in the Quarter system.

ETA-205 Program Logic Controllers for Electricians

1.5 credit hours, 2.5 contact hours (0.5 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ETA-203; Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

This course provides the electrical worker with hands-on exposure to PLCs and their associated installation and programming requirements. The student will learn basic ladder logic and PLC programming.

ETA-205 Program Logic Controllers for Electricians replaces ETA-3072 Program Logic Controllers for Electricians in the Quarter system.

ETA-210 Fire Alarm Systems

1.5 credit hours, 2.5 contact hours (0.5 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ETA-202; Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

In this course, the student applies knowledge and skills to Fire Alarm Systems, explores the mathematics and science of fire alarm applications, uses complex blueprints, and examines fire alarm installation requirements and code requirements for fire alarm applications.

ETA-210 Fire Alarm Systems replaces ETA-3073 Fire Alarm Systems in the Quarter system.

ETA-211 Automated Networks and Special Code Applications

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-202; Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

In this course, the student applies knowledge and skills to common industrial and commercial electrical installations. The student will explore the mathematics and science of automated networks and special power systems. Topics include using complex blueprints as well as automated and integrated building networks.

ETA-211 Automated Networks and Special Code Applications replaces ETA-3074 Automated Networks in the Quarter system.

ETA-212 Advanced Test Instruments

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-105; Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

This course focuses on the apprentice's responsibilities, industry structure, and safety on the job. The course also introduces the student to common materials, instruments and equipment typically found on a commercial or industrial work site.

ETA-212 Advanced Test Instruments replaces ETA-3075 Advanced Test Instruments in the Quarter system.

**COTC COURSE DESCRIPTIONS – ELECTRICAL TRADES TECHNOLOGY
2014-2015 ACADEMIC YEAR****ETA-213 Distributed Generation**

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-202; Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

In this course, the student applies knowledge and skills to common industrial and commercial distributed generation systems. Topics include uninterrupted power supplies, solar photovoltaic systems, and fuel cells.

ETA-213 Distributed Generation replaces ETA-3076 Distributed Generation in the Quarter system.

ETA-214 High Voltage and Insulation Testing

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-105; Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

In this course, the student applies knowledge and skills to common industrial and commercial electrical installations. The student will explore the process of detecting, testing, and instituting safety measures for high voltage applications. Topics include high voltage safety and testing measures, power quality concepts, problems, harmonics, and system troubleshooting.

ETA-214 High Voltage and Insulation Testing replaces ETA-3077 High Voltage and Insulation Testing in the Quarter system.

ETA-215 Telephone and Security Systems

1.5 credit hours, 3.5 contact hours (0.5 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in ETA-211; Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

In this course, the student applies knowledge and skills to common industrial and commercial electrical installations. The student will explore basic telephone and security systems.

ETA-215 Telephone and Security Systems replaces ETA-3078 Telephone and Security Systems in the Quarter system.

ETA-220 First Aid and CPR for the Electrical Industry

0.50 credit hours, 1.50 contact hours (0 hours lecture and 1.50 hours lab). Prerequisite: Open to students accepted into the Electrical Trades Technology program only. Course is graded S/U.

This course is designed to prepare the student to recognize and respond properly to an emergency situation that requires first aid care and/or CPR. The focus of the course is on the particular working environment and hazards that face an electrician in the electrical trades. This course is graded on a Satisfactory/ Unsatisfactory basis.

ETA-220 First Aid and CPR for the Electrical Industry is a New Course in the semester system.

ETA-B3061 Blue Print Reading and Conduit Fabrication I (Bridge Course)

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

This course includes conduit fabrication and common installations of conduit plus the introduction to blueprints in which the student uses actual blueprints and construction specifications for a job.

ETA-B3061 is a COTC Quarter-to-Semester Bridge course. ETA-B3061 was replaced in the Semester system as a part of ETA-104 Blueprint Reading and Conduit Fabrication.

**COTC COURSE DESCRIPTIONS – ELECTRICAL TRADES TECHNOLOGY
2014-2015 ACADEMIC YEAR****ETA-B3062 National Electrical Codes I (Bridge Course)**

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this first course on National Electric Codes (NEC), the student will be introduced to the code and its importance on the job site. The student will also cover code topics in wiring and wiring devices.

ETA-B3062 is a COTC Quarter-to-Semester Bridge Course. ETA-B3062 was replaced in the Semester system as ETA-102 National Electrical Code I.

ETA-B3063 National Electrical Codes II (Bridge Course)

6 credit hours, 6 contact hours (6 hours lecture and 0 hours lab). Prerequisite: *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In a continued study of the national and local electrical codes for wiring, the student will learn wiring design and production, methods, materials, general use equipment, special occupancies, equipment and tables and diagrams for the solution of wiring problems.

ETA-B3063 is a COTC Quarter-to-Semester Bridge Course. ETA-B3063 was replaced in the Semester system as ETA-108 National Electrical Codes II.

ETA-B3064 Blueprint Reading and Conduit Fabrication II (Bridge Course)

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-3063 or ETA-B3063; *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this course, the student will examine grounding and bonding requirements for industrial and commercial electrical installations. Using a combination of lessons, National Electric Code sections and labs, the student will explore all facets of grounding and bonding. The student is introduced to a variety of real world applications requiring a fundamental understanding of electrical theory, codes and installation practices. Topics include grounding requirements for AC systems, service equipment, ground faults and testing.

ETA-B3064 is a COTC Quarter-to-Semester Bridge Course. There is no Semester equivalent course for ETA-B3064.

ETA-B3065 Test Instrumentation and Safety (Bridge Course)

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

An introduction to basic Test Instruments and Transformers, the student will learn the theory of operation and use of analog meters, Digital Multimeters, and Oscilloscopes. Emphasis will be placed on accurate safe measurement techniques. The student will also learn basic transformer theory.

ETA-B3065 is a COTC Quarter-to-Semester Bridge Course. ETA-B3065 was replaced in the Semester system as ETA-105 Test Instrumentation and Safety.

**COTC COURSE DESCRIPTIONS – ELECTRICAL TRADES TECHNOLOGY
2014-2015 ACADEMIC YEAR****ETA-B3066 Electrical Grounding** (Bridge Course)

6 credit hours, 6 contact hours (6 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-3063 or ETA-B3063. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this course the student will examine grounding and bonding requirements for industrial and commercial electrical installations. Using a combination of lessons, National Electric Code sections and labs, the student will explore all facets of grounding and bonding. The student is introduced to a variety of real world applications requiring a fundamental understanding of electrical theory, codes and installation processes. Topics include grounding requirements for AC systems, service equipment, ground faults and testing.

ETA-B3066 is a COTC Quarter-to-Semester Bridge Course. ETA-B3066 was replaced in the Semester system as ETA-106 Electrical Grounding.

ETA-B3067 Industrial Blueprints and Advanced Transformers (Bridge Course)

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-3064 or ETA-B3064. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this course the student using grounding and bonding skills from previous lessons will apply the knowledge to common industrial and commercial electrical applications. The student will explore the mathematics and science of three phase grounded systems. Topics include advanced three phase (WYE and DELTA) transformers, calculating ground faults, and using complex industrial blueprints.

ETA-B3067 is a COTC Quarter-to-Semester Bridge Course. ETA-B3067 was replaced in the Semester system as ETA-201 Industrial Blueprints and Advanced Transformers.

ETA-B3068 Advanced Codes and Practices (Bridge Course)

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-3063 or ETA-B3063. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In a continued study of the national and local electrical codes for Overcurrent, ground faulty and short circuit protective devices, the student will learn the fundamentals of circuit protection. The student will learn how to calculate the load and apply the correct circuit protection for various applications.

ETA-B3068 is a COTC Quarter-to-Semester Bridge Course. ETA-B3068 was replaced in the Semester system as ETA-202 Advanced Codes and Practices.

ETA-B3069 Motors and Motor Control I (Bridge Course)

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ETA-3082 or ETA-B3082. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this course, the student begins an in-depth study of motors and industrial motor control systems. The student first learns the operation and construction of polyphase AC motors and DC motors, then applies those skills to commercial and industrial applications and their controls. Topics include polyphase motors, basic motor control applications.

ETA-B3069 is a COTC Quarter-to-Semester Bridge Course. ETA-B3069 was replaced in the Semester system as ETA-203 Motors and Motor Control.

**COTC COURSE DESCRIPTIONS – ELECTRICAL TRADES TECHNOLOGY
2014-2015 ACADEMIC YEAR****ETA-B3070 Lightning Protection and HVAC (Bridge Course)**

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-3068 or ETA-B3068. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this course, the student begins a study of HVAC fundamentals, Lightning protection systems, and Locating Cable faults pertaining to applications found in modern commercial and industrial environments.

ETA-B3070 is a COTC Quarter-to-Semester Bridge Course. ETA-B3070 was replaced in the Semester system as ETA-204 Lightning Protection and HVAC.

ETA-B3071 OSHA 30 (Bridge Course)

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded S/U.

This course provides in-depth coverage of OSHA policies, procedures and standards, as well as construction safety and health principles. Topics include scope and application of the OSHA construction standards, fall protection, electrical safety, excavations, trenching, personal protective equipment, ladders, lockout/tagout and scaffolds as well as hazard communication, fire protection, hand tools, power tools, welding, cranes, hoists, power transmission, asbestos, mechanized equipment and concrete. Special emphasis is placed on those areas that are the most hazardous, using OSHA standards as a guide. Upon successful course completion, the student will receive an OSHA construction safety and health 30-hour course completion card. This course is graded on a Satisfactory/Unsatisfactory basis.

ETA-B3071 is a COTC Quarter-to-Semester Bridge Course. ETA-B3071 was replaced in the Semester system as ETA-107 OSHA 30.

ETA-B3072 Program Logic Controllers for Electricians (Bridge Course)

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ETA-3069 or ETA-B3069. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

This course of study provides the electrical worker with hands-on exposure to PLC's and their associated installation and programming requirements. The student will learn basic ladder logic and PLC programming.

ETA-B3072 is a COTC Quarter-to-Semester Bridge Course. ETA-B3072 was replaced in the Semester system as ETA-205 Program Logic Controllers – Electricians.

ETA-B3073 Fire Alarm Systems (Bridge Course)

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ETA-3068 or ETA-B3068. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this course, the student will use skills from previous lessons and apply the knowledge to Fire Alarm systems. Using a combination of lessons and labs, the student will explore the mathematics and science of fire alarm applications. Topics include using complex blueprints, fire alarm installation requirements, code requirements for fire alarm applications.

ETA-B3073 is a COTC Quarter-to-Semester Bridge Course. ETA-B3073 was replaced in the Semester system as ETA-210 Fire Alarm Systems.

**COTC COURSE DESCRIPTIONS – ELECTRICAL TRADES TECHNOLOGY
2014-2015 ACADEMIC YEAR****ETA-B3074 Automated Networks and Special Code Applications** (Bridge Course)

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-3068 or ETA-B3068. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this course, the student will use skills from previous lessons and apply the knowledge to common industrial and commercial electrical applications. Using a combination of lessons, National Electric Code sections and labs, the student will explore the mathematics and science of Automated Networks and special power systems. Topics include using complex blueprints, and Automated and Integrated building networks.

ETA-B3074 is a COTC Quarter-to-Semester Bridge Course. ETA-B3074 was replaced in the Semester system as ETA-211 Automated Networks and Special Code Applications.

ETA-B3075 Advanced Test Instruments (Bridge Course)

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-3065 or ETA-B3065. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this course the student will use skills from previous lessons and apply the knowledge to common industrial and commercial electrical applications. The student will explore Measurement techniques, Instrumentation fundamentals, calibration, Installation and Maintenance.

ETA-B3075 is a COTC Quarter-to-Semester Bridge Course. ETA-B3075 was replaced in the Semester system as ETA-212 Advanced Test Instruments.

ETA-B3076 Distributed Generation (Bridge Course)

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-3068 or ETA-B3068. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this course the student will use skills from previous lessons and apply the knowledge to common industrial and commercial Distributed Generation Systems. Topics include uninterrupted Power Supplies, Solar Photovoltaic Systems and Fuel Cells.

ETA-B3076 is a COTC Quarter-to-Semester Bridge Course. ETA-B3076 was replaced in the Semester system as ETA-213 Distributed Generation.

ETA-B3077 High Voltage and Insulation Testing (Bridge Course)

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ETA-3065 or ETA-B3065. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this course the student will use skills from previous lessons and apply the knowledge to common industrial and commercial electrical applications. The student will explore the process of detecting, testing and safety measures of High Voltage testing. Power Quality is explored to understand, identify, troubleshoot and repair Power Quality problems. Topics include High Voltage safety and testing measures, Power Quality concepts, problems, harmonics and system troubleshooting.

ETA-B3070 is a COTC Quarter-to-Semester Bridge Course. ETA-B3070 was replaced in the Semester system as ETA-214 High Voltage and Insulation Testing.

**COTC COURSE DESCRIPTIONS – ELECTRICAL TRADES TECHNOLOGY
2014-2015 ACADEMIC YEAR****ETA-B3078 Telephone and Security Systems** (Bridge Course)

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ETA-3074 or ETA-B3074. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this course the student will use skills from previous lessons and apply the knowledge to common industrial and commercial electrical applications. Using a combination of lessons and labs, the student will explore Basic Telephone and Security systems.

ETA-B3078 is a COTC Quarter-to-Semester Bridge Course. ETA-B3078 was replaced in the Semester system as ETA-215 Telephone and Security Systems.

ETA-B3081 DC Theory for Electricians (Bridge Course)

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in ETA-3080 or ETA-B3080. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

An introduction to direct current fundamentals, electron physics, current and voltage, work, power series and parallel resistances, electrical measurement devices, circuit analysis.

ETA-B3081 is a COTC Quarter-to-Semester Bridge Course. ETA-B3081 was replaced in the Semester system as ETA-121 DC Theory for Electricians.

ETA-B3082 AC Theory for Electricians (Bridge Course)

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in ETA-3081 or ETA-B3081. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

Properties of alternating current, AC measurements, inductance and inductive, reactance, capacitance, impedance, series and parallel circuits, resonance, power and power factor correction, single and three phase transformers and load analysis are discussed.

ETA-B3082 is a COTC Quarter-to-Semester Bridge Course. ETA-B3082 was replaced in the Semester system as ETA-122 AC Theory for Electricians.

ETA-B3084 Physics-Electronics for Electricians (Bridge Course)

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in ETA-3083 or ETA-B3083. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this course the student is introduced to electronic theory that applies to industrial and commercial electrical systems. Through the use of lessons and labs, the student is exposed to most basic components found in electronic circuits. The student is introduced to a variety of real world applications requiring a fundamental understanding of electronics and electronic components. Topics include semiconductors, diodes, SCRs, transistor, rectifiers, amplifiers, integrated circuits, oscillators and timers.

ETA-B3084 is a COTC Quarter-to-Semester Bridge Course. ETA-B3084 was replaced in the Semester system as ETA-125 Physics-Electronics for Electricians.

**COTC COURSE DESCRIPTIONS – ELECTRICAL TRADES TECHNOLOGY
2014-2015 ACADEMIC YEAR****ETA-B3085 Digital Electronics for Electricians (Bridge Course)**

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ETA-3084 or ETA-B3084. *Open only to students enrolled in the Electrical Trades Technology program at COTC in an ETA Plan of Study prior to Academic Year 2012-2013.* Course is graded A-F.

In this course the student begins an in-depth study of digital electronics. The student is exposed to Boolean Algebra, along with some characteristics of logic circuits, while building upon the binary number system and computer mathematics to explore memory, RS, flip-flops, binary arithmetic circuits, clock circuits, and digital switching circuits.

ETA-B3085 is a COTC Quarter-to-Semester Bridge Course. ETA-B3085 was replaced in the Semester system as ETA-124 Digital Electronics for Electricians.

ETA-B3088 AC Theory – Level II

2credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Open to students accepted into the ETA program only. Course is graded A-F.

In this course, the student will continue with an in depth study of AC theory including Series, Parallel, and combination RC, RL, and RLC circuits.

ETA-B3088 replaces ETA-B3084 in the Semester system. Both ETA-B3088 and ETA-B3084 are COTC Quarter-to-Semester Bridge Courses. Both ETA-B3088 and ETA-B3084 were replaced in the Semester system as ETA-125 Physics-Electronics for Electricians.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS – FIRE SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR**

FIRE-101 Firefighter Health and Safety Program

2.50 credit hours, 3.50 contact hours (2 hours lecture and 1.50 hours lab). Prerequisite: Enrollment in Fire Science Technology program. C grade (2.00) or better in FIRE-102 (or concurrent enrollment in FIRE-102). Course is graded A-F.

Firefighter Health and Safety program instructs Firefighter Recruits in the proper way to stay healthy and fit for duty at all times. The student is taught the Sixteen Firefighter Life Safety Initiatives and about the National Fallen Firefighter Near-Miss Program. Firefighter nutrition and wellness concepts are introduced with the student required to document his/her dietary intake demonstrating application of classroom instruction. Proper methods of physical fitness are demonstrated and implemented. Firefighter rehabilitation is discussed. The physical fitness portion of the program provides vital training to improve the firefighter's overall physical endurance and ability to perform his/her duties without sustaining musculoskeletal injuries.

FIRE-101 replaces FIRESCI-101 Firefighter Health and Safety Program in the Semester system. Both FIRE-101 and FIRESCI-101 replace FST-5775 Firefighter Health and Safety Program in the Quarter system.

FIRE-102 Fire Fighter I

6 credit hours, 10 contact hours (4 hours lecture and 6 hours lab). Prerequisite C grade (2.00) or better in GENR-096, GENR-098 and MATH-050 (or appropriate score on COMPASS placement). Concurrent enrollment in FIRE-101 and certificate of completion of NIMS IS-100.b (ICS 100) Introduction to Incident Command System and IS-700.a National Incident Management Command System instruction. Student must produce a copy of each certificate of completion and bring the certificates the first day of class. Course is graded A-F.

This course prepares the individual to perform the duties of Fire Fighters. This includes instruction in basic fire-fighting equipment operation and maintenance, principles of fire science and combustible substances, methods of controlling different types of fires, hazardous material handling and control, fire rescue procedures, public relations and applicable laws and regulations.

FIRE-102 replaces FIRESCI-102 Fire Fighter I in the Semester system. Both FIRE-102 and FIRESCI-102 replace FST-5770 Fire Fighter I in the Quarter system. Both FIRE-102 and FIRESCI-102 meet the Ohio Transfer Assurance Guide standards for course CTFFI002.

FIRE-103 Fire Fighter II

6 credit hours, 10 contact hours (4 hours lecture and 6 hours lab). Prerequisite: C grade (2.00) or better in (FIRE-102 or FIRESCI-102). Course is graded A-F.

This course prepares individuals to perform additional duties of a Fire Fighter. It includes advanced instruction in fire department communication, preparedness, fire ground and rescue operations. The course also covers the prevention of fire and maintenance of fire equipment. Basic driving and operation of fire vehicles is learned.

FIRE-103 replaces FIRESCI-103 Fire Fighter II in the Semester system. Both FIRE-103 and FIRESCI-103 replace FST-5774 Fire Fighter II in the Quarter system. Both FIRE-103 and FIRESCI-103 meets the Ohio Transfer Assurance Guide standards for course CTFFI003.

**COTC COURSE DESCRIPTIONS – FIRE SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR**

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FIRE-104 Driver Operator Pumper and Emergency Vehicle Operations

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: Concurrent enrollment in FIRE-102 and FIRE-103. Course is graded A-F.

This course is designed as a additional segment to supplement the Firefighter I and II (FIRE-102 and FIRE-103) courses and is based on the National Fire Protection Association (NFPA) 1001 Standard for Firefighter Professional Qualifications; NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications; NFPA 1451 Standard for a Fire Service Vehicle Operations Training Program. This program trains the Firefighter Recruit the basic skills needed to drive and operate Fire Department Pumping Apparatus safely.

FIRE-104 replaces FIRESCI-104 Driver Operator Pumper and Emergency Vehicle Operations in the Semester system. Both FIRE-104 and FIRESCI-104 replace FST-5776 Driver Operator Pumper and Emergency Vehicle Operations in the Quarter system.

FIRE-110 Principles of Emergency Services

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course provides an overview to fire protection and emergency services, career opportunities in fire protection and related fields, culture and history of emergency services, fire loss analysis, organization and function of public and private fire protection services, fire departments as part of local government, laws and regulations affecting the fire service, fire service nomenclature, specific fire protection functions, basic fire chemistry and physics, introduction to fire protection systems, introduction to fire strategy and tactics, and life safety initiatives.

FIRE-110 replaces FIRESCI-110 Principles of Emergency Services in the Semester system. Both FIRE-110 and FIRESCI-110 replace FST-5735 Principles of Emergency Services in the Quarter system. Both FIRE-110 and FIRESCI-110 meet the Ohio Transfer Assurance Guide standards for course OFS004.

FIRE-120 Fire Prevention

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course provides fundamental knowledge relating to the field of fire prevention. Topics include the following: history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use and application of codes and standards, plans review, fire inspections, fire and life safety education, and fire investigation.

FIRE-120 replaces FIRESCI-120 Fire Prevention in the Semester system. Both FIRE-120 and FIRESCI-120 replace FST-5760 Fire Prevention in the Quarter system.

FIRE-125 Building Construction for Fire Protection

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (FIRE-110 or FIRESCI-110) and (ENGL-113 or ENGL-111). Course is graded A-F.

This course provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies.

FIRE-125 replaces FIRESCI-125 Building Construction for Fire Protection in the Semester system. Both FIRE-125 and FIRESCI-125 replace FST-5706 Building Construction of Fire Science in the Quarter system.

**COTC COURSE DESCRIPTIONS – FIRE SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR**

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FIRE-132 Fire Safety Inspector

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: NIMS IS-700a National Incident Management System, IS-100a Incident Command System, completed a Hazardous Materials Awareness class, State of Ohio certified firefighter (any level), currently employed by a fire department. Course is graded A-F.

Participant will gain an understanding of the fire inspector's role in code enforcement, general fire prevention practices, fire safety requirements related to HAZ MAT, electrical systems and fire protection systems. The student will learn the skills necessary to conduct fire safety inspections from the Ohio Fire Academy in conjunction with the Code Enforcement Bureau of the State Fire Marshal's Office. This class meets certification requirements established by the Ohio Department of Public Safety and NFPA 1031, Fire Inspector Professional Qualifications. In addition, this course fulfills requirements for IFSAC, Fire Safety Inspector I.

FIRE-132 replaces FIRESCI-132 Fire Safety Inspector in the Semester system. There was no Quarter system equivalent for FIRE-132 or FIRESCI-132. Both FIRE-132 and FIRESCI-132 meets the Ohio Transfer Assurance Guide standards for course CTFINSP001.

FIRE-134 Fire Service Instructor

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in (FIRE-103 or FIRESCI-103); currently active as a firefighter, must be at least 18 years of age at the time of registration, must be a high school graduate or have a G.E.D. and pass a written fire pre-knowledge exam (80 percent) . Course is graded A-F.

This course will provide the student with the ability to deliver instruction effectively from a prepared lesson plan, adapt lesson plans, establish effective learning environments, and maintain associated records. Successful completion of this course will allow the student to be certified as a State of Ohio Fire Safety Instructor.

FIRE-134 replaces FIRESCI-134 Fire Service Instructor in the Semester system. There was no Quarter system equivalent for FIRE-134 or FIRESCI-134. Both FIRE-134 and FIRESCI-134 meets the Ohio Transfer Assurance Guide standards for course CTFSI001.

FIRE-135 Strategy and Tactics

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (FIRESCI-102 or FIRE-102) and (FIRESCI-110 or FIRE-110). Course is graded A-F.

This course introduces the principles of fire ground control through utilization of personnel, equipment, and extinguishing agents.

FIRE-135 replaces FIRESCI-135 Strategy and Tactics in the Semester system. Both FIRE-135 and FIRESCI-135 replace FST-5725 Firefighting Strategies in the Quarter system.

FIRE-140 Principles of Fire and Emergency Services Safety and Survival

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (FIRE-102 or FIRESCI-102) and (FIRE-110 or FIRESCI-110). Course is graded A-F.

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services.

FIRE-140 replaces FIRESCI-140 Principles of Fire and Emergency Services Safety and Survival in the Semester system. Both FIRE-140 and FIRESCI-140 replace FST-5749 Principles of Fire and Emergency Services Safety and Survival in the Quarter system.

**COTC COURSE DESCRIPTIONS – FIRE SCIENCE TECHNOLOGY
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FIRE-145 Occupational Safety and Health for Emergency Services

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk and hazard evaluation and control procedures for emergency service organizations.

FIRE-145 replaces FIRESCI-145 Occupational Safety and Health for Emergency Services in the Semester System. There is no Quarter equivalent course for FIRE-145 or FIRESCI-145.

FIRE-150 Fire Protection Hydraulics and Water Supply

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (FIRESCI-103 or FIRE-103). Course is graded A-F.

This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

FIRE-150 replaces FIRESCI-150 Fire Protection Hydraulics and Water Supply in the Semester system. Both FIRE-150 and FIRESCI-150 replace FST-5750 Hydraulics of Fire Science in the Quarter system.

FIRE-155 Hazardous Materials

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

The student will learn to identify hazardous materials and respond to hazardous materials incidents in this course, and study all federal, state, and local hazardous substance legislation and regulations. This course will follow professional competencies of responders to hazardous material incidents.

FIRE-155 replaces FIRESCI-155 Hazardous Materials in the Semester system. Both FIRE-155 and FIRESCI-155 replace FST-5709 Hazardous Materials I in the Quarter system.

FIRE-160 Legal Aspects

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (FIRE-110 or FIRESCI-110). Course is graded A-F.

This course will address the Federal, State, and local laws that regulate emergency services and includes a review of national standards, regulations, and consensus standards.

FIRE-160 replaces FIRESCI-160 Legal Aspects in the Semester system. Both FIRE-160 and FIRESCI-160 replace FST-5702 Legal Aspects in Fire Service in the Quarter system.

FIRE-165 Fire and Emergency Services Administration

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course introduces the student to the organization and management of a fire and emergency services department and the relationship of government agencies to the fire service. Emphasis is placed on fire and emergency service, ethics, and leadership from the perspective of the company officer.

FIRE-165 replaces FIRESCI-165 Fire and Emergency Service Administration in the Semester system. Both FIRE-165 and FIRESCI-165 replace FST-5713 Fire Organization and Administration in the Quarter system.

**COTC COURSE DESCRIPTIONS – FIRE SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR**

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FIRE-215 Fire Protection Systems

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (FIRE-125 or FIRESCI-125). Course is graded A-F.

This course provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.

FIRE-215 replaces FIRESCI-215 Fire Protection Systems in the Semester system. Both FIRE-215 and FIRESCI-215 replace FST-5701 Principles of Fire Protection Systems in the Quarter system.

FIRE-230 Fire Behavior and Combustion

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course explores the theories and fundamentals of how and why fires start, spread, and are controlled.

FIRE-230 replaces FIRESCI-230 Fire Behavior and Combustion in the Semester system. Both FIRE-230 and FIRESCI-230 replace FST-5703 Fire Behavior and Combustion in the Quarter system. Both FIRE-230 and FIRESCI-230 meet the Ohio Assurance Guide standards for course OFS003.

FIRE-270 Current Issues in the Fire Service

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (FIRE-110 or FIRESCI-110). Course is graded A-F.

This course offers the student the opportunity to examine in-depth current issues affecting the Fire Service. Areas covered include development and research in contemporary methods, techniques, and devices in the field. Topics differ with each offering.

FIRE-270 replaces FIRESCI-270 Current Issues in Fire Science in the Semester system. Both FIRE-270 and FIRESCI-270 replace FST-Current Issues in the Fire Service in the Quarter system.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - FORENSIC SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR**

FOR-101 Forensic Criminalistics I

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Eligible to enroll in ENGL-112. Course is graded A-F.

This course will provide the student with an overview of the various disciplines of forensic science and how they relate to the identification, detection, and solution of crime. The student will learn the significance of preserving physical evidence. The student will be involved in the study and application of scientific crime detection techniques with emphasis on evidence, ballistics, fingerprints, blood work and other on-the-scene forensic techniques.

FOR-101 replaces FORSCI-101 Forensic Science Criminalistics I in the Semester system. Both FOR-101 and FORSCI-101 replace FOR-5510 Principles of Forensics and FOR-5530 Forensic Criminalistics I in the Quarter system.

FOR 102 Forensic Photography

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course will teach the student forensic photography and various uses of photography in the criminal justice system. The student will learn the history of photography. There will be hands-on experience with the use of various cameras, including the 35mm film camera, digital cameras and videography. The student will learn crime scene photography and alternative light sources. Legal aspects of forensic photography will be discussed and court presentation of photographs will be done in a moot court. A crimes scene photographic report will be prepared.

FOR-102 replaces FORSCI-102 Forensic Photography in the Semester system. Both FOR-102 and FORSCI-102 replace FOR-5524 Forensic Photography I and FOR-5525 Forensic Photography II in the Quarter system.

FOR-103 Introduction to Fire Origin and Cause

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Eligible to enroll in ENGL-112. Course is graded A-F.

The purpose of this course is to be able to determine the cause of fires and explosions. Finding the point of origin and determining the cause at a scene will be discussed. Familiarity with chemical and physical principles is necessary in these investigations, and the conditions which influence the growth, spread, and development will be reviewed. Emphasis will be placed on techniques for debris removal and scene reconstruction and examination of evidence.

FOR-103 replaces FORSCI-103 Introduction to Fire Origin and Cause in the Semester system. Both FORSCI-103 and FOR-103 replace FOR-5550 Introduction to Fire Origin and Cause in the Quarter system.

FOR-105 Forensic Investigations

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course will cover forensic and general investigative techniques. The student will study the fundamentals of interviews and interrogations and their legal aspects, working with informants and sources, crime scene searches, evidence handling and packaging, chain of custody issues, crime scene reports and sketching. This course will prepare the student for the advanced courses of criminalistics.

FOR-105 replaces FORSCI-105 Forensic Investigations in the Semester system. Both FOR-105 and FORSCI-105 replace FOR-5516 Forensic Investigations and FOR-5520 Legal/Evidentiary Aspects of Forensics in the Quarter system.

**COURSE DESCRIPTIONS - FORENSIC SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****FOR-106 Survey of Fraud in Society**

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Eligible to enroll in ENGL-112. Course is graded A-F.

This course provides an overview of the field of questioned documents examination, computer crimes and fraud in society. The student will compare handwriting samples, obliterated texts, and different printing and writing instruments to detect forgeries and frauds. Preparation of affidavits, search warrants, and the techniques of seizing computers and computer-related equipment will also be examined. The nature of fraud in society and who commits it will be reviewed. The prevention, detection, and investigation of fraud will also be examined.

FORSCI-106 Survey of Fraud in Society replaces FOR-5552 Survey of Fraud in Society, Questioned Documents, and Computer Crimes First Responder in the Quarter system.

FOR-204 Forensic Criminalistics II

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in (ENGL-110 or ENGL-112) and (FOR-101 or FORSCI-101). Course is graded A-F.

Through lecture, demonstration and hands-on experience, the student will learn and apply scientific crime detection techniques including ballistics, trace metal detection, gun powder residue, hair and fiber evidence, paint comparison, and physical comparisons. The student will participate in courtroom testimony as an expert witness.

FORSCI-204 Forensic Science Criminalistics II replaces FOR-5514 Forensic Firearms and FOR-5531 Forensic Criminalistics II in the Quarter system.

FOR-205 Toxicology and Laboratory Instrumentation and Analysis

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in CHEM-100, MATH-130 (or higher) and ENGL-112. Course is graded A-F.

This course introduces the student to the principles of pharmacology and the relationship of drugs and other chemicals to adverse effects upon human health or behavior. The student will learn the basic tools necessary for drug identification and quantification. Basic principles of drug level interpretations are also covered.

FOR-205 replaces FORSCI-205 Toxicology and Laboratory Instrumentation and Analysis in the Semester system. Both FOR-205 and FORSCI-205 replace FOR-5532 Introduction to Laboratory Instrumentation and FOR-5534 Instrumentation Analysis and FOR-5535 Forensic Toxicology in the Quarter system.

FOR-206 Forensic Serology

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C (2.00) grade or better in CHEM-100, MATH-130 (or higher) and ENGL-112, FOR-101 and FOR-204. Course is graded A-F.

This course is an overview of the field of serology with an emphasis on forensic application. Traditional immunological techniques used for identification and blood grouping of fluids and dried stains will be emphasized by lecture and lab. The principles of DNA testing will be explained and demonstrated. The student will learn to apply the most appropriate technique to specific serological circumstances.

FOR-206 replaces FORSCI-206 Forensic Serology in the Semester system. Both FOR-206 and FORSCI-206 replace FOR-5547 Forensic Serology in the Quarter system.

**COURSE DESCRIPTIONS - FORENSIC SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****FOR-207 Forensic Science Capstone**

3 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: C grade (2.00) or better in (FOR-102 or FORSCI-102), (FOR-103 or FORSCI-103), (FOR-105 or FORSCI-105), (FOR-106 or FORSCI-106), (FOR-204 or FORSCI-204), (FOR-205 or FORSCI-205) and (FOR-206 or FORSCI-206). Course is graded A-F.

The student will work in teams and fully process a major crime scene, fully examine the evidence sized at the crime scene and conduct the follow up investigative activities including witness, suspect and subject interviews; with a moot court presentation. In this course the student will demonstrate a mastery of his/her program of study in a meaningful culmination of his/her degree requirements. Topics covered during the capstone will allow the student to review, analyze, and integrate previous course work.

FOR-207 replaces FORSCI-207 Forensic Science Capstone in the Semester system. Both FOR-207 and FORSCI-207 replace FOR-5548 Advanced Crime Scenes in the Quarter system.

FORSCI-B5510 Principles of Forensics (Bridge Course)

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Appropriate COMPASS placement in reading, writing and math. Course is graded A-F.

This course will provide the student with an overview of the various disciplines of forensic science and how they relate to the identification, detection, and solution of crime. The student will be introduced to the role of the criminalistics laboratory for comparison analysis of evidence. This course will provide the framework for the skills needed by a crime lab technician and crime scene processor.

FORSCI-B5510 is a semester bridge course for students coming out of the quarter system with previous quarter credit for FOR-5530. Successful completion of FOR-5530 and FORSCI-B5510 (with a C grade [2.00] or better) will fulfill the semester requirement for FORSCI-101 Forensics Criminalistics I.

FORSCI-B5514 Forensic Firearms (Bridge Course)

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Acceptance into the Forensic Science Technology program and permission of the Program Director. Course is graded A-F.

Through lecture, demonstration and hands-on experience, the student will learn and apply scientific crime detection techniques including ballistics, trace metal detection, gun powder residue and physical comparisons.

FORSCI-B5514 is a semester bridge course for students coming out of the quarter system with previous quarter credit for FOR-5531. Successful completion of FOR-5531 and FORSCI-B5514 (with a C grade [2.00] or better) will fulfill the semester requirement for FORSCI-204 Forensics Criminalistics II.

FORSCI-B5516 Forensic Investigations (Bridge Course)

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course will cover forensic and general investigative techniques. The student will study the fundamentals of interviews and interrogations and their legal aspects, working with informants and sources, crime scene searches, evidence handling and packaging, chain of custody issues, crime scene reports and sketching. This course will prepare the student for the advanced courses of criminalistics.

FORSCI-B5516 is a semester bridge course for students coming out of the quarter system with previous quarter credit for FOR-5520. Successful completion of FOR-5520 and FORSCI-B5516 (with a C grade [2.00] or better) will fulfill the semester requirement for FORSCI-105 Forensics Investigations.

**COURSE DESCRIPTIONS - FORENSIC SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****FORSCI-B5525 Forensic Photography II (Bridge Course)**

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in FOR-5524 (quarter course). Course is graded A-F.

This course will teach the student forensic photography and various uses of photography in the criminal justice system. The student will learn the history of photography. There will be hands-on experience with the use of various cameras, including the 35mm film camera, digital cameras and videography. The student will learn crime scene photography and alternative light sources. Legal aspects of forensic photography will be discussed and court presentation of photographs will be done in a moot court. A crimes scene photographic report will be prepared.

FORSCI-B5525 is a semester bridge course for students coming out of the quarter system with previous quarter credit for FOR-5524. Successful completion of FOR-5524 and FORSCI-B5525 (with a C grade [2.00] or better) will fulfill the semester requirement for FORSCI-102 Forensic Photography.

FORSCI-B5530 Forensics Criminalistics I (Bridge Course)

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None; however successful completion of FOR-5510 is recommended (FOR-5510 is a quarter course). Course is graded A-F.

This course will provide the student with an overview of the various disciplines of forensic science and how they relate to the identification, detection, and solution of crime. The student will learn the significance of preserving physical evidence. The student will be involved in the study and application of scientific crime detection techniques with emphasis on evidence, ballistics, fingerprints, blood work and other on-the-scene forensic techniques.

FORSCI-B5530 is a semester bridge course for students coming out of the quarter system with previous quarter credit for FOR-5510. Successful completion of FOR-5510 and FORSCI-B5530 (with a C grade [2.00] or better) will fulfill the semester requirement for FORSCI-101 Forensics Criminalistics I.

FORSCI-B5531 Forensics Criminalistics II (Bridge Course)

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None; however, successful completion of FOR-5510 and FOR-5530 are recommended (quarter courses). Course is graded A-F.

Through lecture, demonstration and hands-on experience, the student will learn and apply scientific crime detection techniques including ballistics, trace metal detection, gun powder residue, hair and fiber evidence, paint comparison, and physical comparisons. The student will participate in courtroom testimony as an expert witness.

FORSCI-B5531 is a semester bridge course for students coming out of the quarter system with previous quarter credit for FOR-5514. Successful completion of FOR-5514 and FORSCI-B5531 (with a C grade [2.00] or better) will fulfill the semester requirement for FORSCI-204 Forensics Criminalistics II.

FORSCI-B5532 Introduction to Laboratory Instrumentation (Bridge Course)

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Concurrent enrollment in FORSCI-B5534 (semester bridge course). Course is graded A-F.

The student will learn that advances in the technology of laboratory instrumentation have enabled technicians to replace highly trained analytical chemists in the routine work of the forensic laboratory. The purpose of this course is to introduce the student to the basic underlying principles of spectroscopy and chromatography, the techniques of identification and separation science. The student will become familiar with the Beer-Lambert Law, which provides the theoretical basis for quantitative spectroscopy. The student will be exposed to the basic principles of operation for gas chromatography detectors, their limits of delectability and their application to analysis for forensic evidence.

FORSCI-B5532 is a semester bridge course for students coming out of the quarter system with previous quarter credit for FOR-5534 and FOR-5535 (or FOR-5534 and FORSCI-B5535, or FORSCI-B5534 and FORSCI-B5535). Successful completion of these courses and FORSCI-B5532 (with a C grade [2.00] or better) will fulfill the semester requirement for FORSCI-205 Toxicology and Laboratory Instrumentation and Analysis.

**COURSE DESCRIPTIONS - FORENSIC SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****FORSCI-B5534 Instrumentation Analysis** (Bridge Course)

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Concurrent enrollment in FORSCI-B5532 (semester bridge course). Course is graded A-F.

Through demonstration and hands on experience, the student will expand their theoretical knowledge with practical illustration of spectrophotometers and chromatographs. Through examples of actual casework, the student will apply visible ultraviolet and infrared spectroscopy. The student will also apply gas chromatography to alcohol and drug analysis. The student will gain experience and the application of the combined technique, gas chromatography/mass spectroscopy to forensic problems.

FORSCI-B5534 is a semester bridge course for students coming out of the quarter system with previous quarter credit for FOR-5532 and FOR-5535 (or FOR-5532 and FORSCI-B5535, or FORSCI-B5532 and FORSCI-B5535). Successful completion of these courses and FORSCI-B5534 (with a C grade [2.00] or better) will fulfill the semester requirement for FORSCI-205 Toxicology and Laboratory Instrumentation and Analysis.

FORSCI-B5535 Forensic Toxicology (Bridge Course)

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in FOR-5532 and FOR-5534 (quarter courses). Course is graded A-F.

The student will learn the adverse effects of drugs and chemicals upon the human body. Forensic toxicology is concerned with not only the identification and quantitation of chemicals, but also the relationship of any levels detected in body fluids or tissues to the impairment of a person's health or behavior. The student will focus on the pharmacology of alcohol and the major drugs of abuse and their detection in breath, blood, urine, and saliva. Demonstrations and laboratory work will be essential to the student's successful completion of this course.

FORSCI-B5535 is a semester bridge course for students coming out of the quarter system with previous quarter credit for FOR-5532 and FOR-5534 (or FOR-5532 and FORSCI-B5534, or FORSCI-B5532 and FORSCI-B5534). Successful completion of these courses and FORSCI-B5535 (with a C grade [2.00] or better) will fulfill the semester requirement for FORSCI-205 Toxicology and Laboratory Instrumentation and Analysis.

PUBLISHED MARCH, 2014

CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - Pre-College Courses in English and Communications
2014-2015 ACADEMIC YEAR

GENR-090 Integrated Reading and Writing I

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: COMPASS placement. Course is graded A-F. *The course will count neither for elective credit nor toward meeting minimum credit hour requirements for graduation.*

Integrated Reading and Writing I strengthens the student's reading and writing skills essential for college success. The student will engage in active reading strategies to promote analysis and retention of information. The course requires analysis of multiple reading genres, including textbooks, fiction, autobiography, academic articles, opinion editorials, and works of investigative journalism. The course also addresses visual and media sources as significant contributors to reading comprehension. The writing process is intimately linked to reading methods in the course. The student will compose narrative, informative, and argument paragraphs and an essay in conjunction with reading these forms of writing. The student will engage in pre-writing, drafting, and revision as part of the writing process.

GENR-090 is a new course in the Semester system. GENR-090 is a pre-college course. Credit for GENR-090 will count neither for elective credit nor toward meeting the minimum credit hour requirements for graduation.

GENR-091 Integrated Reading and Writing II

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: COMPASS placement or C grade (2.00) or better in [GENR-090 or (GENR-094 and GENR-096)]. Course is graded A-F. *The course will count neither for elective credit nor toward meeting minimum credit hour requirements for graduation.*

Integrated Reading and Writing II prepares the student for critical reading, writing, and research at the college level. This course engages the student in applying critical reading and content analysis skills to assigned textbook, non-fiction and fiction readings. The student will apply basic conventions of grammar, punctuation, and diction in writing assignments such as summaries and expository essays that relate to selected readings and research. The student will employ standard expository essay structure in assignments that require locating and evaluating research sources. Through in-class and online writing samples, the student will analyze purpose, audience, as well as the quality of introductions, body paragraphs, and conclusions. Research in biographical and in historical information about selected authors will be emphasized.

GENR-091 is a new course in the Semester system. GENR-091 is a pre-college course. Credit for GENR-091 will count neither for elective credit nor toward meeting the minimum credit hour requirements for graduation.

GENR-100 Career Planning I

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Permission only. Must have documented enrollment in a Tech Prep program. Course is graded A-F.

This course provides opportunities for the student to explore issues related to career exploration regarding job market analysis, creation of resumes, cover letters, and job applications, and assists students with presentation skills.

GENR-100 Career Planning replaces COM-1011 Career Planning I in the Quarter system.

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**CENTRAL OHO TECHNICAL COLLEGE
COURSE DESCRIPTIONS – HEAVY EQUIPMENT OPERATION TECHNOLOGY
2014-2015 ACADEMIC YEAR**

HEO-101 Heavy Equipment Class I

3 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: Enrollment in the Heavy Equipment One-Year Certificate program. Course is graded S/U.

This is the first of a four course sequence in heavy equipment operation. The student will gain knowledge in safety, communication, construction math and drawings, as well as hand and power tools. This course is graded on a Satisfactory/ Unsatisfactory basis.

HEO-101 is a new course in the Semester system.

HEO-102 Heavy Equipment Class II

3 credit hours, 9 contact hours (0 hours lecture and 9 hours lab). Prerequisite: Enrollment in the Heavy Equipment One-Year Certificate program and Satisfactory grade in HEO-101. Course is graded S/U.

The second of a four course sequence in heavy equipment operation, this course will continue building on principles and practices introduced in Heavy Equipment Class I. The student will gain knowledge and basic understanding of the heavy equipment operation trade, heavy equipment operation safety, learn how to identify heavy equipment. The student will be introduced to basic heavy equipment operational procedures, including operation of tractors, dump trucks, loaders and backhoes, as well as basic activities related to grades. This course is graded on a Satisfactory/ Unsatisfactory basis.

HEO-102 is a new course in the Semester system.

HEO-103 Heavy Equipment Class III

3 credit hours, 9 contact hours (0 hours lecture and 9 hours lab). Prerequisite: Enrollment in the Heavy Equipment One-Year Certificate program and Satisfactory grade in HEO-102. Course is graded S/U.

This course is the third of a four course sequence in heavy equipment operation. The student will continue building on principles and practices learned in Heavy Equipment Class II. The student will gain knowledge and basic understanding of earthmoving concepts, the operation of dozers, rollers, scrapers, and forklifts, as well as perform excavation math calculations, advanced activities related to grades, and interpret civil blueprint drawings. This course is graded on a Satisfactory/ Unsatisfactory basis.

HEO-103 is a new course in the Semester system.

HEO-104 Heavy Equipment Class IV

3 credit hours, 9 contact hours (0 hours lecture and 9 hours lab). Prerequisite: Enrollment in the Heavy Equipment One-Year Certificate program and Satisfactory grade in HEO-103. Course is graded S/U.

This is the final course in a four course sequence in Heavy Equipment Operation. The student will continue building on principles and practices learned in Heavy Equipment Class III. The student will gain knowledge and basic understanding of construction and industry leadership skills, soils in construction, the operation of excavators, motor graders, demonstrate advanced operational techniques, as well as finishing and grading techniques. This course is graded on a Satisfactory/ Unsatisfactory basis.

HEO-104 is a new course in the Semester system.

**COTC COURSE DESCRIPTIONS – HEAVY EQUIPMENT OPERATION TECHNOLOGY
2014-2015 ACADEMIC YEAR****HEO 108 Safeland Certification**

0.50 credit hours, 0.50 contact hours (0.50 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Heavy Equipment Technology (either 2 year AAS or 1 year Certificate) program. Course is graded S/U.

This course is designed to take the place of multiple operator orientations and give the student a general idea of life and safety issues in the oil and gas industry. This course meets API RP 75 & API RP T-1 requirements and provides a basic, awareness-level understanding of certain general safety information that an employee should know before entering a company facility and while performing assigned work duties. This course is graded on a Satisfactory/Unsatisfactory basis.

HEO-108 is a new course in the Semester system.

HEO-110 Soils for Construction

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course provides an overview of the fundamental characteristics of the soils used in heavy construction. Classification and proper use of materials, as well as, construction methods are investigated.

HEO-110 is a new course in the Semester system.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - HISTORY
2014-2015 ACADEMIC YEAR**

HIST 150 U.S. History I: To 1877

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None; (ENGL-113 or ENGL-111) or (ENGL-216 or ENGL-215) is recommended. Course is graded A-F.

This course surveys the political, social, economic, and cultural development of the United States from pre-history and European exploration through Reconstruction. Among the topics covered are colonization, slavery, the establishment of the new nation, the displacement of native peoples, sectional problems, national growth, the Civil War and Reconstruction.

HIST-150 replaces HIS-1330 U.S. History I: to 1877 in the Quarter System. HIST-150 meets the Ohio Transfer Assurance Guide standards for both OHS010 and OHS043.

HIST-151 U.S. History II: Since 1877

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Prerequisite: None; (ENGL-113 or ENGL-111) or (ENGL-216 or ENGL-215) is recommended. Course is graded A-F.

This course surveys the political, social, economic, and cultural development of the United States from Reconstruction through the end of the twentieth century. Among the topics discussed are westward movement, industrialization, immigration, the labor movement, imperialism, progressivism, World War I, the Great Depression, the New Deal, World War II, the Cold War, Vietnam, and the transition to an information economy.

HIST-151 replaces HIS-1331 U.S. History II: Since 1877 in the Quarter System. HIST-151 meets the Ohio Transfer Assurance Guide standards for both OHS010 and OHS044.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS – HUMAN SERVICES PROGRAM
2014-2015 ACADEMIC YEAR**

HSV-100 Principles of Social Work

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

In this course the student will become acquainted with the field of human services, social work and related professions, including history and development, legal and ethical issues, cultural competence, and various settings in which services are provided. The roles and functions of the skilled helper in the field of human services will also be examined.

HSV-100 replaces HUMSVS-100 Principles of Social Work in the Semester system. Both HSV-100 and HUMSVS-100 replace HUM-5334 Principles of Social Work in the Quarter system. Both HSV-100 and HUMSVS-100 meet the Ohio Transfer Assurance Guide standards for course OSS029.

HSV-110 Chemical Dependency I

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course explores chemical dependency issues from a historical, cultural and legal perspective. Current theories of addiction are presented, as well as physiological effects and categorization of numerous addictive substances. An overview of treatment and prevention will also be included.

HSV-110 replaces HUMSVS-110 Chemical Dependency I in the Semester system. Both HSV-110 and HUMSVS-110 replace HUM-5300 Principles of Chemical Dependency in the Quarter system.

HSV-120 Direct Practice Skills

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course provides the student with interpersonal and interviewing skills used in direct practice in the human services field. Emphasis is placed on skills relevant to diverse populations and a multicultural society. Techniques will be practiced through videotaped role-playing.

HSV-120 replaces HUMSVS-120 Direct Practice Skills I in the Semester system. Both HSV-120 and HUMSVS-120 replace HUM-5281 Interpersonal Skills and HUM-5288 Counseling Skills in the Quarter system.

HSV-130 Case Management in Human Services

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course provides the student with basic knowledge and beginning skills in case management. Topics introduced include observation, data collection, documentation, and reporting of client behaviors, as well as identification and referral to appropriate services.

HSV-130 replaces HUMSVS-130 Direct Practice Skills II in the Semester system. Both HSV-130 and HUMSVS-130 replace HUM-5286 Case Management-Human Services in the Quarter system.

**COTC COURSE DESCRIPTIONS – HUMAN SERVICES PROGRAM
2014-2015 ACADEMIC YEAR****HSV-141 Therapeutic Group Practice Skills**

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course presents the basic principles of therapeutic group dynamics utilized in the field of human services. The student is provided with an experiential awareness of group dynamics and practice of interpersonal skills through participation as a group member in the laboratory setting. The student will also practice group leadership skills in this group laboratory setting.

Approved by the COTC Curriculum Committee on November 1, 2013. HSV-141 replaces HSV-140 Group Dynamics in the Semester system. Both HSV-141 and HSV-140 replace HUMSVS-140 Group Dynamics in Human Services in the Semester system. HSV-141, HSV-140 and HUMSVS-140 all replace HUM-5284 Group Dynamics in Human Services in the Quarter system.

HSV-150 Social Welfare and Policy

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course examines the programs and policies of the social welfare system in the United States. Historical development as well as current policies and trends will be analyzed.

HSV-150 replaces HUMSVS-150 Social Welfare and Policy in the Semester system. Both HSV-150 and HUMSVS-150 replace HUM-5344 Social Welfare and Policy in the Quarter system. Both HSV-150 and HUMSVS-150 meet the Ohio Transfer Assurance Guide standards for course OSS030.

HSV-200 Family Systems

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in SOC-100. Course is graded A-F.

This course studies the multi-cultural evolution of the family based on a generalist perspective. A variety of diverse family systems will be examined while considering social, political and economic forces in society. An over view of family relations throughout the life span as well as comparing characteristics of healthy and conflicted family systems will be included. Family system interventions will be introduced.

HSV-200 replaces HUMSVS-200 Family Systems in the Semester system. Both HSV-200 and HUMSVS-200 replace HUM-5354 Family Systems in the Quarter system. Both HSV-200 and HUMSVS-200 meet the Ohio Transfer Assurance Guide standards for course OSS023.

HSV-230 Social Problems

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in SOC-100. Course is graded A-F.

In this course, a variety of selected social problems in contemporary society are studied. Special emphasis is given to the analysis of the problems and evaluation of potential solutions. Social problems to be covered will include both micro-level and macro-level social issues.

HSV-230 replaces HUMSVS-230 Social Problems in the semester system. Both HSV-230 and HUMSVS-230 replace HUM-5324 Social Problems in the Quarter system. Both HSV-230 and HUMSVS-230 meet the Ohio Transfer Module standards for course TMSBS and also meet the Ohio Transfer Assurance Guide standards for course OSS025.

**COTC COURSE DESCRIPTIONS – HUMAN SERVICES PROGRAM
2014-2015 ACADEMIC YEAR****HSV-235 Capstone: Generalist Human Services Practice**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (HSV-285 or HUMSVS-285). Course is graded A-F.

Competent human services practice involves broad knowledge of person-in-environment and a full integration of generalist human services knowledge, skills, theory, culturally sensitive practice, evidence based interventions. This course expands the student's previous learning of micro and mezzo practice through case studies analyzing ethical practice related issues, and critical thinking skills. The students will expand their knowledge of the use of micro and mezzo skills in macro practice settings and through exploring the principles of working with communities, organizations and mental health. The course builds upon all previous courses in the curriculum and practicum experiences by utilizing a multi-system case study method and prepares students for human services practice.

HSV-235 is a new Semester course.

HSV-240 Social Services for an Aging Population

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course is designed to provide the student with the specialized knowledge base to understand and support the care needs of older adults and their families in a variety of environments with a special emphasis on those individuals residing in the community. Current social policies, provider and service programs are reviewed and discussed throughout the curriculum. Social service processes and tools are specifically reviewed in conjunction with the provision of care.

HSV-240 replaces HUMSVS-240 Social Services for an Aging Population in the Semester system. Both HSV-240 and HUMSVS-240 replace HUM-5326 Social Services Aging Population in the Quarter system.

HSV-250 Chemical Dependency II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (HSV-110 or HUMSVS-110). Course is graded A-F.

This course covers the theory and practices related to chemical dependency treatment. Current strategies and community resources useful in preventing chemical dependence and/or relapse are reviewed and discussed throughout the curriculum. The student will explore treatment issues related to working with diverse populations in conjunction with tools to prepare the human services worker.

HSV-250 replaces HUMSVS-250 Chemical Dependency II in the Semester system. There is no Quarter system course equivalent for HSV-250 or HUMSVS-250.

HSV-285 Human Services Practicum I

3 credit hours, 12 contact hours (2 hours lecture, 0 hours lab, and 10 hours practicum experience per week). Prerequisite: Enrollment in the Human Services Program; completion of a minimum 24 semester hours from the Plan of Study; C grade (2.00) or better in the following: (HSV-100 or HUMSVS-100), (HSV-110 or HUMSVS-110), (HSV-120 or HUMSVS-120), (HSV-130 or HUMSVS-130), (HSV-140 or HUMSVS-140), (ENGL-112 or ENGL-110), and (ENGL-113 or ENGL-111). The student must meet with the Program Director or Practicum Coordinator NO LATER THAN THE FOURTH WEEK OF THE SEMESTER PRIOR to this course. Course is graded A-F.

This course is designed to provide 140 clock hours of practical experience in the field of human services. The student will be placed in a human service agency where he/she will learn agency policies and procedures, observe professionals at work, and practice his/her own human service skills. Supervision will be provided by a qualified professional and an appropriate college representative. Classroom instruction will focus on discussion of experiences encountered in the practicum setting.

HSV-285 replaces HUMSVS-285 Human Services Practicum I in the Semester system. Both HSV-285 and HUMSVS-285 replace HUM-5307 Human Services Practicum I in the Quarter system.

**COTC COURSE DESCRIPTIONS – HUMAN SERVICES PROGRAM
2014-2015 ACADEMIC YEAR****HSV-286 Human Services Practicum II**

3 credit hours, 12 contact hours (2 hours lecture, 0 hours lab, and 10 hours practicum experience per week). Prerequisite: Enrollment in the Human Services Program; permission of the Program Director or the Practicum Coordinator, C grade (2.00) or better in (HSV-285 or HUMSVS-285). The student must meet with the Program Director or Practicum Coordinator NO LATER THAN THE FOURTH WEEK OF THE SEMESTER PRIOR TO TAKING THIS COURSE. Course is graded A-F.

This course is designed as a continuation of practical experience and provides an additional 140 clock hours in a human service agency. The student will increase his/her level of responsibility while implementing human service skills. Supervision will be provided by a qualified professional and an appropriate college representative. Classroom instruction will focus on discussion of experiences encountered in the practicum setting.

HSV-286 replaces HUMSVS-286 Human Services Practicum II in the Semester system. Both HSV-286 and HUMSVS-286 replace HUM-5327 Human Services Practicum II and HUM-5337 Human Services Practicum III in the Quarter system.

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CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS – Criminal Justice and Law Enforcement Technologies
2014-2015 ACADEMIC YEAR

LET-100 Introduction to Criminal Justice

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

During this introductory course the student will examine the Criminal Justice System, including the role of the Police, the Courts, and the Correctional system. An analysis of the agencies involved and the process of administration of criminal justice is also discussed.

LET-100 replaces LET-5209 Principles of Criminal Justice in the Quarter system. LET-100 meets the Ohio Transfer Assurance Guide standards for course OSS031.

LET-105 Ethics in Criminal Justice

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F

This course is designed to offer the student a thematic perspective for making ethical decisions in criminal justice. The student will be introduced to the fundamentals of ethical theory, doctrines, and controversies, and the rules of moral judgment. The student will examine ethical principles common to all components of the discipline, such as wisdom, goodness, morality, and justice, as well as the common vices of deception, racial prejudice, and egotism. This course will also explore area-specific perspectives that will address the state of ethics in policing, corrections, probation and parole.

LET-105 replaces LET-5117 Ethics in Criminal Justice in the Quarter system.

LET-110 Constitutional Law and Courts

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in LET-100 or permission of the Program Director. Course is graded A-F.

This course will focus on the study of the court systems in the United States and the study of the U.S. Constitution. Topics will include the Bill of Rights and court cases that are affected by the Bill of Rights. The student will study cases related to the First, Fourth, Fifth, Sixth, Eighth, and Fourteenth Amendments.

LET-110 replaces LET-5235 Constitutional Law and Evidence and LET-5262 Government and Courts in the Quarter system.

LET-115 Public Administration

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course will examine all aspects of the criminal justice system from an organizational perspective. Agencies and organizations will be portrayed within a general open-systems context in which community, state, and national inputs can be assessed with respect to their impact on individual agencies.

LET-115 replaces LET-5119 Public Administration in the Quarter system.

**COTC COURSE DESCRIPTIONS – Criminal Justice and Law Enforcement Technologies
2014-2015 ACADEMIC YEAR****LET-120 Criminal Law and Procedure**

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in LET-100 or permission of the Program Director. Course is graded A-F.

The student will learn the about Ohio Revised Code. The student will study the criminal code, pre-trial, trial, and post-trial procedures used in the law. The student will be able to recognize violations of the law, the appropriate statutes pertaining to these violations, and apply the procedures in scenarios and written work.

LET-120 replaces LET-5210 Criminal Law and Procedure in the Quarter system.

For Forensics Science Technology students coming out of the quarter system, LET-120 Criminal Law and Procedure will serve as a bridge course for those students who did not complete FOR-5520 Legal/Evidentiary Aspects of Forensics in the quarter system. Successful completion of LET-120 and FOR-5516 Forensic Investigations in the quarter system will fulfill the requirement for (FOR-105 or FORSCI-105) Forensic Investigations.

LET-125 Basic Investigations

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course emphasizes basic investigative techniques and procedures. The student will learn the fundamentals of obtaining evidence from witnesses and crime scene searches. The student will establish corpus delicti and how to prepare the necessary reports associated with the crime scene.

LET-125 replaces LET-5215 Basic Investigation in the Quarter system.

LET-130 Victimology

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

The student will look at the growing concern for the plight of crime victims and the exploration of the victimization experience. This course will cover the losses that burden victims of business and various kinds of street crime.

LET-130 replaces LET-5268 Victimology in the Quarter system.

LET-150 Introduction to Law Enforcement

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: This course is open to Law Enforcement Technology major students only with C grade (2.00) or better in LET-100, LET-105, LET-110, and LET-115; or by permission of the OPOTA LET Academy Commander.

This course will focus specifically on the role of law enforcement within the Criminal Justice System. It will examine law enforcement specific issues and how those issues impact the individual officer, an agency, and society. It will prepare the student entering the Police Academy program to deal with issues from this branch of the Criminal Justice System and guide them into basic training. This course is specifically for the student entering the OPOTA LET Academy.

LET-150 replace LET-5051 Introduction to Law Enforcement in the Quarter system. LET-150 meets the Ohio Transfer Assurance Guide standards for course OSS032.

LET-160 Wellness I

1 credit hour, 3 contact hours (0 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course will enhance the students learning in the area of wellness, and specifically in the areas of fitness required for law enforcement occupations. Life- long learning approaches to physical, spiritual, and psychological wellness will be facilitated. Diet and components of health-related fitness including cardiovascular function, body composition, muscular strength, muscular endurance, and flexibility will be addressed.

LET-160 replaces LET-5113 Wellness I in the Quarter system.

**COTC COURSE DESCRIPTIONS – Criminal Justice and Law Enforcement Technologies
2014-2015 ACADEMIC YEAR****LET-165 Wellness II**

1 credit hour, 3 contact hours (0 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in LET-160. Course is graded A-F.

This course will enhance the student's learning in the area of wellness, and specifically in the topics of strength and aerobics required for law enforcement occupations. Endurance strength versus explosive maximum strength will be addressed. An introduction to running covering topics of natural gate and pace will be covered. Jogging versus sprinting will also be covered.

LET-165 replaces LET-5114 Wellness II in the Quarter system.

LET-170 Wellness III

1 credit hour, 3 contact hours (0 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in LET-165. Course is graded A-F.

This course will enhance the student's learning in the area of wellness, specifically prepare him/her for the final assessment to achieve the 40 percent of the Cooper standards, and prepare him/her to enter into the police academy physical conditioning programming.

LET-170 replaces LET-5115 Wellness III in the Quarter system.

LET-200 Introduction to Corrections

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in LET-100, or permission of the Program Director. Course is graded A-F.

This is an introductory course of instruction where the student examines the adult and juvenile corrections systems in America to include history, philosophies, and the future. Areas of community based corrections, women in prison, and special needs populations will also be addressed.

LET-200 is a New Course in the Semester system. LET-200 meets the Ohio Transfer Assurance Guide standards for course OSS033.

LET-205 Drugs in the Criminal Justice System

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in LET-100 or permission of Program Director. Course is graded A-F.

This course will provide the student with an understanding of the impact of drugs within the Criminal Justice System. Drug abuse, in various forms, will be discussed and how the professional within the Criminal Justice System may become involved with intervention and prevention. The impact of drugs will be examined at from the perspective of law enforcement and its role in prevention and enforcement, the courts and sentencing offenders, and corrections in housing and treating offenders.

LET-205 replaces LET-5055 Drugs and the CJ system in the Quarter system.

LET-210 Criminology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in LET-100, eligible to enroll in ENGL-113 (C grade [2.00] or better in ENGL-112 or ENGL-110), or permission of Program Director. Course is graded A-F.

This course involves the study of crime and criminal behavior. The student will study, the nature and causes of crime and the theories dealing with criminal behavior and delinquency.

LET-210 replaces LET-5263 Criminology in the Quarter system. LET-210 meets the Ohio Transfer Assurance Guide standards for course OSS034.

**COTC COURSE DESCRIPTIONS – Criminal Justice and Law Enforcement Technologies
2014-2015 ACADEMIC YEAR****LET-215 Human Diversity**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in LET-105 or permission of Program Director. Course is graded A-F.

A course focusing on the differences and similarities among racial, ethnic and other diverse populations in the United States. The course includes historical, religious and socio-cultural issues and current conflicts.

LET-215 is a New Course in the Semester system.

LET-220 Juvenile Process

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in LET-100, eligible to enroll in ENGL-113 (C grade [2.00] in ENGL-112 or ENGL-110), or permission of Program Director. Course is graded A-F.

This course will enhance the student in learning the differences between the juvenile system and the adult court system. Juvenile criminal behavior will be discussed as it relates to the theories of criminal behavior. This course will focus on these theories of criminal behavior, the classification, laws that pertain to juvenile offenders, the court process, and the types of juvenile institutions and diversion programs.

LET-220 replaces LET-5266 Juvenile Process in the Quarter system.

LET-225 Probation and Parole

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in LET-100, eligible to enroll in ENGL-113 (C grade [2.00] or better in ENGL-112 or ENGL-110), or permission of Program Director. Course is graded A-F.

This advanced correctional course explores a uniquely American system of criminal justice, probation and parole. This course is intended to provide the student with an understanding of the development, theories, and practices currently utilized in response to social and criminal justice system pressure. The student will learn how the various operational components of probation and parole operate on federal, state and local platforms. Intermediate sanctions will also be explored as part of this course.

LET-225 replaces LET-5053 Probation and Parole in the Quarter system.

LET-230 Introduction to Homeland Security

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This is a course of instruction for the criminal justice student that clearly identifies the police response to domestic terrorism regarding the concepts of prevention, preparedness, response, and recovery.

LET-230 replaces LET-5054 Homeland Security in the Quarter system.

**COTC COURSE DESCRIPTIONS – Criminal Justice and Law Enforcement Technologies
2014-2015 ACADEMIC YEAR****LET-235 Correctional Management**

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in LET-100, LET-115 and LET-200, or permission of Program Director. Course is graded A-F.

This course is designed to offer the student with an advanced look at correctional management and administration. Correctional work is unlike that encountered in any other "total institution," such as the military, hospitals, and the residential mental health facilities. To a large degree, correctional management at the individual supervisory level has many, if not most, of the same underpinnings of management found elsewhere in society. One key difference between corrections and other service organizations and agencies, however, is that the population served by the correctional staff is held involuntarily. This produces a work environment that can be hostile and even dangerous at times. As such, this comprehensive overlay of security concerns permeates the correctional environment and has an impact on virtually all management issues.

LET-235 replaces LET-5120 Correctional Management in the Quarter system.

LET-240 Contemporary Issues in Criminal Justice

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Second year Criminal Justice Technology or Law Enforcement Technology student, or permission of Program Director. Course is graded A-F.

This course will enhance the student in learning subject matter of current law enforcement and criminal justice subjects of the modern day public service worker. Many current social and professional issues will be discussed and how they relate to the criminal justice and law enforcement fields of study. The student will examine current controversial issues and how they relate to theories, concepts, and values of today's public service professionals. This course will help to promote and develop better analytical reasoning. The student will refine communication skills with others, and develop a greater sense of real world issues facing the criminal justice practitioner.

LET-240 replaces LET-5052 Contemporary Issues in Criminal Justice in the Quarter system.

LET-250 Administration

1.50 credit hours, 2.50 contact hours (1 hour lecture and 1.50 hours lab). Prerequisite: Admittance into the COTC Police Academy Program. Course is graded A-F.

The student will learn the basics regarding the role of the American Peace Officer, the structure of the CJ system and methods of dealing with the citizens they serve, both ethically and professionally. This course defines Community Policing and establishes guidelines for developing community policing programs.

LET-250 replaces LET-5010 BPA – Administration in the Quarter system.

LET-257 Firearms

1.50 credit hours, 4.50 contact hours (0 hours lecture and 4.50 hours lab). Prerequisite: Admittance into the COTC Police Academy Program. Course is graded A-F.

The student will learn the fundamentals of weapon craft with both handguns and shotguns. The student will fire handguns and shotguns. The student will fire assorted shotgun ammo as used by police agencies.

LET-257 replaces LET-5022 BPA-Firearms in the Quarter system.

**COTC COURSE DESCRIPTIONS – Criminal Justice and Law Enforcement Technologies
2014-2015 ACADEMIC YEAR****LET-258 Driving**

1.00 credit hours, 2.00 contact hours (0.50 hours lecture and 1.50 hours lab). Prerequisite: Admittance into the COTC Police Academy Program. Course is graded A-F.

The student will learn defensive and pursuit driving techniques as well as safety issues and laws regarding the use of police vehicles. The student will operate vehicles in driving events proscribed by the Ohio Peace Officer Training Commission.

LET-258 replaces LET-5023 BPA-Defensive Driving in the Quarter system.

LET-259 Subject Control

1.50 credit hours, 4.50 contact hours (0 hours lecture and 4.50 hours lab). Prerequisite: Admittance into the COTC Police Academy Program. Course is graded A-F.

The student will learn and practice the basic skills for survival. Subject areas include self-defense, both with and without the use of defensive equipment.

LET-259 replaces LET-5024 BPA-Subject Control in the Quarter system.

LET-260 First Aid

0.50 credit hours, 1.50 contact hours (0 hours lecture and 1.50 hours lab). Prerequisite: Admittance into the COTC Police Academy Program. Course is graded A-F

This course is designed to teach the student basic first aid and life-saving skills.

LET-260 replaces LET-5020 First Aid in the Quarter system.

LET-261 Physical Conditioning I

0.50 credit hours, 1 contact hour (0 hours lecture and 1 hour lab). Prerequisite: Admittance into the COTC Police Academy Program. Course is graded A-F.

The student will participate in a physical conditioning program that will increase their strength, physical endurance, and tone the muscle groups of the body as required by the Ohio Peace Officer Training Commission. The student will also learn good nutrition habits.

LET-261 replaces LET-5018 BPA-Physical Conditioning in the Quarter system.

LET-262 Physical Conditioning II

0.50 credit hours, 1 contact hour (0 hours lecture and 1 hour lab). Prerequisite: Admittance into the COTC Police Academy Program. Course is graded A-F.

The student will participate in a physical conditioning program that will increase their strength, physical endurance, and tone the muscle groups of the body as required by the Ohio Peace Officer Training Commission. The student will also learn good nutrition habits.

LET-262 replaces LET-5019 BPA-Physical Conditioning II in the Quarter system.

**COTC COURSE DESCRIPTIONS – Criminal Justice and Law Enforcement Technologies
2014-2015 ACADEMIC YEAR****LET-265 Advanced Criminalistics**

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: Successful completion of 3 semesters of the Law Enforcement Technology Plan of Study and OPOTA certificate eligible or possesses current OPOTA Peace Officer certificate. Course is graded A-F.

This course will focus on advanced criminalistics techniques employed in the field to collect additional evidence not available to basic crime scene processing. The student will learn techniques for the collection of body fluids, trace evidence, firearms, tool marks, drugs, paint and glass fragments, additional means of processing fingerprints, and the use of photography. The student will also learn the methods used in processing crime scenes with biohazard materials.

LET-265 replaces LET-5126 Advanced Criminalistics in the Quarter system.

LET-266 Advanced Traffic Accident Investigation

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Successful completion of 3 semesters of the Law Enforcement Technology Plan of Study and OPOTA certificate eligible or possesses current OPOTA Peace Officer certificate. Course is graded A-F.

This course is designed to provide the patrol officer with more knowledge in the investigation of traffic accidents. The course will focus on identifying factors from people, the road, and the vehicles involved in a traffic accident. The student will be introduced to different ways of taking measurements, calculating speeds from evidence at the scene, and drawing detailed scaled drawings of accident scenes.

LET-266 replaces LET-5128 Advanced Traffic Accident Investigation in the Quarter system.

LET-267 Patrol Technologies and Advanced Tactics

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Successful completion of 3 semesters of the Law Enforcement Technology Plan of Study and OPOTA certificate eligible or possesses current OPOTA Peace Officer certificate. Course is graded A-F.

This course will expose the student to advanced tactics for use in patrol operations and current technologies in use by law enforcement agencies. Areas of instruction include training in conductive energy devices, traffic RADAR and LIDAR, and tactics for use from the police vehicle. The student will participate in field use of equipment and tactics, including hands-on participation and scenario-based training. The student that successfully completes the course will receive nationally recognized certificates in current technologies.

LET-267 replaces LET-5134 Patrol Technologies and Advanced Tactics in the Quarter system.

LET-268 Advanced Patrol Tactics

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Successful completion of 3 semesters of the Law Enforcement Technology Plan of Study and OPOTA certificate eligible or possesses current OPOTA Peace Officer certificate. Course is graded A-F.

This course will introduce the police academy graduate to a change in paradigm in responding to violent crimes in progress and introduce instinctive shooting technique. The student will be introduced to the tactical application of patrol rifle and includes certification in the use of tactical baton and oleoresin capsicum, offensive unarmed applications, and the introduction of the defensive and offensive applications of edged weaponry. The student will grasp this material through the utilization of structural simulation and experiential learning application. Multiple certificates will be awarded pending the passing of all subject matter areas.

LET-268 replaces LET-5147 Advanced Patrol Tactics in the Quarter system.

**COTC COURSE DESCRIPTIONS – Criminal Justice and Law Enforcement Technologies
2014-2015 ACADEMIC YEAR****LET-270 Counterterrorism and Intelligence**

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: Student must be a State Certified Peace Officer, or Law Enforcement Technology student who has passed OPOTA state exam within one academic year prior to course. Course is graded A-F.

This course increases the student's depth and breadth of knowledge in the areas of domestic and international terrorism and the intelligence gathering apparatus utilized regarding its origin, causes, infrastructure, and operations. Emphasis will be placed upon strategies of law enforcement and national security organizations in the detection, apprehension, adjudication/ neutralization of terrorist entities.

LET-270 replaces LET-5122 Counter-Terrorism and Intelligence in the Quarter system.

LET-271 Physical Security

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Student must be a State Certified Peace Officer, or a Law Enforcement Technology student who has passed OPOTA state exam within one academic year prior to course. Course is graded A-F.

A course designed for the student to learn and become familiar with the overall process of security system design and integration.

LET-271 replaces LET-5123 Physical Security in the Quarter system.

LET-272 Protective Operations

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Student must be a State Certified Peace Officer, or a Law Enforcement Technology student who has passed OPOTA state exam within one academic year prior to course. Course is graded A-F.

This is a course of instruction on the fundamentals of protective operations focusing upon high threat dignitary protection and transportation security.

LET-272 replaces LET-5124 Protective Operations in the Quarter system.

LET-273 Tactical Crisis Resolution

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Student must be a State Certified Peace Officer, or a Law Enforcement Technology student who has passed OPOTA state exam within one academic year prior to course. Course is graded A-F.

A course designed for the student to learn basic functions of special operations personnel in response to critical incident management. The course will facilitate topical areas in tactical crisis resolution. The student will learn historical perspectives regarding personnel, equipment, training paradigms, and missions. Operator level hands-on training in individual and team tactical movement, covert and dynamic entry, patrolling, weapons deployment training, and assault options will be studied and learned.

LET-273 replaces LET-5125 Tactical Crisis Resolution in the Quarter system.

**COTC COURSE DESCRIPTIONS – Criminal Justice and Law Enforcement Technologies
2014-2015 ACADEMIC YEAR****LET-275 Constitutional Rights of Prisoners**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Open to Law Enforcement Technology Majors only. Course is graded A-F.

This advanced criminal justice course details critical information on all aspects of prison and jail litigation, including information on corporal punishment, conditions of isolated confinement, access to the courts, parole, rights to medical aid, religious practices, and liabilities of prison and jail officials. Highlighted topics include the application of the Americans with Disabilities Act to prisons and jails, protection given to HIV-positive inmates and actions of Congress through enactment of the Prison Litigation Reform Act to stem the flow of prison litigation.

LET-275 replaces LET-5056 Constitutional Rights of Prisoners in the Quarter system.

LET-276 Basic Jail Training

5 credit hours, 11 contact hours (2 hours lecture and 9 hours lab). Prerequisite: Open to Law Enforcement Technology Majors only. Course is graded A-F.

This course is designed to offer the student an introduction to basic jail operations from a practitioner's perspective. A standardized form of jail training for full-service adult correctional facilities will be used following the course curriculum developed by the Ohio Peace Officer Training Academy. Lab sessions will be an integral part of the course instruction. Basic Jail Training is designed to familiarize the student with legal issues, the role of corrections officers, facility security operations, booking procedures and searching strategies, inmate booking procedures, medical health screening requirements, inmate classification, an extensive review of interpersonal communication skills, jail security and emergency procedures.

LET-276 replaces LET-5118 Basic Jail Training II and LET-5130 Basic Jail Training I in the Quarter system

LET-277 Human Relations

4.00 credit hours, 5.00 contact hours (3.50 hours lecture and 1.50 hours lab). Prerequisite: Admitted to the COTC Police Academy Program. Course is graded A-F.

The student will learn the techniques in responding to situations regarding people with specific problems. This area of study also includes communications with the public and media, domestic violence, and crisis intervention, and child abuse and neglect.

Approved by the COTC Curriculum Committee on December 6, 2013. LET-277 replaces both LET-252 Human Relations I and LET-253 Human Relations II in the Semester system. Both LET-277 and LET-252 replace LET-5013 BPA-Human Relations in the Quarter system. Both LET-277 and LET-253 replace LET-5013 BPA-Human Relations and LET-5014 BPA-Cultural Diversity in the Quarter system.

LET-278 Criminal Law

2.50 credit hours, 4.50 contact hours (1.50 hours lecture and 3 hours lab). Prerequisite: Admitted to the COTC Police Academy Program. Course is graded A-F.

The student will develop an understanding of the Ohio Revised Code. The criminal code will be studied as it relates to criminal justice substantive and procedural law. The student will apply appropriate statutes to violations through scenarios created by the faculty. The student will learn when they may arrest with or without a warrant, search with or without a warrant, apply knowledge of the law when conducting an interrogation, understand liability issues with the use of force, and demonstrate how to testify in court.

Approved by the COTC Curriculum Committee on December 6, 2013. LET-278 replaces LET-251 Criminal Law in the Semester System. Both LET-278 and LET-251 replace LET-5011 BPA-Criminal Law I and LET-5012 BPA-Criminal Law II in the Quarter system.

**COTC COURSE DESCRIPTIONS – Criminal Justice and Law Enforcement Technologies
2014-2015 ACADEMIC YEAR****LET-279 Investigations**

2.50 credit hours, 3.50 contact hours (2.00 hours lecture and 3.50 hours lab). Prerequisite: Admitted to the COTC Police Academy Program. Course is graded A-F.

The emphasis of this course will deal with basic investigative techniques and procedures. The student will study the fundamentals of obtaining evidence from crime scene searches and from witnesses. During mock crime scenes the student will establish corpus delicti and prepare the necessary reports, crime scene sketches and photography.

Approved by the COTC Curriculum Committee on December 6, 2013. LET-279 replaces LET 256 Investigation in the Semester system. Both LET-279 and LET-256 replace LET-5017 BPA-Investigations in the Quarter system.

LET-280 Patrol

3.00 credit hours, 6.00 contact hours (1.50 hours lecture and 4.50 hours lab). Prerequisite: Admitted to the COTC Police Academy Program. Course is graded A-F.

This course is designed to familiarize the student with the police patrol function. The subjects that are covered provide the basic knowledge to enable the student to safely conduct the required tasks of patrol duties. Areas of instruction include patrol and its related functions, traffic stop safety, civil disorders, prisoner booking, report writing, and homeland security issues.

Approved by the COTC Curriculum Committee on December 6, 2013. LET-280 replaces LET-254 Patrol in the Semester system. Both LET-280 and LET-254 replace LET-5015 BPA-Patrol in the Quarter system.

LET-281 Traffic

3.00 credit hours, 8.00 contact hours (0.50 hours lecture and 7.50 hours lab). Prerequisite: Admitted to the COTC Police Academy Program. Course is graded A-F.

The student will study the traffic enforcement responsibilities of peace officers and the purpose for traffic enforcement. This course includes the study of traffic laws and enforcement, accident investigation, alcohol detection and apprehension, and enforcement with speed measuring devices.

Approved by the COTC Curriculum Committee on December 6, 2013. LET-281 replaces LET-255 Traffic Investigations in the Semester system. Both LET-281 and LET-255 replace LET-5025 BPA-Traffic Enforcement in the Quarter system.

LET-286 Criminal Justice Practicum

2 credit hours, 8 contact hours (1 hour lecture, 0 hours lab and 7 hours per week in a practicum experience). Prerequisite: Student must be enrolled in second year of Criminal Justice Technology program or approval of the Program Director. Course is graded S/U.

This course provides valuable experience and insight into practical operations of a public service related agency through work assignments. A seminar (discussion time) is included in this course to discuss the student's experiences. This course is graded on a Satisfactory/ Unsatisfactory basis.

LET-286 replaces LET-285 Criminal Justice Practicum in the Semester system. Both LET-286 and LET-285 replace LET-5223 Public Service Practicum in the Quarter system.

**COTC COURSE DESCRIPTIONS – Criminal Justice and Law Enforcement Technologies
2014-2015 ACADEMIC YEAR****LET-B5233 Adult/Juvenile Corrections** (Bridge Course)

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in LET-5230 (quarter course) or permission of the instructor. Course is graded A-F.

This course focuses on the roles of corrections of offenders and society. It starts with an historical and philosophical view of the development of corrections (post-adjudication processing of criminal offenders) focusing on adult offenders. Later topics include administrative and operational components of corrections, criminals in confinement, post-adjudication procedures and problems, and community corrections.

LET-B5233 is a semester bridge course for students coming out of the quarter system with previous quarter credit for LET-5266. Successful completion of LET-5266 and LET-B5233 (with a C grade [2.00] or better) will fulfill the semester requirement for LET-220 Juvenile Process.

LET-B5235 Constitutional Law and Evidence (Bridge Course)

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course will provide the student with an understanding of the U.S. Constitution. The focus will be on the Bill of Rights and the Constitutional Law cases that are affected by the Bill of Rights. The Laws of Evidence will also be presented and discussed. The relationship the Bill of Rights has with the Laws of Evidence will enable the student to prepare cases for prosecution while protecting the rights of the accused. This course will assist the student in understanding the different kinds of evidence that may be collected from various sources.

LET-B5235 is a semester bridge course for students coming out of the quarter system with previous quarter credit for LET-5262. Successful completion of LET-5262 and LET-B5356 (with a C grade [2.00] or better) will fulfill the semester requirement for LET-110 Constitutional Law and Courts.

LET-B5262 Government and Court Systems (Bridge Course)

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This Criminal Justice course will examine the federal, state, local governments and their respective courts. The student will become familiar with the purpose and functions of our governments and the courts. This course will prepare the student for future courses in law enforcement and corrections.

LET-B5262 is a semester bridge course for students coming out of the quarter system with previous quarter credit for LET-5235. Successful completion of LET-5235 and LET-B5262 (with a C grade [2.00] or better) will fulfill the semester requirement for LET-110 Constitutional Law and Courts.

LET-B5266 Juvenile Process (Bridge Course)

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course will enhance the student in learning the differences between the juvenile system and the adult court system. Juvenile criminal behavior will be discussed as it relates to the theories of criminal behavior. This course will focus on these theories of criminal behavior, the classification, laws that pertain to juvenile offenders, the court process, and the types of juvenile institutions and diversion programs.

LET-B5266 is a semester bridge course for students coming out of the quarter system with previous quarter credit for LET-5233. Successful completion of LET-5233 and LET-B5266 (with a C grade [2.00] or better) will fulfill the semester requirement for LET-220 Juvenile Process.

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS – MANUFACTURING ENGINEERING TECHNOLOGY
2014-2015 ACADEMIC YEAR**

MANF-100 Principles of Machining

2 credit hours, 3 contact hours (1 hours lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course covers changes in machining technologies, major advancements in the machine tool field or specialty training items. The course will also offer practice in basic bench work, setup and layout for lathe and milling operations and precision measuring instruments. Other activities will include finding solutions of related problems, preparation of weekly laboratory reports and a variety of maintenance tasks necessary for the upkeep and operation of a machine shop. This course will typically be offered on the COTC Knox Campus.

MANF-100 replaces AMT-100 Principles of Machining in the Semester system. Both MANF-100 and AMT-100 replace AMT-3437 Principles of Machining in the Quarter system.

MANF-105 Metrology

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (MATH-070 or MATH-080) or appropriate COMPASS Placement. Course is graded A-F.

This course introduces the care and use of precision measuring instruments and measuring techniques. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. The course consists of a theoretical and practical study incorporating the metric system, geometric dimensioning/ tolerancing, sine bars/plates for compound angles and more. This course will typically be offered on the COTC Newark Campus.

MANF-105 replaces AMT-101 Metrology in the Semester system. Both MANF-105 and AMT-101 replace AMT-3434 Machining Calculations and AMT-3435 Metrology in the Quarter system.

MANF-106 Automation in Manufacturing

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in (MATH-070 or MATH-080). Course is graded A-F.

Concepts, principles, and relationships of automated assembly devices, computer-aided design (CAD), computer-aided manufacturing (CAM), industrial robots, numerical control (NC), industrial lasers, programmable logic controllers (PLCs), automated guided vehicles (AGVs), flexible manufacturing systems (FMS), and computer-integrated manufacturing (CIM). This course will typically be offered on the COTC Newark Campus.

MANF-106 is a new course in the Semester System.

**COTC COURSE DESCRIPTIONS – MANUFACTURING ENGINEERING TECHNOLOGY
2014-2015 ACADEMIC YEAR****MANF-122 Machining-Turning and Milling**

4 credit hours, 8 contact hours (2 hours lecture and 6 hours lab). Prerequisite: C (2.00) grade or better in MANF-100. Course is graded A-F.

This course covers basic and advanced terminology, setup, operation, and daily care of conventional milling machines and lathes. Theory and practical skill development exercises will focus on the use of milling machines and attachments, as well as cutting tool preparations for completing external surface machining such as straight turning, threading, chucking and tailstock operations, and surface piece-part machining operations. Accident prevention practices and procedures will be stressed throughout the course. Concepts and mathematical calculations for part geometry determination, specific lathe (machining) requirements, and the use of digital readout units will be covered. Carbide/ceramic/diamond cutting tool material, insert, and tool holder identification and selection requirements for lathe work will be explained in detail. Process planning and Geometric Dimensioning and Tolerancing (GD&T) characteristics appropriate for lathe machining and milling work will also be addressed. This course will typically be offered on the COTC Knox Campus.

MANF-122 replaces AMT-122 Machining-Turning and AMT-123 Machining-Milling in the Semester System. MANF-122 and AMT-122 replace AMT-3438 Machining-Turning I and AMT-3439 Machining-Turning II in the Quarter system. MANF-122 and AMT-123 replace AMT-3468 Machining – Milling I and AMT-3469 Machining – Milling II in the Quarter system.

MANF-201 Materials in Manufacturing

2 credit hours, 3 contact hours (1 hours lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course covers the production, properties, testing, classification, microstructure, and heat treating effects of ferrous and non-ferrous metals. Topics include the iron-carbon phase diagram, ITT diagram, ANSI code, quenching, tempering, and other processes concerning metallurgical transformations. Upon completion, the student should be able to understand the iron-carbon phase diagram, ITT diagram, microstructure images, and other phenomena concerning the behavior of metals. This course will typically be offered on the COTC Newark Campus.

MANF-201 replaces AMT-201 Materials of Manufacturing in the Semester system. Both MANF-201 and AMT-201 replace AMT-3447 Materials in Manufacturing in the Quarter system.

MANF-202 CAD for Machining

3 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: None. Course is graded A-F.

This course covers creating, reading and interpreting basic to complex industrial blueprints, CAD drawings and sketches. Topics include visualization of objects, machine terminology, multi-view drawings; interpretation of conventional lines, notes, and thread notations; geometric dimensioning and tolerancing; auxiliary and section views; assembly drawings, advanced sectioning, violations of true project, applications of GD & T, operation sheets and tool drawings. This course will typically be offered on the COTC Newark Campus.

MANF-202 replaces AMT-202 CAD for Machining in the Semester system. Both MANF-202 and AMT-202 replace AMT-3434 Machining Calculations and AMT-3436 CAD for Machining in the Quarter system.

**COTC COURSE DESCRIPTIONS – MANUFACTURING ENGINEERING TECHNOLOGY
2014-2015 ACADEMIC YEAR****MANF-203 Statistical Process Control**

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (MATH-070 or MATH-080) or appropriate COMPASS Placement. Course is graded A-F.

Quality control is one of four major functions of the production activity within the manufacturing environment. The concern for quality production has led to a “building it right the first time” philosophy of manufacturing. Developing a product that meets quality standards now requires several activities: 1) designing for quality; 2) implementing quality processes; and 3) manufacturing for quality. This course will present an overview of the quality management system in today’s manufacturing environment. The student will study the basic statistical methods and applications of Statistical Process Control within the production function of manufacturing. This course will typically be offered on the COTC Newark Campus.

MANF-203 replaces AMT-203 Statistical Process Control in the Semester system. Both MANF-203 and AMT-203 replace AMT-3415 Statistical Process Control in the Quarter system.

MANF-204 CNC Graphic Programming

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in (MANF-202 or AMT-202) and (MANF-222 or [AMT-222 and AMT-223]). Course is graded A-F.

This course covers computer numerical controlled (CNC) programming utilizing CAD/CAM with concepts for turning and milling center applications. G and M code programming including fixture offsets, thread milling, looping, macro, and sub program development/utilization/ execution will be included. Criteria relevant to accident prevention practices and procedures, process planning, machine and tool selection, operational sequence, speed, feed, and cutting depth, program proof-out and quality control for a multi-axis CNC program tooling will also be addressed. Emphasis is placed on the interaction of menus to develop a shape file in a graphics CAM system and to develop tool path geometry and part geometry and the transfer of machine code from CAM Graphics to the CNC turning or milling center. The course will also offer practice for job planning using CAM software, including machine selection, tool selection, operational sequence, speed, feed, and cutting depth for a multi-axis CNC program. This course will typically be offered on the COTC Knox Campus.

MANF-204 CNC Graphic Programming replaces AMT-204 CNC Graphic Programming in the Semester system. Both MANF-204 and AMT-204 replace AMT-3448 CNC Graphic Programming in the Quarter system.

MANF-222 CNC-Turning and Milling

4 credit hours, 8 contact hours (2 hours lecture and 6 hours lab). Prerequisite: C (2.00) grade or better in (MANF-122 or [AMT-122 and AMT-123]). Course is graded A-F.

This course covers the manual programming, setup, and safe operation of computer numerical controlled (CNC) milling machines and turning centers. Topics include machine safety, programming formats, control functions, program loading, program editing, machine setup, part production, process control, and practical application and inspection. Emphasis is placed on programming and production of complex parts with CNC milling machines and lathes. This course will typically be offered on the COTC Knox Campus.

MANF-222 replaces AMT-222 CNC Turning and AMT-223 CNC Milling in the Semester system. MANF-222 and AMT-222 replace AMT-3445 CNC-Turning I and AMT-3446 CNC-Turning II in the Quarter system. MANF-222 and AMT-223 replace AMT-3475 CNC-Milling I and AMT-3476 CNC-Milling II in the Quarter system.

**COTC COURSE DESCRIPTIONS – MANUFACTURING ENGINEERING TECHNOLOGY
2014-2015 ACADEMIC YEAR****MANF-270 Lean Manufacturing**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

Lean manufacturing is one of the mainstays of successful, modern manufacturing and production. This course provides a historic perspective of manufacturing and the roots of lean manufacturing principles, both domestically and internationally. Lean manufacturing's major concepts, including Value Stream Mapping, the Seven Wastes, Continuous Improvement and People Involvement are discussed. Lean manufacturing's major tools, including 5S and Visual Management, Set-up Reduction and Single Minute Exchange Device (SMED), Batch size Reduction and One-Piece-Flow, Standardized work, Work Balancing (TAKT-time), Production leveling/smoothing, Cellular Manufacturing, and Kanban are discussed. Significant time is dedicated to Kaizen. Lean manufacturing concepts and tools will be reinforced in a laboratory setting, possibly in local manufacturing facilities. This course will typically be offered on the COTC Newark Campus.

MANF-270 replaces ENGRTECH-270 Lean Manufacturing in the Semester system. Both MANF-270 and ENGRTECH-270 replace EMT-3210 Lean Manufacturing in the Quarter system.

AMT-B3413 Production Planning and Control (Bridge Course)

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

Production planning and control is one of four major management functions within the production activity of manufacturing. It is involved with the systems and controls within the manufacturing environment that provides the efficient transformation of raw materials into a form that can be sold. This course will typically be offered on the COTC Newark Campus.

AMT-B3413 is a semester bridge course for students coming out of the quarter system with previous quarter credit for AMT-3433. Successful completion of AMT-3433 and AMT-B3413 (with a C grade [2.00] or better) will fulfill the semester requirement for AMT-102 Principles of Manufacturing.

AMT-B3433 Principles of Manufacturing (Bridge Course)

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course introduces concepts and techniques used in manufacturing. Topics include process control, process capability, management and quality improvement. The commonalities of theory and skills associated with various branches of the manufacturing industry are explored. An overview of departments including engineering design, job planning, process documents, manufacturing support team responsibilities, as well as production workforce member's duties and responsibilities will be discussed. This course will typically be offered on the COTC Newark Campus.

AMT-B3433 is a semester bridge course for students coming out of the quarter system with previous quarter credit for AMT-3413. Successful completion of AMT-3413 and AMT-B3433 (with a C grade [2.00] or better) will fulfill the semester requirement for AMT-102 Principles of Manufacturing.

AMT-B3434 Machining Calculations (Bridge Course)

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1226 (quarter system course) or concurrent enrollment in MATH-110 in the semester system. Course is graded A-F.

This course introduces calculations as they relate to machining occupations. This course combines mathematical functions with practical machine shop applications and problems. Emphasis is placed on gear ratios, lead screws, indexing problems, and their applications in the machine shop. This course will typically be offered on the COTC Newark Campus.

AMT-B3434 is a semester bridge course for students coming out of the quarter system with previous quarter credit for AMT-3436. Successful completion of AMT-3436 and AMT-B3434 (with a C grade [2.00] or better) will fulfill the semester requirement for AMT-202 CAD for Machining.

**COTC COURSE DESCRIPTIONS – MANUFACTURING ENGINEERING TECHNOLOGY
2014-2015 ACADEMIC YEAR****AMT-B3435 Metrology** (Bridge Course)

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (AMT-3434 or AMT-B3434). Course is graded A-F.

This course introduces the care and use of precision measuring instruments and measuring techniques. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. The course consists of a theoretical and practical study incorporating the metric system, geometric dimensioning/ tolerancing, sine bars /plates for compound angles and more. This course will typically be offered on the COTC Newark Campus.

AMT-B3435 is a semester bridge course for students coming out of the quarter system with previous quarter credit for AMT-3434. Successful completion of AMT-3434 and AMT-B3435 (with a C grade [2.00] or better) will fulfill the semester requirement for AMT-101 Metrology.

AMT-B3436 CAD for Machining (Bridge Course)

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in (DDT-3706 or ARCH-B3706). Course is graded A-F.

This course covers creating, reading and interpreting basic to complex industrial blueprints, CAD drawings and sketches. Topics include visualization of objects, machine terminology, multi-view drawings; interpretation of conventional lines, notes, and thread notations; geometric dimensioning and tolerancing; auxiliary and section views; assembly drawings, advanced sectioning, violations of true project, applications of GD & T, operation sheets and tool drawings. This course will typically be offered on the COTC Newark Campus.

AMT-B3436 is a semester bridge course for students coming out of the quarter system with previous quarter credit for AMT-3434. Successful completion of AMT-3434 and AMT-B3436 (with a C grade [2.00] or better) will fulfill the semester requirement for AMT-102 CAD for Machining.

AMT-B3439 Machining – Turning II (Bridge Course)

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in (AMT-3438 or AMT-B3438). Course is graded A-F.

This is a continuation of AMT-3438 Machining-Turning I (quarter system course). This course covers terminology, setup, operation, and daily care of conventional metal working engine and related lathes. Theory and practical skill development exercises will focus on cutting tool preparations for completing external surface machining such as; straight turning, threading, chucking and tailstock operations, as well as internal surface piece-part machining operations. Accident prevention practices and procedures will be stressed throughout the course. Concepts and mathematical calculations for part geometry determination, specific lathe (machining) requirements, and the use of digital readout units will be covered. Carbide/ceramic/diamond cutting tool material, insert, and tool holder identification and selection requirements for lathe work will be explained in detail. Process planning and Geometric Dimensioning and Tolerancing (GD&T) characteristics appropriate for lathe machining will also be addressed. This course will typically be offered on the COTC Newark Campus.

AMT-B3439 is a semester bridge course for students coming out of the quarter system with previous quarter credit for AMT-3438. Successful completion of AMT-3438 and AMT-B3439 (with a C grade [2.00] or better) will fulfill the semester requirement for AMT-122 Machining Turning.

**COTC COURSE DESCRIPTIONS – MANUFACTURING ENGINEERING TECHNOLOGY
2014-2015 ACADEMIC YEAR****AMT-B3446 CNC Turning II (Bridge Course)**

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in (AMT-3445 or AMT-B3446). Course is graded A-F.

This course covers the production, properties, testing, classification, microstructure, and heat treating effects of ferrous and non-ferrous metals. Topics include the iron-carbon phase diagram, ITT diagram, ANSI code, quenching, tempering, and other processes concerning metallurgical transformations. Upon completion, the student should be able to understand the iron-carbon phase diagram, ITT diagram, microstructure images, and other phenomena concerning the behavior of metals. This course will typically be offered on the COTC Newark Campus.

AMT-B3446 is a semester bridge course for students coming out of the quarter system with previous quarter credit for AMT-3445. Successful completion of AMT-3445 and AMT-B3446 (with a C grade [2.00] or better) will fulfill the semester requirement for AMT-222 CNC Turning.

AMT-B3469 Machining – Milling II (Bridge Course)

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in (AMT-3468 or AMT-B3468). Course is graded A-F.

This is a continuation of AMT-3468 Machining-Milling I (quarter system course). This course covers terminology, set-up, operation and daily care of conventional milling machines. Theory and practical skill development exercises will focus on the use of conventional metal working milling machines and attachments. Accident prevention practices and procedures will be stressed throughout the course. Concepts and mathematical calculations for machining of prismatic (cube-like) features and part geometry will be covered. Process planning, documentation and Geometric Dimensioning, and Tolerancing (GD&T) characteristics for milling work, cutters and insert (geometry and grade) selection, as well as cutting parameters, will be addressed. This course will typically be offered on the COTC Newark Campus.

AMT-B3469 is a semester bridge course for students coming out of the quarter system with previous quarter credit for AMT-3468. Successful completion of AMT-3468 and AMT-B3469 (with a C grade [2.00] or better) will fulfill the semester requirement for AMT-123 Machining Milling.

AMT-B3476 CNC Milling I (Bridge Course)

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in (AMT-3475 or AMT-B3475). Course is graded A-F.

A continuation of CNC-Milling I, this course covers the manual programming, setup, and safe operation of computer numerical controlled (CNC) milling machines. Topics include machine safety, programming formats, control functions, program editing, program loading, machine setup, part production, process control, practical application and inspection. The course will also offer practice in the manufacturing of simple parts using CNC milling machines. Emphasis is placed on programming and production of complex parts with CNC milling machines. This course will typically be offered on the COTC Newark Campus.

AMT-B3476 is a semester bridge course for students coming out of the quarter system with previous quarter credit for AMT-3475. Successful completion of AMT-3475 and AMT-B3476 (with a C grade [2.00] or better) will fulfill the semester requirement for AMT-223 CNC Milling.

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - PRE-COLLEGE - MATHEMATICS
2014-2015 ACADEMIC YEAR**

MATH-040 Basic Mathematics

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is required for all students scoring below the minimum level on the COMPASS Numerical Skills Test. *This course will count neither for elective credit nor toward meeting minimum credit hours for graduation.* Course is graded A-F.

Basic Mathematics is designed to develop the student's potential to succeed in other college mathematics courses. Basic arithmetic skills involving whole number, fractions and decimals are reviewed and applied. Also covered are U.S. and Metric measures, dimensional analysis, basic geometric concepts and the use of formulas.

MATH-040 replaces MTH-1200 Basic Mathematics in the Quarter System. MATH-040 is a pre-college course. Credit for this course will count neither for elective credit nor toward meeting minimum credit hours for graduation.

MATH-070 Intermediate Algebra

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MATH-060 or appropriate score on COMPASS placement exam. *This course will count neither for elective credit nor toward meeting minimum credit hours for graduation.* Course is graded A-F.

PLEASE NOTE THIS COURSE WILL ONLY BE OFFERED SUMMER SEMESTER 2014 AND AUTUMN SEMESTER 2014 IN THE 2014-2015 ACADEMIC YEAR.

This course is a study of intermediate algebraic operations. It includes factoring, simplifying rational and radical expressions, solving and graphing systems of linear equations as well as rational, radical and quadratic equations.

MATH-070 replaces MTH-1206 Intermediate Algebra/ MTH-1210 Intermediate Algebra in the Quarter system. MATH-070 is a pre-college course. Credit for this course will count neither for elective credit nor toward meeting minimum credit hours for graduation.

MATH-080 Foundations of College Mathematics

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in MATH-040 or appropriate score on COMPASS placement exam. *This course will count neither for elective credit nor toward meeting minimum credit hours for graduation.* Course is graded A-F

Foundations of College Mathematics is a non-traditional approach to selected topics from elementary and intermediate algebra. It is designed to develop the student's potential to succeed in college-level mathematics courses, including college algebra, statistics and pre-calculus. It includes real number operations, a study of polynomial and rational expressions as well as the solving of linear, quadratic, radical and rational equations. Function notation and beginning data analysis are also introduced. Graphing calculators, as well as other technologies are used extensively to study these topics.

MATH-080 is a new course in the Semester system.

PUBLISHED MARCH, 2014

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - MATHEMATICS
2014-2015 ACADEMIC YEAR**

MATH-110 Trigonometry

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (MATH-070 or MATH-080) or appropriate score on COMPASS placement exam. Course is graded A-F.

This course will cover concepts of trigonometry including the graphing of trigonometric functions. Radicals, exponential functions, and logarithms are discussed.

MATH-110 replaces MTH-1226 Trigonometry in the Quarter system. MATH-110 meets the Ohio Transfer Module standards for course TMM003.

MATH-115 Technical Mathematics

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (MATH-070 or MATH-080) or appropriate score on COMPASS placement exam; this course is open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

This course is the study of the trigonometric functions, exponential and logarithmic functions, the complex numbers, and sequences and series. Topics investigated will include right triangle trigonometry; the graphs of the trigonometric functions and their translations; vectors and oblique triangles; the Law of Sines and the Law of Cosines; finding products, quotients and roots of complex numbers in rectangular, polar, and exponential form; sequences and series.

MATH-115 replaces MTH-1229 Technical Mathematics in the Quarter system.

MATH-120 Introduction to Calculus

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MATH-110 or appropriate score on COMPASS placement exam. Course is graded A-F.

Introduction to Calculus is an introduction to the principles of analytic geometry to develop an understanding of graphic functions. These concepts are expanded to the calculus of rate of change expressed through algebraic functions, derivatives, maximum and minimum velocity, temperature and the applications of the integral in areas, volumes, pressure, power, electrical charge and work; with the emphasis on their application as related to the engineering technician.

MATH-120 replaces MTH-1232 Introduction to Calculus in the Quarter system.

MATH-130 Introduction to Statistics

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (MATH-070 or MATH-080) or appropriate score on COMPASS placement exam. Course is graded A-F.

This is a non-calculus, introductory course in descriptive and inferential statistics. Concepts are explained intuitively and supported by examples. The applications are general in nature, and the exercises include problems from agriculture, biology, business, economics, education, environmental studies, psychology, engineering, medicine, sociology and computer science.

MATH-130 replaces MTH-1218 Statistics in the Quarter system. MATH-130 meets the Ohio Transfer Module standards for course TMM010.

**COTC COURSE DESCRIPTIONS - MATHEMATICS
2014-2015 ACADEMIC YEAR****MATH-140 College Algebra**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (MATH-070 or MATH-080) or appropriate score on COMPASS placement exam. Course is graded A-F.

This course is a study of algebraic functions including polynomial, rational, radical, exponential, logarithmic and piece-wise defined functions. Topics investigated will include domain, range, graphs, inverses, operations, equations, inequalities and their applications.

MATH-140 replaces MTH-1215 College Algebra in the Quarter system. MATH-140 meets the Ohio Transfer Module standards for course TMM001.

MATH-150 Pre-Calculus

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (MATH-070 or MATH-080) or appropriate score on COMPASS placement exam. Course is graded A-F.

This course is a study of algebraic functions, trigonometry, vectors, conic sections, sequences and series. The course will include the study of polynomial, rational, radical, exponential, logarithmic and piece-wise defined functions, and the trigonometric functions and their graphs. Topics investigated will include domain, range, graphs, inverses, operations, equations, inequalities and their applications.

MATH-150 replaces MTH-1216 Pre-Calculus in the Quarter system. MATH-150 meets the Ohio Transfer Module standards for course TMM002.

MATH-200 Calculus I

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MATH-150 or appropriate score on COMPASS placement exam. Course is graded A-F.

Concepts of limits of functions are covered including continuity of functions. The definition of the derivative as well as rules for differentiation develop the ability to find the derivatives of functions, including polynomial, rational, algebraic, trigonometric, inverse trigonometric, exponential, logarithmic, hyperbolic and inverse hyperbolic functions. Derivatives are used in curve sketching as well as in solving applied problems. The Mean Value Theorem and Newton's Method for optimization are covered. Definite and indefinite integrals, the Fundamental Theorem of Calculus, the substitution method and area between curves are discussed.

MATH-200 replaces MTH-1233 Calculus I and MTH-1234 Calculus II in the Quarter system. When completed with MATH-210, MATH-200 meets the Ohio Transfer Module standards for course TMM01; MATH-200 also meets the Ohio Transfer Assurance Guide standards for course TMM005.

MATH-210 Calculus II

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MATH-200 or appropriate score on COMPASS placement exam. Course is graded A-F.

The course is a study of integral calculus concentrating on indefinite and definite integrals and their applications in a wide range of functions.

MATH-210 replaces MTH-1234 Calculus II and MTH-1235 Calculus III in the Quarter system. When completed with MATH-200, MATH-210 meets the Ohio Transfer Module standards for course TMM01; MATH-210 also meets the Ohio Transfer Assurance Guide standards for course TMM006.

**COTC COURSE DESCRIPTIONS - MATHEMATICS
2014-2015 ACADEMIC YEAR****MATH-B1204 Business Math** (Bridge Course)

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1200 (quarter course) or appropriate score on COMPASS placement exam. Course is graded A-F.

This course is a study of basic business arithmetic. It presents the concepts and applications of percentages, payroll, insurance, consumer interest, loans, and other common business computations.

MATH-B1204 is a Semester Bridge Course for students coming out of the quarter system with NO previous quarter credit for MTH-1204 Business Mathematics; there is no Semester equivalent course for MTH-1204.

PUBLISHED MARCH, 2014

**CENTRAL OHIO TECHNICAL COLLEGE
COURSES DESCRIPTIONS – HEALTH SERVICES - MEDICAL CODING OPTION
2014-2015 ACADEMIC YEAR**

MCDE-101 Medical Coding Specialist I

6 credit hours, 6 contact hours (6 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in BIO-110, BIO-130, BIO-131, BUS-150 IDS-100, (ENGL-112 or ENGL-110), (PHIL-100 or PHIL-200). Basic computer knowledge and experience is suggested. Course is graded A-F.

This course teaches fundamental coding skills for outpatient physician settings and prepares the student to take the AAPC CPC exam for a career in medical coding. It provides the most up-to-date information relating to CPT, HCPCS, and ICD-9 CM (and ICD-10) coding and assures a broad, encompassing knowledge and expertise in reviewing and selecting the correct procedure and diagnosis codes for physician services. Successful completion of the Medical Coding course sequence indicates that the student is eligible to sit for the AAPC CPC Examination. American Academy of Professional Coders test fees are approximately \$370.00, not included in the cost of the course.

MCDE-101 is a New Semester course.

MCDE-102 Medical Coding Specialist II

6 credit hours, 6 contact hours (6 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MCDE-101 and concurrent enrollment in MCDE-103. Course is graded A-F.

This course is a continuation of Med Cod 101 with additional ICD-9 CM and ICD-10 CM/PCS coding processes. This course continues teaching coding skills for outpatient physical settings and prepares the student to take the AAPC CPC exam for a career in medical coding. It provides the most up-to-date information relating to CPT, HCPCS, and ICD-9 CM (and ICD-10) coding and assures a broad, encompassing knowledge and expertise in reviewing and assigning the correct procedure and diagnosis codes for physician services. Successful completion of the Medical Coding course sequence indicates that students are eligible to sit for the AAPC CPC Examination. American Academy of Professional Coders test fees are approximately \$370.00, which is not included in the cost of the course.

MCDE-102 is a New Semester course.

MCDE-103 Medical Coding Specialist III

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MCDE-101 and concurrent enrollment in MCDE-102. Course is graded A-F.

This course addresses the documentation analysis phase of ICD-10-CM coding and provides all the tools required for an effective documentation analysis and a corrective action plan.

MCDE-103 is a New Semester course.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - ENGINEERING TECHNOLOGY, MECHANICAL ENGINEERING
2014-2015 ACADEMIC YEAR**

MECH-100 3D Modeling with Autodesk Inventor

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: None. Course is graded A-F.

This course covers the fundamental principles of 3D parametric part design, assembly design, and assembly drawings. Students learn to create, place, and constrain components and assemblies. The student will also document designs and assemblies and follow drafting standards while dimensioning and annotating drawing views and parts lists.

MECH-100 3D is a new Semester course.

MECH-110 Mechanical Systems

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

Mechanical elements of power transmission including gears, levels, chains, belts, and pulleys are introduced and the student will learn basic design rules for these elements. The course also includes analysis of simple power trains and linkage devices, the study of the nature of gear tooth contact, as well as the study of fixtures and bolted joints.

MECH-110 replaces ENGRTECH-110 Mechanical Systems in the Semester system. Both MECH-110 and ENGRTECH-110 replace EMT-3253 Mechanical Components and Mechanisms in the Quarter system.

MECH-162 Instrumentation and Measurement

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course presents the measurement of various physical quantities using industrial sensors. Specifications, suitable applications as well as calibration procedures for different types of sensors will be discussed. Process and Instrumentation Drawings (P&ID) are introduced.

MECH-162 replaces ENGRTECH-162 Instrumentation and Measurement in the Semester system. Both MECH-162 and ENGRTECH-162 replace EMT-3262 Industrial Instrumentation in the Quarter system.

MECH-200 Alternative and Renewable Energy Sources

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course provides a comprehensive overview of renewable energies, including solar energy, wind power, hydropower, fuel cells, biomass, and alternative transportation options. Also, the principles of solar home design, solar hot water, pool and space heating, and solar cooling for both new and existing construction are covered. Wind power viability assessments are presented, as well as hydropower or biomass system calculations for a given site. The course presents the impact of government regulations on the use of renewable energies. The course teaches how to analyze renewable energy systems and calculate savings fractions, backup energy needs, financing options, and economic analyses. The course also investigates the potentials of renewable energy technologies to help solve environmental and economic problems within society. Efforts in the laboratory will emphasize solar energies.

MECH-200 replaces ENGRTECH-200 Alternative and Renewable Energy Sources in the Semester system. Both MECH-200 and ENGRTECH-200 replace EMT-3201 Alternative and Renewable Energy in the Quarter system.

**COTC COURSE DESCRIPTIONS - ENGINEERING TECHNOLOGY, MECHANICAL ENGINEERING
2014-2015 ACADEMIC YEAR****MECH-201 Fluid Mechanics**

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: MATH-150 and concurrent enrollment in PHYS-100. Course is graded A-F.

The course is an introduction to fluid mechanics; the study of fluids and the forces on them. The course will cover basic principles of fluid properties, fluid statics and flow measurements. This course also introduces the student to the principles of pneumatics and components found in a typical pneumatic circuit, as well as flow in pipes and open channels.

MECH-201 a new course in the Semester system.

MECH-202 Thermodynamics

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: MATH-150 and PHYS-100. Course is graded A-F.

The course is an introduction to thermodynamics; the study of heat and energy transfer as it relates to practical engineering situations. Topics include state equations of a gas and the first and second laws of thermodynamics as they relate to gas compressors, industrial furnaces and other manufacturing processes, as well as automobile and aircraft engines, power generating and refrigeration equipment.

MECH-202 a new course in the Semester system.

MECH-212 HVAC Systems

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-F.

This course provides a comprehensive overview of gas, fuel oil, and electric furnaces, as well as heat pumps. Additionally, the course covers residential and commercial cooling systems. Course content also includes temperature, humidity, air filtering, and air movement. Course emphasizes energy conservation and efficiency.

MECH-212 replaces ENGRTECH-212 HVAC Systems in the Semester system. Both MECH-212 and ENGRTECH-212 replace EMT-3202 Heating and Cooling Systems in the Quarter system.

MECH-222 Energy Efficiency Methods

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in (MECH-212 or ENGRTECH-212). Course is graded A-F.

This course covers the devices that are used to regulate energy use in buildings: from pneumatic and electric to electronic devices; from manual to automatic, from simple switches to microprocessors. An emphasis is placed on identifying and solving control/calibration problems, and improving energy efficiency through energy control strategies. Also, energy-consuming facilities will be discussed and analyzed for energy efficiency opportunities. The course will also cover the calculation of energy savings and the appropriate use of energy monitoring and measuring equipment commonly used by energy specialists and energy auditors.

MECH-222 replaces ENGRTECH-222 Energy Efficiency Methods in the Semester system. Both MECH-222 and ENGRTECH-222 replace EMT-3203 Energy Control, Efficiency and Conservation Methods in the Quarter system.

**COTC COURSE DESCRIPTIONS - ENGINEERING TECHNOLOGY, MECHANICAL ENGINEERING
2014-2015 ACADEMIC YEAR****MECH-230 Hydraulics and Pneumatics**

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in MATH-150 and PHYS-100. Course is graded A-F.

This course covers hydraulic and pneumatic fluid power systems. First, basic principles and laws and their influence are described. Types of pressure, flow, and directional control valves are presented and analyzed. The course provides instruction on selecting and sizing pumps and actuators for specific applications. Complete circuits are studied and analyzed, and basic electrical control of fluid power circuits is introduced.

MECH-230 replaces ENGRTECH-230 Hydraulics and Pneumatics in the Semester system. Both MECH-230 and ENGRTECH-230 replace EMT-3243 Hydraulics and Pneumatics in the Quarter system.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - NURSING TECHNOLOGY – PRACTICAL NURSING ONE-YEAR PROGRAM
2014-2015 ACADEMIC YEAR**

NPN-101 Introduction to Practical Nursing

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Admission into the Nursing Technology, Practical Nursing program and concurrent enrollment in NPN-102 and NPN-103. Course is graded A-F.

This course introduces the student to professional issues in nursing. Concepts include the health care delivery system, role of the practical nurse, communication, and critical thinking. Emphasis is placed on the nursing process and an examination of how it guides the safe and effective care of clients across the lifespan. The student will examine the importance of ethical, legal, and professional standards. This course is typically offered as a term course. Course is graded on an A-F basis.

NPN-101 Introduction to Practical Nursing replaces NPN-4827 Introduction to Nursing for the PN in the Quarter system

NPN-102 Introduction to Pharmacology

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab)

Prerequisite: Admission into the Nursing Technology, Practical Nursing program and concurrent enrollment in NPN-101 and NPN-108. Course is graded A-F.

This course introduces the nursing student to the principles of pharmacology and the role of the practical nurse in drug therapy for patients of all ages. Basic pharmacokinetics, drug control laws, selected methods of medication administration, safe dosage calculation, and approved abbreviations will be presented. The laboratory setting (in a concurrent course) is utilized to develop the skills necessary for safe medication administration. This course is typically offered as a term course. Course is graded on an A-F basis.

NPN-102 Introduction to Pharmacology replaces NPN-4820 Pharmacology I for the PN's in the Quarter system.

NPN-110 Fundamentals of Practical Nursing

5 credit hours, 9 contact hours (3 hours lecture, 3 hours lab and 3 hours clinical). Prerequisite: Admission to the Practical Nursing One-Year Certificate Program. Course is graded A-F.

This course introduces the student to the knowledge, skills, and attitudes needed for safe and effective practice as a practical nurse. Basic focused assessment and nursing care of physiological, psychosocial, spiritual, and cultural needs of patients across the lifespan are examined. The student will learn fundamental nursing skills appropriate for the practical nurse. These skills are developed in the nursing laboratory and applied to adult patients in the health care setting.

NPN-110 replaces NPN-103 Fundamentals of Practical Nursing in the Semester system. Both NPN-110 and NPN-103 replace NPN-4828 Fundamentals of Nursing-PN's in the Quarter system.

NPN-111 Health Alterations I for the Practical Nurse

7 credit hours, 12 contact hours (4.50 hours lecture, 1.50 hours lab and 6 hours clinical). Prerequisite: C grade (2.00) or better in NPN-101, NPN-102, and NPN-110 and (BIO-121 or [BIO-130 or BIO-150] and [BIO-131 or BIO-151]). Course is graded A-F.

This course focuses on patient-centered care for adults experiencing common, acute and chronic, physical and mental health alterations. Basic focused assessment and nursing care skills are developed. Clinical and simulation laboratory experiences assist students in the implementation of the nursing process. The student will have the opportunity to plan and provide care for one or two assigned patients in an acute and/or long term care facility.

NPN-111 replaces NPN-104 Health Alterations I for the Practical Nurse in the Semester system. Both NPN-111 and NPN-104 replace NPN-4823 Health Alterations I for PN's in the Quarter system.

**COTC COURSE DESCRIPTIONS - NURSING TECHNOLOGY – PRACTICAL NURSING ONE-YEAR PROGRAM
2014-2015 ACADEMIC YEAR****NPN-112 Health Alterations II for the Practical Nurse**

6.50 credit hours, 10.50 contact hours (4.50 hours lecture, 0 hours lab and 6 hours clinical). Prerequisite: C grade (2.00) or better in NPN-111 and PSY-100. Course is graded A-F.

This course focuses on multisystem, acute and chronic, health alterations within more complex body systems. Basic focused assessment and nursing care skills are refined. Prioritization and delegation skills within the scope of the practical nurse are emphasized. These skills will be practiced in the simulation laboratory. In the clinical setting, the student will have the opportunity to plan and provide care for individual or groups of patients based on the complexity of care.

NPN-112 replaces NPN-106 Health Alterations II for the Practical Nurse in the Semester system. Both NPN-112 and NPN-106 replace NPN-4825 Health Alterations II for the PN's in the Quarter system.

NPN-113 Transition to Practice for the Practical Nursing Student

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in NPN-111 and PSY-100. Course is graded A-F.

This course provides a transition for the student nurse to the role of the licensed practical nurse. Career planning, resume writing, and interviewing skills will be developed. The student will prepare for the practical nursing licensure exam through completion of case studies, NCLEX-review questions, and test-taking strategies. The course also includes a comprehensive review course which will assist the student in preparing for the NCLEX-PN exam. Through comprehensive assessment testing, the student will have the opportunity to identify knowledge deficits and complete a plan of remediation based on individual learning needs.

NPN-113 replaces NPN-108 Transition to Practice for the Practical Nursing Student in the Semester system. Both NPN-113 and NPN-108 replace NPN-4809 Trends and Issues for the Practical Nurse in the Quarter system.

NPN-114 Maternal/Child Nursing for the Practical Nurse

4.50 credit hours, 6 contact hours (3 hours lecture, 2 hours lab and 1 hour clinical). Prerequisite: C grade (2.00) or better in NPN-111. Concurrent enrollment in NPN-112 and NPN-113. Course is graded A-F.

In this course, the student will be introduced to the nursing care of individuals and families during the childbearing experience and to the care of children with common health alterations. The student gains the knowledge, skills, and attitudes necessary to provide safe and effective care. The role of the practical nurse in promoting health and meeting the developmental needs of the individual and family will be emphasized. Simulation laboratory practice and selected clinical experiences assist the student in the development of basic skills needed to care for maternal/child patients.

NPN-114 Maternal/Child Nursing for the Practical Nurse replaces NPN-107 Maternal/Child Nursing for the Practical Nurse in the Semester system. Both NPN-114 and NPN-107 replace NPN-4829 Maternal/Child Nursing for the Practical Nursing Student in the Quarter system.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - NURSING TECHNOLOGY
2014-2015 ACADEMIC YEAR**

NURS-001 Basic Health Care Skills

3.50 credit hours, 5.50 contact hours (2.50 hours lecture, 2 hours lab and 1 hour clinical). Prerequisite: Must be 16 years of age or older to enroll. A two-step Mantoux test for tuberculosis must be completed by the first day of class. A criminal background check (BCI) is required within six months of starting this course. Results must be available by the first day of the class. Students are required to wear a specified uniform. Course is graded A-F.

Additional Prerequisite for students registering in the Coshocton Campus sections of this course: A complete health physical must be completed by the first day of class.

This course prepares a basic health care worker with skills required by the Training and Competency Evaluation Program (TCEP) prior to gaining eligibility to become a State Tested Nurse Aide (STNA) and/or to employment as a home health aide. Content includes communication, infection control, safety and emergency procedures, promoting residents'/clients' independence, respecting residents'/clients' rights, basic nursing skills, personal care skills, providing care in a home setting, mental health and social service needs and basic restorative services. College lab permits development of various basic nursing skills. These skills are then implemented during a 20 hour clinical experience in a local health care facility.

NURS-001 replaces NUR-4015 Basic Health Care Skills in the Quarter system.

NURS-101 Introduction to Professional Nursing

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Admission to the Associate Degree Nursing Program. Course is graded A-F.

This course is designed to introduce the nursing student to the registered nursing profession and the nursing program at Central Ohio Technical College. Emphasis is placed on the role of the professional nurse, communication, culture, nursing process, evidence-based practice, and clinical decision making. The student will also explore legal and ethical aspects of nursing, professionalism, uses of technology, and healthcare delivery systems as they influence the practice of nursing. Course is graded on an A-F basis.

NURS-101 Introduction to Professional Nursing replaces NUR-4243 Introduction to Professional Nursing in the Quarter system.

NURS-107 Introduction to Pharmacology

2.50 credit hours, 4.50 contact hours (1.50 hours lecture and 3 hours lab). Prerequisite: Admission to the Nursing Technology A.D.N. or L.P.N. to A.D.N. program. Course is graded A-F.

This course introduces the student to the role of the professional nurse in drug therapy for patients of all ages. The focus of this course is on the principles associated with safe and effective medication administration, including basic pharmacokinetics, drug control laws, selected methods of medication administration, dosage calculation, and approved abbreviations. The laboratory setting is utilized to develop the skills necessary for safe medication administration. This course introduces drug classifications for the various body systems.

NURS-107 replaces NURS-102 Introduction to Pharmacology in the Semester system. Both NURS-107 and NURS-102 replace NUR-4244 Introduction to Pharmacology in the Quarter system.

**COTC COURSE DESCRIPTIONS - NURSING TECHNOLOGY
2014-2015 ACADEMIC YEAR****NURS-108 Fundamentals of Nursing**

6 credit hours, 12 contact hours (3 hours lecture, 3 hours lab and 6 hours clinical). Prerequisite: C grade (2.00) or better in (BIO-130 or BIO-150), IDS-100, MATH-140, NURS-101, NURS-107 and PSY-100. Course is graded A-F.

This course introduces the student to the knowledge, skills, and attitudes needed for safe and effective practice as a professional nurse. Comprehensive health assessment and basic care for common physiological, psychosocial, spiritual, and cultural patient needs across the lifespan are examined. The student will learn fundamental nursing skills appropriate for the professional nurse. These skills are developed in the nursing lab and applied to adult patients in the health care practice setting.

NURS-108 replaces NURS-103 Fundamentals of Nursing in the Semester system.

NURS-111 Introduction to Adult Health

9 credit hours, 15 contact hours (6 hours lecture, 3 hours lab, and 6 hours clinical). Prerequisite: C grade (2.00) or better in BIO-115, (BIO-131 or BIO-151), NURS-108 and SPCH-210. Course is graded A-F.

This course explores common acute and chronic stable health alterations within various body systems, progressing from less complex to more complex systems during the semester. The student will build on concepts of collaboration, evidence based practice, and safe, effective quality care. Clinical experiences coupled with simulation laboratory practice assist students in continued development of skills, implementation of the nursing process and development of nursing judgment to integrate theory into practice. The student will have the opportunity to plan and provide care for 1-2 adult patients of all ages within a medical-surgical setting based on acuity level.

NURS-111 replaces NURS-109 Adult Health I/NURS-105 Adult Health I and NURS-110 Adult Health II/NURS-106-Adult Health II in the Semester system. There is no Quarter equivalent course for NURS-111, NURS-105, NURS-109 or NURS-110.

NURS-200 LPN to RN Transition

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Admission to the LPN to RN Transition Program; C grade (2.00) or better in (BIO-130 or BIO-150), (BIO-131 or BIO-151) and IDS-100. Course is graded A-F.

This course is designed to enable the student to explore integrative concepts in nursing and to assist the student in transition from licensed practical nurse to registered nurse. The student will refine and update previous learning in addition to identifying goals for successful transition into the registered nursing program. Combined with classroom and nursing laboratory experiences, the student learns through application of concepts. The student will demonstrate the ability to solve problems through the use of the nursing process with a focus on client assessment and effective communication. (Excerpted from *Ohio Nursing Collaborative for Nursing Mobility*.) Course is graded on an A-F basis.

NURS-200 LPN to RN Transition is a new course in the Semester system.

NURS-201 Advanced Adult Health

7 credit hours, 15 contact hours (3 hours lecture, 3 hours lab and 9 hours clinical). Prerequisite: C grade (2.00) or better in ENGL-112 and NURS-111 and concurrent enrollment in NURS-202. Course is graded A-F.

This course focuses on the management of patient-centered care for adults of all ages experiencing acute and chronic, multisystem, complex health alterations. The student will synthesize and integrate the concepts of collaboration, evidence based practice, and safe, effective quality care. Clinical experiences coupled with simulation laboratory practice assist students in assimilation of skills, inquiry, and development of nursing judgment to integrate theory into practice. The student will have the opportunity to plan and provide care for 1-3 adult patients based on acuity level within medical-surgical or critical care areas. Course is graded on an A-F basis.

NURS-201 Adult Health III is a new course in the Semester system.

**COTC COURSE DESCRIPTIONS - NURSING TECHNOLOGY
2014-2015 ACADEMIC YEAR****NURS-202 Family Centered Care**

6 credit hours, 10 contact hours (4 hours lecture, 0 hours lab and 6 hours clinical). Prerequisite: C grade (2.00) or better in ENGL-112 and NURS-111 and concurrent enrollment in NURS-201. Course is graded A-F.

In this course, the student will utilize the nursing process to provide patient-centered care for individuals and families experiencing reproductive health care needs, during the childbearing event and children with common health alterations. The student will synthesize and integrate nursing knowledge, skill and attitudes to provide evidence-based, safe, effective quality care to facilitate physiologic and psychosocial integrity. The student will have the opportunity to promote health and wellness of the maternal/child population and those with reproductive health needs. The student will have the opportunity to develop clinical judgment in the clinical setting when caring for these groups of patients. Course is graded on an A-F basis.

NURS-202 Family Centered Care is a new course in the Semester system.

NURS-207 Nursing Concepts Synthesis

2.50 credit hours, 2.50 contact hours (2.50 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ENGL-113, NURS-201 and NURS-202.. Course is graded A-F.

In this course, the student will synthesize major nursing concepts through completion of case studies, NCLEX-review questions, and test-taking strategies. The course also includes a comprehensive review which will assist the student in preparing for the NCLEX-RN exam. Through comprehensive assessment testing, the student will have the opportunity to identify knowledge deficits and complete a plan of remediation based on individual learning needs.

NURS-207 Nursing Concepts Synthesis replaces NURS-205 Nursing Concepts Synthesis in the Semester system. There is no Quarter course equivalent for NURS-207 or NURS-205.

NURS-208 Management of Care

6.50 credit hours, 13 contact hours (3 hours lecture, 1 hour lab, and 9 hours clinical). Prerequisite: C grade (2.00) or better in ENGL-113, NURS-201 and NURS-202.. Course is graded A-F.

This course focuses on trends in professional nursing, the development of leadership and management of care knowledge, and the behaviors required for the beginning nurse generalist. The student examines current issues and trends which impact the profession, and discusses legal, economic, political, cultural, and ethical issues that impact the nurse, the profession, and the delivery of health care. Clinical experiences provide opportunities to apply leadership and management of care through collaboration with members of the health care team. The student assumes professional nursing roles working under the supervision of faculty or RN preceptors. Clinical and simulation laboratory activities focus on developing the competencies needed to transition into entry-level nursing practice.

NURS-208 replaces NURS-206 Management of Care, NURS-203 Nursing Capstone and NURS-204 Management of Care in the Semester system. There is no Quarter course equivalent for NURS-208, NURS-206, NURS-203 or NURS-204.

**COTC COURSE DESCRIPTIONS - NURSING TECHNOLOGY
2014-2015 ACADEMIC YEAR****NURS-209 Management of Care - Preceptorship**

6.50 credit hours, 13 contact hours (3 hours lecture, 1 hour lab, and 9 hours clinical). Prerequisite: C grade (2.00) or better in ENGL-113, NURS-201 and NURS-202. Entry into this course is by Nursing Administration approval only. Course is graded A-F.

This course focuses on trends in professional nursing, the development of leadership and management of care knowledge, and the behaviors required for the beginning nurse generalist. The student examines current issues and trends which impact the profession, and discusses legal, economic, political, cultural, and ethical issues that impact the nurse, the profession, and the delivery of health care. Precepted clinical experiences provide opportunities to apply leadership and management of care through collaboration with members of the health care team. The student assumes professional nursing roles working under the supervision of faculty or RN preceptors. Clinical and simulation laboratory activities focus on developing the competencies needed to transition into entry-level nursing practice.

NURS-209 is a new course in the Semester system.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - PHILOSOPHY COURSES
2014-2015 ACADEMIC YEAR**

PHIL-100 Critical Thinking

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in GENR-091 or appropriate COMPASS placement. Course is graded A-F.

This course examines the basic elements of logic, argument analysis, and argument construction. Topics include arguments, deductive and inductive reasoning, formal and informal fallacies, and rhetoric. This course develops student's abilities to think critically, to understand and carefully construct arguments, and to understand the uses of language in a variety of contexts.

PHIL-100 replaces BHS-1006 Critical Thinking in the Quarter system. PHIL-100 meets the Ohio Transfer Module standards for course TMAH

PHIL-150 Introduction to Philosophy

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ENGL-112. Course is graded A-F.

This course is a general survey of the basic problems and systems in western philosophy. Special consideration is given to elementary logic, epistemology, metaphysics, and ethics.

PHIL-150 is a new course in the Semester system. PHIL-150 meets the Ohio Transfer Module standards for course TMAH. PHIL-150 meets the Ohio Transfer Assurance Guide standards for course OAH045.

PHIL-200 Introduction to Ethics

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ENGL-112. Course is graded A-F.

This course explores ethical theories as well as ethical practices. It seeks to develop critical thinking skills as a basis for ethical choice using lectures, open discussion and case studies. A variety of topics will be evaluated in a cultural, social and historical context.

PHIL-200 replaces BHS-1340 Ethics in the Quarter system. PHIL-200 meets the Ohio Transfer Module standards for course TMAH. PHIL-200 meets the Ohio Transfer Assurance Guide standards for course OAH046.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSES DESCRIPTIONS – HEALTH SERVICES – PHARMACY TECHNICIAN OPTION
2014-2015 ACADEMIC YEAR**

PHRM-110 Pharmacy Technology I

7 credit hours, 7 contact hours (7 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in BIO-110, (ENGL-112 or ENGL-110) and (MATH-140 or MATH-150). Basic computer knowledge is highly suggested. Course is graded A-F.

This online course prepares the student to sit for the Pharmacy Technician Certification Board (PTCB) through blended online learning. Through directed online education, the fundamentals of working for a pharmacist in a local drug store or hospital pharmacy will be taught. The curriculum includes medical terminology, medical review, aseptic techniques, pharmacy operations and legal aspects of drug dispensing, repackaging, dose calculations, inventory control and other duties. Computer experience necessary. The PTCB Pharmacy Technician Certification Board test fee is \$129.00 which is not included in the course fee.

PHRM-110 is a New Semester course.

PHRM-111 Pharmacy Technology II

9 credit hours, 9 contact hours (9 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in PHRM-110. Must be 18 years of age at the beginning of the course. Criminal Background check is required prior to enrollment. Course is graded A-F.

This online course continues to prepare the student to sit for the Pharmacy Technician Certification Board (PTCB) through blended online learning. Through directed online education, the fundamentals of working for a pharmacist in a local drug store or hospital pharmacy will be taught. The curriculum includes medical terminology, medical review, aseptic techniques, pharmacy operations and legal aspects of drug dispensing, repackaging, dose calculations, inventory control and other duties. Computer experience necessary. A 21 hour internship will be part of the learning experience of this course. The PTCB Pharmacy Technician Certification Board test fee is \$129.00 which is not included in the course fee.

PHRM-111 is a New Semester course.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - PHYSICS
2014-2015 ACADEMIC YEAR**

PHYS-100 General Physics

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (MATH-070 or MATH-080) or COMPASS placement; Recommend completion of or concurrent enrollment in a pre-college or college level composition course. Course is graded A-F.

General Physics provides a brief survey of fundamental concepts of science, mechanics, the properties of matter, heat, sound, electricity and magnetism, light, atomic physics, and nuclear physics. The student will apply the concepts in the laboratory portion of the course.

PHYS-100 replaces PHY-1721 General Physics in the Quarter System. PHYS-100 meets the Ohio Transfer Module requirements for course TMNS

PHYS-110 Physics I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in MATH-150 or COMPASS Placement. Recommend completion of or concurrent enrollment in a pre-college or college level composition course. Course is graded A-F.

Physics I is the first course in a two semester sequence. This algebra-based course presents an experimental and analytical study of Newtonian mechanics, emphasizing one- and two-dimensional kinematics, dynamics, work and energy, conservation theorems, linear and angular momentum, collisions, rotational dynamics, simple harmonic motion, waves and sound, and the properties of matter.

PHYS-110 replaces PHY-1726 Physics I Mechanics and PHY-1728 Physics III Heat, Light and Sound in the Quarter System. PHYS-110 meets the Ohio Transfer Module standards for course TMNS and also meets the Ohio Transfer Assurance Guide standards for courses OSC014 and OSC021.

PHYS-111 Physics II

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in PHYS-110. Recommend completion of or concurrent enrollment in a pre-college or college level composition course. Course is graded A-F.

Physics II is the final course in a two semester sequence. This algebra-based course presents experimental and analytical study of optics, electrostatics, electric fields, DC and AC circuits, magnetism, electromagnetic induction, electromagnetic waves, including the laws of Coulomb, Faraday, Gauss, Ampere, and Kirchoff.

PHYS-111 replaces PHY-1727 Physics II Electricity and Magnetism and PHY-1728 Physics III Heat, Light and Sound in the Quarter System. PHYS-110 meets the Ohio Transfer Module standards for course TMNS and also meets the Ohio Transfer Assurance Guide standards for courses OSC015 and OSC021.

PHYS-115 Technical Physics

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Open to students accepted into the Electrical Trades Technology program only. Course is graded A-F.

This algebra-based course presents an experimental and analytical study of electrostatics, electric fields, DC and AC circuits, magnetism, electromagnetic induction, and electromagnetic waves.

PHYS-115 replaces PHY-1729 Technical Physics in the Quarter System.

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - PSYCHOLOGY
2014-2015 ACADEMIC YEAR**

PSY-100 Introduction to Psychology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (GENR-091 or GENR-095 or GENR-099) or appropriate COMPASS placement. Course is graded A-F.

Introduction to Psychology provides an introduction to the areas of basic theoretical constructs, nervous system functioning, perception, learning, memory, emotion, cognition, intelligence, personality theories, stress social psychology and motivational psychology.

PSY-100 replaced PSYCH-100 Introduction to Psychology in the Semester system. Both PSY-100 and PSYCH-100 replace BHS-1376 General Psychology in the Quarter system. Both PSY-100 and PSYCH-100 meet Ohio Transfer Module standards for course TMSBS. Both PSY-100 and PSYCH-100 meet Ohio Transfer Assurance Guides standards for course OSS015.

PSY-200 Abnormal Psychology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (PSY-100 or PSYCH-100). Course is graded A-F.

Abnormal Psychology is the study of psychological disorders with emphasis on current theoretical views, assessment, clinical characteristics, causes and treatments. Major areas of study include anxiety disorders, stress disorders, mood disorders, somatoform disorders, dissociative disorders, substance abuse disorders, psychotic disorders and personality disorders.

PSY-200 replaces PSYCH-200 Abnormal Psychology in the Semester system. Both PSY-200 and PSYCH-200 replace BHS-1378 Abnormal Psychology in the Quarter system. Both PSY-200 and PSYCH-200 meet Ohio Transfer Module standards for course TMSBS. Both PSY-200 and PSYCH-200 meet Ohio Transfer Assurance Guides standards for course OSS017.

PSY-210 Developmental Psychology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (PSY-100 or PSYCH-100). Course is graded A-F.

This course is a study of human development as a dynamic, multi-dimensional process from conception through death. Emphasis is placed on the inter-relationship of the many biopsychosocial factors influencing human development, general principles of growth and development, major developmental tasks encompassing each stage of the life cycle, and health and development problems common to each stage.

PSY-210 replaces PSYCH-210 Development Psychology in the Semester system. Both PSY-210 and PSYCH-210 replace BHS-1345 Human Development in the Quarter system. Both PSY-210 and PSYCH-210 meet Ohio Transfer Module standards for course TMSBS. Both PSY-210 and PSYCH-210 meet Ohio Transfer Assurance Guides standards for course OSS048.

PSY-220 Social Psychology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (PSY-100 or PSYCH-100). Course is graded A-F.

Social psychology is the study of the reciprocal influence of individuals and social situations. Major areas of study include basic theoretical concepts, social cognition and perception, the emergence of the self, attitudes including stereotyping and prejudice, discrimination, relationships, conformity, prosocial behavior, aggression and the social effects of belonging.

PSY-220 replaces PSYCH-220 Social Psychology in the Semester system. Both PSY-220 and PSYCH-220 replace BHS-1370 Social Psychology in the Quarter system. Both PSY-220 and PSYCH-220 meet the Ohio Transfer Module standards for course TMSBS. Both PSY-220 and PSYCH-220 meet Ohio Transfer Assurance Guide standards for course OSS016.

**COTC COURSE DESCRIPTIONS - PSYCHOLOGY
2014-2015 ACADEMIC YEAR****PSY-230 Organizational Psychology**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (PSY-100 or PSYCH-100). Course is graded A-F.

Organizational Psychology is an introduction to the application of the methods, facts, and principles of psychology to human behavior within work organizations. Topics include history and use of psychology, causation and purpose of behavior, leadership, group problem solving and group leadership, evaluating individual abilities, motivating workers for optimum performance, job fatigue, and counseling skills for managers.

PSY-230 replaces PSYCH-230 Organizational Psychology in the Semester system. Both PSY-230 and PSYCH-230 replace BHS-1385 Organizational Psychology in the Quarter system.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - RADIOLOGIC SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR**

RAD-101 Imaging Procedures I

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Admission to the Radiologic Science Technology program, IDS-100, and C grade (2.00) or better in BIO-110 and MATH-140. Course is graded A-F.

The student will be introduced to the basic radiographic positioning principles and terminology. This course also covers radiographic imaging of the chest, abdomen and upper and lower extremities. Emphasis is on the anatomy, routine positioning and common pathologies demonstrated.

RAD-101 replaces MEDIMG-101 Imaging Procedures I in the Semester system. Both RAD-101 and MEDIMG-101 replace RAD-4103 RAD Anatomy and Positioning I and RAD-4102 RAD Anatomy and Procedures II in the Quarter system.

RAD-103 Imaging Procedures II

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisites: Enrollment in the Radiologic Science Technology program. C grade (2.00) or better in RAD 101. Course is graded A-F.

The student will study the basic anatomy and positioning of the vertebral column, digestive and urinary system, and cranium. They will also study additional diagnostic procedures to include ERCP, arthrography, myelography, sialography and hystersalingography, trauma and C-arms. The types and uses of contrast media will also be presented. The student will have the opportunity to apply classroom theory in the college laboratory setting.

RAD-103 replaces RAD-102 Imaging Procedures II in the Semester system. Both RAD-103 and RAD-102 replace MEDIMG-102 Imaging Procedures II in the Semester system. RAD-103, RAD-102 and MEDIMG-102 replace RAD-4102 RAD Anatomy and Positioning II in the Quarter system.

RAD-130 Radiation Physics I

1.50 credit hours, 1.50 contact hours (1.50 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology program. Course is graded A-F.

This course discusses the principles of physics as they relate to radiation. Topics to be covered include electromagnetic and particulate radiation, electrodynamics and electrostatics.

RAD-130 replaces MEDIMG-130 Radiation Physics in the Semester system. Both RAD-130 and MEDIMG-130 replace RAD-4157 Radiation Physics I and RAD-4158 Radiation Physics II in the Quarter system.

RAD-131 Radiation Physics II

1.50 credit hours, 1.50 contact hours (1.50 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology program. C grade (2.00) or better in (RAD-130 or MEDIMG-130). Course is graded A-F.

This course is a continuation of RAD-130 Radiation Physics I. The student will apply knowledge to the construction and use of the radiographic equipment. Special emphasis will be placed on the effects of radiographic techniques and image formation.

RAD-131 replaces MEDIMG-131 Radiation Physics in the Semester system. Both RAD-131 and MEDIMG-131 replace RAD-4158 Radiation Physics II in the Quarter system.

**COTC COURSE DESCRIPTIONS - RADIOLOGIC SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****RAD-132 Radiobiology and Radiation Protection**

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Enrollment in Radiologic Science Technology program; C grade (2.00) or better in (RAD-131 or MEDIMG-131) or permission of the instructor. Course is graded A-F.

This radiographic technology course presents the study of radiobiology, radiation protection and safety and methods of minimizing radiation exposure to occupational workers and patients. The radiobiology portion of the course includes the following topics: molecular and cellular radiobiology, early and late effects of radiation exposure and theories related to the effect of ionizing radiation on humans. During the radiation protection and safety segment students will be introduced to state and federal regulations and discuss various methods of minimizing radiation exposure.

RAD-132 replaces MEDIMG-132 Radiobiology and Radiation Protection in the Semester system. Both RAD-132 and MEDIMG-132 replace RAD-4139 Radiation Protection in the Quarter system.

RAD-133 Image Acquisition

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology program; C grade (2.00) or better in (RAD-131 or MEDIMG-131). Course is graded A-F.

This course is the study of the science of determining diagnostic radiographic exposure factors. Topics to be covered include image acquisition in film/screen, digital and fluoroscopic modalities. The production and control of scatter, radiation will be discussed. The student will evaluate images for contrast, density, detail, distortion and human pathology influence.

RAD-133 replaces MEDIMG-133 Image Acquisition in the Semester system. Both RAD-133 and MEDIMG-133 replace RAD-4184 Principles of Radiographic Exposure and RAD-4187 Radiologic Imaging Modalities in the Quarter system.

RAD-154 Medical Imaging Seminar I

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology program; C grade (2.00) or better in (RAD-132 or MEDIMG-132) and (RAD-133 or MEDIMG-133). Course is graded A-F.

This course provides the student with the opportunity to discuss the principles of radiographic imaging in an integrated approach. Application of previously learned concepts will be discussed relative to the clinical setting.

RAD-154 replaces MEDIMG-154 Medical Imaging Seminar in the Semester system. Both RAD-154 and MEDIMG-154 replace RAD-4154 Radiographic Seminar I in the Quarter system.

RAD-164 Patient Care and Management I

0.50 credit hours, 1 contact hour (0 hours lecture and 1 hour lab). Prerequisite: Enrollment in the Radiologic Science Technology program. Course is graded A-F.

During this introductory course to the Patient Care and Management sequence, the student is introduced to basic safety and precautions, patient transfers, and body mechanics, fire safety and guest relations. The student will also learn basic universal precautions, documentation and patient history techniques. The communication process theories will be applied to the patient/ health care team interaction.

RAD-164 replaces MEDIMG-164 Patient Care and Management in the Semester system. Both RAD-164 and MEDIMG-164 replace RAD-4109 Patient Care and Management I in the Quarter system.

**COTC COURSE DESCRIPTIONS - RADIOLOGIC SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****RAD-165 Patient Care and Management II**

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology program; C grade (2.00) or better in (RAD-164 or MEDIMG-164). Course is graded A-F.

During this second course in the Patient Care sequence, the student is introduced to surgical and medical asepsis, patient advocacy, contrast and, general pharmacology, and medico-legal aspects of radiography. Principles of conflict management and the impact of values and beliefs on patient communication will be discussed.

RAD-165 replaces MEDIMG-165 Patient Care and Management II in the Semester system. Both RAD-165 and MEDIMG-165 replace RAD-4109 Patient Care and Management I and RAD-4165 Patient Care and Management II in the Quarter system.

RAD-166 Patient Care and Management III

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology program; C grade (2.00) or better in (RAD-165 or MEDIMG-165). Course is graded A-F.

During this patient care course, the student is introduced to special patient situations encountered with critical care, orthopedic and geriatric patients. Radiographer's interventions and responsibilities will be discussed. The student will evaluate images to determine appropriate internal placement of medical devices, such as chest tubes and endotracheal tubes. The student will identify communication problems when providing care to these special populations.

RAD-166 replaces MEDIMG-166 Patient Care and Management III in the Semester system. Both RAD-166 and MEDIMG-166 replace RAD-4165 Patient Care and Management II and RAD-4166 Patient Care and Management III in the Quarter system.

RAD -184 Orientation to Clinical Environment

0.50 credit hours, 1.50 contact hours (0 hours lecture and 1.50 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology program. Course is graded S/U.

This course provides an orientation to the clinical environment. Topics covered are designed to prepare the student for safe practice in the clinical setting. Topics include radiation safety, OSHA standards, policies and procedures; code of ethics. This course is typically offered on a term basis and is graded on a Satisfactory/ Unsatisfactory basis.

RAD-184 replaces MEDIMG-184 Orientation to Clinical Environment in the Semester system. Both RAD-184 and MEDIMG-184 replace RAD-4130 Pre-Clinical Radiology in the Quarter system.

RAD-185 Clinical Education in Radiology I

1 credit hour, 8 contact hours (1 hour lecture, 0 hours lab and 7 hours directed practice [clinical]). Prerequisite: Enrollment in Radiologic Science Technology program; concurrent enrollment in RAD-101 and Satisfactory grade in (RAD-184 or MEDIMG-184). Course is graded S/U.

During this clinical experience, the student will gain practical experience and begin to apply cognitive, psychomotor, and affective skills in the clinical setting. The student will function under the supervision of qualified radiographers or physicians. This course will meet for one hour weekly on campus with the program faculty. This course is typically offered on a term basis and is graded on a Satisfactory/ Unsatisfactory basis.

RAD-185 replaces MEDIMG-185 Clinical Education in Radiology I in the Semester system. Both RAD-185 and MEDIMG-185 replace RAD-4146 Clinical Radiology I in the Quarter system.

**COTC COURSE DESCRIPTIONS - RADIOLOGIC SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****RAD-186 Clinical Education in Radiology II**

2 credit hours, 16 contact hours (1 hour lecture, 0 hours lab and 15 hours directed practice [clinical]). Prerequisite: Enrollment in the Radiologic Science Technology program; Satisfactory grade in (RAD-185 or MEDIMG-185). Course is graded S/U.

During this clinical experience the student will gain practical experience and begin to apply cognitive, psychomotor, and affective skills in the clinical setting. The student will function under the supervision of qualified radiographers or physicians. This course will meet for one hour weekly on campus with the program faculty. This course is graded on a Satisfactory/ Unsatisfactory basis.

RAD-186 replaces MEDIMG-186 Clinical Education in Radiology II in the Semester system. Both RAD-186 and MEDIMG-186 replace RAD-414 Clinical Radiology I and RAD-4150 Clinical Education in Radiology II in the Quarter system.

RAD-187 Clinical Education in Radiology III

2 credit hours, 16 contact hours (1 hour lecture, 0 hours lab, and 15 hours directed practice [clinical]). Prerequisite: Enrollment in the Radiologic Science Technology program; Satisfactory grade in (RAD-186 or MEDIMG-186). Course is graded S/U.

This course provides advanced experience in the clinical setting. It is designed to allow the student to apply previously learned theories and techniques for radiographic imaging. The student will have the opportunity to participate in trauma and surgical procedures. Student radiographers will function under the supervision and guidance of the clinical radiographers and physicians in the health care setting. This course will meet for one hour weekly on campus with program faculty. This course is graded on a Satisfactory/ Unsatisfactory basis.

RAD-187 replaces MEDIMG-187 Clinical Education in Radiology III in the Semester system. Both RAD-187 and MEDIMG-187 replace RAD-4150 Clinical Education in Radiology II and RAD-4178 Clinical Education in Radiology III in the Quarter system.

RAD-188 Clinical Education in Radiology I

1.50 credit hour, 16.00 contact hours (1.00 hour meetings with faculty for 10 weeks [0.50 lecture hours]), 0 hours lab and 15.00 hours directed practice [clinical]). Prerequisite: Enrollment in the Radiologic Technology Sciences Program and a Satisfactory grade in RAD-185. Course is graded S/U.

During this clinical experience students will gain practical experience and begin to apply cognitive, psychomotor, and affective skills in the clinical setting. Students will function under the supervision of qualified radiographers or physicians. This course will meet for one hour weekly on campus with the program faculty. This course is graded on a Satisfactory/ Unsatisfactory basis.

RAD-188 is a new course in the Semester system.

RAD-210 Radiologic Pathology I

1.50 credit hours, 1.50 contact hours (1.50 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology program; Satisfactory grade in (RAD-285 or MEDIMG-285). Course is graded A-F.

This course discusses the principles of human pathophysiology, the signs symptoms, diagnosis and treatment of numerous pathological processes of the respiratory, skeletal, cardiovascular, endocrinological and hemopoietic systems. Topics will include the imaging implications and methods to best demonstrate various pathologies.

RAD-210 replaces MEDIMG-210 Radiologic Pathology I in the Semester system. Both RAD-210 and MEDIMG-210 replace RAD-4160 Principles of Pathology for Radiographers in the Quarter system.

**COTC COURSE DESCRIPTIONS - RADIOLOGIC SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****RAD-211 Radiologic Pathology II**

1.50 credit hours, 1.50 contact hours (1.50 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology program; C grade (2.00) or better in (RAD-210 or MEDIMG-210). Course is graded A-F.

This course discusses the principles of human pathophysiology, the signs symptoms, diagnosis and treatment of numerous pathological processes of the gastrointestinal, nervous, reproductive, urinary systems in addition to nutritional and systemic pathologies. Topics will include the imaging implications and methods to best demonstrate various pathologies.

RAD-211 replaces MEDIMG-211 Radiologic Pathology II in the Semester system. Both RAD-211 and MEDIMG-211 replace RAD-4160 Principles of Pathology for Radiographers in the Quarter system.

RAD-226 Department Administration

1.50 credit hours, 1.50 contact hours (1.50 hours lecture and 0 hours lab). Prerequisite: Second Year Status in Radiologic Science Technology program. Course is graded A-F.

This course is designed to introduce the student to basic principles of hospital administration and organization and relates those principles to the management of the imaging department. The student will have the opportunity to review the concepts of hospital organization, financing, employment practices and quality control. Upon completion of this course, the student should gain an insight of the overall administration of hospitals and departments within the hospital. This course should provide basic management skills and knowledge for those students interested in pursuing a supervisory position in the radiology department.

RAD-226 replaces MEDIMG-226 Department Administration in the Semester system. Both RAD-226 and MEDIMG-226 replace RAD-4126 Department Administration in the Quarter system.

RAD-233 Quality Assurance and Image Production

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology program; C grade (2.00) or better in (RAD-133 or MEDIMG-133). Course is graded A-F.

The importance of quality assurance programs in the medical imaging department is discussed in this course. The student will be introduced to the basic testing procedures of all aspects of the imaging chain for both film/screen and digital imaging systems. The student will analyze the finished radiograph and identify all factors which alter quality. The principles of computer integrated imaging will be discussed relative to radiography and fluoroscopy.

RAD-233 replaces MEDIMG-233 Quality Assurance and Image Production in the Semester system. Both RAD-233 and MEDIMG-233 replace RAD-4185 Advanced Exposure/Quality Assurance and RAD-4187 Radiologic Imaging Modalities in the Quarter system.

RAD-246 Current issues and Ethics in Medical Imaging

1.50 credit hours, 1.50 contact hours (1.50 hours lecture and 0 hours lab). Prerequisite: Second Year Status in the Radiologic Science Technology program. Course is graded A-F.

This course deals with current issues relevant to imaging departments and personnel. In addition, there is a brief review of ethics as applied to the radiology profession. Upon completion of the course, the student will be prepared to deal with similar issues that they may encounter in their employment as staff imagers.

RAD-246 replaces MEDIMG-246 Current Issues and Ethics in Medical Imaging in the Semester system. Both RAD-246 and MEDIMG-246 replace RAD-4046 Current Issues in Allied Health in the Quarter system.

**COTC COURSE DESCRIPTIONS - RADIOLOGIC SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****RAD-254 Medical Imaging Seminar II**

1.50 credit hours, 1.50 contact hours (1.50 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology program; C grade (2.00) or better in (RAD-233 or MEDIMG-233). Course is graded A-F.

This course provides the correlation between previously learned radiographic concepts and clinical application. It is designed to aid the transition to the entry level radiographer. General topics of discussion include radiation protection, equipment operation and maintenance, image production and evaluation, radiographic positioning and patient care procedures. Requirements for ethical and legal practice of radiography in Ohio are discussed.

RAD-254 replaces MEDIMG-254 Medical Imaging Seminar II in the Semester system. Both RAD-254 and MEDIMG-254 replace RAD-4155 Radiographic Seminar II in the Quarter system.

RAD-267 Patient Care and Management IV

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology program; C grade (2.00) or better in (RAD-166 or MEDIMG-166). Course is graded A-F.

The final course in the patient care sequence is designed to provide the student with knowledge and practice in the use of electrocardiograms and monitor, venipuncture and contrast administration techniques, pediatric radiology, forensic radiology and common laboratory procedures.

RAD-267 replaces MEDIMG-267 Patient Care and Management IV in the Semester system. Both RAD-267 and MEDIMG-267 replace RAD-4167 Patient Care and Management IV and RAD-4168 Patient Care and Management V in the Quarter system.

RAD-279 Mammography and Breast Health

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (RAD-210 or MEDIMG-210) and (RAD-211 or MEDIMG-211) or current registration with American Registry of Radiologic Technologists and permission of Program Director. Course is graded A-F or P/NP.

This course provides a complete overview of breast health and the theory and practice of diagnosing and treating the patient with breast disease. Topics to be covered include the following: pathology, mammographic positioning, patient education, and diagnostic intervention. The student will have the opportunity to apply classroom theory in the laboratory setting. The assurance of quality and the selection of radiation parameters will also be discussed.

RAD-279 replaces MEDIMG-279 Mammography and Breast Health in the Semester system. Both RAD-279 and MEDIMG-279 replace RAD-4180 Mammography and Breast Health in the Quarter system.

RAD-280 Clinical Education in Specialty Disciplines

1 credit hour, 8 contact hours (1 hour meetings with faculty, 0 hours lab, and 8 hours directed practice [clinical hours for a total of 120 hours per semester]). Total number weekly contact hours offered on a flexed basis. Prerequisite: Enrollment in the Radiologic Science Technology Program, Satisfactory grade in RAD 286, and C grade (2.00) or better in or concurrent enrollment in related technical elective; or permission of Radiologic Science Technology Program Director. Course is graded S/U.

This course is designed to allow the student to apply learned theories and techniques of specialty discipline imaging in the clinical setting. Specialty areas may include: surgical radiography, vascular interventional, cardiac interventional, mammography, magnetic resonance imaging or computed tomography procedures. The student will function under the supervision and guidance of the clinical radiographers and physicians in the health care setting. The course will meet for one hour weekly with program faculty. This course is graded on a Satisfactory/ Unsatisfactory basis.

RAD-280 replaces RAD-287 in the Semester system. Both RAD-280 and RAD-287 replace MEDIMG-287 Clinical Education in Specialty Disciplines in the Semester System. MEDIMG-287 was a new course in the Semester system.

**COTC COURSE DESCRIPTIONS - RADIOLOGIC SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****RAD-285 Clinical Education Radiology I**

4 credit hours, 32 contact hours (1 hour lecture, 0 hours lab and 31 hours directed practice [clinical]). Prerequisite: Enrollment in the Radiologic Science Technology program; C grade (2.00) or better in (RAD-187 or MEDIMG-187) and concurrent enrollment in RAD-290. Course is graded S/U.

This course is designed to provide the student with extensive clinical experience in all areas of the radiology department. The student will develop individual techniques and skills in radiographic procedures under the supervision of qualified radiographers or physicians. This course will meet for one hour weekly on campus with the program faculty. This course is graded on a Satisfactory/ Unsatisfactory basis.

RAD-285 replaces MEDIMG-285 Clinical Education Radiology IV in the Semester system. Both RAD-285 and MEDIMG-285 replace RAD-4159 Clinical Radiology IV in the Quarter system.

RAD-286 Clinical Education in Radiology II

2 credit hours, 16 contact hours (1 hour lecture, 0 hours lab, and 15 hours directed practice [clinical]). Prerequisite: Enrollment in the Medical Imaging in the Radiologic Sciences Technology program; Satisfactory grade in (RAD-285 or MEDIMG 285). Course is graded S/U.

This course provides advanced experience in the clinical setting. It is designed to allow the student to apply previously learned theories and techniques for radiographic imaging. The student will have the opportunity to observe angiography and specialized procedures. Student radiographers will function under the supervision and guidance of the clinical radiographers and physicians in the health care setting. Hospital computer systems will be discussed. This course will meet for one hour weekly on campus with program faculty. This course is graded on a Satisfactory/ Unsatisfactory basis.

RAD-286 replaces MEDIMG-286 Clinical Education in Radiology in the Semester system. Both RAD-286 and MEDIMG-286 replace RAD-4148 Clinical Radiology VI and RAD-4179 Clinical Education in Radiology V in the Quarter system.

RAD-288 Clinical Education in Radiology III

2 credit hours 17 contact hours (1 hour meetings with faculty [for a total of 10 hours per semester], 0 hours lab and 16 hours directed practice [for a total of 240 contact hours per semester]). Prerequisite: Enrollment in the Radiologic Technology Sciences Program and a Satisfactory grade in RAD-286. Course is graded S/U.

This course provides advanced experience in the clinical setting. It is designed to allow the student to apply previously learned theories and techniques for radiographic imaging. Student radiographers will function under the supervision and guidance of the clinical radiographers and physicians in the health care setting. This course will meet for one hour weekly on campus with program faculty. This course is graded on a Satisfactory/ Unsatisfactory basis.

RAD-288 is a new course in the Semester system.

RAD-290 Specialty Disciplines in Radiology

0.50 credit hours, 0.50 contact hours (0.50 hours lecture and 0 hours lab). Prerequisite: Enrollment in Radiologic Science Technology program and C grade (2.00) or better in (RAD-133 or MEDIMG-133) and concurrent enrollment in RAD-285. Course is graded A-F.

This course is an overview of the imaging modalities inclusive of Computer Tomography, Magnetic Resonance Imaging, Diagnostic Medical Sonography, Radiation Therapy and Nuclear Medicine. Emphasis will be on general operating principles of the modality, image production and its integration into patient diagnosis.

RAD-290 replaces MEDIMG-290 Specialty Disciplines in Radiology in the Semester system. Both RAD-290 and MEDIMG-290 replace RAD-4188 Specialty Disciplines in Radiology in the Quarter system.

**COTC COURSE DESCRIPTIONS - RADIOLOGIC SCIENCE TECHNOLOGY
2014-2015 ACADEMIC YEAR****RAD-294 Interventional and Surgical Radiology**

2.50 credit hours, 2.50 contact hours (2.50 hours lecture and 0 hours lab). Prerequisite: Current enrollment in Radiologic Science Technology program and C grade (2.00) or better in RAD-210 and RAD-233 or current registration with American Registry of Radiologic Technologists and permission of Program Director. Course is graded A-F.

This Radiographic Technology course is the study of interventional radiologic and surgical procedures. Topics to be covered include equipment requirements, anatomy visualized, radiographer's role, indications, contraindication, and pre and post procedural care, surgical procedures and pathologies demonstrated.

RAD-294 replaces RAD-297 Interventional and Surgical Radiology in the Semester system. Both RAD-294 and RAD-297 replace MEDIMG-297 Interventional and Surgical Radiology in the Semester system. RAD-294, RAD-297 and MEDIMG-297 replace RAD-4193 Interventional and Surgical Radiology in the Quarter system.

RAD-295 CT Instrumentation

2.50 credit hours, 2.50 contact hours (2.50 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology Program, C grade (2.00) or better in RAD-210 and DMS-110 or current registration with the American Registry of Radiologic Technologists and permission of Program Director. Course is graded A-F.

This course provides the physical principles and instrumentation of Computed Tomography. CT principles of operation and components, image processing and display, image quality, artifact recognition and reduction are included.

RAD-295 replaces RAD-298 CT Instrumentation in the Semester system. Both RAD-295 and RAD-298 replace MEDIMG-298-CT Instrumentation in the Semester system. RAD-295, RAD-298 and MEDIMG-298 replace RAD-4194 CT Instrumentation in the Quarter system.

RAD-296 MR Instrumentation

2.50 credit hours, 2.50 contact hours (2.50 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Science Technology Program, C grade (2.00) or better in RAD-210 and DMS-110 or current registration with the American Registry of Radiologic Technologists and permission of Program Director. Course is graded A-F.

This course provides the principles and instrumentation of Magnetic Resonance Imaging. MR principles of operation, MR safety, imaging parameters and procedures, instrumentation, and artifact recognition included.

RAD-296 replaces RAD-299 MR Instrumentation in the Semester system. Both RAD-296 and RAD-299 replace MEDIMG-299 MR Instrumentation in the Semester system. RAD-296, RAD-299 and MEDIMG-299 replace RAD-4195 MRI Pulse Sequence and Instrumentation in the Quarter system.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - SOCIOLOGY
2014-2015 ACADEMIC YEAR**

SOC-100 Introduction to Sociology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

Sociology is the study of social groups and societal institutions and their effect on society and individuals. Topics covered include research methods, theoretical perspectives, culture, the structure and organization of society, systems of stratification including global inequality, racial stratification, social class and gender stratification, major social institutions and current topics.

SOC-100 replaces BHS-1382 Sociology in the Quarter system. SOC-100 meets the Ohio Transfer Module standards for course TMSBS and also meets the Ohio Transfer Assurance Guides standards for course OSS021.

SOC-110 Cultural Diversity

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This course focuses on the differences and similarities among racial, ethnic, religious and other diverse populations in the United States and includes historical, religious and sociocultural issues and current conflicts.

SOC-110 replaces BHS-1379 Cultural Diversity in the Quarter system. SOC-110 meets the Ohio Transfer Guide standards for course TMSBS and also meets the Ohio Transfer Assurance Guides standards for course OSS024.

SOC-235 Social Problems

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade or better (2.00) in SOC-100. Course is graded A-F.

Social Problems will examine key social problems in the United States and abroad. The class will focus on how such problems are identified, legitimized, and addressed and how social structures, such as the political system, education, the economy, etc., generate these problems. The class will social structure and culture shape social policy with the effect of resolving, but also exacerbating social problems. It will also review how major theoretical perspectives and the scientific method can be used to understand and resolve these social problems.

SOC-235 replaces HUMSVS-230 Social Problems in the Semester system, beginning with the 2014-2015 academic year. Both SOC-235 and HUMSVS-230 replace HUM-5324 Social Problems in the Quarter system. Both SOC-235 and HUMSVS-230 meet the Ohio Transfer Assurance Guide standards for course OSS025.

PUBLISHED MARCH, 2014

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS – FOREIGN LANGUAGE COURSES - SPANISH
2014-2015 ACADEMIC YEAR**

SPAN-101 Spanish I

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This class prepares the student to connect with the language and cultures of the Spanish-speaking world. Through the introduction of cultural themes and related activities, the student will engage in meaningful communication in the Spanish language and have various opportunities to practice the basic foundations of comprehending, reading, speaking, and writing the language. Spanish is the primary language of classroom instruction. The course content includes grammar and practical vocabulary applications.

SPAN-101 Spanish I will be a new course in the Semester system.

SPAN-102 Spanish II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in SPAN-101 or one year of high school Spanish with a grade of B (3.00) or better. Course is graded A-F.

This class is a continuation of Spanish I and increases the foundational knowledge and comprehension of Spanish. The course further prepares the student to connect with the language and cultures of the Spanish-speaking world. Through the continued introduction of cultural themes and related activities, the student will engage in meaningful communication in the Spanish language and have various opportunities to continue to practice the basic foundations of comprehending, reading, speaking, and writing the language. Spanish is the primary language of classroom instruction. The course content includes additional grammar and practical vocabulary applications.

SPAN-102 Spanish II will be a new course in the Semester system.

SPAN-103 Spanish III

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in SPAN-102 or two years of high school Spanish with a B grade (3.00) or better. Course is graded A-F.

This class is a continuation of SPAN-102 and increases intermediate knowledge and comprehension of Spanish. The course further prepares the student to connect with the language and cultures of the Spanish-speaking world. Through the continued introduction of cultural themes and related activities, the student will engage in meaningful communication in the Spanish language and have various opportunities to continue to practice intermediate levels of comprehension, reading, speaking, and writing in Spanish. The course lays particular emphasis on providing practical conversation preparation for the medical, law enforcement, and business fields. Spanish is the primary language of classroom instruction. The course content includes additional grammar and practical vocabulary applications.

SPAN-103 is a new course in the Semester system.

SPAN-104 Spanish IV

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in SPAN-103 or three years of high school Spanish with a B grade (3.00) or better. Course is graded A-F.

This class is a continuation of SPAN-103 and increases intermediate knowledge and comprehension of Spanish. The course further prepares the student to connect with the language and cultures of the Spanish-speaking world. Through the continued introduction of cultural themes and related activities, the student will engage in meaningful communication in the Spanish language and have various opportunities to continue to practice intermediate levels of comprehension, reading, speaking, and writing in Spanish. The course lays particular emphasis on providing practical conversation preparation for the medical, law enforcement, and business fields. Spanish is the primary language of classroom instruction. The course content includes additional grammar and practical vocabulary applications.

SPAN-104 is a new course in the Semester system..

**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - ENGLISH AND COMMUNICATIONS - SPEECH
2014-2015 ACADEMIC YEAR**

SPCH-100 Fundamentals of Communication

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-F.

This introductory course explores oral communication and its impact on the individual in a variety of settings; it examines the basic principles of communication in one-on-one, small group, and public speaking situations. Activities are provided to the student that will allow him or her to practice and develop intrapersonal, interpersonal skills, group decision making and public speaking competence. Upon completion of the course, the student will have a better understanding of the various elements of the communication process, this awareness assisting in both the student's personal and professional life.

SPCH-100 replaces COM-1534 Effective Communications in the Quarter System. SPCH-100 meets Ohio Transfer Assurance Guide course OCM004.

SPCH-205 Public Speaking

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None; However, for a student who elects to take both SPCH-100 and SPCH-205, it is recommended that the student first successfully complete SPCH-100 and then enroll in SPCH- 205. Course is graded A-F.

This course emphasizes instruction and practical experience in public speaking. The student will learn to analyze audiences, select topics, apply research learned, organize, and present a series of extemporaneous speeches. This course introduces other interpersonal and intrapersonal communications skills, including listening and nonverbal communications.

SPCH-205 replaces COM-1504 Public Speaking in the Quarter System. SPCH-205 meets the Ohio Transfer Module standards for course TMCOM and also meets the Ohio Transfer Assurance Guide standards for course OCM004.

SPCH-210 Small Group Communication

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None; However, for a student who elects to take both SPCH-100 and SPCH-210, it is recommended that the student first successfully complete SPCH-100 and then enroll in SPCH- 210. Course is graded A-F.

This course focuses on the communication process in the small group setting. The student practices the techniques of defining, researching, planning, and group decision making, an emphasis being placed on leadership, participation, and shared responsibility.

SPCH-210 replaces COM-1523 Small Group Communications in the Quarter System. SPCH-210 meets the Ohio Transfer Assurance Guide standards for course OCM003.

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**CENTRAL OHIO TECHNICAL COLLEGE
COURSE DESCRIPTIONS - SURGICAL TECHNOLOGY
2014-2015 ACADEMIC YEAR**

SURG-135 Pharmacology for Surgical Assisting

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in BIO-131 (or concurrent enrollment in BIO-131) and (SURG-139 or SURG-131); and Satisfactory grade in SURG-184. Course is graded A-F.

The student will study the role of the surgical technologist in safe handling of drugs according to operating room policies and procedures. The student will also learn the classification of drugs, and federal and state pharmacy regulations applying to the surgical patient. Further, the student will study the complications and safety of the patient during local, regional and general anesthesia administration. Dosage calculation, life saving drugs, and other drugs commonly used in the Operating Room (OR) will be discussed.

SURG-135 Pharmacology for Surgical Assisting replaces SUR-4601 Pharmacology for Surgical Assisting in the Quarter system.

SURG-139 Basic Surgical Technology

5 credit hours , 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Admittance into the Surgical Technology Program. C grade (2.00) or better in BIO-130 (or concurrent enrollment in BIO-130) and concurrent enrollment in SURG-184. Course is graded A-F.

In this course, the student will be introduced to the operating room techniques, different types of health care facilities, roles of the surgical team members and physical environment of the surgical suite. The history of the development of surgery as well as ethical, moral, and legal responsibilities of the surgical team members, layout of the operating room suite, sterile and sub-sterile areas will be discussed. The student will also discuss the communication, interpersonal and interdepartmental relationship skills needed to function effectively in the operating suite. Further, the student will be introduced to: the basic instrumentation; surgical equipment; supplies (sterile & unsterile); sutures; stapling devices; the care, handling, use and assembly of instruments and equipment; condition of the patient; special population; transportation of the patient; O.R. records; preparation of the patient; aseptic technique; care of specimens; use of thermo regulatory devices; vital signs; handling of blood replacement components; urinary catheterization; diagnostics tests; and emergency procedures, electricity, robotics and computers in the OR.

SURG-139 replaces SURG- 131 Basic Surgical Technology in the Semester system. Both SURG-139 and SURG-131 replace SUR-4631 Fundamentals of Surgical Technology and SUR-4633 Patient Care Concepts and SUR-4635 Basic Case Preparation in the Quarter system.

SURG-141 Surgical Procedures I

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in the following: (SURG-131 or SURG-139) and BIO-130, Satisfactory grade in SURG-184 and concurrent enrollment in SURG-186. Course is graded A-F.

This course is designed to acquaint the student with the operating room procedures and techniques necessary to function in the Operating Room. Discussed will be the relevant anatomy, indications for surgery, special equipment, supplies, purpose and expected outcome and possible complications for procedures in the following surgical specialties: General and Gastrointestinal, Obstetric and Gynecologic, Orthopedic, ophthalmic, ear/nose/throat, dental/oral/maxillofacial, plastic and reconstructive and neurological surgery. The student will have clinical experiences in the above areas, functioning as a second scrub, first scrub or assistant circulator under the supervision of a certified surgical technologist or registered nurse.

SURG-141 replaces SURG-133 Surgical Procedures I in the Semester system. Both SURG-141 and SURG-133 replace SUR-4637 Surgical Procedures I and SUR-4639 Surgical Procedures II in the Quarter system.

**COTC COURSE DESCRIPTIONS - SURGICAL TECHNOLOGY
2014-2015 ACADEMIC YEAR****SURG-143 Surgical Procedures II**

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in BIO-131, and (SURG-133 or SURG-141), Satisfactory grade in SURG-186 and concurrent enrollment in SURG-188. Course is graded A-F.

This course is an extension of Surgical Procedures I. Discussed during this course will be the relevant anatomy, indications of surgery, special equipment and supplies, purpose and expected outcome and possible complications for procedures in thoracic, cardiovascular, peripheral vascular, and genitourological. The student will also acquaint with pediatric patients and a variety of surgical procedures unique to this special group. The student will have clinical experience in the above areas, functioning as a second scrub, first scrub, or assist circulator under the supervision of a certified surgical technologist or registered nurse.

SURG-143 replaces SURG-137 Surgical Procedures II in the Semester system. Both SURG-143 and SURG-137 replace SUR-4641 Surgical Procedures III and SUR-4643 Pediatric Surgery in the Quarter system.

SURG-184 Basic Surgical Technology Lab

3 credit hours, 9 contact hours (0 hours lecture and 9 hours lab). Prerequisite: Admittance into the Surgical Technology Program; concurrent enrollment in SURG-139; and C grade (2.00) or better in BIO-130 (or concurrent enrollment in BIO-130). Course is graded A-F.

During the laboratory exercise, the student will be introduced to the layout of the operating room suite, sterile and sub-sterile areas. The student will practice aseptic technique, scrubbing, gowning, gloving, opening of supplies and creating a sterile field. The student will also be introduced to sterile techniques, movement within the sterile field, surgical instrumentation, operating room equipment, care of specimen, and thermo regulatory devices, vital signs, handling of blood replacement components, urinary catheterization, and emergency procedures. Further, the student will be taught the importance of transportation, positioning, anesthesia of surgical patients, safety procedures, skin preparation and draping of the patient. The student will be given an opportunity to shadow a surgical technologist in surgery.

SURG-184 replaces SUR-4632 Fundamentals of Surgical Technology Lab and SUR-4634 Patient Care Concepts Lab and SUR-4636 Basic Case Preparation Laboratory in the Quarter system.

SURG-186 Surgical Procedures I Clinical

3 credit hours, 15 contact hours (0 hours lecture, 0 hours lab, and 15 hours directed practice [clinical]). Prerequisite: C grade (2.00) or better in (SURG-139 or SURG-131), SURG-184, and BIO-130; and concurrent enrollment in SURG-141. Course is graded S/U.

This course is designed to build on the student's knowledge of basic surgical techniques, professionalism, and ethics. The role of the surgical technologist is developed and applied in basic surgical procedures. The principles of asepsis and patient care concepts of positioning, prepping, draping, and procedural techniques are applied directly to the investigation of General, Gastrointestinal, Obstetrics, Gynecological, Orthopedic, Ophthalmic, ear/nose/throat, Dental/oral/maxillofacial, Plastic and reconstructive and Neurological surgical procedures. Maintaining the integrity, safety, and efficiency of the sterile and non-sterile areas throughout surgical procedures will be emphasized. This course is graded on a Satisfactory/ Unsatisfactory basis.

SURG-186 replaces SUR-4638 Surgical Procedures I: Clinical and SUR-4640 Surgical Procedure II: Clinical in the Quarter system.

**COTC COURSE DESCRIPTIONS - SURGICAL TECHNOLOGY
2014-2015 ACADEMIC YEAR****SURG-188 Surgical Procedures II Clinical**

3 credit hours, 15 contact hours (0 hours lecture, 0 hours lab, and 15 hours directed practice [clinical]). Prerequisite: C grade (2.00) or better in BIO-131 and (SURG-141 or SURG-133); and concurrent enrollment in SURG-143. Course is graded S/U.

This course is designed to build on the student's knowledge of surgical technology with emphasis on clinical surgical applications in thoracic, cardiovascular, peripheral vascular, and urology surgical procedures. Clinical experiences will emphasize adapting pediatric concepts in the surgical setting as they are available. The student will be given the opportunity to scrub in these pediatric specialty surgeries: General Surgery, Urology, Orthopedic, Neurosurgery, Thoracic surgery, Cardiovascular surgery, Ophthalmology, Plastic surgery, and ENT surgery. Emphasis is on further development of surgical skills. This course is graded on a Satisfactory/ Unsatisfactory basis.

SURG-188 replaces SUR-4642 Surgical Procedures III: Clinical and SUR-4644 Pediatric Surgery: Clinical in the Quarter system.

SURG-231 Advanced Surgical and Specialty Surgical Practice

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (SURG-141 or SURG-137) and concurrent enrollment in SURG-284. Course is graded A-F.

This course focuses on continuing surgical theory. It provides study of special problems that correlate with the individual needs and interests of the student during clinical practice. Clinical supervised practice is an integral part of this course.

SURG-231 Advanced Surgical and Specialty Surgical Practice replaces SUR-4645 Advanced Surgical Technology Practicum and SUR-4651 Specialty Surgical Practice in the Quarter system.

SURG-233 Professional Trends and Issues in Surgical Technology Seminar

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (SURG-143 or SURG-137) and concurrent enrollment in SURG-284. Course is graded S/U.

This course is designed to provide the correlation between previously learned concepts and clinical application. It is designed to aid in transition from surgical technology student to entry level Surgical Technologist. Topics include in this course include General, OB/GYN, Vascular, GU, Cardiothoracic, Plastic and Ophthalmology surgeries. Requirements for ethical and legal practice as defined by the National Association of Surgical Technologists will be reviewed and discussed. Topics discussed will be: factors that affect the student's personal life, professional relations and organizations, preparation for the national certification examination, type of health care delivery agencies, accrediting agencies and job seeking skills. This course is graded on a Satisfactory/ Unsatisfactory basis.

SURG-233 Professional Trends and Issues in Surgical Technology Seminar replaces SUR-4647 Professional Trends/Issues in Surgical Technology and SUR-4649 Surgical Technology Seminar in the Quarter system.

SURG-284 Advanced Surgical and Specialty Surgical Practice Clinical

3 credit hours, 15 contact hours (0 hours lecture, 0 hours lab, and 15 hours directed practice [clinical]). Prerequisite: Satisfactory grade in (SURG-143 or SURG-133), C grade (2.00) or better in BIO-130 and BIO-131, and concurrent enrollment in SURG-143. Course is graded S/U.

This course is designed to build on the student's knowledge of surgical technology with emphasis on clinical surgical applications. The student is expected to work with one preceptor during this course, and is expected to perform in the clinical practice with minimal assistance. This course is graded on a Satisfactory/ Unsatisfactory basis.

SURG-284 Advanced Surgical and Specialty Surgical Practice Clinical replaces SUR-4646 Advanced Surgical Technology Practicum: Clinical and SUR-4652 Specialty Surgical Practicum: Clinical in the Quarter system.