ACC-2113 Principles of Accounting--Financial

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

The meaning, purpose and function of accounting in business are presented through studying the concepts and theories of accounting. Basic accounting procedures covered in this course include journalizing transactions, posting, trial balances, adjusting and closing entries and preparation of financial statements. Other topics of study include the preparation and use of working papers, internal control, special journals, and the voucher system. The course focuses on the sole proprietorship form of business organization for both service and merchandising operations.

ACC-2114 Financial Accounting

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Accounting Majors: C grade (2.00) or better in ACC-2113; All Others: ACC-2113. Course is graded A-E.

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.

ACC-2116 Data Applications in Accounting

2 credit hours, 4 contact hours (0 hours lecture and 4 hours lab). Prerequisite: Accounting Majors: C grade (2.00) or better in BMS-2037 and ACC-2114; All Others: BMS-2037 and ACC-2114. Course is graded A-E.

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.

ACC-2120 Managerial Accounting

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Accounting Majors: C grade (2.00) or better in ACC-2114; All Others: ACC-2114. Course is graded A-E.

This course continues the development of techniques presented in Accounting 2113 and 2114. The topics covered include managerial accounting, process and job order cost accounting systems, cost behavior and cost-volume profit analysis, budgeting, performance evaluation using variances from standard costing, differential analysis and product pricing, and capital investment and analysis.

ACC-2126 Individual Taxation

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Accounting Majors: C grade (2.00) or better in ACC-2113 or permission of the instructor; All Others: ACC-2113 or permission of the instructor. Course is graded A-E.

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.

ACC-2127 Payroll Accounting

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Accounting Majors: C grade (2.00) or better in ACC-2114; All Others: ACC-2114. Course is graded A-E.

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.

ACC-2128 Cost Management: A Contemporary Approach

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Accounting Majors: C grade (2.00) or better in ACC-2120; All Others: ACC-2120. Course is graded A-E.

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 managers' 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.

Topics, tools, and techniques will be scrutinized, evaluated, and investigated in this course include: the role of cost management, cost and managerial accounting versus financial accounting, the sue of activity based costing systems, implementation of activity based management, budgeting standard costing, variance analysis, flexible budgets, and other current leading edge cost management tools and practices.

ACC-2132 Principles of Finance

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: ACC-2114. Course is graded A-E.

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.

ACC-2136 General Ledger Software

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ACC-2113. Course is graded A-E.

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.

ACC-2139 Governmental Accounting

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ACC-2114. Course is graded A-E.

This course will introduce students 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: development and use of budgetary data, the concept of the modified accrual basis of accounting, accounting for general fund operations and other funds, interfund relationships and combined financial statements, and interpreting financial statements.

ACC-2161 Auditing

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ACC-2173. Course is graded A-E.

This course covers the theory and processes of auditing. Areas of study include: generally accepted auditing standards, reports on audited statements, audit work papers, audit planning, internal control evaluation, audit sampling, and fraud awareness auditing. Audit applications will be discussed relating to the revenue and collection cycle and the acquisition and expenditure cycle.

ACC-2172 Intermediate Accounting I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ACC-2114. Completion of ACC-2120 is recommended but not required before taking ACC-2172. Course is graded A-E.

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; and methods of valuations.

ACC-2173 Intermediate Accounting II

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ACC-2172. Course is graded A-E.

This course is a continuation of 2172 Intermediate Accounting II and presents 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.

ACC-2174 Intermediate Accounting III

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ACC-2173. Course is graded A-E.

This course is a continuation of 2173 Intermediate Accounting II 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.

ACC-2180 Accounting Capstone Course

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in ACC-2116, ACC-2126, ACC-2128, ACC-2132, ACC-2136, ACC-2139, and ACC-2173 and concurrent enrollment in ACC-2161 (unless already successfully completed). Course is graded A-E.

This capstone course is designed to equip accounting students with the analytical skills necessary to compete in the accounting field. Comprehensive cases requiring critical thinking, communication skills, analysis, interpretation, and decision making will be utilized. Simulation(s) and outside speakers may also be utilized to enhance the student's learning. The student will apply skills acquired in prior course work to solve accounting problems and cases involving practical applications.

AMT-3413 Production Planning and Control

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

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.

AMT-3415 Statistical Process Control

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: MTH-1210 (or a score of at least 71 on the COMPASS Elementary Algebra test). Course is graded A-E.

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.

AMT-3433 Principles of Manufacturing

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

This course introduces concepts and techniques used in manufacturing. Topics include process control, process capability, management and quality improvement. The commonalties 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.

AMT-3434 Machining Calculations

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: MTH-1226 (or concurrent enrollment). Course is graded A-E.

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.

AMT-3435 Metrology

2 credit hours, 4 contact hours (1 hours lecture and 3 hours lab). Prerequisite: AMT-3434 (or concurrent enrollment). Course is graded A-E.

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.

AMT-3436 CAD for Machining

4 credit hours, 8 contact hours (2 hours lecture and 6 hours lab). Prerequisite: DDT-3706. Course is graded A-E.

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.

AMT-3437 Principles of Machining

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

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.

AMT-3438 Machining Turning I

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: AMT-3437 (or concurrent enrollment). Course is graded A-E.

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.

AMT-3439 Machining Turning II

3 credit hours, 7 contact hours (1 hours lecture and 6 hours lab). Prerequisite: AMT-3438 (or concurrent enrollment). Course is graded A-E.

Continuation of Machining-Turning I. 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.

AMT-3445 CNC Turning I

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: AMT-3439. Course is graded A-E.

This course covers terminology, set-up, operation, and daily care of CNC turning machines. Theory and practical skill development exercises will focus on the use of CNC metal working turning machines and attachments. Accident prevention practices and procedures will be stressed throughout the course. 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.

AMT-3446 CNC Turning II

3 credit hours, 7 contact hours (1 hours lecture and 6 hours lab). Prerequisite: AMT-3445. Course is graded A-E.

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.

AMT-3447 Materials in Manufacturing

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

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, senescing, and other processes concerning metallurgical transformations. Upon completion, students should be able to understand the iron-carbon phase diagram, ITT diagram, microstructure images, and other phenomena concerning the behavior of metals.

AMT-3448 CNC Graphic Programming

4 credit hours, 8 contact hours (2 hours lecture and 6 hours lab). Prerequisite: AMT-3436, AMT-3475 and AMT-3476. Course is graded A-E.

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.

AMT-3468 Machining Milling I

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: AMT-3437 (or concurrent enrollment). Course is graded A-E.

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.

AMT-3469 Machining Milling II

3 credit hours, 7 contact hours (1 hours lecture and 6 hours lab). Prerequisite: AMT-3468 (or concurrent enrollment). Course is graded A-E.

Continuation of Machining-Milling I. 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.

AMT-3475 CNC Milling I

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: AMT-3469. Course is graded A-E.

This course covers the set-up, operation and daily are of CNC milling machines. Theory and practical skill development exercises will focus on the use of CNC 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. 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.

AMT-3476 CNC Milling II

3 credit hours, 7 contact hours (1 hours lecture and 6 hours lab). Prerequisite: AMT-3475. Course is graded A-E.

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.

AMT-3490 Cooperative Education Machining

2 credit hours, 24 contact hours (1 credit hour awarded per 12 hours per week cooperative education). Prerequisite: AMT-3437, AMT-3434, AMT-3435, AMT-3438, AMT-3439 and ETA-3071. Course is graded S/U.

This flexible course offering is composed of a paid or unpaid cooperative work experience coordinated by the student's advisor. The work experience must be related to the student's academic program. This course is graded on a Satisfactory/Unsatisfactory basis.

AMT 3491 Cooperative Education CNC

2 credit hours, 24 contact hours (1 credit hour awarded per 12 hours per week cooperative education). Prerequisite: (AMT-3490, AMT-3492, or AMT-3494), DDT-3754 and AMT-3448. Course is graded S/U.

This flexible course offering is composed of a paid or unpaid cooperative work experience coordinated by the student's advisor. The work experience must be related to the student's academic program. This course is graded on a Satisfactory/Unsatisfactory basis.

AMT-3492 Field Experience Machining

2 credit hours, 24 contact hours (1 credit hour awarded per 12 hours per week field experience). Prerequisite: AMT-3437, AMT-3434, AMT-3435, AMT-3438, AMT-3439 and ETA-3071. Course is graded S/U.

This flexible course offering is composed of a paid or unpaid field experience work coordinated by the student's advisor. The work experience must be related to the student's academic program. This course is graded on a Satisfactory/Unsatisfactory basis.

AMT-3493 Field Experience CNC

2 credit hours, 24 contact hours (1 credit hour awarded per 12 hours per week field experience). Prerequisite: (AMT-3490, AMT-3492, or AMT-3494), DDT-3754 and AMT-3448. Course is graded S/U.

This flexible course offering is composed of a paid or unpaid field experience work coordinated by the student's advisor. The work experience must be related to the student's academic program. This course is graded on a Satisfactory/Unsatisfactory basis.

AMT-3494 Practicum Machining

2 credit hours, 24 contact hours (1 credit hour awarded per 12 hours per week practicum work experience). Prerequisite: AMT-3437, AMT-3434, AMT-3435, AMT-3438, AMT-3439 and ETA-3071. Course is graded S/U.

This flexible course offering is composed of an unpaid practicum work experience coordinated by the student's advisor. The work experience must be related to the student's academic program. This course is graded on a Satisfactory/Unsatisfactory basis.

AMT-3495 Practicum CNC

2 credit hours, 24 contact hours (1 credit hour awarded per 12 hours per week practicum work experience). Prerequisite: (AMT-3490, AMT-3492, or AMT-3494), DDT-3754 and AMT-3448. Course is graded S/U.

This flexible course offering is composed of an unpaid practicum work experience coordinated by the student's advisor. The work experience must be related to the student's academic program. This course is graded on a Satisfactory/Unsatisfactory basis.

BHS-1006 Critical Thinking

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: COM-1535. Course is graded A-E.

This course, an introduction to logic, teaches students to analyze the media, advertising, and everyday problems -- career, academic, and personal. It aims at equipping students with the basic skills and discipline necessary to make valid judgments.

BHS-1030 Reasoning Skills

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: This course is required for all students who place in two or more Pre-College Communications courses. This course is open to any student with a grade of C (2.00) or better in PCE-1400 (or a score of at least 75 on the COMPASS writing skills test, or a score of at least 42 on the ASSET writing skills test) and a grade of C (2.00) or better in PCE-1423, or either a score of at least 85 on the COMPASS reading skills test or a score of at least 44 on the ASSET reading skills test. Course must be taken within student's first 45 credit hours. Course is graded A-E.

This course develops the critical thinking skills needed to analyze situations in personal, academic, and career life. Skills developed include analyzing facts, applying strategies for deep learning, recognizing assumptions, making decisions, evaluating information critically and ethically, and opening one's mind to other options.

BHS-1340 Ethics

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: COM-1535. Course is graded A-E.

This Ethics 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.

BHS-1345 Human Development

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in BHS-1383 or BHS-1376. Course is graded A-E. Not open to students with credit for BHS-4045.

Students study 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. Course requirements include a project focusing on the application of human development theories, concepts, principles, and tasks.

BHS-1370 Social Psychology

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: BHS-1376. Course is graded A-E.

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.

BHS-1376 General Psychology

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Minimum ASSET score of 44 in reading and writing or minimum COMPASS score of 85 in reading and 75 in writing or completion of both PCE-1400 and PCE-1423. Course is graded A-E. Course is not open to students with credit for BHS-1395, BHS-1396, or BHS-1386.

General Psychology provides an introduction to the history of psychology, basic theoretical constructs, research methods, physiological effects on behavior, cognitive functioning, social psychology, organizational psychology, personality theory and psychopathology.

BHS-1378 Abnormal Psychology

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in BHS-1376. Course is graded A-E. Not open to students with credit for BHS-1388 or BHS-1397.

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. Topics will be developed through lecture, class discussion, papers, structured class activities and films.

BHS-1379 Cultural Diversity

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. This course is not open to students with credit for BHS-1389, BHS-1392 or BHS-1399. Course is graded A-E.

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.

BHS-1382 Sociology

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

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.

BHS-1383 Psychology of Adjustment

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: (Minimum ASSET score of 44 in reading and 44 in writing) or (minimum COMPASS score of 85 in reading and 75 in writing) or (completion of both PCE-1400 and PCE-1423). Course is graded A-E. Not open to students with credit for BHS-1393.

This course deals with issues related to personal growth and adjustment. Topics covered include basic research methods, personality, aspects of the self, social influence, interpersonal attraction and communication, emotional expression, sexual expression, adolescent and adult development, gender roles and mental health.

BHS-1385 Organizational Psychology

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

Organizational Psychology is an introduction to the application of the methods, facts, and principles of psychology of human behavior within work organizations. Topics include history and use of applied psychology, causation and purpose in behavior, leadership, group problem solving and group leadership, evaluating individual abilities, motivating workers for optimum performance, job fatigue, and counseling skills for managers. Course objectives are achieved through lecture and discussion, role-playing exercises, and written projects.

BHS-1399 Cultural Diversity for Law Enforcement

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Open to Law Enforcement Technology students only. This course is not open to students with credit for BHS-1389 or BHS-1392. Course is graded A-E.

This course focuses on the differences and similarities among racial, ethnic, and other diverse populations in the United States and includes historical, religious, and sociocultural issues and current conflicts.

BIO-1705 Introduction to Human Biology

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None; Completion of or concurrent enrollment in PCE-1400 or equivalent course or college level composition course is recommended. Course is graded A-E. Not open to students with credit for NAT-1705 or NAT-4008. This course will count neither for elective credit nor toward meeting minimum credit hour requirements for graduation.

This introductory course is designed for the student planning entry into a technology requiring an understanding of human structure, function, and familiarity with anatomical and physiological terminology.

BIO-1730 Environmental Science

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: None. Recommend completion of or concurrent enrollment in PCE-1400 or equivalent course or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1730 or NAT-4061.

This 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 toxic materials. The roles of business, industry, and government as related to the environment will also be addressed. The laboratory portion of this course enhances the theories and concepts presented in the lecture.

BIO-1740 General Biology

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: A grade of C (2.00) or better in High School Biology or BIO-1705. Recommended completion of this course for students who must take BIO-1772 Human Anatomy and Physiology I, and BIO-1773 Human Anatomy and Physiology II. Recommend completion of or concurrent enrollment in PCE-1400 or equivalent course or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1740 or NAT-4070.

General Biology 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 of this course enhances the theories and concepts presented in lecture.

BIO-1745 Human Biology

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: Grade of C (2.00) or better in high school biology or BIO-1705. This course may not be taken concurrently with BIO-1705. High school chemistry is recommended but not required. Recommend completion of or concurrent enrollment in PCE-1400 or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1745 or NAT-4081.

Human Biology is a one-quarter introductory course that examines introductory chemistry, the cell, cellular reproduction and differentiation, tissues, a review of the anatomical and physiological aspects of the integumentary, skeletal, musculature, nervous, endocrine, cardiovascular, immune, respiratory, digestive, urinary, and reproductive systems. Also, students will review the principles of genetics and will discuss genetic disorders. Laboratory studies will involve the application of lecture materials and may involve the use of human cadavers, along with other learning resources including videos, computer applications, histological slides, animal specimens/dissections, and anatomical models.

BIO-1750 Elementary Microbiology

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Grade of C (2.00) or better in BIO-1740 or BIO-1745. Recommend completion of or concurrent enrollment in PCE-1400 or college level composition course. Not open to students with credit for NAT-1745, NAT-1755, NAT-4003 or NAT-4004. Course is graded A-E.

This course is an introduction to microbiology, surveying the basic types of microscopic organisms. Classification, structure, culturing, transmission, microbial control, and selected diseases are studied.

BIO-1755 Microbiology

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in high school chemistry or CHM-1700 ***and*** grade of C (2.00) or better in BIO-1740 or BIO-1745 or BIO-1772. Recommend completion of or concurrent enrollment in PCE-1400 or equivalent course or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1755 or NAT-4003.

This course is a survey of the microbial world including types of microbes, microbial metabolism, microbial genetics, microbial growth, host/microbe interactions, immunology, and infectious diseases of the body systems. The laboratory portion of this course enhances the theories and concepts presented in the didactic portion of the course.

BIO-1760 Medical Terminology

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Student must have knowledge of computer applications and access to a computer as this course is offered only online. Recommend preparation: completion of or concurrent enrollment in PCE-1400 or college level composition course. Course is graded A-E. BIO-1760 has been approved by the Ohio Board of Regents as meeting the Transfer Assurance Guide (TAG) course OHL005 requirements. Not open to students with credit for NAT-1760 or NAT-4039.

This web-based on-line course is designed to introduce the student to the basic elements of medical terminology. The material presented will give the student the ability to combine root elements with prefixes, suffices, and combining vowels to decipher and understand medical terms.

BIO-1764 Human Nutrition

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab).
Prerequisite: None. Recommend preparation: high school chemistry and completion of or concurrent enrollment in PCE-1400 or equivalent course or college-level composition course. Course is graded A-E.

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-1772 Human Anatomy and Physiology I

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in CHM-1710 or CHM-1713. Course is graded A-E.

This course is an introduction to the study of anatomy and physiology of the human body, including standard terminology, chemistry review, cells, tissues, and structure, function and physiology of the integumentary, skeletal, muscular, nervous, special senses and receptors. Laboratory studies will involve the application of lecture materials and may involve the use of human cadavers, along with other learning resources including videos, computer applications, histological slides, animal specimens/dissections, and anatomical models.

BIO-1773 Human Anatomy and Physiology II

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in BIO-1772. Course is graded A-E.

The student will continue to study the anatomy and physiology of the human body, including the structures and functions of endocrine system, cardiovascular system, lymphatic system, respiratory system, digestive system, urinary, and reproductive systems. The course also includes the study of genetics and embryology. Laboratory may include the study of human cadavers along with other learning resources including videos, computer applications, histological slides, animal specimens/dissections, and anatomical models.

BIO-1778 Pathophysiology I

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in BIO-1772. Recommend completion of or concurrent enrollment in PCE-1400 or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1778 or NAT-4048. BIO-1778 plus BIO-1779 together have been approved by the Ohio Board of Regents as meeting the Transfer Assurance Guide (TAG) course requirements.

This course is the study of pathological imbalances including cellular adaptation and injury, fluid compartment exchanges with edema and dehydration, electrolyte functions, control and imbalances, acidosis and alkalosis, nervous system injuries and responses, sensory imbalances, skeletal system injury and repair, soft tissue injury and repair, and muscle injury and dysfunction.

BIO-1779 Pathophysiology II

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in BIO-1773 and BIO-1778. Recommend completion of or concurrent enrollment in PCE-1400 or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1779 or NAT-4049. BIO-1778 plus BIO-1779 together have been approved by the Ohio Board of Regents as meeting the Transfer Assurance Guide (TAG) course requirements.

This course is the study of pathological imbalances including blood pressure, homeostasis, shock, cardiac malfunction, respiratory malfunction, hematopoiesis with anemias and leukemias, gastrointestinal imbalances, liver malfunction, renal failure, bladder injury and control, and endocrine hypersecretions and hyposecretions.

BIO-1780 Biology I

6 credit hours, 8 contact hours (4 hours lecture, 1 hour recitation, 3 hours lab). Prerequisite: Grade of C (2.00) or better in high school biology or BIO-1705 and grade of C (2.00) or better in high school Algebra II or MTH-1210 and grade of C (2.00) or better in high school chemistry or CHM-1700. Recommend completion of or concurrent enrollment in PCE-1400 or college level composition course. Course is graded A-E.

This course explores general biological problems and processes as they are experienced by all living organisms: the chemistry and energetic 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-quarter sequence - BIO-1780 Biology I and BIO-1781 Biology II.

BIO-1781 Biology II

6 credit hours, 8 contact hours (4 hours lecture, 1 hour recitation, 3 hours lab). Prerequisite: Grade of C (2.00) or better in BIO-1780. Course is graded A-E.

This course explores general biological problems and processes as they are experienced by 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. This is the second of a two-quarter sequence - BIO-1780 Biology I and BIO-1781 Biology II.

BMS-2029 Document Production I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: None. Recommended Preparation: keyboarding ability and knowledge of Windows. Course is graded A-E.

This course develops the ability and knowledge of the student of basic document production techniques for 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. Some emphasis is placed on production timelines.

BMS-2037 Spreadsheet Applications I

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: None. Recommended Preparation: keyboarding ability and knowledge of Windows. Course is graded A-E.

This course provides the student the instruction for developing the skills necessary to create and efficiently use spreadsheets. It is designed to take the student step by step through the features of industry standard spreadsheet software. Numerous practical in-depth spreadsheets should be completed.

BMS-2038 Spreadsheet Applications II

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: Grade of C (2.00) or better in BMS-2037. Course is graded A-E.

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.

BMS-2067 Database Applications I

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: None. Recommended Preparation: keyboarding ability and knowledge of Windows. Course is graded A-E.

This course is the study of the principles and procedures of record creation, storage and retrieval using professional, industry standard relational database software. The student will gain an understanding of the basics of database design and the relationships among the elements of a database.

BMS-2068 Database Applications II

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: Grade of C (2.00) or better in BMS-2067. Course is graded A-E.

This course continues the study of the principles and procedures of record creation, storage, retrieval and management as may be facilitated by any professional, industry standard relational database software. Advanced topics are covered.

BMS-2205 MS PowerPoint I

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Recommended Preparation: keyboarding ability and knowledge of Windows. Course is graded A-E.

This Microsoft PowerPoint course is designed to teach students to prepare a PowerPoint presentation and use various methods for editing and formatting a presentation. Students gain experience in adding animation, using WordArt, creating organizational charts for use in presentations, as well as ways in which PowerPoint interacts with Windows and the Internet. Students need some prior computer experience and familiarity using Windows.

BMS-2210 Medical Information Coding

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: BIO-1760 and BMS-2294. Course is graded A-E.

This medical coding course is designed to teach students how to find, use, and apply the codes of the ICD-9-CM (International Classification of Diseases) in order to classify medical documents efficiently, accurately, and effectively to optimize reimbursements of medical practices or medical facilities.

BMS-2294 Patient Billing

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: BIO-1760, BMS-2027 and ACC-2113. Course is graded A-E.

This course will help prepare the student to master many of the medical billing skills that are highly regarded and sought after in the health care profession. The student will learn how to use Medisoft (a widely used patient accounting program) to perform the following tasks: add new billing codes, input patient information, process patient transactions, produce various reports, print statements and insurance forms, and process claims.

BMS-2902 Introduction to the Internet

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

This course covers the skills and concepts needed to effectively use Internet resources. The concepts covered include: Internet fundamentals, connecting to the Internet, browsing the Internet, Hypertext Links, Bookmarks, News and Discussion Groups, email, downloading from FTP sites, Telnet, Web search engines, the World Wide Web, Internet Explorer and Web Browsers. . This course is graded on a Satisfactory/Unsatisfactory basis.

BMS-2903 Introduction to Networking

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

This course introduces the student to networking fundamentals. The following concepts are covered: LAN fundamentals, connecting LANS to other computing resources, token rings, Ethernet, installing a typical application, managing network printing, providing network access and maintaining security, shared resources, and administrative tools. This course is graded on a Satisfactory/Unsatisfactory basis.

BMS-2904 Introduction to Windows

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

This course covers the skills and concepts needed to use Windows-based programs effectively and efficiently. The course introduces the basic PC functions, typical operating system functions, executing software applications, working with files and folders, customizing and configuring a Windows-based PC. . This course is graded on a Satisfactory/Unsatisfactory basis.

BMS-2909 Advanced Windows

1 credit hour, 1 contact hours (1 hour lecture and 0 hours lab). Prerequisite: BMS-2904. Course is graded S/U.

This course continues concepts introduced in Introduction to Windows by covering the concepts in more detail. Procedures and troubleshooting techniques are introduced for adding and removing software and hardware from a Windows system.. This course is graded on a Satisfactory/Unsatisfactory basis.

BMS-2917 MS Word I

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

This course covers the basic skills and concepts needed to effectively use word processing software. The concepts covered include: creating, modifying, saving, retrieving and printing word documents. . This course is graded on a Satisfactory/Unsatisfactory basis.

BMS-2919 MS Word II

1 credit hour, 1 contact hours (1 hour lecture and 0 hours lab). Prerequisite: BMS-2917. Course is graded S/U.

This course covers the intermediate, business level, skills necessary for using word processing software. The concepts covered include: paragraph formatting, page layout, tables, graphics, and columns. . This course is graded on a Satisfactory/Unsatisfactory basis.

BMS-2928 MS Excel I

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

This course covers the basic skills and concepts needed to effectively use a spreadsheet application. The concepts covered include: creating, modifying, saving, retrieving, and printing spreadsheets. The use of formulas, functions, and formatting will also be covered. This course is graded on a Satisfactory/Unsatisfactory basis.

BMS-2929 MS Excel II

1 credit hour, 1 contact hours (1 hour lecture and 0 hours lab). Prerequisite: BMS-2928. Course is graded S/U.

This course covers the intermediate, business level, skills necessary for using a spreadsheet application. The concepts covered include: column/row operations and formatting, graphics, charts, database features, data importing and exporting, and complex formulas. . This course is graded on a Satisfactory/Unsatisfactory basis.

BMS-2938 MS PowerPoint

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

This course covers the basic skills necessary for a presentation graphics package. The concepts covered include: slide layouts and formatting; inserting and formatting charts, graphs, tables, hyperlinks and multimedia files; and using custom animations, timings, and transitions. This course is graded on a Satisfactory/Unsatisfactory basis. . This course is graded on a Satisfactory/Unsatisfactory basis.

BMS-2976 MS Access I

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

This course covers the basic skills necessary for using a database application package. The concepts covered include: creating a table/database of information, database information entry, terminologies used, creating queries, forms and reports, sorting data in a database. . This course is graded on a Satisfactory/Unsatisfactory basis.

BMT-2014 Principles of Business

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

This introductory course presents the principles, terminology and concepts necessary for understanding our business system. It covers such key topics as business formation and ownership decisions, management and organization, the various functional Divisions within the business and the interaction of business and society.

BMT-2018 Project Management

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

This course is designed to examine the key elements in the project management process. This process will include: characteristics of a well-defined project; successful project organization; managing the project team; planning; scheduling; and controlling. Effective project planning will include gathering budget information and scheduling data. Techniques for scheduling projects will include GNATT chart schedules and reports.

BMT-2019 Strategic Management

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: BMT-2021 and BMT-2022. Course is graded A-E.

Strategies an organization pursues have a major impact upon its performance relative to that of competitors. This class 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 strategies successfully will be applied.

BMT-2021 Principles of Management

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

The basic functions of management are planning, organizing, leading/motivating 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.

BMT-2022 Principles of Marketing

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

This course is designed to introduce the student to the field of marketing in its broadest concepts, from the viewpoint of both the seller and the buyer. The student will be exposed to the various careers in marketing and will learn how managers manipulate the four variables of marketing (price, product, distribution, promotion) to achieve organizational goals.

BMT-2025 Micro Economics

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E. This course has been approved by the Ohio Board of Regents as meeting the Transfer Assurance Guide (TAG) course requirements.

Dealing with fundamentals of micro-economics, 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; behaviors of customers and suppliers as well as the government relative to supply and demand the appropriate schedules that apply. Elasticity and substitutions, along with total revenue, total costs, marginal revenue, and marginal costs and profit analysis are researched.

BMT-2046 Principles of Macroeconomics

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Recommended Preparation: BMT-2025. Course is graded A-E.

The course introduces the traditional areas of Macroeconomics from an “economic naturalist” point of view which employs basic economic principles to understand and explain what we observe in the world around us. The course will focus on the seven core principles of Macroeconomics: The Scarcity Principle, the Cost-Benefit Principle, the Incentive Principle, the Principle of Comparative Advantage, the Principle of Increasing Opportunity Costs, the Efficiency Principle, and the Equilibrium Principle as they apply to the Macroeconomic environment.

BMT-2070 Managerial Skills

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

This course is designed to assess and develop a broad range of managerial skills that are often required to become an effective manager and leader. The student will develop usable managerial skills in the areas of: leadership, conflict management, ethics, diversity, and change management. The course will utilize a combination of internet research and in-class contact as appropriate.

BMT-2071 Team Building

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

This course presents how formal teams are able to do more than just accomplish tasks that the individual alone could not. The student will learn teams are a union of structure, process, culture, and politics.

BMT-2074 Business Law Today

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E. This course has been approved by the Ohio Board of Regents as meeting the Transfer Assurance Guide (TAG) course requirements.

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 issues, in the current business environment.

BMT-2075 Global Business

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

Global Business explores 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. Students 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.

BMT-2428 Business Portfolio I

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Enrollment in Business Management Technology. Course is graded S/U.

This course introduces students to career portfolios and their many uses and applications in the business arena. Students will learn how to identify key artifacts from their body of work and how those artifacts can be integrated into their final project in BMT-2448 Business Portfolio II. Key career preparation tools, such as cover letters and resumes will be introduced an reinforced during the course. Students will also be introduced to a variety of tools for maintaining their portfolio through electronic and hard-copy submissions. This course is graded on a Satisfactory/Unsatisfactory basis.

BMT-2448 Business Portfolio II

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Enrollment in Business Technology and in the final quarter prior to graduation. Course is graded S/U.

A studio course in which students 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. This course is graded on a Satisfactory/Unsatisfactory basis.

BMT-2464 Personal Computer Applications in Business

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

This course is designed to give students standardized, progressive, detailed, hands-on instruction in the most popular personal computer software used today by business and industry. The student will demonstrate the ability to integrate word processing, spreadsheets, and graphic design through group projects. The course combines demonstration and self-paced instruction. Students will be tested and the course will be graded.

BMT-2470 Organizational Ethics

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

Business ethics engages essential questions to business and their stakeholders concerning purpose, values, and transactions of and among individuals, groups, companies and their global alliances. A thorough understanding of the complex issues and frameworks concerning ethical decisions will be thoughtfully and objectively analyzed. The student will create an understanding and application of ethical reasoning in the marketplace and in workplace relationships.

BMT-2480 Service Marketing and Management

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Grade of C (2.00) or better in BMT-2022. Course is graded A-E.

This course allows the student to define services marketing and detail the fundamental concepts and strategies that differentiate the marketing of services from the marketing of tangible goods. The fundamentals of business knowledge, employee competence, competence in customer satisfaction, service quality and customer service will be concentrated on. The student will also develop skills that are essential in understanding and sustaining a customer base through marketing and management.

BMT-2481 Salesmanship

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

This course allows students to conceive a method of constructing their own sales presentations. The student will learn the concepts and practices of selling in a practical, straightforward and conceivable manner. The fundamentals of personal selling will be developed with appropriate actions learned for particular prospects and customers. The student will learn to be a problem solver, helper, and advisor in different roles to convey their sales message. All major aspects of selling will be explored.

BMT-2482 Retail Management

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: BMT-2022. Course is graded A-E.

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.

BMT-2483 Advertising Concepts/Procedures

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: BMT-2022. Course is graded A-E.

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.

BMT-2484 Accountable Marketing

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: BMT-2022. Course is graded A-E.

This course will allow the student greater efficiency and the elimination of waste within the marketing field. A model based test and measure concept will be utilized. The student will learn to apply data driven marketing to all kinds of promotions and image advertisements. The student will also be able to establish allowable costs per order, which will help in the learning process of assessment for marketing efficiency and profitability of programs within all types of organizations.

BMT-2485 Public Relations

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: BMT-2022. Course is graded A-E.

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.

BMT-2486 Cases in Marketing/Research

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: BMT-2022. Course is graded A-E.

This capstone course will give the student a basic understanding of the scope of marketing research, using an applied approach with interesting and practical applications.

BMT-2710 Entrepreneurship

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

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

BMT-2712 E-Commerce

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

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. Students will review E-Commerce systems, regulatory, legal and internet issues, and be able to identify resources in both the traditional and web-based business. Students will study both organizational and external factors that create the environment in which E-Commerce systems operate.

BMT-2846 Compensation and Benefits

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: BMT-2876. Course is graded A-E.

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

BMT-2850 Employee Relations

4 credit hours, 4 contact hours (4 hours lecture, 0 hours lab). Prerequisite: BMT-2876. Course is graded A-E.

The course deals with both the traditional areas of labor relations (history of the labor movement, labor legislation, collective bargaining, contract administration) and with issues that arise in today's white collar, service oriented workforce and economy. Students will simulate actual collective bargaining, grievance procedures and arbitration cases. Emphasis is placed on negotiation objectives, strategy and tactics, and students will develop skills suitable for advancing the objectives of either management or of a labor union.

BMT-2855 Problem Solving and Managerial Decision Making

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: BMT-2014, BMT-2021 and BMT-2022. Course is graded A-E.

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.

BMT-2856 Human Resource Law

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: BMT-2876. Course is graded A-E.

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

BMT-2860 Personnel Interviewing

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: BMT-2876. Course is graded A-E.

This course will examine the six types of personnel interviews (selection, performance, appraisal, counseling, career development, disciplinary and exit). Legal aspects of interviewing will be studied to provide the student insights into the personnel functions. There will be an emphasis on developing usable interviewing techniques and skills from the management and employees or probable employee prospective.

BMT-2865 Customer Service

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

This course helps the student understand customer expectations and develop skills necessary to provide any and all types of quality service. Customer service skills will focus on change, communication, data usage, negotiations, perception, problem-solving, and teamwork toward action plans for continuous improvement.

BMT-2871 Health, Safety & Security

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

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

BMT-2875 Training and Development

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: BMT-2876. Course is graded A-E.

Training and Development work to support organizational goals and to solve performance problems throughout an entire organization. This incorporates assuming a number of roles with a full range of competencies. The Training and Development roles include needs analyst, program designer, instructional writer, media specialist, instructor, facilitator, change agent, program administrator and evaluator. In assuming these roles, especially in society today, one must be able to do more using fewer resources. In addition, due to developing technology and growing work requirements, organizations have to invest in the retraining and reassignment of existing as well as new employees.

BMT-2876 Introduction to Human Resource Management

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

This course is designed to familiarize the student with the vital role of human resource management in determining the success of an organization. The student will develop an awareness of the complexity of the issues surrounding the management of today's employee. Employee rights, employee responsibilities, Equal Employment Opportunities, right to work laws, benefits, legal environments, performance appraisal, and the training and development of employees will be explored.

BMT-2980 Advertising Campaign

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: BMT-2483. Course is graded A-E.

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 students to conduct an ad campaign for a local business. Students will work in teams to create, plan and execute the campaign, which will meet the needs of the local business. Topics will include; the study of advertising principles, client behavior, development of integrated media ads, and evaluating the effectiveness of an advertising campaign.

BMT-2994 Internship/Service Learning I

1 credit hour, 7 contact hours (1 credit hour will be awarded for each seven (7) hours per week work experience). The student will also meet with their advisor 1 hour per week per each credit hour. Prerequisite: Enrollment in the Business Technology Program with a minimum of 30 credits from the Plan of Study. Course is graded S/U. Along with Internship/Service Learning II and III, course is repeatable up to 12 credit hours.

This course offering is composed of work experience with a profit or non-profit organization chosen by the student and coordinated with a business faculty member or the Academic Dean. The work experience must be related to the student's academic program and will reinforce the concepts and ideals related to the management field. This course requires substantial self-directed application of learning. This course is graded Satisfactory/Unsatisfactory.

BMT-2995 Internship/Service Learning II

2 credit hours, 14 contact hours (1 credit hour will be awarded for each seven (7) hours per week work experience). The student will also meet with their advisor 1 hour per week per each credit hour. Prerequisite: Enrollment in the Business Technology Program with a minimum of 30 credits from the Plan of Study. Course is graded S/U. Along with Internship/Service Learning I and III, course is repeatable up to 12 credit hours.

This course offering is composed of work experience with a profit or non-profit organization chosen by the student and coordinated with a business faculty member or the Academic Dean. The work experience must be related to the student's academic program and will reinforce the concepts and ideals related to the management field. This course requires substantial self-directed application of learning. This course is graded Satisfactory/Unsatisfactory.

BMT-2996 Internship/Service Learning III

3 credit hours, 21 contact hours (1 credit hour will be awarded for each seven (7) hours per week work experience). The student will also meet with their advisor 1 hour per week per each credit hour. Prerequisite - Enrollment in the Business Technology Program with a minimum of 30 credits from the Plan of Study. Course is graded S/U. Along with Internship/Service Learning I and II, course is repeatable up to 12 credit hours.

This course offering is composed of work experience with a profit or non-profit organization chosen by the student and coordinated with a business faculty member or the Academic Dean. The work experience must be related to the student's academic program and will reinforce the concepts and ideals related to the management field. This course requires substantial self-directed application of learning. This course is graded Satisfactory/Unsatisfactory.

BMT-2997 Field Experience – Business I

1 credit hour, 12 contact hours (1 credit hour per 12 hours per week work experience). Along with Field Experience – Business II and III, repeatable up to 12 credit hours. Prerequisite: Permission of Academic Dean upon recommendation of academic advisor. Course is graded S/U.

This flexible course offering is composed of a paid work experience coordinated by the student's advisor. The work experience must be related to the student's academic program. Technical or basic elective credit is awarded on a Satisfactory/Unsatisfactory basis.

BMT-2998 Field Experience – Business II

2 credit hours, 24 contact hours (1 credit hour per 12 hours per week work experience). Along with Field Experience – Business I and III, repeatable up to 12 credit hours. Prerequisite: Permission of Academic Dean upon recommendation of academic advisor. Course is graded S/U.

This flexible course offering is composed of a paid work experience coordinated by the student's advisor. The work experience must be related to the student's academic program Technical or basic elective credit is awarded on a Satisfactory/Unsatisfactory basis.

BMT-2999 Field Experience – Business III

3 credit hours, 36 contact hours (1 credit hour per 12 hours per week work experience). Along with Field Experience – Business I and II, repeatable up to 12 credit hours. Prerequisite: Permission of Academic Dean upon recommendation of academic advisor. Course is graded S/U.

This flexible course offering is composed of a paid work experience coordinated by the student's advisor. The work experience must be related to the student's academic program. Technical or basic elective credit is awarded on a Satisfactory/Unsatisfactory basis.

CHM-1700 Basic Chemistry

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: Grade C (2.00) or better in either high school Algebra I or MTH-1205 or score of at least 43 on COMPASS Elementary Algebra test. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation. Recommend completion of or concurrent enrollment in PCE-1400 or equivalent course or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1223 or NAT-1700.

An introduction to the basic concepts of chemistry designed to serve as a foundation (or refresher) for the student about to enter the study of allied health sciences. The course includes the following topic areas: metrics; elements, compounds and mixtures; atomic structure; bonding; chemical reactions, energy of reactions; oxidation-reduction; gas laws, solids and liquids; liquid mixtures; acids, bases and salts; and a brief look at fluid-electrolyte balance. The laboratory portion of this course enhances the theories and concepts presented in lecture.

CHM-1710 General Organic Chemistry

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: (Grade C (2.00) or better in either high school Algebra I or MTH-1205 or a score of at least 43 on COMPASS Elementary Algebra test) and grade C (2.00) or better in either high school chemistry or CHM-1700. Completion of or concurrent enrollment in PCE-1400 or college level composition course is recommended. Course is graded A-E. Not open to students with credit for NAT-1228 or NAT-1710.

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.

CHM-1713 General, Organic, and Biochemistry

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: Grade C (2.00) or better in both high school Chemistry and high school Algebra I or MTH-1205. Course is graded A-E.

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.

CHM-1790 General Chemistry I

5 credit hours, 7 contact hours (4 hours lecture and 3 hours lab). Prerequisite: (Grade of C (2.00) or better in high school chemistry, CHM-1700 or equivalent) and, (grade of C (2.00) or better in MTH-1215 or placement on the COMPASS test). Recommended preparation: completion of or concurrent registration in PCE-1400 or equivalent course or college level composition course.
Course is graded A-E.

An introduction to the basic concepts of chemistry designed for students 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, and chemical bonding theory. 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.

CHM-1791 General Chemistry II

5 credit hours, 7 contact hours (4 hours lecture and 3 hours lab). Prerequisite: Grade of C (2.00) or better in CHM-1790.
Course is graded A-E.

A continuation of CHM-1790 designed for students pursuing an Associate of Science degree and/or interested in transfer credit. The course includes the following topic areas: molecular geometry and bonding theories, gases, intermolecular forces, properties of solutions, chemical kinetics, chemical equilibrium, and acid-base equilibria. 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.

CHM-1792 General Chemistry III

5 credit hours, 7 contact hours (4 hours lecture and 3 hours lab).
Prerequisite: Grade of C (2.00) or better in CHM-1791.
Course is graded A-E.

A continuation of CHM-1791 designed for students pursuing an Associate of Science degree and/or interested in transfer credit. The course includes the following topic areas: buffers, solubility equilibria, chemical thermodynamics, electrochemistry, coordination chemistry, nuclear chemistry, nonmetals, metals and metallurgy, and applications of chemistry in society. 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.

CMP-1601 Principles of Computing

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: None. S/U Graded Course. Course is not open to students with credit for CMP-1600, BMS-2921, BMS-2900, CMP-2500, or CMP-3012.

Principles of Computing introduces the student to basic computer uses. The course includes an understanding of computers and how they function. The student will identify and use hardware and software. Both operating systems and application software will be introduced. The student will become familiar with common application programs including word processing, data base, spreadsheet, graphics, presentation, web authoring, and email accounts. The course is graded Satisfactory/Unsatisfactory.

CMP-2501 Help Desk Concepts

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

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.

CMP-2502 Computer Applications for Technology Professionals

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

The student will learn about the components and peripherals of a computer (PC) and how they function and communicate as a system. Topics covered include the Windows operating system, internet applications, the Windows networking environment, emerging technologies and applications, social networks, a selection of software applications used to solve business technology problems, browsers, and also e-mail communication. Hands-on lab experience using the Windows operating system is emphasized.

CMP-2503 Advanced Computer Applications for Technology Professionals

3 credit hours, 5 contact hours (1 hours lecture and 4 hours lab).
Prerequisite: Grade of “C” (2.0) or better in CMP-2502.
Course is graded A-E.

The student will continue to learn the components and peripherals of a computer (PC) and how they function an communicate as a system. Topics covered include the advanced internet applications, advanced emerging technologies and applications, advanced social networks, a selection of advanced software applications used to solve business technology problems, and also advanced email communication. Hands-on lab experience is emphasized.

CMP-2531 Microsoft Project Tools

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

This course introduces the student to software applications used for project management and scheduling. The student will use Microsoft Project and Visio to become familiar with analyzing and designing a project. The student will plan and manage the different stages such as scheduling, budgeting, and final delivery of a project.

CMP-2540 IT Project Management

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab).
Prerequisite: Grade of "C" (2.0) or better in CMP-2531
Course is graded A-E.

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 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.

CMP-2541 Disaster Recovery & Business Continuity

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

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 students will be able to provide documentation for a disaster recovery plan.

CMP-2544 IT Professional Capstone Course

3 credit hours, 5 contact hours (1 hours lecture and 4 hours lab). Prerequisite: Grade of C (2.00) or better in both CMP-2540 and CMP-2505. Course is graded A-E.

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

CMP-2551 IT Internship

3 credit hours
21 contact hours (3 credit hours will be awarded for each 21 hours per week work experience).
Prerequisite: Grade of C (2.00) or better in CMP-2540.
Course is graded S/U.

This course offering is composed of a non-paid work experience chosen by the student and coordinated with the student's advisor 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.

CMP-2552 IT Cooperative Work Experience

3 credit hours
30 contact hours (3 credit hours will be awarded for each 30 hours per week work experience).
Prerequisite: Grade of C (2.00) or better in CMP-2540.
Course is graded S/U.

This course offering is composed of a paid work experience chosen by the student and coordinated with the student's advisor 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.

CMP-2564 Java Programming

4 credit hours
6 contact hours (2 hours lecture and 4 hours lab)
Prerequisite: Grade of C (2.00) or better in both CMP-2596 and CMP- 2586.
Course is graded A-E.

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

CMP-2565 Directed Studies in Computers

3 Credit hours
5 contact hours (1 hour lecture and 4 hours lab).
Prerequisite: Grade of C (2.00) or better in CMP-2593 and CMP-2594.
Course is graded A-E.

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

CMP-2576 Visual Basic

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: Grade of C (2.00) or better in CMP-2596. Course is graded A-E.

The student will learn the essential aspects of creating a graphical user interface and its corresponding event-driven programming code in Visual Basic.Net. The student learns the fundamental aspects of coding a Visual Basic program, along with error handling and data validation techniques. The student utilizes a hands-on lab environment to design projects that use Visual Basic forms and controls, solve business problems, use variables, perform calculations, incorporate conditions and reach decisions in the Visual Studio environment. Programs are run on minicomputers using the Windows operating system.

CMP-2580 Visual Basic II

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: Grade of C (2.00) or better in CMP-2576. Course is graded A-E.

This course expands on the fundamentals of Visual Basic.Net as presented in CMP-2576. 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, and graphics and animation offered through Visual Basic.Net.

CMP-2585-Data Communications

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: Grade of Satisfactory in CMP-1601. Course is graded A-E.

This course introduces the principles, design approaches, and standards involved in computer data communications. Networking considerations, communication architecture, data encoding and transmission, switching, network access protocols, and transport protocols will be emphasized as well as an overview of the concepts of the open systems Interconnections model. Lab work will involve hands-on experiences dealing with communications software and hardware.

CMP-2586 Object Oriented Programming with C++

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: Grade of C (2.00) or better in CMP-2596. Course is graded A-E.

This course offers a basic introduction of Object-Oriented concepts and programming techniques. Issues such as declaring, defining, and using classes, declaring and defining objects and functions in the context of classes are covered. The concepts and techniques of Object class hierarchy and inheritance are applied. Using pointers as a means of creating dynamic arrays and for using strings is covered. The process of building Object algorithms is also emphasized.

CMP-2587 Advanced C++

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: Grade of C (2.00) or better in CMP-2586. Course is graded A-E.

This course is a continuation of 2586 Object Oriented C++. The course provides hands-on experience in the design and writing of more complex business oriented programs.

CMP-2592 Operating Systems and Security

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

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.

CMP-2593 Systems Analysis and Design

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: Grade of C (2.00) or better in CMP-2576 or CMP-2586. Course is graded A-E.

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 will learn and apply normalization, use various modeling structures and examine the pros and cons of conventional file systems in comparison to a distributed database. The student will learn and analyze various client/server architectures.

CMP-2594 Database II

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: Grade of C (2.00) or better in BMS-2067. Course is graded A-E.

This course provides the student with the necessary skills and knowledge to identify and perform the tasks in implementing and managing databases using Structured Query Language (SQL) with a Microsoft SQL Server. In a hands-on, computer lab environment, the student will use SQL to store and retrieve data from a relational database management system. The student will learn how to use Select statements, arithmetic and comparison operators, build-in functions, and sub-queries.

CMP-2596 Principles of Computer Programming

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-E.

This course introduces the student to the logic of computer programming. Through the use of flowcharts, pseudocode, and a procedural programming language such as RPG, COBOL, or C++, the student will develop algorithms for solutions to business related programming problems. Hands-on lab exercises allow the student to apply the algorithms to real computer programs.

CMP-2597 Current Industry Software

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

This course is designed to present the student with an overview of software currently used in organizations. Software covered will reflect software in prominent usage, as well as discuss software predicted to be adopted by organizations. The student will be guided to any similarities in seemingly disparate software and be led into discussions regarding what may be predicted to be utilized in the future.

CMP-2598 Internet Programming I

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: Grade of C (2.00) or better in DMD-3839. Course is graded A-E.

This course builds on the concepts and skills learned in DMD-3839. The student is introduced to Web page programming with dynamic contents. The student will be introduced to a scripting language such as Java, Javascript, or VBSscript as well as XML. The emphasis is on Client-Side programming.

CMP-2599 Internet Programming II

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: Grade of C (2.00) or better in CMP-2598. Course is graded A-E.

This course is a continuation of CMP-2598 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 the student 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.

COM-1007 Career Explorations

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

Career Explorations provides opportunities for students to build confidence and to develop self-reliance while they relate their educational experience to the importance of career planning. The course focuses on self-awareness, job market research, career services and options at COTC, and team building. Students will experience contact with working professionals, class and team discussions, lectures, videos, handouts, readings, on-site visitations, and individual reports.

COM-1011 Career Planning I

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: COM-1007, or documented enrollment in a technology program, or permission of the Academic Dean, or current employment. Course is graded A-E.

This course develops the student's ability to prepare resumes, cover letters, and employment applications. Students examine authentic job materials with emphasis on writing job objectives, using action words, as well as focusing on the benefit factor. Professional appearance of documents is stressed.

COM-1012 Career Planning II

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: COM-1007, or COM-1011, or documented enrollment in a technology program, or permission of the Academic Dean, or current employment. Course is graded A-E.

Technology Career Planning II prepares the student for the three stages of the interview process: pre-interview planning, interview management, and post-interview follow-up. Specific topics include: 1) company research; 2) interview questions and responses; 3) employer evaluation criterion; 4) positive image; 5) skill reinforcement; and 6) interview reassessment. Emphasis is given to professionalism and persuasive communication. This course is taught through employer contacts, role-play, small group discussion, lectures, videos, and videotaped interviews.

COM-1050 Introduction to Online Learning

Zero credit hours, 1 contact hour (0.4 hours lecture and 0.4 hours lab). Prerequisite: None. Course is graded S/U.

This course is designed to teach the student how to successfully learn online. The student will receive training on terminology, concepts, course tools, learning resources, and expectations as it relates to online learning.

COM-1504 Public Speaking

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in COM-1535. This course is not open to students with credit for COM-1112, COM-1509, COM-1509.1, COM-1512, or COM-1521. Course is graded A-E.

This course emphasizes instruction and practical experience in public speaking. Students 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, non-verbal communications, and small group communications.

COM-1514 Contemporary Fiction

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: COM-1535 or equivalent. Course is graded A-E.

This course acquaints the student with various pieces of contemporary fiction. The student reads noteworthy novels and short stories and writes essays demonstrating his/her analysis and understanding of these texts.

COM-1523 Small Group Communications

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Grade of C (2.00) or better in COM-1535. Course is not open to students with credit for COM-1115 or COM-1515. Course is graded A-E. This course has been approved by the Ohio Board of Regents as meeting the Transfer Assurance Guide (TAG) course requirements.

Students practice the techniques of defining, researching, planning, and group decision making in a series of five conferences, stressing leadership, participation, and responsibility.

COM-1525 Technical Writing

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in COM-1535. Course is graded A-E. This course is not open to students with credit for COM-1113, COM-1505, COM-1513, or COM-1522.

Training in writing techniques used in business, industry, and public service is stressed. The student prepares, edits, and submits memoranda, letters, reports, and resumes.

COM-1531 National Issues

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: COM-1535. This course is not open to students with credit for COM-1530. Course is graded A-E.

The course explores the economical, historical and geo-political nature and ramification of several current issues facing the people of the United States. Each issue will be studied in depth. It requires synthesis and fine-tuning of the basic communicative skills--thinking, listening, speaking, reading, and writing. Frequent oral and written reports are required.

COM-1534 Effective Communications

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in COM-1535. Course is graded A-E.

This course is constructed to help the student meet those needs identified as critical by the local business and professional community. It focuses the student on further development of their communication skills as well as their methods of delivery in the workforce. Skills emphasized include presenting effective verbal communications for one-on-one and group formats, assessing effectiveness of written and oral presentations, enhancing awareness of listening barriers, in addition to identifying and adjusting to non-verbal cues of audience. Development in methods of delivery include selecting and utilizing a variety of appropriate tools such as electronic media and graphics.

COM-1535 Composition I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in PCE-1400, or ASSET score of 42 or above on writing skills test, or a score of at least 75 on the COMPASS writing skills test and a score of at least 85 on the COMPASS Reading skills test, or a score of at least 44 on the ASSET reading skills test, or a grade of C (2.00) or better in both PCE-1413 and PCE-1423.Course is graded A-E. COM-1535 is not open to students with credit for the following courses: COM-1111, COM-1502, COM-1506, COM-1507, COM-1511, COM-1520, COM-1532 or COM-1533.

Composition I 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 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. **Minimum Passing Grade for this Course is a C (2.00).**

COM-1536 Composition II

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in COM-1535. Course is graded A-E. COM-1536 is not open to students with credit for the following courses: COM-1503; COM-1507, COM-1508, COM-1511, COM-1521 or COM-1533.

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. **Minimum Passing Grade for this Course is a C (2.00).**

COM-1551 Survey of American Literature I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in COM-1535. Course is graded A-E.

Survey of American Literature I is designed to expose students to a wide range of early American literature. In this course, students will examine the works of major writers in the U.S., from the early settlements to 1865. Students will read and critically analyze various genres, including essays, short stories, fiction, and the novel. Students 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, students will trace the development of both literary and cultural movements such as Puritanism, Romanticism and Transcendentalism.

COM-1552 Survey of American Literature II

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab).Prerequisite: Grade of C (2.00) or better in COM-1535. Course is graded A-E.

Survey of American Literature II is designed to expose students to a wide range of later American literature. In this course, students 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. Students will read and critically analyze various genres, including essays, short stories, fiction, drama, and the novel. Students 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, students will trace the development of both literary and cultural movements such as Realism, Modernism, and Postmodernism.

COM-1553 Writing About Literature

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in COM-1535. Course is graded A-E.

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, students will apply various critical approaches to reading and responding to literature, including reader-response, biographical, historical, psychological, and cultural. Students will engage in these individual and collaborative experiences to enhance their self-understanding and to deepen their perspectives about the world in which they live.

CUL-6000 Introduction to Culinary Science

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

An introduction to and synopsis of the science of the culinary world. Involves historical and social context and societal responsibility in the evolution of culinology. Course work will involve reading, discussion, and reporting on culinary advancements, including the development of appropriate technology.

CUL-6010 Product Knowledge and Purchasing

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

An introduction to the identification and use of vegetables, fruits, herbs, nuts, grains, dry goods, prepared goods, dairy products, and spices in various forms. Students will identify, taste and explore each item with emphasis on local sustainability, 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 systems are discussed and demonstrated in this course.

CUL-6020 Food Service Safety

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

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, contaminates, personal hygiene, management practices of hygiene, HACCP principles, facility management and safe design, and food safety laws. Students will take the National Restaurant Association ServSave® examination in this course.

CUL-6030 Culinary Skill Development I

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

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, soup preparation, grand sauces, timing, station organization, palate development, culinary French terms, food costing, vegetable cookery by color and family, potato cookery, grain cookery, fresh pasta cookery, dry legumes, production of stews from vegetables and grains, broth/bouillon, and advanced soup cookery. Emphasis will be on the basic skills necessary to prepare breakfast in a foodservice operation, basic methods of egg cookery, quick breads, grains, fruit plates, breakfast beverages, meat, and potatoes, preparing, tasting, serving and evaluating traditional and contemporary lunch items served in casual foodservice operations, including basic cooking principles of quantity food preparation. Skills of efficiency, organization, speed, timing, and quality volume production will be stressed.

CUL-6031 Culinary Skills Development II

4 credit hours, 7 contact hours (1 hour lecture and 6 hours lab)
Prerequisite: C grade (2.00) or better in CUL-6030
Course is graded A-E.

The foundation of cooking techniques and theories from Culinary Skills Development I will be applied in a production setting. Emphasis is placed on individual as well as team production. Three-course menus consisting of soup, salad, and an entrée with a vegetable and a starch will be rotated throughout the class. Vegetarian and vegan menus will be introduced as well. Students will learn to prepare modern and seasonal dishes in a restaurant setting and previously earned skills into practice in the College's restaurants. This course will emphasize cooking techniques and ingredients used in contemporary and classical cuisines and cover planning and ordering for production, station organization, preparation and plating, timing, palate development, and other production realities of a restaurant.

CUL-6040 Culinary Fabrication

4 credit hours, 8 contact hours (2 hours lecture and 6 hours lab)
Prerequisite: None.
Course is graded A-E.

An introduction to meat and seafood fabrication for foodservice operations. In this course, students learn the fundamentals of purchasing, receiving, handling, and storing meat and seafood, techniques for fabricating cuts for professional kitchens, meat grinding, brining, curing, and smoking, and basic sausage making. Identification will involve round fish, flat fish, crustaceans, and shellfish. Topics include commonly used and under-utilized species of fish, as well as knife skills, yield results, quality checking, product tasting, storage of various types of fish, techniques for fabricating cuts for professional kitchens, and special storage equipment.

CUL-6050 Garde Manger

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

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

CUL-6060 World Cuisines

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

Students will prepare, taste, serve, and evaluate traditional and regional dishes of the Americas, Asia, and Europe. Emphasis will be placed on ingredients, flavor profiles, preparations, and techniques representative of the cuisines of the United States, Central America, South America, the Caribbean, China, Korea, Japan, Vietnam, Thailand, Indonesia, India, the Middle East, Spain, France, Italy, and Eastern Europe. Students are introduced to cooking techniques of grilling/ broiling, roasting, braising, stewing, and deep-frying. Lecture, demonstration and production revolve around world cuisines, ingredients and plate presentations. The proper use of knives and basic vegetable cuts is emphasized.

CUL-6070 Menu Planning and Cost Controls

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab)
Prerequisite: None.
Course is graded A-E.

This course is designed to acquaint the student with the various segments of the food service industry, including the understanding of how a professional menu is developed and the major areas of cost and sales, and control needs. Emphasis is placed upon budgeting and computer assisted control.

CUL-6071 Techniques of Banqueting and Catering

5 credit hours, 8 contact hours (2 hours lecture and 6 hours lab)
Prerequisite: None.
Course is graded A-E.

Students will focus on event planning and organization and server design and sustainability. Catering service skills are reinforced. Student will need to be evaluated on a mock event in order to advance.

CUL-6080 Baking, Pastry and Dessert

4 credit hours, 8 contact hours (2 hours lecture and 6 hours lab)
Prerequisite: None.
Course is graded A-E.

This course provides an introduction to the principles and techniques used in the preparation of high-quality baked goods and pastries, with an emphasis on fundamental production techniques
and evaluation of quality characteristics. Topics include bread fermentation and production, ingredient functions, and custard ratios and preparations. Production will include basic breads and rolls, starting with mixing, proofing and proper baking temperatures, laminated dough, muffins, quick breads, cookies and pies. Proper use of the baker's scale, liquid measurement and equipment identification are a primary focus for this course. Emphasis will be placed on the production of creams, ice creams, sorbets, mousse, chocolate, strudel, filo (phyllo), sauces and plated desserts. Daily presentation of individual desserts and creative plate presentation are featured.

CUL-6085 Wine and Beverage Services

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab)
Prerequisite: None.
Course is graded A-E.

The course combines an introduction and application of beverage, bartending and service. Students are introduced to the identification, production, and service of non-alcoholic beverages, beer, wine, spirits, cordials, cocktails, mixed drinks, coffee and tea. Students are introduced to sensory evaluation of beverages. This class incorporates and requires the student to become certified in an industry recognized alcohol training intervention procedures program. Students examine the roles that wines and spirits play as quality beverages in professional foodservice operations. The course will emphasize styles of wine from around the world; the theory of matching wine with food; tasting wines, beers, and other beverages; and organizing wine service. Subjects to be explored include purchasing, storing, issuing, pricing, merchandising, and serving wines and spirits in a restaurant and catering environments.

CUL-6090 Culinary Externship I

1 credit hour, 10 contact hours (0 hours lecture and 10 hours lab)
Prerequisite: None.
Course is graded S/U.
Course is repeatable in the first three quarters of the program.

A supervised work experience designed to expand career knowledge while increasing speed, timing, organization, and ability to handle cooking in an approved commercial foodservice and hospitality establishment. Students on externship will receive feedback from their supervisor and keep a journal recording and reflecting on their work experience. This course is graded on a Satisfactory/ Unsatisfactory basis.

CUL-6091 Culinary Externship II

1 credit hour, 10 contact hours (0 hours lecture and 10 hours lab)
Prerequisite: None.
Course is graded S/U.
Course is repeatable in the first three quarters of the program.

A supervised work experience designed to expand career knowledge while increasing speed, timing, organization, and ability to handle cooking in an approved commercial foodservice and hospitality establishment. Students on externship will receive feedback from their supervisor and keep a journal recording and reflecting on their work experience. This course is graded on a Satisfactory/ Unsatisfactory basis.

CUL-6092 Culinary Externship III

1 credit hour, 10 contact hours (0 hours lecture and 10 hours lab)
Prerequisite: None.
Course is graded S/U.
Course is repeatable in the first three quarters of the program.

A supervised work experience designed to expand career knowledge while increasing speed, timing, organization, and ability to handle cooking in an approved commercial foodservice and hospitality establishment. Students on externship will receive feedback from their supervisor and keep a journal recording and reflecting on their work experience. This course is graded on a Satisfactory/ Unsatisfactory basis.

CUL-6093 Culinary Internship I

1 credit hour, 10 contact hours (0 hours lecture and 10 hours lab)
Prerequisite: None.
Course is graded S/U.
Course is repeatable in the first three quarters of the program.

A supervised work experience designed to expand career knowledge while increasing speed, timing, organization, and ability to handle cooking in an approved commercial foodservice and hospitality establishment. Students on internship will receive feedback from their supervisor and keep a journal recording and reflecting on their work experience. This course is graded on a Satisfactory/ Unsatisfactory basis.

CUL-6094 Culinary Internship II

1 credit hour, 10 contact hours (0 hours lecture and 10 hours lab)
Prerequisite: None.
Course is graded S/U.
Course is repeatable in the first three quarters of the program.

A supervised work experience designed to expand career knowledge while increasing speed, timing, organization, and ability to handle cooking in an approved commercial foodservice and hospitality establishment. Students on internship will receive feedback from their supervisor and keep a journal recording and reflecting on their work experience. This course is graded on a Satisfactory/ Unsatisfactory basis.

CUL-6095 Culinary Internship III

1 credit hour, 10 contact hours (0 hours lecture and 10 hours lab)
Prerequisite: None.
Course is graded S/U.
Course is repeatable in the first three quarters of the program.

A supervised work experience designed to expand career knowledge while increasing speed, timing, organization, and ability to handle cooking in an approved commercial foodservice and hospitality establishment. Students on internship will receive feedback from their supervisor and keep a journal recording and reflecting on their work experience. This course is graded on a Satisfactory/ Unsatisfactory basis.

DDT-3257 Statics and Strength of Materials I

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: MTH-1226 (or a score of at least 46 on the COMPASS Trigonometry test) and PHY-1721. Course is graded A-E.

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.

DDT-3258 Statics and Strength of Materials II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: DDT-3257. Course is graded A-E.

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.

DDT-3704 Auto CAD Civil 3D

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: DDT-3706 or permission of the instructor. Course is graded A-E.

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.

DDT-3705 Revit Architecture

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: DDT-3706 or equivalent and DDT-3758. Course is graded A-E.

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.

DDT-3706 Introduction to CAD

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

This is the first course in a series of Computer Aided Drafting courses. The students will gain familiarity with the system hardware, peripherals and software. They will learn to construct a basic dimensioned orthographic drawing with the CAD system.

DDT-3707 Intermediate CAD

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: DDT-3706. Course is graded A-E.

This is the second in a series of 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.

DDT-3708 Advanced CAD

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: DDT-3707. Course is graded A-E.

This course, the third in a series, builds on the concepts established in the first two CAD courses. The student will learn to customize the CAD working environment. The concepts of 3-D drawing and viewing are also taught including wire-frames, surfaced models, solid models, and rendering.

DDT-3717 Materials for Engineering Technicians

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

This course provides an overview of the fundamental characteristics of the materials used in heavy construction. Classification, testing procedures, and proper use of materials, as well as, construction methods are investigated.

DDT-3718 Architecture History Survey

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

This course provides a survey of architectural traditions from early civilization to the modern architecture of the 20th Century, including buildings, landscape and planning.

DDT-3719-Advanced AEC CAD

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DDT-3708 or permission of the instructor Course is graded A-E.

This advanced computer-aided drafting course is the fourth in the COTC CAD sequence, structured for students in the Drafting and Design Technology program. The student will use specialized CAD software for architecture and civil engineering applications. These applications include, but are not limited to, the following: 2D and 3D plans, details, schedules, roof forms, elevation drawings, equipment layouts, subdivision layouts, highway layouts, contours, profiles, and earthwork.

DDT-3728 Drafting II

3 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: DDT-3758. Course is graded A-E.

Developing the techniques learned in 3758 Engineering Sketching, the student 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.

DDT-3731 Introduction to Civil Drafting/Design

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: MTH-1210 (or concurrent enrollment in MTH-1210), DDT-3706 and DDT-3758. Course is graded A-E.

This course is an introduction to the methods and practices of civil drafting. Includes surveying fundamentals, mapping, plot plans, contours, profiles, and highway layouts.

DDT-3733 Civil Drafting/Design II

4 credit hours, 7 contact hours (2 hours lecture and 5 hours lab). Prerequisite: DDT-3731. Course is graded A-E.

This course, the second in a series of three civil drafting and design courses, focuses on site grading/earthwork and storm stormwater management and earthwork.

DDT-3736 Civil Drafting/Design III

4 credit hours, 7 contact hours (2 hours lecture and 5 hours lab). Prerequisite: DDT-3733. Course is graded A-E.

This course, the third in a series of three civil drafting and design courses, focuses on land development. Topics covered include roadways and design and layout of development projects.

DDT-3737 Building Mechanical Systems

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: DDT-3733 or DDT-3766 or permission of the instructor. Course is graded A-E.

Mechanical systems for residential buildings are the focus for this course. Topics include plumbing, supply and drain, waste, vent design, heat loss calculations, climate control, and electric distribution. The student is also introduced to standard drafting practices related to plumbing, climate control, and electrical plan documents.

DDT-3739 Drafting III

3 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: DDT-3706 and DDT-3728 (or concurrent enrollment in DDT-3728). Course is graded A-E.

This is the third in a series of drafting courses using both manual and CAD drafting methods. This course develops concepts in geometric dimensioning and tolerancing, threaded fastener designation and use. Also covered is welding symbols and joint design, structural steel detailing and piping layout.

DDT-3748 Materials of Construction

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

An overview of the fundamental characteristics of the most frequently used materials in modern construction is presented. Proper use of materials, construction methods, and detailing practices are investigated.

DDT-3757 Architectural Design I

4 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: DDT-3728. Course is graded A-E.

This course, the first in the Architectural Design series, presents the theories and practices used in architectural drafting and design. Emphasis is placed on developing skills required in architectural drafting and design. Design theories, drafting, surveying, basic structural design, and cost estimating are introduced.

DDT-3758 Engineering Sketching

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

This is a beginning course to learn techniques to develop and document ideas through freehand sketching. Emphasis is on the development of sketching techniques, multi-view and isometric drawings, dimensioning, and blueprint reading.

DDT-3759 3D Design with SketchUp

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

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.

DDT-3766 Architectural Design II

4 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: DDT-3706. Course is graded A-E.

In this course, the second in the Architectural Design series, the student is given a sequence of drafting and design projects involved in residential construction. Both manual and CAD drafting are used to produce a set of working drawings for a residence. Concepts introduced in other courses are further explored along with an introduction to design techniques and model building.

DDT-3771 Structural Steel and Concrete

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: DDT-3706 and DDT-3758. Course is graded A-E.

This course covers the fundamentals of structural steel and reinforced concrete designing and drafting. Topics covered include 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.

DDT-3776 Architectural Design III

4 credit hours, 7 contact hours (1 hour lecture and 6 hours lab). Prerequisite: DDT-3705. Course is graded A-E.

The focus of this course, the third in the Architectural Design sequence, is on commercial construction. CAD drafting is employed to produce a series of working drawings representative of types drawn for a commercial building. Topics in design, building type study and code review are also included as they relate to the specific project.

DDT-3786 Drafting and Design Capstone Course

5 credit hours, 8 contact hours (2 hours lecture and 6 hours lab). Prerequisite: DDT-3736 or (DDT-3766 and DDT 3776). Course is graded A-E.

This is a capstone course structured to give the student experience in real world drafting, designing and engineering problems. The student should apply skills and theories learned in previous course work to complete team projects. This class is structured to simulate a real world office.

DDT-3910 Cooperative Work Experience/Architectural

5 credit hours, 20 contact hours (0 hours lecture and 0 hours lab, 20 hours co-op directed practice). Prerequisite: DDT-3702 (or DDT-3013 and DDT-3706), DDT-3728, DDT-3757 (DDT-3756 or DDT-3755 or concurrent enrollment in DDT-3757), a grade point average of 2.75 or greater, and permission of faculty advisor. Course is graded A-E.

This course, to be taken toward the end of the two-year Drafting and Design Technology, Architectural Major curriculum, is designed to give the student a real-world, office, work experience which uses 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.

DDT-3996 Field Experience - Engineering

1 credit hour, 12 contact hours (1 credit hour per 12 hours per week work experience). Along with Field Experience – Engineering II and III, repeatable up to 12 credit hours. Prerequisite: COM-1525, 45 credit hours completed, and permission of Academic Dean. Course is graded S/U.

This flexible course offering is composed of a paid work experience coordinated by the student's advisor. The work experience must be related to the student's academic program. Elective credit is awarded on a satisfactory/unsatisfactory basis.

DDT-3997 Field Experience - Engineering

2 credit hours, 24 contact hours (1 credit hour per 12 hours per week work experience). Along with Field Experience – Engineering I and III, repeatable up to 12 credit hours. Prerequisite: COM-1525, 45 credit hours completed, and permission of Academic Dean. Course is graded S/U.

This flexible course offering is composed of a paid work experience coordinated by the student's advisor. The work experience must be related to the student's academic program. Elective credit is awarded on a satisfactory/unsatisfactory basis.

DDT-3998 Field Experience – Engineering III

3 credit hours, 36 contact hours (1 credit hour per 12 hours per week work experience). Along with Field Experience – Engineering I and II, repeatable up to 12 credit hours. Prerequisite: COM-1525, 45 credit hours completed, and permission of Academic Dean. Course is graded S/U.

This flexible course offering is composed of a paid work experience coordinated by the student's advisor. The work experience must be related to the student's academic program. Elective credit is awarded on a satisfactory/unsatisfactory basis.

DDT 39XX Special Topics in Engineering

1-5 credit hours. Prerequisite: Permission of instructor and Academic Dean. Course is graded A-E.

Special topic study is designed to provide a student with the opportunity to work on special topics within the field of engineering under the directive of the Engineering faculty. This course may be substituted for an engineering technical elective course if it is applicable. The course may be repeated.

DMD-3819 Graphic Design History

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

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-3820 Design Fundamentals

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: (DMD-3837 or DMD-3860) or concurrent enrollment in 3860. Course is graded A-E.

This course is an orientation to digital design, with emphasis on the history and the basic principles of digital design using key computer graphics tools.

DMD-3822 Digital Photography I

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

This course provides an introduction to the techniques and theories of digital photography, with an emphasis on the design of photographic images and learning to "see." The course covers pre-visualization, composition, image capture, simple digital editing of the image and final digital output. Through group critiques, the student will learn to appreciate and use photography as part of the communication process of design. A digital still camera of at least 3 Megapixels is highly recommended.

DMD-3824 Fundamentals of Color

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3820 or (concurrent enrollment in DMD-3820 and DMD-3860). Course is graded A-E.

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-3825 Digital Photography II

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: DMD-3822. Course is graded A-E.

This course continues the exploration of digital photography begun in Digital Photography II, expanding into uses of digital software tools to manipulate the image. The student will continue to hone his or her own creative vision in capturing and manipulating photographic images using digital technology. The student 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-3826 Fundamentals of Typography

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: DMD-3837 or DMD-3860 or concurrent enrollment in DMD-3860. Course is graded A-E.

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-3828 Digital Video Production I

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3831, and (DMD-3822 or concurrent enrollment in DMD-3822). Course is graded A-E.

This course is an introduction to the creation and editing of digital video. The course covers the history of film and video and explores the various forms of the medium. The student will learn the basic underlying technology of digital video and create their own projects from motion studies to complete non-linearly-edited video stories.

DMD-3829 Digital Video Production II

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3828. Course is graded A-E.

This course continues the exploration of digital video production, and the focus of this course in on non-linear editing and special effects. Topics covered include audio, video, transitional effects, 2-D animation and compositing, and video compression for digital media.

DMD-3831 Fundamentals of Drawing

4 credit hours, 8 contact hours (0 hours lecture and 8 hours lab). Prerequisite: None. Course is graded A-E. This course has been approved by the Ohio Board of Regents as meeting the Transfer Assurance Guide (TAG) course OAH001 requirements.

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 rapidly communicate with basic analog tools before using digital media.

DMD-3832 Multimedia Production I

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3820 and DMD-3831. Course is graded A-E.

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-3833 Multimedia Production II

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: DMD-3832. Course is graded A-E.

This course continues the exploration of interactive media, integrating audio, video, text, graphics and animation into a single program under interactive control. Topics covered include advanced Actionscript and interactive projects.

DMD-3835 Digital Media Senior Project

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3824, DMD-3825, DMD-3828, DMD-3832, and DMD-3844. Course is graded A-E.

The Digital Media Design Project course completes the study of digital media design with a quarter long project focused on the digital media specialty of the student's choice. The student will choose a project, 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-3836 Mass Media Communication

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None [DMD-3837 or DMD-3860 (or concurrent enrollment in DMD-3860) or DMD-3820 (or concurrent enrollment in DMD-3820) is recommended]. Course is graded A-E.

This course is an introduction to the history and development of mass media, from print to the interactive future. The student will study how communication, in particular marketing and advertising, 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-3839 Web Design & Development I

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3837 or DMD-3860 (or concurrent enrollment in DMD-3860) or CMP-2596. Course is graded A-E.

This course is an introduction to Web site design and development. The student will be introduced to XHTML, page markup, page layout including tables, frames and layers, and the use of scripting languages.

DMD-3840 Web Design and Development II

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3839. Course is graded A-E.

Building on the concepts and skills learned in 3839, 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 alternate with human-centered design and dynamic XHTML/XML, including Cascading Style Sheets, Layers, and Javascript.

DMD-3841 3-D Design and Animation II

3 credit hours, 5 contact hours (1 hours lecture and 4 hours lab). Prerequisite: DMD-3844. Course is graded A-E

Continuing the design of 3-D models in software, the course expands on advanced rendering techniques such as radiosity and advanced animation, including inverse kinematics and bones.

DMD-3842 Digital Media Portfolio

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: DMD-3824, DMD-3825, DMD-3828, DMD-3832, and DMD-3844.

This is capstone course structured to give the student experience in real world design problem solving. The student will apply skills learned in previous course work to develop several portfolio-level pieces, with an emphasis on design. The student will learn how to create an appropriate resume and portfolio for digital media.

DMD-3843 Design for Print I

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3831 (or concurrent enrollment in DMD-3831), DMD-3820 or (DMD-3837 or DMD-3860) and concurrent enrollment in DMD-3820. Course is graded A-E.

This course focuses on the layout of printed materials using standard digital page layout software. The student will focus on illustration and layout software while they explore the creation of projects such as brochures, advertisements, newsletters and other printed promotional materials, with an emphasis on the pre-press process and final printed output.

DMD-3844 3-D Design and Animation I

3 credit hours, 5 contact hours (1 hours lecture and 4 hours lab). Prerequisite: DMD-3837 or DMD-3860. Course is graded A-E

This course is an introduction to the construction of three-dimensional models and environments with animated movement through those environments.

DMD-3845 Design for Print II

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3843 and DMD-3826. Course is graded A-E.

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 typography and real-world printing processes.

DMD-3850 Web Design & Development III

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: DMD-3840. Course is graded A-E.

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-3852 Motion Graphics

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: DMD-3828. Course is graded A-E.

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

DMD-3853 Information Design

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3845. Course is graded A-E.

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

DMD-3854 Photography III

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3825. Course is graded A-E.

This course is a further exploration into digital photography, with a concentration on portrait photography utilizing natural, studio and strobe lighting. Instruction will include methods by which to create photographs that capture a subject's innermost essence and/or document an event, i.e., a wedding or graduation. It includes shooting outdoors and indoors with both natural/ existing light and professional lighting equipment.

DMD-3855 Digital Media Internship

2 credit hours, 12 contact hours per week (0 hours lecture, 0 hours lab, and 12 hours per week internship) for a total of 120 contact hours. Prerequisite: Completion of all basic and level one technical coursework in the first four Plan of Study quarters, plus a grade of "B" (3.00) or better in COM-1535 and COM-1536. Course is graded A-E.

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-3857 Audio Production

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: DMD-3836. Course is graded A-E.

This course is an overview of digital audio as a medium of communication. The student will learn the terminology and processes of audio production. The course will further examine theories of communication as they apply to audio production for radio, video, and music recording. The student will have the opportunity to practice the techniques and skills involved in the process of producing digital audio material.

DMD-3860 Digital Software Fundamentals

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

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

DMD-3862 Introduction 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-E.

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 blogs, wikis, RSS, social bookmarking, video streams, virtual communities for entertainment and education, and browser-based applications.

DMD-3864 Interactive Site Design

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3839. Course is graded A-E.

This project-based course continues the exploration of Web design, focusing on the Document Object Model (DOM) and web tools for developing interactive web sites. The actual design tools will remain flexible to reflect the latest industry standards. Emphasis is less on page design and more on creating the elements that convert a static site into an interactive site.

DMD-3866 Designing Dynamic Websites

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3840. Course is graded A-E.

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-3870 Critical Studies in Game Design

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

This course introduces the non-technical study of games, the history of games and the game industry. The course develops a vocabulary for discussing games and tools for analyzing why certain games are successful. The course will also touch on game theory and its application to a variety of disciplines and will introduce the social aspects of games. The student will be expected to provide written critiques of games using the critical approaches presented in the course.

DMD-3873 Game Design Decisions and Processes

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

This course is an exploration of the design process from the "management of constraints" and the manipulation of design variables to the planning and execution of the design during the development process. The student will investigate and explore problem-solving methods, writing specifications, creating design documents, game bibles, pseudo-code, and paper prototypes in preparation for programming.

DMD-3874 Interactive Storytelling

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: DMD-3873. Course is graded A-E.

This course is about human-media interaction: interactive storytelling, computer game design and more. The essence of this course is on the most basic element: storytelling. This course provides the student with hands-on training in interactive projects developed from their own stories. These projects will include text, images and animation with basic programming using 2D game software.

DMD-3876 Game Programming I

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3873 or CMP-2596. Course is graded A-E.

This course is an introduction to game programming using C++. Topics include representing game worlds using data structures, pointers, classes, functions, and objects; conditions, arrays, and loops to control the flow of game logic; user input; sprites and graphic display. The student will program a classic 2D game using a simple game library.

DMD-3877 Game Programming II

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: DMD-3876. Course is graded A-E.

This course is a continuation of an exploration of game programming using C++. Topics include sprite animation, user interface, construction, 2D asset creation, programming for speed and playability, AI and scripting languages. The student will program computer games using a simple game library.

DMD-3878 Game Programming III

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: DMD-3877. Course is graded A-E.

This course is an overview of 3D game development using a professional-level 3D game engine. Topics include terrain building, character generation, GUI construction, mission building, and animation of multi-boned creatures.

DMD-3880 Advertising Portfolio

2 credit hours, 4 contact hours (1 hours lecture and 3 hours lab).
Prerequisite: Grade of C (2.00) or better in the following: BMT-2018, BMT-2022, BMT-2480, BMT-2483, BMT-2484, BMT-2980, COM-1534, COM-1536, DMD-3819, DMD-3826, DMD-3840, DMD-3845.
Course is graded A-E.

This is a 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.

DMS-4050 Patient Care in Sonography

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in the following: BIO-1772 and DMS-4514. Course is graded A-E.

During this course the Sonography student is introduced to the basic aspects of patient care in the health care setting. The student is acquainted with the different types of patient care situations they may encounter while working in a health care facility.

Topics of discussion include evaluating and meeting the physical needs of patients, infection control practices, dealing with acute situations and the special care unit patients.

DMS-4507 Gynecological Sonography

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4511 and concurrent enrollment in DMS-4545. Course is graded A-E.

This course emphasizes the fundamental principles of sonographic imaging of the female pelvis. Anatomy, physiology, pathology, interpretation of clinical data, differential diagnosis and sonographic techniques relative to the gynecological patient are presented.

DMS-4509 Sonography Seminar

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4546 and concurrent enrollment in DMS-4549, or permission of the Program Director. Course is graded A-E.

This course provides correlation between previously learned sonographic concepts and clinical application. It is designed to aid the transition to entry-level sonographer and ARDMS preparation. The student must successfully complete comprehensive examinations.

DMS-4511 Cross Sectional Anatomy

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology or the Radiologic Technology programs. Grade of C (2.00) or better in the following: BIO-1772, BIO-1773 and BIO-1760 (or equivalent), or permission of the Program Director. Course is graded A-E.

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-4514 Principles of Diagnostic Sonography

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

This is the introductory course to the Diagnostic Medical Sonography sequence. Topics included in the course are the health care delivery system, professional communication and conduct, organizations, history of ultrasound, the sonographer's role and basic scanning protocols.

DMS-4515 Sonographic Physics and Instrumentation I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Must be enrolled in the Diagnostic Medical Sonography Technology program, grade of C or better in PHY-1721, and concurrent enrollment in (DMS-4529, DMS-4536, DMS-4543) or (DMS-4551, DMS-4571 and DMS-4577); or permission of the Program Director. Course is graded A-E.

This course deals with the fundamental principles of sonographic physics. Topics such as the nature of waves, wave properties, interactions of ultrasound with tissue, ultrasonic beam parameters and basic Doppler principles are covered. Students will have an opportunity to apply these principles in the college laboratory setting.

DMS-4517 Sonographic Physics and Instrumentation III

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the Diagnostic Medical Sonography Technology program , grade of C (2.00) or better in DMS-4519 and concurrent enrollment in (DMS-4546 or DMS-4563) or permission of the Program Director. Course is graded A-E.

This course concludes the sonographic physics instrumentation sequence. Topics such as artifacts, storage devices, biological effects of ultrasound, and quality assurance testing will be discussed.

DMS-4519 Sonographic Physics and Instrumentation II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the Diagnostic Medical Sonography program, grade of C (2.00) or better in DMS-4515, and concurrent enrollment in (DMS-4530, DMS-4537 and DMS-4544) or (DMS-4562, DMS-4572, and DMS-4578); or permission of the Program Director. Course is graded A-E.

This course applies the fundamental principles of sonographic physics of specific ultrasound instrumentation. Topics such as transducer design, equipment controls and instrumentation for static, real-time and Doppler systems will be discussed. The student will have the opportunity to apply these principles in the clinical laboratory setting.

DMS-4529 Obstetrical Sonography I

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the Diagnostic Medical Sonography program, grade of C (2.00) or better in DMS-4507 and concurrent enrollment in DMS-4515, DMS-4536 and DMS-4543; or permission of the Program Director. Course is grade A-E.

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-4530 Obstetrical Sonography II

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Must be enrolled in the Diagnostic Medical Sonography program, grade of C (2.00) or better in DMS-4529, and concurrent enrollment in DMS-4519, DMS-4537 and DMS-4544; or permission of the Program Director. Course is grade A-E.

This course provides an extensive study of the anatomy, physiology, pathology, and sonographic appearance of the developing fetus. Clinical presentations of maternal complications, second and third trimester development as well as various anomalies associated with pregnancy are emphasized.

DMS-4536 Abdominal Sonography I

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the DMS program and concurrent enrollment in DMS-4529, DMS-4515 and DMS-4543; or permission of the Program Director. Course is graded A-E.

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

DMS-4537 Abdominal Sonography II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the DMS program and grade of C (2.00) or better in DMS-4536 and concurrent enrollment in DMS-4519, DMS-4530, and DMS-4544; or permission of the Program Director. Course is graded A-E.

This course covers sonographic and related imaging techniques of the kidneys, adrenal glands, spleen, lymph nodes, peritoneal cavity and GI tract. Emphasis is on anatomy, physiology, pathology, interpretation of clinical data, differential diagnosis, and ultrasound techniques relative to the abdomen.

DMS-4538 Superficial Structures

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Grade of C (2.00) or better in DMS-4537 and concurrent enrollment in DMS-4517, DMS-4546 and DMS-4581, or permission of the Program Director. Course is graded A-E.

This course discusses sonographic imaging of the thyroid, scrotum, popliteal fossa, prostate, eye, peripheral vascular system, neonatal head and musculoskeletal system. Emphasis is on anatomy, physiology, pathology, interpretation of clinical data, differential diagnosis and ultrasound techniques relative to superficial small parts.

DMS-4541 Principles of Clinical Sonography

2 credit hours, 9 contact hours (1 hour lecture and 0 hours lab, 8 hours clinical). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4050, and a valid CPR card. Course is graded A-E.

An introductory experience to the clinical setting in which students have an opportunity to observe concepts and techniques related to sonographic imaging and patient care. Students will function under the close supervision of qualified sonographers or physicians in hospitals and other health related facilities.

DMS-4543 Clinical Sonography I

4 credit hours, 25 contact hours (1 hour lecture, 0 hours lab, and 24 hours clinical). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program, and grade of C (2.00) or better in DMS-4545, and concurrent enrollment in DMS-4515, DMS-4529 and DMS-4536, and a valid CPR card. Course is graded A-E.

The initial scanning experience in the clinical setting provides the student with the opportunity to apply learned concepts and 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-4544 Clinical Sonography II

4 credit hours, 25 contact hours (1 hour lecture and 0 hours lab, 24 hours clinical). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4543, concurrent enrollment in DMS-4519, DMS-4530 and DMS-4537 and a valid CPR card. Course is graded A-E.

During this clinical course, students will gain practical experience and develop individual scanning techniques related to sonographic 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-4545 Sonography Scan Lab

2 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: Must be enrolled in the General Diagnostic Medical Sonography Program. Course is graded A-E.

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

DMS-4546 Clinical Sonography III

4 credit hours, 25 contact hours (1 hour lecture and 0 hours lab, 24 hours clinical). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4544, concurrent enrollment in DMS-4517, DMS-4538 and DMS-4581, and a valid CPR card. Course is graded A-E.

This course provides more advanced experience in the clinical setting in which the student will improve upon previously learned skills and techniques related to sonographic 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-4549 Clinical Sonography IV

6 credit hours, 33 contact hours (1 hour lecture and 0 hours lab, 32 hours clinical). Prerequisite: Enrollment in the Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4546, concurrent enrollment in DMS-4509 and a valid CPR card. Course is graded A-E.

This final clinical experience emphasizes 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. A weekly one hour seminar focusing on specific case studies will be conducted.

DMS-4551 Cardiovascular Clinical I

4 credit hours, 25 contact hours (1 hour lecture, 0 hours lab, and 24 hours clinical). Prerequisite: Must be enrolled in the Cardiovascular Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4552, concurrent enrollment in DMS-4515, DMS-4571 and DMS-4577, and a valid CPR card. Course is graded A-E.

The initial scanning experience in the clinical setting provides the student with the opportunity to apply learned concepts and techniques related to cardiovascular 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-4552 Cardiovascular Sonography Scan Lab

2 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: Must be enrolled in the Cardiovascular Diagnostic Medical Sonography Program. Course is graded A-E.

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

DMS-4560 Principles of Cardiovascular Clinical

2 credit hours, 9 contact hours (1 hour lecture and 0 hours lab, and 8 hours clinical). Prerequisite: Enrollment in the Cardiovascular Diagnostic Medical Sonography Technology program. A grade of C (2.00) or better in DMS-4050 and a valid CPR card. Course is graded A-E.

An introductory experience to the cardiovascular clinical setting in which students have an opportunity to observe concepts and techniques related to cardiovascular imaging and patient care. Students will function under the close supervision of qualified sonographers or physicians in hospitals and other health related facilities.

DMS-4562 Cardiovascular Clinical II

4 credit hours, 25 contact hours (1 hour lecture and 0 hours lab, 24 hours clinical). Prerequisite: Enrollment in the Cardiovascular Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4551, concurrent enrollment in DMS-4519, DMS-4572 and DMS-4578 and a valid CPR card. Course is graded A-E.

During this clinical course, students will gain practical experience and develop individual scanning 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-4563 Cardiovascular Clinical III

4 credit hours, 25 contact hours (1 hour lecture and 0 hours lab, 24 hours clinical). Prerequisite: Enrollment in the Cardiovascular Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4562, concurrent enrollment in DMS-4517, DMS-4570, DMS-4573, and DMS-4579, and a valid CPR card. Course is graded A-E.

This course provides more advanced experience in the clinical setting in which the student will improve upon previously learned skills 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-4564 Cardiovascular Clinical IV

6 credit hours, 33 contact hours (1 hour lecture and 0 hours lab, 32 hours clinical). Prerequisite: Enrollment in the Cardiovascular Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4563, concurrent enrollment in DMS-4569 and a valid CPR card. Course is graded A-E.

This final clinical experience emphasizes mastery of skills in cardiovascular sonographic imaging. 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. A weekly one hour seminar focusing on specific case studies will be conducted.

DMS-4569 Cardiovascular Seminar

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Cardiovascular Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4563 and concurrent enrollment in DMS-4564. Course is graded A-E.

This course provides correlation between previously learned sonographic concepts and clinical application. It is designed to aid the transition to entry-level sonographer and ARDMS preparation. The student must successfully complete a comprehensive examination.

DMS-4570 Introduction to Pediatric Echocardiography

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the Cardiovascular Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4572, and concurrent enrollment in DMS-4517, DMS-4563 and DMS-4573 or permission of the Program Director. Course is graded A-E.

This course covers the sonographic imaging of the pediatric heart with emphasis on embryology, anatomy, pathology, physiology, 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-4571 Echocardiography I

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the Cardiovascular Diagnostic Medical Sonography Technology program, and concurrent enrollment in DMS-4515, DMS-4551 and DMS-4577; or permission of the Program Director. Course is graded A-E.

This course will review cardiac anatomy and physiology. B-mode, M-mode, and Doppler testing in the detection of Mitral Valve disease will be discussed. EKG and Holter monitoring will also be studied.

DMS-4572 Echocardiography II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the Cardiovascular Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4571 and concurrent enrollment in DMS-4519, DMS-4562 and DMS-4578; or permission of the Program Director. Course is graded A-E.

This course will continue the sonographic evaluation of aortic valve, tricuspid valve, and pulmonic valve disease. Ischemic and pericardial heart disease, and cardiomyopathies will also be discussed.

DMS-4573 Echocardiography III

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the Cardiovascular Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4572 and concurrent enrollment in DMS-4517, DMS-4563, DMS-4570 and DMS-4579; or permission of the Program Director. Course is graded A-E.

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

DMS-4577 Vascular Sonography I

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the Cardiovascular Diagnostic Medical Sonography Technology program, and concurrent enrollment in DMS-4515, DMS-4551 and DMS-4571; or permission of the Program Director. Course is graded A-E.

This course emphasizes the sonographic evaluation of the peripheral vascular system. Non-invasive 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.

DMS-4578 Vascular Sonography II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the Cardiovascular Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4577, and concurrent enrollment in DMS-4519, DMS-4562 and DMS-4572; or permission of the Program Director. Course is graded A-E.

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-4579 Vascular Sonography III

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the Cardiovascular Diagnostic Medical Sonography Technology program. Grade of C (2.00) or better in DMS-4578, and concurrent enrollment in DMS-4517, DMS-4563, DMS-4570 and DMS-4573; or permission of the Program Director. Course is graded A-E.

This course discusses miscellaneous vascular pathologies and advanced imaging techniques. 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-4581 Breast Sonography

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Must be enrolled in the Cardiovascular Diagnostic Medical Sonography Technology program. C grade or better in DMS-4537 and concurrent enrollment in DMS-4517, DMS-4538 and DMS-4546; or permission of the Program Director. Course is graded A-E.

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 techniques will also be discussed. Emphasis is on correlation of clinical data, related imaging techniques and sonographic appearance to determine differential diagnosis.

EAR-5610 Observation and Assessment of Young Children

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Concurrent enrollment in EAR-5614 and eligible to take COM-1535 (or by permission of the ECD Program Director). Course is graded A-E.

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

EAR-5614 Introduction to Early Childhood Education

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Concurrent enrollment in EAR-5610 and eligible to take COM-1535 (or permission of the ECD Program Director). Course is graded A-E.

This course will introduce the student to topics on the history of early childhood education, program descriptions, evaluation, policy concerns, and professional behavior. The underlying theories and practices of specific program models or frameworks to curriculum planning for early childcare and education settings will be examined. The student will discover the broad range of educational strategies that are available for working with young children and their families.

EAR-5615 Managing Children in Groups

2.5 credit hours, 5 contact hours (2 hours seminar, 0 hours lab, and 3 hours practicum). Prerequisite: COM-1535, and a C grade (2.00) or better in EAR-5610, EAR-5614, EAR-5656, plus prior approval by the ECD Program Director at least six weeks prior to the start of class, a completed Student Practicum File, or by permission of the ECD Program Director. Course is graded A-E.

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. Students will explore and reflect on strategies that promote positive conflict resolution, self-control, self-esteem within a nurturing, safe community classroom environment. As participant observers, students 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.

EAR-5616 ECD Instructional Technology

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in EAR-5614 and experience with basic personal computer or permission of the ECD Program Director. Course is graded A-E.

This course will prepare the early childhood development professional to design, select and analyze instructional materials, basic media options and computer applications to enhance teaching and maximize children's progress. An overview of augmentative technology will be included.

EAR-5617 Engaging Children in Projects

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

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.

EAR-5621 ECD Field Practicum

1.5 credit hours, 4.5 contact hours (1 hour seminar, 0 hours lab and 3.5 hours practicum). Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614, EAR-5615, EAR-5616, EAR-5624, EAR-5645, EAR-5656, concurrent enrollment in EAR-5638, and permission of the ECD Program Director. Course is graded A-E.

This course will assist the student in applying the principles, methods and practices learned in the following method course, Children's Literature. The student will participate in a supervised early childhood setting.

EAR-5624 Curriculum Planning

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in EAR-5614 and EAR-5645 or permission of ECD Program Director. Course is graded A-E.

In this course the student will be introduced to theories of classroom planning and instruction. Specific topics will include exploring various curriculum philosophies, planning and assessment, teaching strategies, transitions, guidance techniques with attention to exceptionality and cultural diversity.

EAR-5631 ECD Field Practicum

1.5 credit hours, 4.5 contact hours (1 hour seminar, 0 hours lab and 3.5 hours practicum). Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614, EAR-5615, EAR-5616, EAR-5624, EAR-5645 and EAR-5656, concurrent enrollment in EAR-5637, and permission of the ECD Program Director. Course is graded A-E.

This course will assist the student in applying the principles, methods, and practices learned in the following method course, Creative Arts Across the Curriculum. The student will participate in a supervised early childhood setting.

EAR-5637 Creative Arts Across the Curriculum

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614, EAR-5616, EAR-5624, EAR-5615, EAR-5645 and EAR-5656 and concurrent enrollment in EAR-5631 and completion of the ECD Student Practicum File or by permission of the ECD Program Director. Course is graded A-E.

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. Students will work with a group of children following the children's interests and needs in planning experiences.

EAR-5638 Children's Literature

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614, EAR-5616, EAR-5624, EAR-5615, EAR-5645, EAR-5656, EAR-5684, concurrent enrollment in EAR-5621, and completion of the ECD Student Practicum File, or by permission of the ECD Program Director. Course is graded A-E.

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 especially with links to social studies. Students will assess, critique and reflect on appropriate literature for children and families. The student will practice reading and integrating meaningful literature related experiences for children within an early childhood program.

EAR-5640 Parenting and Parent Education

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

This course is an introduction to current theories of parenting and parent education programs that focus on parenting from infancy through the early childhood years. Topics will examine guidance techniques that promote the optimum development of young children with sensitivity to special needs and cultural variation. The student will examine ways to work with parents, individually or in groups, within the early childhood setting.

EAR-5641 ECD Field Practicum

1.5 credit hours, 4.5 contact hours (1 hour seminar, 0 hours lab and 3.5 hours practicum). Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614, EAR-5615, EAR-5616, EAR-5624, EAR-5645, EAR-5656, concurrent enrollment in EAR-5649, and permission of the ECD Program Director. Course is graded A-E.

This course will assist the student in applying the principles, methods, and practices learned in the following method course, 5649 Math and Science for ECD. The student will participate in a supervised early childhood setting.

EAR-5645 Theory and Practice of Children's Play

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

This course will explore the important role of a play-based curriculum for young children. Children's development along with ways to foster play experiences in the early childhood setting will be explored. Child initiated and teacher guided events of play will be discussed, including developmentally appropriate play activities that promote children's learning like blocks, sociodramatic play, games and sensorimotor play.

EAR-5649 Math and Science for ECD

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614, EAR-5615, EAR-5616, EAR-5624, EAR-5645, EAR-5656 and concurrent enrollment in EAR-5641 and completion of the ECD Student Practicum File, or by permission of the ECD Program Director. Course is graded A-E.

In this course the student will explore various ways to assist preschool children in developing specific concepts in the areas of math and science including computers and current technologies. The focus will be on setting up developmentally appropriate practices which enable children to develop critical thinking and problem-solving skills. Attention will be given to various methods of documentation of children's learning.

EAR-5656 Family, Child, and Community Health and Safety

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

This course will provide training and practice in basic First Aid, in communicable disease recognition and management, and in child abuse recognition and prevention. Meets requirements of the Ohio Department of Human Services, Child Day Care Licensing Regulations for staff in early child care settings. Local and national laws and regulations related to community health and safety will be explored.

EAR-5665 Mentoring and Supervision Seminar

2 credit hours, 2 contact hours (2 hours seminar and 0 hours lab). Prerequisite: C grade (2.00) or better in EAR-5624, EAR-5637, EAR-5638, EAR-5645, EAR-5649, EAR-5671, and EAR-5686, or permission of the ECD Program Director. Course is graded A-E.

This course is designed to provide the student with the opportunity to analyze and evaluate personal, professional and pre-service teaching experiences relevant to the principles and practices of mentors and protégés in the early childhood field. Students will explore the stages of teacher development, working towards collegiality, conflict resolution and assessment of adult knowledge, skills and dispositions.

EAR-5667 Student Teaching Practicum

3 credit hours, 17 contact hours (1 hour seminar, 0 hours lab, and 16 hours practicum). Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614, EAR-5616, EAR-5624, EAR-5640, EAR-5645, EAR-5665 (or concurrent enrollment in EAR-5665), EAR-5674 (or concurrent enrollment in EAR-5674), EAR-5679, EAR-5684, EAR-5685, EAR-5686. An overall B grade average (3.00) is required in the methods/practicum course work: EAR-5621, EAR-5631, EAR-5637, EAR-5638, EAR-5641, and EAR-5649. Students may also enroll by permission of the ECD Program Director. Course is graded A-E.

This course is designed to meet the final requirements for Ohio Department of Education Pre-Kindergarten Associate Licensure by providing the opportunity for a student to assume responsibility for planning and assessing children's learning. Under the guidance and supervision of a qualified early childhood teaching and supervising faculty, the student will actively assume the role of teacher with in and 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 for this course, the student must meet with the ECD Program Director at least one month prior to the start of the quarter.

EAR-5671 Exceptional Children

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in EAR-5686 and (EAR-5656 or equivalent) or by permission of the ECD Program Director. Course is graded A-E.

This course will explore the special needs of atypical children, which include children with severe mental or physical disabling conditions, children with more mild forms of delay, and gifted children. Causes, treatment, concepts, and services available will be studied.

EAR-5674 Trends and Issues in ECD

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in EAR-5614, EAR-5624, EAR-5637, EAR-5638, EAR-5645, EAR-5649, EAR-5671, and EAR-5686 or by permission of the ECD Program Director. Course is graded A-E.

In this course the student will explore historical and contemporary issues affecting children, family, community and the early childhood professional. Topics will include societal views of children, early childhood professionalism, current research and future implications. This course is taught via internet.

EAR-5675 ECD Early Intervention Family Dynamics

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Approved Early Childhood coursework or permission of the ECD Program Director. Course is graded A-E.

This course examines the function and structure of the relationship and interaction among the family, helping professional and the child, birth to age six years with special needs. The student will complete structured observations and interviews with community professionals and families emphasizing an individualized family service planning.

EAR-5676 Team Models and Community Collaboration

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Approved Early Childhood coursework or permission of the ECD Program Director. Course is graded A-E.

This course is designed to familiarize the student with the importance of early intervention team models and community collaboration. Focus will be with the development of cooperative community services for children birth to six years and their families. In addition, the student will explore the formation of group processes, team leadership and the coordination of the individualized service plans for the family and child.

EAR-5678 Early Intervention Assessment Practices

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Approved Early Childhood coursework or permission of the ECD Program Director. Course is graded A-E.

This course is designed to provide basic knowledge of finding, screening, and assessing children, birth to age six, who are at risk and need further assessment. The student will become familiar with a wide range of diagnostic assessment instruments and procedures that encompass the developmental needs of the whole child involving the family, appropriate community resources and professionals. The student will complete structured observations of typically developing children and assist with the screening and assessment of children with special needs.

EAR-5679 Infant and Toddler Development and Care

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

This course will emphasize development from conception through three years of age. Principles related to physical, cognitive, language, social, and emotional development will be covered. Connections of principles to practices, with a focus on appropriate environments, activities and curriculums will be evaluated. The importance of parents as partners will be explored.

EAR-5680 Administration in Early Childhood Programs

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in EAR-5621, EAR-5631, EAR-5641 or by permission of the ECD Program Director. Course is graded A-E.

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.

EAR-5682 Children's Mental Health Issues

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

This course will explore children's mental health issues related to self-esteem, development, the effects of adult life choices, and the effects of current day stressors.

EAR-5683 School Age Programs and Care

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

This course is designed to assist caregivers of school ages in understanding the needs elementary school age children have for programs and care outside of school hours. Students will explore developmentally and culturally appropriate activities, positive guidance, and communication guidelines.

EAR-5684 Fundamentals of Reading and Writing

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

This course will focus on research-based principles and practices that will provide children birth to eight years of age with a solid foundation in developmentally appropriate early reading and writing. The student will explore and evaluate the concepts in practice.

EAR-5685 Family Development

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

This course is an introduction to the study of families from a social science perspective. The focus will be on family related issues that affect individuals throughout the life cycle. The course will comprise the principles of family research including cultural and historical influences. Contemporary social issues will be explored that affect the formation and maintenance of family life.

EAR-5686 Child Development

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in EAR-5679 or by permission of the ECD Program Director. Course is graded A-E.

This course will emphasize the development of young children, and explore development in middle childhood and adolescence. Principles related to physical, cognitive, social and emotional development will be covered. Class topics will include influences on development, such as culture and various abilities. Connections of principles to practice will be evaluated.

EAR-5801 ECD Independent Study: Creative Music Experiences with Pre-Schoolers

1-2 (variable) credit hours; 5-10 hours contact hours independent study. Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614 and EAR-5686 and permission of the ECD Program Director. Course is graded A-E.

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

EAR-5802 ECD Independent Study: Self-Esteem Development with Children

1-2 (variable) credit hours; 5-10 hours contact hours independent study. Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614 and EAR-5686 and permission of the ECD Program Director. Course is graded A-E.

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

EAR-5803 ECD Independent Study: Children's Literature

1-2 (variable) credit hours; 5-10 hours contact hours independent study. Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614 and EAR-5686 and permission of the ECD Program Director. Course is graded A-E.

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

EAR-5804 ECD Independent Study: Special Needs Inclusion

1-2 (variable) credit hours; 5-10 hours contact hours independent study. Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614 and EAR-5686 and permission of the ECD Program Director. Course is graded A-E.

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

EAR-5805 ECD Independent Study: The School Age Child: Plans and Activities

1-2 (variable) credit hours; 5-10 hours contact hours independent study. Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614 and EAR-5686 and permission of the ECD Program Director. Course is graded A-E.

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

EAR-5806 ECD Independent Study: Parent Education

1-3 (variable) credit hours; 5-15 hours contact hours independent study. Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614 and EAR-5686 and permission of the ECD Program Director. Course is graded A-E.

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

EAR-5807 ECD Independent Study: Current Issues in Child Development

1-3 (variable) credit hours; 5-15 hours contact hours independent study. Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614 and EAR-5686 and permission of the ECD Program Director. Course is graded A-E.

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

EAR-5808 ECD Independent Study: Developing an ECD Manual

1-3 (variable) credit hours; 5-15 hours contact hours independent study. Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614 and EAR-5686 and permission of the ECD Program Director. Course is graded A-E.

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

EAR-58XX Independent Study in ECD

1-2 (variable) credit hours; 5 hours per quarter minimum contact hours. Prerequisite: C grade (2.00) or better in EAR-5610, EAR-5614 and EAR-5686 and permission of the ECD Program Director. Course is graded A-E.

This course is designed to allow the ECD student the opportunity to choose a topic for independent study related to early childhood development or education. The student will work closely with an ECD faculty member in determining the appropriateness of the topic area. Transfer students receiving partial credit for an ECD course may utilize this course as an elective to meet up to 2 credit hours in any one topic area towards the required credits for graduation.

EET-3018 PC Hardware: Troubleshooting and Maintenance

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

This course offers a detailed study of microcomputer systems hardware modules. Combining theory and practice the course will cover module level maintenance, repair, replace, and retrofit and upgrading trade-off decision parameters; and introductory troubleshooting, with a focus on software troubleshooting. Students will remove and replace defective modules, perform hardware upgrades, and install software with attendant hardware boards. Students will gain experience in the assembly and disassembly of microcomputer stems.

EET-3028 Circuits I

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: MTH-1210 or a score of at least 71 on the COMPASS Algebra test. Course is graded A-E.

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.

EET-3029 Circuits II

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: EET-3028 and concurrent enrollment (or previous successful completion of) MTH-1226. Course is graded A-E.

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

EET-3039 PC Hardware: Troubleshooting and Maintenance

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

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 essentials part of the Comp TIA A+ certification exam.

EET-3132 Communications Electronics I

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: EET-3133. Course is graded A-E.

Includes the theory and operation of power supplies, oscillators, AF and RF amplifiers, AM Transmitters and Receivers, SSB, Testing and Alignment, and Troubleshooting of Communication Systems. Laboratory experiences consist of construction of basic circuits, test and repair of commercial units, and the use of specialized test equipment.

EET-3133 Electronics I

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: EET-3029. Course is graded A-E.

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 also discussed. Laboratory sessions, both bread boarded and simulated, emphasize transistor in audio amplifiers.

EET-3144 Linear Integrated Circuits

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: MTH-1232 and EET-3133. Course is graded A-E.

Includes semi-conductor devices and circuits, junction field effect transistors, MOSFET, linear integrated circuits, operational amplifiers and optoelectronic devices.

EET-3152 Communications Electronics II

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: EET-3132. Course is graded A-E.

Continues the concepts presented in 3132 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.

EET-3154 Digital Electronics I

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: CMP-1601 (or concurrent enrollment in COM-1601). Course is graded A-E.

Students pursue the study of digital logic elements such as logic gates, flip-flops, counters and shift registers. The study of math as used in digital circuits is covered in laboratory and lecture.

EET-3164 Digital Electronics II

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: EET-3154 or equivalent. Course is graded A-E.

The architecture of a microprocessor is studied in this course. The buss architecture of several common busses will be discussed. The programming of a microprocessor in both machine and assembly language will be introduced.

EET-3167 Digital Electronics III

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: EET-3164. Course is graded A-E.

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.

EET-3185 EET Capstone Design Course

3 credit hours, 6 contact hours (0 hours lecture and 6 hours lab). Prerequisite: EET-3132, EET-3144, EET-3167, EET-3306 and concurrent enrollment in EET-3326. Course is graded A-E.

The student will work in small groups to design and build an operational electronic project that demonstrates the knowledge acquired during the completion of their EET degree. During these projects, the student is expected to contribute to each aspect of the project, to participate in group planning, to participate in the final demonstration, and to use the lab time efficiently.

EET-3306 Local Area Networks

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: CMP-1601 (or equivalent computer operation experience). Course is graded A-E

This course is an introduction to local area networking with personal computers in small environments such as offices. Subjects covered include planning a LAN, selecting hardware and software, net management, installation, troubleshooting, and Internet working. Laboratory exercises involve constructing and operating a LAN. No knowledge of electronics is necessary, but familiarity with personal computer operation would be helpful, particularly the IBM PC and DOS.

EET-3320 Data Communications

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: EET-3167 and EET-3306. Course is graded A-E

This course introduces basic fundamentals related to data communication: analog and digital communication, multiplexing telephone systems, codes and formats, and error detection and correction.

EET-3326 Local Area Networks - Microsoft

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

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

EMS-4052 First Aid

2 credit hours, 4 contact hours (1 hour lecture and 3 hours lab). Prerequisite: None. This course is not open to students with credit for EMS-4042, LET-5140, LET-5205, or LET-5267. Course is graded A-E.

This course is designed to help the student make appropriate decisions regarding first aid care and to act on those decisions. Students will recognize when an emergency has occurred and the plan of action needed for the emergency until professional medical help arrives.

EMS-4327 EMT-Basic

6 credit hours, 10 contact hours (4 hours lecture and 6 hours lab). Prerequisite: Score of 85 or above on the Compass Reading Skills Test or 44 or above on the ASSET Reading Skills Test; CPR Certification recommended. Course is graded A-E.

This basic course covers all aspects of emergency medical care in the field, including equipment, controlling the situation, anatomy and physiology, medical and trauma emergencies, and advanced airway control. This course at its successful completion allows the student to take the national registry exam to become certified at the EMT-Basic Level.

EMS-4328 EMS Intermediate I

7 credit hours, 10 contact hours (5 hours lecture and 5 hours lab). Prerequisite: Must be a State Certified EMT-Basic and pass compass reading and pre-algebra testing. This course must be taken concurrently with EMS-4329. Course is graded A-E.

The EMS Intermediate I course will present the medical practice act, roles and responsibilities of the EMT-Intermediate. The course builds upon the skills and knowledge of the EMT-Basic by adding advanced airway management, intravenous fluid therapy, and an introduction to cardiac monitoring, interpretation of electrocardiograms and manual defibrillation.

EMS-4329 EMS Intermediate I - Practicum

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Concurrent enrollment in EMS-4328. Course is graded A-E.

This course is designed to provide practical experience in combined clinical experience and pre-hospital experience. The student will work in a clinical setting and pre-hospital services where he/she will learn agency procedures and demonstrate the required emergency medical techniques to meet all EMS standards for EMS Intermediate.

EMS-4330 Nationally Registered First-Responder

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

The student will study the emergency techniques utilized by first responders to an accident or other medical emergencies. The program is to allow the student to become a Nationally Registered First Responder and a State of Ohio Certified First Responder.

EMS-4331 Adult, Child, and Infant CPR

0.5 credit hours, 8 total contact hours (2 total hours lecture and 6 total 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. Course is graded Satisfactory/Unsatisfactory.

EMS-4334 EMS Paramedic I

6 credit hours, 8 contact hours (4 hours lecture and 4 hours lab). Prerequisite: High school biology or equivalent or BIO-1705 with a C grade (2.00) or better or concurrent enrollment in BIO-1705 if not already completed and acceptance into the EMS-Paramedic Certificate program. Concurrent enrollment in BIO-1745 unless previously completed with a C grade (2.00) or better. Course is graded A-E.

The student will study the roles, responsibilities, and duties of an EMS-P including professional ethics and behavior. The preparatory stages related to the functioning of an EMS-Paramedic will be presented. The course will include instruction in the management of endocrine emergencies, allergies, anaphylaxis, gastrointestinal emergencies and respiratory emergencies.

EMS-4336 EMS Paramedic II

6 credit hours, 8 contact hours (4 hours lecture and 4 hours lab). Prerequisite: C+ (2.30) grade or better in EMS-4334, BIO-1745 with a grade of C (2.00) or better, and concurrent enrollment in EMS-4352. Course is graded A-E.

This course will provide instruction in the anatomy and physiology of the cardiovascular system, recognition of dysrhythmia assessment of the cardiac patients, and the pathophysiology of cardiovascular disease will be presented.

EMS-4338 EMS Paramedic III

6 credit hours, 8 contact hours (4 hours lecture and 4 hours lab). Prerequisite: C+ (2.30) grade or better in EMS-4336, Satisfactory grade in EMS-4352, concurrent enrollment in EMS-4354, and completion of BIO-1745 with a grade of C (2.00) or better. Course is graded A-E.

The course will provide instruction in 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-4340 EMS Paramedic IV

6 credit hours, 8 contact hours (4 hours lecture and 4 hours lab). Prerequisite: C+ (2.30) grade or better in EMS-4338, Satisfactory grade in EMS-4354, and concurrent enrollment in EMS-4356. Course is graded A-E.

This course will include instruction in the assessment and management of shock, trauma emergencies, burns, and common cardiac emergencies in the pre-hospital setting.

EMS-4352 EMS Paramedic Practicum

2 credit hours, 10.5 contact hours (1 hour lecture, 0 hours lab, and 9.5 hours practicum). Prerequisite: C+ (2.30) grade or better in EMS-4334. Course is graded S/U.

This course is designed to provide practical experience in combined clinical experience and pre-hospital experience. The student will work in a clinical setting and pre-hospital services where they will learn agency procedures and demonstrate the required emergency medical techniques to meet all EMS standards for EMT-Paramedic. Course is graded Satisfactory/Unsatisfactory.

EMS-4354 EMS Paramedic Practicum

2 credit hours, 10.5 contact hours (1 hour lecture, 0 hours lab, and 9.5 hours practicum). Prerequisite: C+ (2.30) grade or better in EMS-4336 and concurrent enrollment in EMS-4338. Course is graded S/U.

This course is designed to provide practical experience in combined clinical experience and pre-hospital experience. The student will work in a clinical setting and pre-hospital services where they will learn agency procedures and demonstrate the required emergency medical techniques to meet all EMS standards for EMT-Paramedic. Course is graded Satisfactory/Unsatisfactory.

EMS-4356 EMS Paramedic Practicum

2 credit hours, 10.5 contact hours (1 hour lecture, 0 hours lab, and 9.5 hours practicum). Prerequisite: C+ (2.30) grade or better in EMS-4338 and EMS-4354 and concurrent enrollment in EMS-4340. Course is graded S/U.

This course is designed to provide practical experience in combined clinical experience and pre-hospital experience. The student will work in a clinical setting and pre-hospital services where they will learn agency procedures and demonstrate the required emergency medical techniques to meet all EMS standards for EMT-Paramedic. Course is graded Satisfactory/Unsatisfactory.

EMS-4390 Epinephrine Administration and Cardiac Emergencies

1.5 credit hours, 2 contact hours (1 hour lecture and 1 hour lab). Prerequisite: State certified EMS-Basic which is current at the time of enrollment. Course is graded A-E.

The EMS Intermediate will present the medical practice act, rules and responsibilities of the EMS Intermediate. The course builds upon the skills and knowledge of the EMS Basic by adding advanced airway management, intravenous fluid therapy, and an introduction to cardiac monitoring, interpretation of electrocardiograms and manual defibrillation.

EMT-3201 Alternative and Renewable Energy Sources

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

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. Students will learn how to assess the viability of a wind power, hydropower or biomass system for a given site. Students will also learn about the impact of government regulations on the use of renewable energies. Students will analyze these renewable energy systems and will calculate savings fractions, backup energy needs, financing options, and economic analyses. The student will investigate the potentials of renewable energy technologies to help solve environmental and economic problems within society. Efforts in the laboratory will emphasize solar energies.

EMT-3202 Heating & Cooling Systems

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

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 includes temperature, humidity, air filtering, and air movement. Course emphasizes energy conservation and efficiency.

EMT-3203 Energy Control, Efficiency, and Conservation Methods

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: EMT-3202. Course is graded A-E.

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. Students will calculate energy savings and demonstrate the appropriate use of energy monitoring and measuring equipment commonly used by energy specialists and energy auditors.

EMT-3210 Lean Manufacturing

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-E.

Lean manufacturing is one of the mainstays of successful, modern manufacturing and production. This course provides students with 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.

EMT-3243 Hydraulics and Pneumatics

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: Grade C (2.00) or better in PHY-1726 or EET-3029. Course is graded A-E.

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. Students learn to select and size pumps and actuators for specific applications. Complete circuits are studied and analyzed, and basic electrical control of fluid power circuits is introduced.

EMT-3244 Industrial Power

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: EET-3029. Course is graded A-E.

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. During these laboratory experiences, students will also learn wiring practices and how to select and apply proper protection devices.

EMT-3252 Programmable Logic Controllers

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: Grade C (2.00) or better in EET-3029 and EET-3154. Course is graded A-E.

This course includes electrical control of Fluid Power/Electrical systems with relay ladder diagrams, but concentrates mainly on PLC's and their use for 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 time-driven sequencing schemes are studied. Architecture, use, and programming of PLC's are covered and reinforced in practically oriented laboratory projects.

EMT-3253 Mechanical Components and Mechanisms

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Grade C (2.00) or better in PHY-1726. Course is graded A-E.

Mechanical elements of power transmission including gears, levers, 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, and the study of the nature of gear tooth contact.

EMT-3261 Electromechanical Systems

5 credit hours, 9 contact hours (3 hours lecture and 6 hours lab). Prerequisite: EMT-3252. Course is graded A-E.

Concepts and applications of sensors, controllers, actuators, and industrial processes used in closed loop process control are studied in this course. System stability and controller tuning are explored. The use of PLC’s for analog process control is also covered. For laboratory activities, the student will make use of material from previous courses to complete capstone design projects typical of industrial process control applications.

EMT-3262 Industrial Instrumentation

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: Grade C (2.00) or better in EET-3028 and completion of or concurrent enrollment in PHY-1728. Course is graded A-E.

Students will measure various physical quantities by using industrial sensors. Specifications and suitable applications as well as calibration procedures for different types of sensors will be discussed. Process and Instrumentation Drawings (P&ID) are introduced.

ETA-3060 Overview of the Electrical Trades Industry

3 credit hours, 4 contact hours (2 hours lecture and 2 hour lab). Prerequisite: Open to students accepted into the ETA program only. Course is graded A-E.

This course is an overview of the Electrical Trades Industry that focuses on the apprentices' 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-3061 Blue Print Reading and Conduit Fabrication I

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-E.

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-3062 National Electrical Codes I

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Open to students accepted into the ETA program only. Course is graded A-E.

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-3063 National Electrical Codes II

6 credit hours, 6 contact hours (6 hours lecture and 0 hours lab). Prerequisite: ETA-3062; Open to students accepted into the ETA program only. Course is graded A-E.

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-3064 Blueprint Reading and Conduit Fabrication II

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: ETA-3063; Open to students accepted into the ETA program only. Course is graded A-E.

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-3065 Test Instrumentation and Safety

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Open to students accepted into the ETA program only. Course is graded A-E.

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-3066 Electrical Grounding

6 credit hours, 6 contact hours (6 hours lecture and 0 hours lab). Prerequisite: ETA-3063; Open to students accepted into the ETA program only. Course is graded A-E.

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-3067 Industrial Blueprints and Advanced Transformers

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: ETA-3064; Open to students accepted into the ETA program only. Course is graded A-E.

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-3068 Advanced Codes and Practices

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: ETA-3063; Open to students accepted into the ETA program only. Course is graded A-E.

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-3069 Motors and Motor Control I

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: ETA-3082; Open to students accepted into the ETA program only. Course is graded A-E.

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-3070 Lightning Protection and HVAC

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: ETA-3068; Open to students accepted into the ETA program only. Course is graded A-E.

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-3071 OHSA 30

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Open to students accepted into the AMT and ETA programs only. 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 Satisfactory/Unsatisfactory.

ETA-3072 Program Logic Controllers for Electricians

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: ETA-3069; Open to students accepted into the ETA program only. Course is graded A-E.

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-3073 Fire Alarm Systems

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: ETA-3068; Open to students accepted into the ETA program only. Course is graded A-E.

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-3074 Automated Networks and Special Code Applications

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: ETA-3068; Open to students accepted into the ETA program only. Course is graded A-E.

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-3075 Advanced Test Instruments

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: ETA-3065; Open to students accepted into the ETA program only. Course is graded A-E.

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-3076 Distributed Generation

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: ETA-3068; Open to students accepted into the ETA program only. Course is graded A-E.

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-3077 High Voltage and Insulation Testing

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: ETA-3065; Open to students accepted into the ETA program only. Course is graded A-E.

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-3078 Telephone and Security Systems

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: ETA-3074; Open to students accepted into the ETA program only. Course is graded A-E.

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-3079 OSHA 10

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 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 and hazard communications. Special emphasis is placed on those areas that are the most hazardous, using OSHA standards as a guide. Upon successful completion of the course, the student will receive an OSHA construction safety and health 10-hour course completion card. This course is graded Satisfactory/Unsatisfactory.

ETA-3081 DC Theory for Electricians

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: ETA-3080; Open to students accepted into the ETA program only. Course is graded A-E.

An introduction to direct current fundamentals, electron physics, current and voltage, work, power series and parallel resistances, electrical measurement devices, circuit analysis.

ETA-3082 AC Theory for Electricians

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: ETA-3081; Open to students accepted into the ETA program only. Course is graded A-E.

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-3084 Physics-Electronics for Electricians

4 credit hours, 6 contact hours (2 hours lecture and 4 hours lab). Prerequisite: ETA-3083; Open to students accepted into the ETA program only. Course is graded A-E.

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, rectifers, amplifiers, integrated circuits, oscillators and timers.

ETA-3085 Digital Electronics for Electricians

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: ETA-3084; Open to students accepted into the ETA program only. Course is graded A-E.

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 arithematic circuits, clock circuits, and digital switching circuits.

FOR-5510 Principles of Forensics

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None; however, (CHM-1700 and CHM-1710 or CHM-1713) and LET-5209 are recommended. Course is graded A-E.

The purpose of this course is to 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 introduced to the role of the criminalistics laboratory for comparison and analysis of evidence. This course will provide the framework for the skills needed by a crime lab technician and crime scene processor.

FOR-5514 Forensic Firearms

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Acceptance into the Forensic Science Technology Program and permission of the Program Director. Course is graded A-E.

This course will enable the student to learn firearms and knife safety techniques including firing, unloading, packaging and transporting weapons to the lab. The student will also learn how to test fire a weapon while maintaining all safety requirements and will study ammunition characteristics and identification. The student will also apply scientific crime detection techniques in the field of firearms investigations including ballistics, trace metal detection, gun powder residue, instant shooter identification, determining range of fire. Knife and gun shot wounds and legal aspects of firearms investigations and the history of firearms investigation will be discussed. Bullet and cartridge case comparison will also be practiced.

FOR-5516 Forensic Investigations

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: None. Course is graded A-E.

The emphasis of this course will deal with 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 advance courses of criminalistics.

FOR-5520 Legal and Evidentiary Aspects of Forensics

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

The student will study the legal aspects of being a forensic technician. The student will learn to apply legal principles regarding search and seizure, as well as legal principles which serve to protect a defendant's rights to the preservation and/or independent testing of evidence. Additionally, the student will learn evidence rules governing testimony by expert witnesses.

FOR-5524 Forensic Photography I

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: None; Open to Forensic Science Technology students only. Course is graded A-E.

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. Different shutter speeds, f-stops, apertures, depth of field, as well as various lenses and their uses will be utilized. The course will address different film speed uses, and the use of both artificial and natural light. The student will demonstrate the ability to do surveillance, traffic accident photography and videography.

FOR-5525 Forensic Photography II

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in FOR-5524. Course is graded A-E.

The student will learn lighting techniques, the use of filters, 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. The student will develop proficiency in digital photography and be familiarized with the development and printing of film in a darkroom. Aspects of photographic composition will also be covered and painting with light will be performed. Crime, evidence, Ultraviolet, fluorescent and infrared photography will also be covered in this course.

FOR-5530 Forensic Criminalistics I

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: None; however FOR-5510 is recommended. Course is graded A-E.

The student will be involved in the study and application of scientific crime detection techniques with emphasis on collection of physical evidence, fingerprint development, identification of known to unknown fingerprint and palm prints. The student will learn footprint recovery and identification, tool mark comparisons, and blood spatter analysis.

FOR-5531 Forensic Criminalistics II

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: None; however FOR-5510 and FOR-5530 are recommended. Course is graded A-E.

The student will be involved in the study of scientific crime detection techniques with emphasis on ballistics, trace metal, gunpowder, residue, hair and fiber evidence, paint comparison and physical comparisons. The student will participate in courtroom testimony and what is required from an expert witness.

FOR-5532 Introduction to Laboratory Instrumentation

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in (CHM-1700 and CHM-1710 or CHM-1713), and PHY-1721 and concurrent enrollment in FOR-5534. Course is graded A-E.

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 underling 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 common principles which run through thin-layer, liquid and gas chromatography. The student will learn the basic principles of operation for the gas chromatography detectors, their limits of delectability and their application to analysis for forensic evidence.

FOR-5534 Instrumentation Analysis

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: This course must be taken concurrently with FOR-5532. Course is graded A-E.

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 the application of the combined technique, gas chromatography/mass spectroscopy to forensic problems.

FOR-5535 Forensic Toxicology

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in FOR-5532 and FOR-5534. Course is graded A-E.

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.

FOR-5547 Forensic Serology

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in MTH-1210, (CHM-1700 and CHM-1710 or CHM-1713) and (BIO-1740 or BIO-1745). Course is graded A-E.

The purpose of this course is, through lecture, demonstration and laboratory, to overview the field of serology with an emphasis on forensic application. The course will comprise a review of the formed elements of the blood and other biological fluids such as saliva, perspiration, milk, and semen. The 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 their specific serological circumstance.

FOR-5548 Advanced Crime Scenes

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in FOR-5530 and FOR-5531. Course is graded A-E.

Students are encouraged to take this course in their final quarter of study or as close to it as possible. This course is a capstone experience which involves working as a member of a Crime Scene Investigation Team and working a scenario based case from the crime scene to the court room.

FOR-5550 Introduction to Fire Origin and Cause

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

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 are 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-5551 Forensic Science Seminar

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Second year Forensic Science Student. Course is graded A-E.

This course is designed to allow the student to apply their theoretical and laboratory training knowledge to practical experiences in a forensic setting. The major emphasis for this seminar will be on criminalistics. The student will have the opportunity to interact with criminalists and other professionals who are involved daily in the scientific detection, identification and ultimately, the solution of the crime. The lecture portion will be a less formal educational experience in which the student will engage in discussions of current topics relative to the forensic sciences. Guest presenters and field trips may be part of the educational experience.

FOR-5552 Survey of Fraud in Society, Questioned Documents, and Computer Crimes First Responder

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

Through lecture, demonstration and hands-on experience the student will be presented with an overview of the field of questioned documents examination, computer crimes first Responder and Fraud in Society. The student will compare handwriting samples, obliterated text and different printing and writing instruments to detect forgeries and frauds. Preparation of affidavits, search warrens, 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.

FOR-5553 Fraud Examination

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in ACC-2114. Course is graded A-E.

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. Lectures, case studies, videos, and guest lecturers may be utilized in this class.

FST-5701 Principles of Fire Protection Systems

4 credit hours
5 contact hours (3 hours lecture and 2 hours lab)
Prerequisite: Firefighting 1 or State-certified 240 card (Firefighting 1 & 2).
Course is graded A-E.

FST-5701 explores the principles of design, application, and operation of fire detection, alarms, and suppression systems, the study of extinguishing agents and their applications and analysis and evaluation of specific NFPA code requirements related to the design, inspection, testing, and maintenance of fire protection systems.

FST-5702 Legal Aspects in Fire Service

4 credit hours
4 contact hours (4 hours lecture and 0 hours lab)
Prerequisite: State-certified 240 card (Firefighting 1 & 2) or equivalent.
Course is graded A-E.

This course is a study of legislative and legal decisions relating to personnel practices, employee safety and public protection in fire safety services, a review of NFPA Standards more commonly used within the fire services and specific electrical/building codes. Some emphasis will be on the legal responsibilities, liabilities, and authority of the practitioner.

FST-5703 Chemistry and Dynamics of Fire

4 credit hours
5 contact hours (3 hours lecture and 2 hours lab)
Prerequisite: Firefighting 1 or State-certified 240 card (Firefighting 1 & 2).
Course is graded A-E.

This course is an introduction of the chemistry and dynamics of fire as it relates to properties of hazardous materials and the development of fire in a structure. This course applies the principle of fire chemistry to the science of fire and fire extinguishment.

FST-5706 Building Construction of Fire Science

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

This course is a study of building construction and materials as fire protection features. It covers relative resistance of fire, flame and smoke spread of various types of construction and the ways in which structural failure can occur during a fire. The student learns to recognize structure shortcomings requiring pre-emergency planning and to evaluate blue prints.

FST-5709 Hazardous Materials I

3 credit hours
5 contact hours (2 hours lecture and 3 hours lab)
Prerequisite: Firefighting 1 or State-certified 240 card (Firefighting 1 & 2).
Course is graded A-E.

The student will learn to identify hazardous materials and respond to hazardous materials incidents in this course, as well as a study of all federal, state, and local hazardous substance legislation and regulations. This course will follow professional competencies of responders to hazardous material incidents.

FST-5710 Fire Investigations

3 credit hours
3 contact hours (3 hours lecture and 0 hours lab)
Prerequisite: State-certified 240 card (Firefighting 1 & 2) or equivalent.
Course is graded A-E.

This course involves the systematic approach to the investigation of the cause and origin of a fire. Concentration will be on the rules of evidence, photography, scene searches, sketchers, collection and preservation of evidence. Also covered are report writing, sources of information, interviews, and interrogation.

FST-5713 Fire Organization and Administration

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

This course will provide the student with an understanding of contemporary management principles and practices as they apply to the fire service and discusses administration methods for managing public organizations.

FST-5716 Current Issues in the Fire Service

3 credit hours
3 contact hours (3 hours lecture and 0 hours lab)
Prerequisite: Firefighting 1 or State-certified 240 card (Firefighting 1 & 2).
Course is graded A-E.

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.

FST-5720 Principles of Fire Technology

4 credit hours
4 contact hours (4 hours lecture and 0 hours lab)
Prerequisite: None.
Course is graded A-E.

This course provides an overview of the fire service including a history of large loss of life and property fires. The student is exposed to issues concerning careers, ethics, records, and reports, and insurance ratings. The course will introduce management principles as well as discuss the planning, evaluating, and management of public fire protection.

FST-5725 Firefighting Strategies

5 credit hours
5 contact hours (5 hours lecture and 0 hours lab).
Prerequisite: State-certified 240 card (Firefighting 1 & 2) or equivalent
Course is graded A-E.

This course provides an in-depth analysis of the principles of fire control through the utilization of personnel, equipment, and extinguishing agents.

FST-5750 Hydraulics

4 credit hours
4 contact hours (4 hours lecture and 0 hours lab)
Prerequisites: MTH-1215 and State-certified 240 card (Firefighting 1 & 2) or equivalent.
Course is graded A-E.

This course will introduce the student to the equipment, specialized machinery, principles, and calculations involved in the safe and efficient delivery of water and other extinguishing agents on the fire ground.

FST-5760 Fire Prevention

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

This course is designed to teach the fundamental concepts and practices involved in the protection of people and property from fire and explosion. Emphasis will be placed on organizations, inspection programs, fire protection procedures, and prevention programs connected to the private sector and various levels of government. Related legal codes, arson, program plans, and investigation techniques will be discussed.

HUM-5281 Interpersonal Skills

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

This course presents basic interpersonal and interviewing skills, with special emphasis on techniques relevant to diverse populations and a multicultural society. Topics include rapport building, active listening, and verbal and non-verbal communication skills utilized in helping relationships. Techniques will be practiced through videotaped role-playing.

HUM-5282 Counseling Theories

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in BHS-1376. Course is graded A-E.

This course presents the major concepts and techniques associated with various counseling theories. Emphasis is on the practical application of techniques, including the advantages and disadvantages of each and the impact on the client-helper relationship.

HUM-5284 Group Dynamics in Human Services

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in (HUM-5334 and HUM-5281 and HUM-5288). Course is graded A-E.

This course presents the basic principles of therapeutic group dynamics utilized in the field of human services. Topics include group formation, process, stages of development, leadership skills, and conflict resolution. Students are provided with an experiential awareness of group dynamics and practice of interpersonal skills through participation as a group member in the laboratory setting. Students also practice group leadership skills in this group laboratory setting.

HUM-5286 Case Management - Human Services

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (HUM-5334 and HUM-5281 and HUM-5288). Course is graded A-E.

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.

HUM-5288 Counseling Skills

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: C grade (2.00) or better in (HUM-5334 and HUM-5281). Course is graded A-E.

This course builds on the basic interpersonal and interviewing skills learned in the previous course, with special emphasis on learning advanced skills that are appropriate in a helper/helpee relationship. Topics include techniques related to confrontation, focusing, influencing strategies, skill integration, and determining personal style. Techniques will be practiced through videotaped role-playing.

HUM-5297 Crisis Intervention

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (HUM-5334 and HUM-5281 and HUM-5288). Not open to students with credit HUM-5287. Course is graded A-E.

This course emphasizes assessment of diverse crisis situations with emphasis on the use of short-term intervention and problem-solving techniques to help individuals and families de-escalate crisis situations and develop appropriate coping techniques. Students must demonstrate skills in laboratory experiences.

HUM-5300 Principles of Chemical Dependency

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

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.

HUM-5301 Pharmacology of Chemical Dependency

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in BHS-1376 and HUM-5300. Course is graded A-E.

This course extensively examines the composition, uses, and effects of various addictive substances. A comprehensive overview of the central nervous system and drug/neurotransmitter interactions will also be covered.

HUM-5302 Prevention and Treatment of Chemical Dependency

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in (HUM-5334, HUM-5281 and HUM-5300). Course is graded A-E.

This course covers the theory and practices related to chemical dependency treatment. Strategies and community resources useful in preventing chemical dependency and/or relapse are also presented.

HUM-5304 CD Issues with Special Populations

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in HUM-5300. Course is graded A-E.

This course will explore the psychosocial aspects of chemical dependency across the lifespan, as well as within particular populations. Examples of populations covered include the elderly; ethnic minority groups; gays and lesbians; adolescents, including juvenile delinquents; persons who are homeless; and persons who are physically and/or mentally challenged.

HUM-5307 Human Services Practicum I

4 credit hours, 16 contact hours (2 hours lecture, 0 hours lab, and 14 hours practicum). Prerequisite: Must be enrolled in the Human Services Program; must have completed a minimum of 36 quarter hours from the Plan of Study; must have received a C grade (2.00) or better in the following: BHS-1376, COM-1535, COM-1536, HUM-5334, HUM-5281, HUM-5284, HUM-5286, HUM-5288, HUM-5300; must have permission of the Program Director or the Practicum Coordinator. The student must meet with the Program Director or Practicum Coordinator NO LATER THAN THE FOURTH WEEK OF THE QUARTER PRIOR to when the student wishes to begin a Practicum. Certain conditions, including but not limited to the following, could result in dismissal from the Human Services program and/or failure to qualify for Practicum placement: felony conviction (within the last 2 years) and/or pending charges; current relapse from drug and/or alcohol recovery (within last 12 months); conviction and/or pending charges related to child endangerment, falsification of any documents. Course is graded A-E.

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 they will learn agency policies and procedures, observe professionals at work, and practice their own human services 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.

HUM-5324 Social Problems

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in HUM-5334. Course is graded A-E.

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.

HUM-5325 Health and Aging

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

This course examines the nature of the aging process, the manner in which the individual responds to change, and the ways in which interventions may help with adaptations. A continuum of elderly impairment, from the unimpaired through the minimally, moderately and severely impaired stages of elder functioning is reviewed. Emphasis is on understanding the bio-psycho-social-spiritual needs of the aging person and the major issues, concepts and theories in late stage functioning.

HUM-5326 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-E.

This course is designed to provide the student with the specialized knowledge base to meet the needs of older persons and their families in a variety of community-based and institutional settings. A basic orientation to the roles of the various providers in these settings is offered. Current social policies and programs are reviewed and discussed throughout the curriculum.

HUM-5327 Human Services Practicum II

4 credit hours, 16 contact hours (2 hours lecture, 0 hours lab, and 14 hours practicum). Prerequisite: Must be enrolled in the Human Services Program; have permission from the Practicum Coordinator or Program Director, and have a C grade (2.00) or better in HUM-5307. The student must meet with the Program Director or Practicum Coordinator NO LATER THAN THE FOURTH WEEK OF THE QUARTER PRIOR to when the student wishes to begin a Practicum. Course is graded A-E.

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 their level of responsibility in implementing their 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.

HUM-5334 Principles of Social Work

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab).
Prerequisite: None. Course is graded A-E.

In this course students are acquainted with the field of human services, social work and related professions, including history and development, legal and ethical issues, 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.

HUM-5337 Practicum III

4 credit hours, 16 contact hours (2 hours lecture and 14 hours practicum).
Prerequisite: Must be enrolled in the Human Services Program, have permission from the Practicum Coordinator or Program Director, and have a grade of C (2.00) or better HUM-5327. The student must meet with the Program Director or Practicum Coordinator NO LATER THAN THE FOURTH WEEK OF THE QUARTER PRIOR to when the student wishes to begin a Practicum. Course is graded A-E.

This course is designed as the culmination of practical experience and provides an additional 140 clock hours in a human services agency. The student will be placed in an agency that provides social services and will implement the specific skills appropriate to this area of specialty with supervision provided by a qualified professional and an appropriate college representative. Classroom instruction will focus on discussion of experiences encountered in the practicum setting.

HUM-5344 Social Welfare and Policy

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab).
Prerequisite: Grade of C (2.00) or better in HUM-5334. Course is graded A-E.

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.

HUM-5354 Family Systems

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab).
Prerequisite: Grade of C (2.00) or better in HUM-5334.
Course is graded A-E.

This course studies the multi-cultural evolution of the family based on the generalist social worker 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.

LET-5010 Basic Police Academy - Administration

2.5 credit hours, 2.5 contact hours (2.5 hours lecture and 0 hours lab). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

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 will serve, both ethically and professionally. This course defines Community Policing and establishes guidelines for developing community policing programs.

LET-5011 Basic Police Academy - Criminal Law I

1 credit hour, 3 contact hours (0.5 hours lecture, 0 hours lab, and 2.5 hours directed practice). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

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.

LET-5012 Basic Police Academy - Criminal Law II

2.5 credit hours, 4.5 contact hours (2 hours lecture, 0 hours lab, and 2.5 hours directed practice). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

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.

LET-5013 Basic Police Academy - Human Relations

4 credit hours, 5 contact hours (3 hours lecture, 0 hours lab, and 2 hours directed practice). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

The student will learn the techniques necessary for responding to situations regarding people with specific problems. This area of study also includes handling of special needs populations, domestic violence, missing and abused children, and crisis intervention. The student will understand victim's rights, the juvenile justice system, and crime prevention.

LET-5014 Basic Police Academy - Cultural Diversity

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

This course focuses on the differences and similarities among racial, ethnic, and other diverse populations in the United States and includes historical, religious, and sociocultural issues and current conflicts.

LET-5015 Basic Police Academy - Patrol

3.5 credit hours, 6.5 contact hours (2 hours lecture, 2 hours lab and 2.5 hours directed practice). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

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. Areas of instruction include patrol, traffic, civil disorders, and prisoner booking.

LET-5017 Basic Police Academy - Investigations

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

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.

LET-5018 Basic Police Academy - Physical Conditioning I

0.5 credit hours, 1.5 contact hours (0 hours lecture and 1.5 hours lab). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

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-5019 Basic Police Academy - Physical Conditioning II

0.5 credit hours, 1.5 contact hours (0 hours lecture and 1.5 hours lab). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

The student will participate in a physical conditioning program that will increase their strength, physical endurance, and tone the muscle groups of the body. The student will also learn good nutrition habits. This is a continuation of Skills I.

LET-5020 Basic Police Academy - First Aid

1 credit hours, 1.5 contact hours (0.5 hours lecture and 1 hour lab). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

This course is designed to teach the student the basic first aid and life saving skills.

LET-5022 Basic Police Academy - Firearms

2 credit hours, 6 contact hours (1 hour lecture, 0 hours lab, and 5 hours directed practice). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

The student will learn the fundamentals of weapon craft with both handguns and shotguns. The student will fire both semi-auto pistols and revolvers. The student will fire assorted shotgun ammo as used by police agencies.

LET-5023 Basic Police Academy - Defensive Driving

1.5 credit hours, 2.5 contact hours (0.5 hours lecture and 2 hours lab). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

The student will learn defensive and pursuit driving techniques as well as safety issues and laws regarding the use of police vehicles.

LET-5024 Basic Police Academy - Subject Control

2 credit hours, 5 contact hours (.50 hour lecture and 4.5 hours lab). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

The student will learn and practice the basic skills for survival. Subject areas include self-defense, both with and without the use of self-defense equipment.

LET-5025 Basic Police Academy - Traffic Enforcement

5 credit hours, 9 contact hours (3 hours lecture and 6 hours lab). Prerequisite: Admittance into the COTC Basic Police Academy. Course is graded A-E.

The student will study the traffic enforcement responsibilities of peace officers and the purpose of traffic enforcement. This course includes the study of traffic laws, accident investigation, alcohol detection and apprehension, and enforcement with speed measuring devices.

LET-5051 Introduction to Law Enforcement

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Recommended preparation: LET-5209. Course is graded A-E. Open to LET majors only.

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. This course 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.

LET-5052 Contemporary Issues in Criminal Justice

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Recommended preparation: LET-5209. Course is graded A-E.

This course will enhance the student in learning the 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-5053 Probation and Parole

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Recommended preparation: LET-5209. Course is graded A-E.

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 a part of this course.

LET-5054 Homeland Security

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Recommended preparation: LET-5209. Course is graded A-E.

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-5055 Drugs and the Criminal Justice System

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Recommended preparation: LET-5209. Course is graded A-E.

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 looked 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-5056 Constitutional Rights of Prisoners

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Recommended preparation: LET-5209. Course is graded A-E.

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-5113 Wellness I

0.5 credit hours, 3 contact hours (0 hours lecture, 0 hours lab, 3 hours miscellaneous applications). Prerequisite: None. Course is graded A-E.

This course will enhance the student's 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-5114 Wellness II

0.5 credit hours, 3 contact hours (0 hours lecture, 0 hours lab, 3 hours miscellaneous applications). Prerequisite: LET-5113. Course is graded A-E.

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-5115 Wellness III

0.5 credit hours, 3 contact hours (0 hours lecture, 0 hours lab, 3 hours miscellaneous applications). Prerequisite: LET-5114. Course is graded A-E.

This course will enhance the student's learning in the area of wellness, and specifically in the topics of endurance strength and aerobic intensity and duration required for law enforcement occupations.

LET-5116 Wellness IV

0.5 credit hours, 3 contact hours (0 hours lecture, 0 hours lab, 3 hours miscellaneous applications). Prerequisite: LET-5115. Course is graded A-E.

This course will enhance the student's learning in the area of wellness, and specifically will prepare them for the final assessment to achieve 40 percent of the Cooper standard.

LET-5117 Ethics in Criminal Justice

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Recommended preparation: LET-5209. Course is graded A-E.

This core criminal justice 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, controversies, and the rules of moral judgment. The student will examine ethical principles common to all components of the criminal justice 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 which will address the state of ethics in policing, corrections, probation and parole.

LET-5118 Basic Jail Training II

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: LET-5130 with a grade of C (2.00) or better. Student must have completed six quarters of the LET Plan of Study before enrollment in the Correctional Management Option will be permitted. Course is graded A-E.

This is the second part of a course designed to offer the student an understanding of basic jail operations as a practitioner. Once again, the 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, as well, will remain an integral part of the course instruction. Basic Jail Training II explores inmate booking procedures, medical health screening requirements, inmate classification, an extensive review of interpersonal communication skills, jail security and emergency procedures.

LET-5119 Public Administration

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: None. Recommended preparation: LET-5209. Student must have completed six quarters of the LET Plan of Study before enrollment in the Correctional Management Option will be permitted. Course is graded A-E.

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-5120 Correctional Management

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Completed 45 or more credit hours of CJT courses with a grade of C (2.00) or better or approval of the Program Director. Student must have completed six quarters of the LET Plan of Study before enrollment in the Correctional Management Option will be permitted. Course is graded A-E.

This course is designed to offer the student 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 key 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-5122 Counter-Terrorism and Intelligence

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Student must have completed six quarters of the LET Plan of Study before enrollment in the Homeland Security Option will be permitted. Course is graded A-E.

A course designed to further the 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 place upon strategies of law enforcement and national security organizations in the detection, apprehension, adjudication/neutralization of terrorist entities.

LET-5123 Physical Security

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Student must have completed six quarters of the LET Plan of Study before enrollment in the Homeland Security Option will be permitted. Course is graded A-E.

A course designed for the student to learn and become familiar with the overall process of security system design and integration.

LET-5124 Protective Operations

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Student must have completed six quarters of the LET Plan of Study before enrollment in the Homeland Security Option will be permitted. Course is graded A-E.

A course of instruction on the fundamentals of protective operations focusing upon high threat dignitary protection and transportation security.

LET-5125 Tactical Crisis Resolution

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Student must have completed six quarters of the LET Plan of Study before enrollment in the Homeland Security Option will be permitted. Course is graded A-E.

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-5126 Advanced Criminalistics

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Student must have completed six quarters of the LET Plan of Study before enrollment in the Advanced Patrol and Investigations Option will be permitted. Course is graded A-E.

This course is an advanced continuation of Part I. The course will focus on additional 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. Techniques employed for specific crimes will also be addressed.

LET-5127 Advanced Patrol Tactics

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Student must have completed six quarters of the LET Plan of Study before enrollment in the Advanced Patrol and Investigations Option will be permitted. Course is graded A-E.

A course of instruction for the policy academy graduate that facilitates a change in paradigm in responding to violent crimes in progress, the tactical application of patrol rifle, the 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 learner will grasp this material through the utilization of structural simulation and experiential learning application. Multiple certifications will be awarded pending the passing of all subject matter areas.

LET-5128 Advanced Traffic Accident Investigation

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Student must have completed six quarters of the LET Plan of Study before enrollment in the Advanced Patrol and Investigations Option will be permitted. Course is graded A-E.

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 details scaled drawings of accident scenes.

LET-5129 Computer Crimes

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Student must have completed six quarters of the LET Plan of Study before enrollment in the Advanced Patrol and Investigations Option will be permitted. Course is graded A-E.

This course will educate the law enforcement officer in current and future crimes associated with computer systems and how to investigate them. Identifying computer criminals and their crimes that are committed on the computer network system will prepare the officer for detection and apprehension of offenders. The course will also examine the legalities of investigating crimes on computers.

LET-5130 Basic Jail Training I

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Completed 45 or more credit hours of LET courses with a grade of C (2.00) or better or approval of the Program Director. Student must have completed six quarters of the LET Plan of Study before enrollment in the Correctional Management Option will be permitted. Course is graded A-E.

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 I is designed to familiarize the student with legal issues, the role of corrections officers, facility security operations, booking procedures and searching strategies.

LET-5134 Patrol Technologies and Advanced Tactics

4 credit hours, 8 contact hours (2 hours lecture and 6 hours lab). Prerequisite: Successful completion of approved OPOTA Basic Police Officer Academy with Letter of Completion (or awaiting) or current law enforcement commission. Course is graded A-E.

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-5147 Advanced Patrol Tactics

4 credit hours, 8 contact hours (2 hours lecture and 6 hours lab). Prerequisite: Successful completion of approved OPOTA Basic Police Officer Academy with Letter of Completion (or awaiting) or current law enforcement commission. Course is graded A-E.

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 the course 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 Learner 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-5163 CA Skills I

4 credit hours, 10 contact hours (1 hour lecture and 9 hours lab). Prerequisite: Admittance into the College Police Academy. Course is graded A-E.

The student will learn and practice the basic skills for survival. Subject areas covered include self-defense, first aid, and physical conditioning. This course is partial fulfillment of the OPOTC Certificate Program.

LET-5164 CA Criminal Investigations

4 credit hours, 8 contact hours (2 hours lecture and 6 hours lab). Prerequisite: Enrolled in the College Police Academy in the second year or permission of the instructor. Course is graded A-E.

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 the preparation of necessary reports, crime scene sketches, and photography.

LET-5166 Traffic Enforcement

5 credit hours, 9 contact hours (3 hours lecture and 6 hours lab). Prerequisite: Admittance into the College Police Academy only. Course is graded A-E.

The student will study the traffic enforcement responsibilities of a peace officer and the purposes of traffic enforcement. This course includes the study of traffic laws, accident investigation, alcohol detection and apprehension, and enforcement with speed measuring devices.

LET-5197 CA Criminal Law

3 credit hours, 8 contact hours (2 hours lecture, 0 hours lab and 6 hours directed practice). Prerequisite: Admittance to the College Police Academy. Course is graded A-E.

The student will develop an understanding of the Ohio Revised Code. The student will study the criminal code as it pertains to criminal justice procedures. The student will be able to recognize violations of the law and appropriate statutes pertaining to these violations and apply the procedures through practical application. Included in this course are guidelines to laws of arrest, search and seizure.

LET-5198 Community Based Corrections

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Recommended preparation: LET-5209. Course is graded A-E.

Community Based Corrections is the general term used to refer to a variety of sanctions and non-institutional correctional programs for criminal offenders. These include: 1) efforts designed to divert accused offenders from the criminal justice system or jail prior to prosecution; 2) sentences and programs that impose restrictions on convicted offenders while maintaining them in the community; and 3) efforts designed to assist in the transition of inmates from prison back to the community. This course will explore these efforts and these options in the continuum of Community Based Corrections.

LET-5209 Principles of Criminal Justice

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

During this introductory course students 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 are also discussed.

LET-5210 Criminal Law and Procedure

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite Prerequisite: None. Recommended preparation: LET-5235. Course is graded A-E.

The student will learn the Ohio Revised Code. The student will study the criminal code and 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 used in trials through a Mock Trial.

LET-5215 Basic Investigation

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: MTH-1200 (or score of at least 41 on ASSET Numerical Skills test, or score of at least 44 on COMPASS Pre-Algebra/Numerical Skills test) and for Criminal Justice Students only C grade (2.00) or better in all previous CJT or LET courses. Course is graded A-E.

The emphasis of this course will deal with 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-5223 Public Service Practicum

2 credit hours, 14 contact hours (14 hour per week in a practicum setting). Prerequisite: Second year standing in the Criminal Justice Technology or Law Enforcement Technology with C grade (2.00) or better in all LET courses. Course is graded S/U.

Pre-service students gain valuable experience and insight into the practical operations of a public service related agency through work assignments. A seminar (discussion time) will be arranged throughout the quarter to discuss the activity in which the students are participating. This course is recommended to all pre-service students and is offered on a satisfactory/unsatisfactory basis.

LET-5233 Adult/Juvenile Corrections

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

This course will cover the various views of corrections prevailing in different parts of the country and among the different specialties within the field. Students will discuss the divergent interpretations of correctional objectives and the means by which those objectives should be achieved and implemented.

LET-5235 Constitutional Law and Evidence

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Prerequisite: None. Recommended preparation: LET-5209 and LET-5262. Course is graded A-E.

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-5239 Human Relations in Criminal Justice

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Prerequisite: None. Recommended preparation: LET-5209. Course is graded A-E.

Good human relations are an integral part of any Law Enforcement or Correctional agency. The purpose of this course is to provide the student with an understanding of what human relations are, how to improve human relations through self-development, and how to apply those skills in dealing with domestic disputes and crisis through role-playing scenarios.

LET-5240 CA Criminalistics

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Course is open to students enrolled in the Criminal Justice Program or accepted into the College Police Academy Program. Course is graded A-E.

The student will be involved in the study and application of scientific crime detection techniques with emphasis on ballistics, fingerprints, blood tracing, and other on-the-scene forensics techniques. This course includes photography as applied to investigation with emphasis on techniques and darkroom processing.

LET-5258 Public Service Seminar

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Final quarter Criminal Justice Technology students only with C grade (2.00) or better in all Criminal Justice technical courses or by permission of the instructor. Course is graded A-E.

This last quarter course will center on the current events that have a significant impact on the Criminal Justice System. The students will take part in discussing the most current events that have changed the way the system works.

LET-5259 Law Enforcement Seminar

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Final quarter Law Enforcement Technology students only; students must have successfully completed LET-5267, LET-5272 and LET-5273 with a C grade (2.00) or better. Course is graded A-E.

This course is to be taken in the final quarter of the program. The student will discuss and perform previously learned techniques as recommended for a peace officer in the State of Ohio. At the completion of this course the state examination will be given.

LET-5262 Government and Courts

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

The first quarter Criminal Justice course will examine the federal, state, and local governments and their respective courts. Students 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-5263 Criminology

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Recommended preparation: LET-5209. Course is graded A-E.

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-5264 Crime Prevention

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Recommended preparation: LET-5209. Course is graded A-E.

The student will be introduced to the preventive as opposed to the reactive methods of criminal interception through exposure to a variety of programs applicable to crime prevention. Statistical analysis of crime patterns are interpreted and methods for involving citizens and others to become involved are developed in this program.

LET-5266 Juvenile Process

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None. Recommended preparation: LET-5209. Course is graded A-E.

The Juvenile System is somewhat similar to the Adult system, yet the study of the system is unique to those who work in the Criminal Justice System. For every similarity between the two systems, there are as many differences. This course will enhance the student's understanding of these differences. 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 classifications of juvenile offenders, laws that pertain to juvenile offenders, the court process, and the types of juvenile correctional institutions and diversion programs.

LET-5267 Medical First-Responders

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Criminal Justice Technology or Law Enforcement Technology students only with C grade (2.00) or better in CJT or LET technical courses or permission of the instructor. Course is graded A-E.

Students will study the emergency techniques utilized by first responders to an accident or other medical emergencies. The program is recognized by public safety agencies in the State of Ohio.

LET-5268 Victimology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Recommended preparation: LET-5209. Course is graded A-E.

The student will look at the growing concern for the plight of crime victims and the exploitation of the victimization experience. This course will also cover the losses that burden victims of business and various kinds of street crime.

LET-5273 CA Skills II

3 credit hours, 9 contact hours (1 hour lecture and 0 hours lab, 8 hours directed practice). Prerequisite: Acceptance into the OPOTC/COTC College Police Academy Program. Course is graded A-E.

The student will learn the fundamentals of weapon craft with the handgun and shotgun and qualify with each weapon. Also, the course includes defensive driving, pursuit and maneuverability. This course is partial fulfillment of the Ohio Peace Officers Training Council's Certificate Program.

LET-5277 Human Relations in Law Enforcement

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Admittance to the College Police Academy Law Enforcement Technology program only by faculty. Course is graded A-E.

The student will learn the techniques in responding to situations regarding people with specific problems. This area of study includes handling of special needs population, domestic violence, missing and abused children. Also, the student will learn crisis intervention, victim rights, juvenile justice and crime prevention techniques.

LET-5278 CA Patrol

4 credit hours, 10 contact hours (2 hours lecture, 1 hour lab, and 7 hours directed practice). Prerequisite: Admittance to the College Police Academy Law Enforcement Technology program only by faculty. Course is graded A-E.

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. Areas of instruction include patrol, traffic, civil disorders and prisoner booking.

LET-5279 CA Administration

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Admitted to the College Police Academy Law Enforcement Technology program upon completion of required documentation and approved by faculty. Course is graded A-E.

The student will learn the basics regarding the role of the American Peace Officer, the structure of the 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.

MTH-1200 Basic Mathematics

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: None. Not open to students with credit for MTH-3000 or MTH-3002. Course is required for all students scoring below 41 on the ASSET numerical skills test or below 44 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-E.

Basic Mathematics is designed to develop the student's potential to succeed in other college mathematics courses. The basic arithmetic skills involving whole numbers, fractions, and decimals are reviewed. Also covered are signed numbers, percents, dimension analysis, and the rudiments of algebra.

MTH-1203 Introduction to Geometry

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Grade C (2.00) or better in MTH-1200, or score of at least 41 on ASSET Numerical Skills test, or score of at least 44 on COMPASS Pre-Algebra/Numerical Skills test. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation. Course is graded A-E.

This course is an introduction to elementary geometric concepts. It includes the study of lines, angles, triangles, polygons, circles and solids. Right triangle trigonometry and classic geometric constructions are also explored. This course is problem-solving oriented rather than proof-oriented.

MTH-1204 Business Math

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Grade C (2.00) or better in MTH-1200, or score of at least 41 on ASSET numerical skills test or score of at least 44 on COMPASS pre-Algebra/Numerical Skills Test. Course is graded A-E. This course is not open to students with credit for MTH-1201 or MTH-1202.

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.

MTH-1205 Introduction to Algebra

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1200, or score of at least 41 on ASSET Numerical Skills test, or score of at least 44 on COMPASS Pre-Algebra/Numerical Skills test. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation. This course is not open to students with credit for MTH-1206 or MTH-1210. Course is graded A-E.

This course is an introduction to elementary algebraic concepts. It includes operations with real numbers, exponents and radicals, variable expressions, first degree equations, word problems, formulas and graphing. The student will develop the ability to use a scientific calculator efficiently.

MTH-1206 Intermediate Algebra

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1205, or score of at least 10 on COTC Algebra Skills test, or score of at least 43 on COMPASS Elementary Algebra test. Course is graded A-E. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation.

This course is a study of intermediate algebraic operations. It includes solving equations and inequalities, factoring, rational expressions, radicals, systems of equations, and graphing.

MTH-1210 Intermediate Algebra

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1205, or score of at least 10 on COTC Algebra Skills test, or score of at least 43 on COMPASS Elementary Algebra test. This course is not open to students with credit for MTH-3010. Course is graded A-E. *This course will not be offered after Winter Quarter 2011.*

This course is a study of intermediate algebraic operations. It includes solving equations and inequalities, factoring, rational expressions, radicals, systems of equations, and graphing.

MTH-1215 College Algebra

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Successful completion of MTH-1210 with a grade of "C" (2.00) or better or a score of at least 71 on the COMPASS Algebra test. A Texas Instruments 83, 84, or 89 graphing calculator is required for this course. Course is graded A-E.

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.

MTH-1216 Pre-Calculus

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Successful completion of MTH-1215 with a grade of "C" (2.00) or better or a score of at least 80 on the COMPASS Algebra test. Course is graded A-E.

This course is a study of the concepts of Trigonometry (including graphs), vectors and conic sections**.**

MTH-1218 Elementary Statistics

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab)
Prerequisite: Grade of C (2.00) or better in MTH-1210, or placement from the COMPASS Algebra test.
Course is graded A-E.

This is a non-calculus 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.

MTH-1226 Trigonometry

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1210 or a score of at least 71 on the COMPASS Algebra test. Course is graded A-E.

Exponential and logarithmic functions and concepts of trigonometry, including the graphing of trigonometric functions, are discussed.

MTH-1232 Introduction to Calculus

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1226 or a score of 46 on the COMPASS Trigonometry test. Course is graded A-E. Course is not open to students with credit for MTH-1231 or MTH-3020.

An introduction to the principles of Analytic Geometry to develop an understanding of graphic functions. These concepts are expanded to the calculus or 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.

MTH-1233 Calculus I

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab)
Prerequisite: Grade of C (2.00) or better in MTH-1216, or MTH-1232, or placement from the COMPASS Algebra test.
Course is graded A-E.

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.

MTH-1234 Calculus II

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab)
Prerequisite: Grade of C (2.00) or better in MTH-1233, or placement from the COMPASS Algebra test.
Course is graded A-E.

The course is a study of integral calculus concentrating on indefinite and definite integrals and their applications in a wide range of functions. Topics covered in the study of integrals include: area, volume, The Fundamental Theorem of Calculus, L'Hopital's Rule, the Trapezoidal Rule, Simpson's Rule, special and improper integrals.

MTH-1235 Calculus III

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab)
Prerequisite: Grade of C (2.00) or better in MTH-1234, or placement from the COMPASS Algebra test.
Course is graded A-E.

The course is a continuation of the study of differential and integral calculus including sequences and series, Taylor's Theorems and power series. Equations of conics are covered along with polar equations and vector operations.

MTH-2553 Mathematics for Programming

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1210 or a score of at least 71 on the COMPASS Algebra test. Course is graded A-E.

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.

NPN-4809 Trends and Issues for the Practical Nurse

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Concurrent enrollment in NPN-4824 and NPN-4829. Course is graded A-E.

The purpose of this course is to introduce the PN nursing student to current concepts, trends, and issues in patient care management. Societal influences that affect the development of PN practice and delineate the PN's scope of practice will be the major focus of this course. The image of the PN in today's society will be explored, as will the media's influence on the health care consumer's opinion of nursing. Professional socialization of the PN student will occur through emphasis on such topics as role transition to the workplace, licensure issues in the State of Ohio, management of ancillary personnel, nurse's rights at work, legal and ethical implications of patient care delivery, approaches to patient care delivery, channels of communication, quality improvement in health care, the organizational process, the role of the PN leader, critical thinking strategies, and how to make the work environment work for you. The PN student builds on previously learned concepts and develops additional learning within the Licensed Practical Nurse scope of practice.

NPN-4820 Pharmacology I for the Practical Nursing Students

4 credit hours, 6.5 contact hours (2.5 hours lecture, 3 hours lab, and 1 hour clinical). Prerequisite: C grade (2.00) or better in NPN-4827 and BIO-1745, concurrent enrollment in BHS-1376 unless previously completed with a grade of 'C' or better and concurrent enrollment in NPN-4828. Course is graded A-E.

The student will be introduced to the role of the Licensed Practical Nurse in drug therapy for clients of all ages. Drug control laws, methods of administration, calculation of dosage, measurements, and abbreviations will be presented. Methods of administration emphasized during this course include: enteral, topical, inhalant, and the parenteral routes of intradermal, subcutaneous, and intramuscular. This course is also designed to introduce the student to the classifications of drugs and the utilizaion of the nursing process in identifying expected actions, common side effects, normal dosage and routes of administration. Prototype examples will be used in each classification. Relevant data collections and teaching of clients will be included. Upon satisfactory completion of this course, the student should be able to utilize the nursing process to administer medications to a client in a safe, effective and caring manner. In addition, each student shall satisfactorily administer medications to a group of clients.

NPN-4821 Pharmacology II for the Practical Nursing Students

3 credit hours, 5 contact hours (2 hours lecture, 1.5 hours lab, and 1.5 hours clinical]). Prerequisite: C grade (2.00) or better in BIO-1745, NPN-4828 and NPN-4820 and concurrent enrollment in NPN-4823. Course is graded A-E.

The role of the Licensed Practical Nurse in drug therapy for clients of all ages continues in this course. Methods of administration and calculation of dosage for intravenous administration of medications will be presented. This course continues to introduce the student to further classifications of drugs and the utilization of the nursing process in identifying expected actions, common side effects, normal dosage and routes of administration. Prototype examples will be used in each classification. Relevant data collection and teaching of clients will be included. Upon satisfactory completion of this course the student should be able to utilize the nursing process to administer medications to a client in a safe, effective, and caring manner. In addition, each student shall satisfactorily administer medications to a group of clients.

NPN-4823 Health Alterations I for the Practical Nursing Students

6 credit hours, 12 contact hours (3 hours lecture, 3 hours lab and 6 hours clinical). Prerequisite: Enrollment in the Practical Nursing Program and C grade (2.00) or better in NPN-4828 and NPN-4820, BHS-1376, and BIO-1764. Concurrent enrollment in (BIO-1750 or BIO-1755), BHS-1345, unless previously completed with a grade of 'C' or better, and NPN-4821. Course is graded A-E.

This course is designed to provide the Practical Nursing student with concepts, skills, communication techniques necessary for providing caring, therapeutic care to culturally diverse clients of adult age groups. Emphasis will be placed on clients experiencing common recurring health alterations related to gastrointestinal, integumentary, immunology, sensory, and endocrine functioning as well as alterations in cellular growth and in mental health. While interacting with clients in acute and long term care facilities, the student will recognize self-care deficits, demonstrate caring behaviors, administer safe care, be accountable, and adhere to the legal and ethical standards of practical nursing practice.

NPN-4825 Health Alterations II for the Practical Nursing Students

6 credit hours, 13.5 contact hours (3 hours lecture, 3 hours lab and 7.5 hours clinical). Prerequisite: Enrollment in the Practical Nursing program and C grade (2.00) or better in (BIO-1750 or BIO-1755), BHS-1345, NPN-4821 and NPN-4823; and concurrent enrollment in NPN-4829 and NPN-4809. Course is graded A-E.

This course is designed to provide the PN student with concepts, skills, and communication techniques, necessary for providing caring, therapeutic care to culturally diverse clients of adult age groups. Emphasis will be placed on clients experiencing common recurring health alterations related to cardiac, respiratory, musculoskeletal, renal and male reproductive as well as neurological functioning. While interacting with clients in acute and long term care facilities, the student will recognize self-care deficits, demonstrate caring behaviors, administer safe care, be accountable, and adhere to the legal and ethical standards of practical nursing practice.

NPN-4827 Introduction to Nursing for Practical Nurses

5.5 Credit Hours, 10.5 contact hours (3 hours lecture, 3 hours lab and 4.5 hours clinical). Prerequisite: Admission to the Practical Nursing sequence. Course is graded A-E.

This course introduces the student to the philosophy and conceptual framework of the nursing program. The past, present and future roles of nursing are explored by viewing the roles and functions of the nurse as influenced by historical and sociological factors. Concepts of caring, Orem's theoretical framework, Gordon's functional health patterns, ethical and legal responsibilities, nursing process, communication techniques, and holistic care across the lifespan are introduced. Emphasis is placed on the functional health patterns of health-perception-health-management, activity-exercise, rest-sleep, nutrition-metabolic and elimination. The student will learn a step-by-step approach to body system observation; how to differentiate normal from abnormal findings; and how to recognize and support patterns of self-care which will promote health for clients across the life span. The student will develop data collection skills which will be utilized to determine the level of client wellness, health practices, past illnesses, related experiences and health care goals as influenced by cultural and spiritual practices. The student is introduced to the principles of surgical asepsis. The student will begin to apply the nursing process while caring for clients with needs for hygiene, rest, sleep, activity and elimination. The student is expected to demonstrate characteristics of personal responsibility and legal/ethical standards of the nursing profession.

NPN-4828 Fundamentals of Nursing for the Practical Nursing Student

5.5 credit hours, 11.5 contact hours (2.5 hours lecture, 3 hours lab, and 6 hours clinical). Prerequisite: C grade (2.00) or better in: COM-1535, (BIO-1745 or BIO-1772 and BIO-1773), and NPN-4827. Course is graded A-E.

In this course the student continues to gain an understanding about the concepts of Orem's theoretical framework, caring, wellness and illness, which were introduced in the first nursing course. The student will contribute to the nursing process while caring for clients with needs for hygiene, rest and sleep, and activity and will develop the basic technical and communications skills to provide safe care. The student builds on content presented in the first quarter and begins practicing the principles of surgical asepsis and perioperative care of the client. Emphasis is placed on the functional health patterns of coping/stress, cognitive/perceptual, nutrition/metabolic and elimination. The student is expected to demonstrate personal responsibility and ethical/legal standards of the profession.

NPN-4829 Maternal/Child Nursing for the Practical Nursing Student

7 credit hours, 10 contact hours (5.5 hours lecture, 1.5 hours lab, 3 hours clinical). Prerequisite: Enrollment in the Practical Nursing program and C grade (2.00) or better in BHS-1345, (BIO-1750 or BIO-1755), NPN-4821 and NPN-4823, and concurrent enrollment in NON-4809 and NPN-4825. Course is graded A-E.

This course provides the opportunity for the student to explore and develop concepts basic to meeting the health care needs of the childbearing family. Utilizing the framework of Maslow's Hierarchy of Basic Human Needs and Orem's theoretical framework as well as Gordon's functional health patterns as the biological, psychosocial, and cultural components of human sexuality through pregnancy, birth, and childbearing are introduced. The family is viewed in terms of life span development. The concept of the role of the practical nurse in the promotion of wellness for the families at all stages of development is stressed. Guidelines for the establishment of therapeutic communication as it relates to the concepts of caring will be reviewed and specific methods for communication with parents and children will be presented. In the clinical setting, emphasis is placed on the practical nurse's contribution to the nursing process as it relates to the care of families in pregnancy, childbirth and parenting. Included is the adaptation of basic nursing skills in meeting the needs of both the parents and the child in promoting, maintaining, and restoring health. The effects of illness and hospitalization on the developing family are explored. Opportunity is provided for observation in a variety of community settings serving the health care and developmental needs of the family. Scientific principles, concepts, and skills development relating to both maternal and child care will be presented. The student is expected to demonstrate characteristics of personal responsibility and legal and ethical standards of the profession.

NUR-4015 Basic Health Care Skills

5 credit hours, 8 contact hours (3 hours lecture, 3 hours lab and 2 hours clinical). Prerequisite: Must be 16 years of age or older to enroll; Two step Mantoux test for tuberculosis completed by first day of class. Criminal background check completed with results available by the first day of class for students enrolled in Coshocton campus sections of NUR-4015. Course is graded A-E.

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.

NUR-4233 Nursing I

7 credit hours, 13.5 contact hours (3.5 hours lecture, 3 hours lab, 6 hours clinical and 1 hour mental health). Prerequisite: Admission into the A.D.N. Nursing Technology program. Course is graded on an A-E basis.

In this course the student is introduced to the four categories of client needs (National Council of State Boards of Nursing, Inc., 2004): safe effective care environment; health promotion and maintenance; psychosocial integrity and physiological integrity. The beginning student nurse will discover aspects of the professional nursing role. The student will demonstrate competent and caring nursing practice, therapeutic communication, and clinical judgment grounded in evidence based practice through participation in active learning in classroom, laboratory, and clinical practice. The student focuses on the provision of nursing care and beginning coordination of care with individual clients. Areas of concentration will include the nursing process, physical assessment, communication, documentation, safety and infection control, basic pharmacologic concepts and skills, nutrition, basic care and comfort, and psychosocial concepts. The student will practice within the legal and ethical parameters of the profession.

NUR-4234 Nursing II

7 credit hours, 13.5 contact hours (3.5 hours lecture, 3 hours lab, 1 hour Mental Health Lab, 6 hours clinical). Prerequisite: C grade (2.00) or better in BHS-1030, BIO-1772 and NUR-4233. Course is graded on an A-E basis.

The student nurse will apply the professional nursing role in this course in the care of clients experiencing alterations in any basic need. The student develops competent and caring nursing practice; therapeutic communication; and clinical judgment grounded in evidence based practice through participation in active learning in classroom, laboratory, and clinical practice. The student focuses on the provision of nursing care and coordination of care with clients and family/significant others. In this course the student will operationalize knowledge of the four categories of client needs (National Council of State Boards of Nursing, Inc., 2004): safe effective care environment; health promotion and maintenance; psychosocial integrity and physiological integrity. Areas of concentration will include the nursing process, physical assessment, communication, psychosocial concepts, documentation, safety and infection control, pharmacologic concepts and skills in the administration of parenteral and intravenous medications, and basic are and comfort. The student will practice within the legal and ethical parameters of the profession.

NUR-4235 Nursing III

11 credit hours, 17 contact hours (8 hours lecture, 0 hours lab, and 9 hours clinical). Prerequisite: C grade (2.00) or better in BHS-1376, BIO-1773 and NUR-4234. Course is graded on an A-E basis.

In this course the student nurse will integrate theory, interventions and clinical experiences related to the four categories of client needs (National Council of State Boards of Nursing, Inc., 2004): safe effective care environment; health promotion and maintenance; psychosocial integrity and physiological integrity into further development of a competent and caring nursing practice. The student will focus on the use of the nursing process to plan and implement nursing care for one or two clients in the developmental stage of birth through young adult and their families/significant others while being introduced to the concept of coordination of care. Areas of concentration will include common pediatric and young adult health alterations, mental health issues and childbearing. The student will learn to adapt previously learned concepts of physical assessment, communication, safety and infection control, pharmacology, nutrition, care and comfort to be age-appropriate. The student will continue development of therapeutic communication and clinical judgment grounded in evidence based practice through participation in active learning in classroom, lab and clinical practice. The student will practice within the legal and ethical parameters of the profession.

NUR-4236 Nursing IV

11 credit hours, 17 contact hours (8 hours lecture, 0 hours lab, and 9 hours clinical). Prerequisite: C grade (2.00) or better in BHS-1345 and NUR-4235. Course is graded on an A-E basis.

In this course the student nurse will practice nursing in a competent, caring manner while refining communication and clinical judgment that is grounded in evidence based practice. The student will expand their understanding of client needs by synthesizing and integrating a deeper knowledge of the four categories of client needs (National Council of State Boards of Nursing, Inc., 2004): safe effective care environment; health promotion and maintenance; psychosocial integrity and physiological integrity. The student nurse will coordinate and provide nursing care for clients and their families/significant others during the stage of adulthood. The student will practice within the legal and ethical parameters of the profession.

NUR-4237 Nursing V

11 credit hours, 17 contact hours (8 hours lecture, 0 hours lab, and 9 hours clinical). Prerequisite: C grade (2.00) or better in BHS-1382, COM-1536 and NUR-4236. Valid CPR card, current tuberculin testing, immunization records, record of fingerprinting, and a negative drug test according to the COTC Nursing Handbook policies. Course is graded on an A-E basis.

In this course the student will practice nursing in a competent and caring manner while continuing to refine their communication and clinical judgment skills grounded in evidence based practice. The student will expand their understanding of client needs by synthesizing and integrating a deeper knowledge of the four categories of client needs National Council of State Boards of Nursing, Inc., 2004): safe effective care environment; health promotion and maintenance; psychosocial integrity and physiological integrity. The student will coordinate and provide nursing care for the culturally diverse clients and their families/significant others who are in the life stage of the older adult and who have complex health alterations. In addition, concepts related to management of care, collaboration and delegation skills will be developed. The student will utilize the nursing process in writing, while interacting with them in various care settings. The student will demonstrate caring behaviors, accountability, and serve as a client advocate and adhere to the legal and ethical standards of the profession.

NUR-4238 Nursing VI

11 credit hours, 23 contact hours (5 hours lecture, 0 hours lab, and 18 hours clinical). Prerequisite: C grade (2.00) or better in COM-1523 and NUR-4237. Course is graded on an A-E basis.

In this course the student nurse will continue to expand their understanding of client needs by synthesizing and integrating a deeper knowledge of the four categories of client needs (National Council of State Boards of Nursing, Inc., 2004): safe effective care environment; health promotion and maintenance; psychosocial integrity and physiological integrity as well as maintaining a professional role. The student will implement advanced management skills in coordinating competent care delivery to clients and families/significant others. The focus of this course will be the management of care of a group of clients with chronic health needs across the lifespan. As the student progresses through this course, they will apply knowledge obtained from previous courses related to competent and caring nursing practice; therapeutic communication; and clinical judgment grounded in evidence based practice in order to assist clients/families/significant others attain optimal level of functioning. The student will identify and respond to legal and ethical issues related to clients with chronic illnesses while adhering to standards of the professional nurse. The student will identify and understand the definition of a chronic health related illness and the restrictions that it places on major life activities such as breathing, feeling, walking, self-care and learning. The student nurse promotes achievements of client outcomes by providing and directing nursing care that enhances the care delivery setting in order to protect clients, family/significant others and other health care personnel.

NUR-4239 Nursing VII: Transition into Practice, Preceptor

5 credit hours, 12 contact hours (4 hours lecture (implemented at 2 hours lecture and 2 hours online) and 8 hours lab (preceptorship)). Prerequisite: C grade (2.00) or better in BHS-1379 and NUR-4238. Enrollment in this course is by permission of the Nursing Programs Administrator. Students are selected based on academic performance and absence of any performance improvement plan in preceding nursing courses.

In this course the student nurse transitions into the professional nursing role. The student will consolidate theory, interventions and precepted clinical experiences, related to the four categories of client needs (National Council of State Boards of Nursing, Inc.): safe effective care environment; health promotion and maintenance; psychosocial integrity and physiological integrity. Through reflective practice the student will internalize professional nursing behaviors that are required for the successful completion of the NCLEX-RN and subsequent entry into the nursing profession.

NUR-4240 Transition from L.P.N. to A.D.N.

4 credit hours, 6 contact hours (3 hours lecture and 3 hours lab). Prerequisite: Current licensure as a Licensed Practical Nurse in the state of Ohio with Meds endorsement. Acceptance for admission to the Associate Degree Nursing program or permission of the Nursing Programs Administrator. Successful completion of the following courses with a grade of "C" (2.00) or better: BHS-1030, BHS-1382, BHS-1376, COM-1523, COM-1536, BIO-1772, and BIO-1773. NUR-4240 will count neither for elective credit nor toward meeting minimum credit hours for graduation. Course is graded A-E.

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. Combining classroom and college laboratory experiences, the student learns through application of nursing concepts. The student will demonstrate the ability to solve problems through the use of the nursing process with a focus on client assessment and to communicate more effectively.

NUR-4241 Nursing VII: Transition into Practice, Clinical

5 credit hours, 12 contact hours (4 hours lecture (implemented at 2 hours lecture and 2 hours online) and 8 hours lab (clinical)). Prerequisite: C grade (2.00) or better in BHS-1379 and NUR-4238

In this course the student nurse transitions into the professional nursing role. The student will consolidate theory, interventions and clinical experiences, related to the four categories of client needs (National Council of State Boards of Nursing, Inc., 2004): safe effective care environment; health promotion and maintenance; psychosocial integrity and physiological integrity. Through reflective practice the student will internalize professional nursing behaviors that are required for the successful completion of the NCLEX-RN and subsequent entry into the nursing profession.

NUR-4279 NCLEX-RN Preparation

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Successful completion of all the nursing program with the exception of NUR-4239. May be concurrent with NUR-4239. NUR-4279 will count neither for elective credit nor toward meeting minimum credit hours for graduation. S/U Graded Course.

The student will utilize the nursing process as a framework for review of care for clients across the lifespan experiencing the need for health care. Principles of communication, interpersonal skills, biopsychosocial, spiritual, and pathophysiological and caring concepts will be reviewed. Emphasis will be placed on the current NCLEX-RN test plan. This course is graded on a Satisfactory/Unsatisfactory basis.

PCE-1400 Basic Writing Skills

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: None. This course is required of all students scoring below 75 on the COMPASS writing skills test or below 42 on the ASSET writing skills test. Course is not open to students with credit for PCE-1110, PCE-1500, PCE-1501 or PCE-1510. This course will count neither for elective credit nor toward meeting minimum credit hour requirements for graduation. Course is graded A-E.

This course provides the student with the opportunity to strengthen written language skills with emphasis on the writing process, sentence structure, unified paragraphs, word usage, capitalization, punctuation, and spelling.

PCE-1413 Basic College Success Skills

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. This course is required of all students scoring below 85 on Compass Reading Skills, or below 44 on ASSET Reading Skills. Course must be taken within student's first 30 hours of enrollment and is strongly recommended as a first-quarter course. Course is not open to students with credit for PCE-1013 or PCE-1015. This course will count neither for elective credit nor toward meeting the minimum credit hour requirements for graduation. Course is graded A-E.

College success skills are those skills that the student must master in order to function and succeed within the structure of college life. Many of these skills will carry over into the world of work. Skills developed in this course include basic organizational techniques such as time management, memory and concentration, prioritizing tasks, and goal setting. Academic skills include identifying individual learning styles, note taking, and test taking skills.

PCE-1423 Basic Reading Skills

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None; however, this course is required of all students scoring below 85 on the COMPASS reading skills test, or below 44 on the ASSET reading skills test. Course must be taken within student's first 30 hours of enrollment and is strongly recommended as a first-quarter course. Course is graded A-E. This course will count neither for elective credit nor toward meeting the minimum credit hour requirements for graduation. This course is not open to students with credit for PCE-1023.

Critical reading skills necessary for successful use of college level reading materials are the focus of this course. Critical reading and vocabulary building skills covered include: features of textbooks, interpreting graphics, identifying main ideas and supporting details, textbook marking and annotating, vocabulary building, dictionary usage, and reading systems. This course may be taken concurrently with College Success Skills.

PCE-1424 English for Speakers of Other Languages (ESOL) I

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Self placement or ESL Compass Score of XXXX. This course will count neither for elective credit nor toward meeting minimum credit hour requirements for graduation. Course is graded S/U.

English for Speakers of Other Languages I (ESOL I) focuses on basic sentence structure and the writing process, developing a reflective writing portfolio, and basic reading comprehension skills. ESOL I is a technology assisted instruction course that utilizes a constructivist humanistic methodology in developing basic American English skills required for successful entry into college level technology courses. This course is graded on a Satisfactory/Unsatisfactory basis.

PCE-1425 English for Speakers of Other Languages (ESOL) II

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Successful completion of PCE-1424 ESOL I or ESL Compass Score of XXXX. This course will count neither for elective credit nor toward meeting minimum credit hour requirements for graduation. Course is graded S/U.

English for Speakers of Other Languages II (ESOL II) focuses on basic sentence structure and the writing process, developing a reflective writing portfolio, and basic reading comprehension skills. ESOL II is a technology assisted instruction course that utilizes a constructivist humanistic methodology in developing basic American English skills required for successful entry into college level technology courses. This course is graded on a Satisfactory/Unsatisfactory basis.

PHY-1721 General Physics

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Grade C (2.00) or better in MTH-1210. Course is graded A-E.

Fundamental concepts of measurement, force, motion, dynamics, energy, friction, temperature scales, effects of heat on matter, principles of sound, electricity, magnetism, nature of light and atomic physics. The student will apply many of these principles in the laboratory portion of the course.

PHY-1726 Physics I - Mechanics

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in MTH-1215 and either MTH-1226 or MTH-1216 (or concurrent). Course is graded A-E.

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, and simple harmonic motion.

PHY-1727 Physics II - Electricity and Magnetism

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in PHY-1726. Course is graded A-E.

This algebra-based course presents an experimental and analytical study of electrostatics, electric fields, DC and AC circuits, magnetism, electromagnetic induction, electromagnetic waves, including the laws of Coulomb, Faraday, Gauss, Ampere, and Kirchhoff.

PHY-1728 Physics III - Heat, Light and Sound

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in PHY-1727 or grade of C (2.00) or better in EET-3029. Course is graded A-E.

This algebra-based course presents an experimental and analytical study of the thermal properties of matter, laws of thermodynamics, the kinetic molecular theory, calorimetry, Carnot cycle, heat engines, heat pumps, the nature of light, geometrical and physical optics, as applied to reflection, refraction, polarization, interference, and diffraction, and the nature of sound.

RAD-4046 Current Issues in Allied Health

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Second Year status in Diagnostic Medical Sonography Technology or Radiologic Technology. Course is graded A-E.

This course presents 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.

RAD-4102 RT Anatomy and Positioning II

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Must be enrolled in the Radiologic Technology program. C grade (2.00) or better in BIO-1772 and RAD-4103. Course is graded A-E.

This course covers Radiologic imaging of the bony thorax, vertebral column, digestive and urinary systems and cranium. Emphasis is on the anatomy, routine positioning, common pathologies, and contrast media utilized.

RAD-4103 Anatomy and Positioning I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Admittance to Radiologic Technology and a grade of S(satisfactory) in RAD-4130. Course is graded A-E

The student will be introduced to the basic Radiologic positioning principles and terminology. This course also covers Radiologic imaging of the chest, abdomen, and upper and lower extremities. Emphasis is on the anatomy, routine positioning and common pathologies demonstrated.

RAD-4109 Patient Care and Management I

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and a grade of Satisfactory in RAD-4130. Course is graded A-E.

During this introductory course of the Patient Care sequence, the student is introduced to universal precautions, patient transfers, and body mechanics, fire safety and guest relations. The student will also learn basic patient assessment procedures and policies and study the communication process as it applies to patients and the health care team.

RAD-4126 Departmental Administration

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Technology program. Course is graded A-E.

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 radiology department. Students will have the opportunity to review the concepts of hospital organization, financing, employment practices and quality control. Upon completion of this course, students gain an insight into the overall administration of hospitals and departments within the hospital. This course provides basic management skills and knowledge for those students interested in pursuing a supervisory position in the radiology department.

RAD-4130 Pre-Clinical Radiology

1 credit hour, 3 contact hours (0 hours lecture and 3 hours lab). Prerequisite: Enrollment in the Radiologic 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, departmental organization, and the health care team. This course will be taught as a term course (contact hours will be doubled over a five week period). This course is graded on a Satisfactory/Unsatisfactory basis.

RAD-4139 Radiobiology and Radiation Protection

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Enrollment in Radiologic Technology. C grade (2.00) or better in RAD-4184 or permission of the instructor. Course is graded A-E.

This Radiologic 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-4146 Clinical Radiology I

2 credit hours, 17 contact hours (1 hour lecture and 0 hours lab, 16 hours clinical). Prerequisite: Enrollment in the Radiologic Technology program and a grade of Satisfactory in RAD-4130. 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 Satisfactory/Unsatisfactory basis.

RAD-4148 Clinical Radiology VI

2 credit hours, 17 contact hours (1 hour lecture and 0 hours lab, 16 hours clinical). Prerequisite: Enrollment in the Radiologic Technology program and a grade of Satisfactory in RAD-4159. Course is graded S/U.

This course provides advanced experience in the clinical setting. It is designed to allow students to apply previously learned theories and techniques for Radiologic imaging. Students 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 the program faculty. This course is graded on Satisfactory/Unsatisfactory basis.

RAD-4149 Clinical Radiology IV

2 credit hours, 16 contact hours (0 hours lecture and 0 hours lab, 16 hours clinical). Prerequisite: Enrollment in the Radiologic Technology program and a grade of satisfactory in RAD-4148. Course is graded A-E.

This final clinical experience emphasizes mastery of skills in all areas of Radiologic technology. The course is designed to challenge students to function independently within the supervised environment of the clinical setting. Students will have the opportunity to observe several imaging modalities. This course will be taught as a term course (contact hours will be doubled over a five week period).

RAD-4150 Clinical Education in Radiology II

3 credit hours, 25 contact hours (1 hours lecture, 0 hours lab, and 24 hours directed practice). Prerequisite: Enrollment in the Radiologic Technology program with 2 earned credits for RAD-4146. Course is graded S/U.

This course provides the student with extensive clinical experience in all areas of the radiology department. It is designed to allow the student to apply previously learned theories and techniques for Radiologic imaging. The student will develop individual techniques and skills in Radiologic 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-4152 Special Radiologic Procedures

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and C grade (2.00) or better in RAD-4182 and a grade of Satisfactory in RAD-4159. Course is graded A-E.

This Radiologic Technology course is the study of advanced Radiologic procedures, angiography and interventional radiology. Topics to be covered include equipment requirements, anatomy visualized, radiographers role, indications, contraindications, pre and post procedural care and pathologies demonstrated.

RAD-4154 Radiologic Seminar I

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and C grade (2.00) or better in RAD-4158 and RAD-4184 and a grade of Satisfactory in RAD-4178. Course is graded A-E.

This course provides the student with the opportunity to discuss the principles of Radiologic imaging. Application of previously learned concepts will be discussed relative to the clinical setting.

RAD-4155 Radiologic Seminar II

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and C grade (2.00) or better in RAD-4185 and a grade of Satisfactory in RAD-4148. Course is graded A-E.

This course provides the correlation between previously learned Radiologic concepts and clinical application. It is designed to aid in the transition from student to entry level radiographer. General topics of discussion include: radiation protection, equipment operation, image production and evaluation, Radiologic positioning, and patient care procedures. Requirements for ethical and legal practice of radiography in Ohio are discussed. This course will be taught as a term course (contact hours will be doubled over a five week period).

RAD-4157 Radiation Physics I

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Technology program. Course is graded A-E.

This course discusses the principles of physics as they relate to radiation. Topics to be covered include electromagnetic and particulate radiation, electrodynamics and electrostatics, magnetism and electromagnetism.

RAD-4158 Radiation Physics II

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and C grade (2.00) or better in RAD-4157. Course is graded A-E.

This course is a continuation of 4157 Radiation Physics I. The student will apply knowledge to the construction and use of the Radiologic equipment. Special emphasis will be placed on the effects on Radiologic techniques and image formation.

RAD-4159 Clinical Radiology IV

4 credit hours, 32 contact hours (1 hour lecture and 0 hours lab, 31 hours clinical). Prerequisite: Enrollment in the Radiologic Technology program and a grade of Satisfactory in RAD-4178. Course is graded S/U.

This course is designed to provide students with extensive clinical experience in all areas of the radiology department. Students will develop individual techniques and skills in Radiologic 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 Satisfactory/Unsatisfactory basis.

RAD-4160 Principles of Pathology for Radiographers

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and 3 earned credits in RAD-4179. Course is graded A-E.

This course discusses the principles of human pathophysiology, the signs, symptoms, diagnosis and treatment of numerous pathological processes. Topics will include the imaging implications and methods to best demonstrate various pathologies.

RAD-4165 Patient Care and Management II

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiologic Technology program, a C grade (2.00) or better in RAD-4109. Course is graded A-E.

During this second course in the Patient Care sequence, the student is introduced to surgical and medical asepsis, patient advocacy, contrast and oxygen administration, general pharmacological principles, and medico-legal aspects of radiography. Principles of conflict management and the impact of values and beliefs on patient communication will be discussed.

RAD-4166 Patient Care and Management III

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and C grade (2.00) or better in RAD-4165. Course is graded A-E.

During this Patient Care course, the student is introduced to the principles of mobile, surgical, and trauma radiology. Special patient situations encountered with critical care, orthopedic and geriatric patients will also be discussed. The student will also evaluate his/her listening skills relative to patient care.

RAD-4167 Patient Care and Management IV

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and C grade (2.00) or better in RAD-4166. Course is graded A-E.

During this Patient Care course the student will study basic pharmacology and radiopharmaceuticals. Recognition and acute care in specific emergency situations will be discussed. Other topics include special needs of the pediatric and disabled patients and patient education techniques.

RAD-4168 Patient Care and Management V

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and C grade (2.00) or better in RAD-4167. Course is graded A-E.

The final course in the Patient Care sequence is designed to provide the student with knowledge of Electrocardiograms and monitor indications, common laboratory procedures, patient record keeping, and forensic radiology. Phlebotomy techniques will be discussed and practiced.

RAD-4177 Clinical Education in Specialty Disciplines

2 credit hours, 17 contact hours (1 hours lecture, 0 hours lab, and 16 hours directed practice). Prerequisite: Enrollment in the Radiologic Technology program with 9 earned credit hours in RAD-4150 and RAD-4178 and RAD-4179 or permission of the Instructor. Course is graded S/U.

This course provides clinical experience in one specialty discipline. It is designed to allow the student to apply theories and techniques in specialty discipline imaging. The student will have the opportunity to participate in interventional/surgical radiography, magnetic resonance imaging or computed tomography procedures. The student radiographer 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-4178 Clinical Education in Radiology III

3 credit hours, 25 contact hours (1 hours lecture, 0 hours lab, and 24 hours directed practice). Prerequisite: Enrollment in the Radiologic Technology program with 2 earned credits for RAD-4146. Course is graded S/U.

This course provides the student with extensive clinical experience in all areas of the radiology department. It is designed to allow the student to apply previously learned theories and techniques for Radiologic imaging. The student will develop individual techniques and skills in Radiologic 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-4179 Clinical Education in Radiology V

3 credit hours, 25 contact hours (1 hours lecture, 0 hours lab, and 24 hours directed practice). Prerequisite: Enrollment in the Radiologic Technology program with 4 earned credits for RAD-4159. Course is graded S/U.

This course provides the student with extensive clinical experience in all areas of the radiology department. It is designed to allow the student to apply previously learned theories and techniques for Radiologic imaging. The student will develop individual techniques and skills in Radiologic 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-4180 Mammography and Breast Health

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Enrollment in Radiologic Technology and grade of C (2.00) or better in the following: RAD-4160 and RAD-4185, or proof of registration with the ARRT, or permission of the Program Director. Course is graded on an A-E or Pass/Non-Pass basis.

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, diagnostic intervention. Students 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-4183 Imaging Modalities II

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiographic Technology program and C grade (2.00) or better in (RAD-4182 or RAD-4187). Course is graded A-E.

This course is an overview of the imaging modalities of Computed Tomography, Magnetic Resonance Imaging, Ultrasonography, Radiation Therapy and Nuclear Medicine. Emphasis will be on general operating principles of the modality, image production and its integration into patient diagnosis.

RAD-4184 Principles of Radiologic Exposure

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and grade of C (2.00) or better in RAD-4158. Course is graded A-E.

This course is the study of the science of determining diagnostic Radiologic exposure factors. Topics to be covered include: film processing, intensifying screens and cassettes, grids, scatter radiation, contrast, density, detail, distortion, and human pathology influence.

RAD-4185 Advanced Exposure and Quality Assurance

3 credit hours, 5 contact hours (2 hours lecture and 3 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and grade of C (2.00) or better in RAD-4158 and RAD-4187. Course is graded A-E.

The importance of quality assurance programs in the radiography department is discussed in this course. Students will be introduced to basic testing procedures of x-ray equipment. Students will analyze the finished radiograph and identify all factors which alter quality.

RAD-4187 Radiologic Imaging Modalities

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and a grade of C (2.00) or better in RAD-4158 and RAD-4184. Course is graded A-E.

This course will discuss the basic principles of fluoroscopy, tomography, and image intensification. Digital imaging and computed radiology and other advancements and related technology will be discussed.

RAD-4188 Specialty Disciplines in Radiology

1 credit hour, 1 contact hour (1 hour lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and a grade of C (2.00) or better in RAD-4158 and DMS-4511. Course is graded A-E.

This course is an overview of the imaging modalities inclusive of Computed Tomography, Magnetic Resonance Imaging, Diagnostic Medical Sonography, Radiation Therapy, and Nuclear Medicine. Emphasis will be placed on general operating principles of the modality, image production and its integration into patient diagnosis.

RAD-4193 Interventional and Surgical Radiology

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and a grade of C (2.00) or better in RAD-4187 and 3 earned credit hours in RAD-4178. Course is graded A-E.

This Radiologic 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-4194 CT Instrumentation

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and a grade of C (2.00) or better in RAD-4160 and DMS-4511 or current registration with the American Registry of Radiologic Technologists or permission of the Instructor. Course is graded A-E.

This course provides the 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-4196 Bone Densitometry

1.5 credit hours, 1.5 contact hours (1.5 hours lecture and 0 hours lab). Prerequisite: Enrollment in the Radiologic Technology program and a C grade (2.00) or better in RAD-4185 or proof of registration with the ARRT or permission of the instructor or the Academic Dean. Course is graded A-E.

This course provides the basic principles of bone densitometry. Topics to be covered include, examination objectives, patient preparation, examination procedures and protocols, data analysis, patient education and the pathophysiology of osteoporosis. Various types of equipment, methods of data collection and radiation protection procedures will be discussed. The student will become knowledgeable about dietary and pharmacological procedures for prevention, treatment and maintenance of the disease.

RAD-49XX Special Topics in Allied Health

1-5 credit hours, contact hours to be determined. Prerequisite: Approval of Academic Dean. Course is graded A-E.

This course will provide the student an opportunity to work on special topics within the field of Allied Health under the direct supervision of a faculty member. A faculty member and student must obtain approval from the Academic Dean prior to initiating this course. Enrollment in this course must be approved by the Academic Dean.

SUR-4601 Pharmacology for Surgical Assisting

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade or better (2.00) in BIO-1773. Course is graded A-E.

The student will be introduced to the study of pharmacology for patients of all ages. The role of the surgical assistant, drug control laws, methods of preparation, and abbreviations will be presented. This course is designed to introduce the student to the classifications of drugs, identification of expected actions and uses, common adverse effects, normal dosage ranges, and routes of administration. Prototype examples will be used in each classification. Relevant assessments of patients will be included. Upon satisfactory completion of this course the student should be able to understand and prepare medications for the safe administration to patients.

SUR-4631 Fundamentals of Surgical Technology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Admittance into the Surgical Technology program and concurrent enrollment in SUR-4632. Course is graded A-E.

This course is an introduction to surgical technology. Different types of health care facilities, the roles of the different surgical team members and aspects of the physical environment of the surgical suite are studied. The history of the development of surgery as well as ethical, moral, and legal responsibilities are discussed. In this course the student will also discuss communication skills, interpersonal and interdepartmental relationship skills needed.

SUR-4632 Fundamentals of Surgical Technology Laboratory

2 credit hours, 4 contact hours (0 hours lecture and 4 hours lab). Prerequisite: Admittance into the Surgical Technology program and concurrent enrollment in SUR-4631. Course is graded S/U.

During the laboratory exercise the students will practice sterile techniques, be introduced to surgical instrumentation, operating room equipment and creating a sterile field. Included in this course will be an opportunity to shadow a surgical technologist in surgery. This course is graded on a Satisfactory/Unsatisfactory basis.

SUR-4633 Patient Care Concepts

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in high school biology or equivalent and concurrent enrollment in SUR-4634. Course is graded A-E.

The student will be introduced to the layout of the operating room suite, sterile and sub-sterile area. The importance of skin preparation, transportation, positioning and anesthesia of surgical patients will be present. The student will also be introduced to aseptic technique, care of specimen, use of thermoregulatory devices, vital signs, handling of blood replacement components, urinary catheterization, and emergency procedures.

SUR-4634 Patient Care Concepts Laboratory

2 credit hours, 4 contact hours (0 hours lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in high school biology or equivalent and concurrent enrollment in SUR-4633. Course is graded S/U.

This course is designed to enable the student to become skilled in assisting with the preparation, transportation, positioning, and anesthesia of the surgical patient. Skills included in this course are: aseptic technique, positioning, skin preparation, care of specimens, use of thermoregulatory devices, vital signs, handling of blood replacement components, urinary catheterization and emergency procedures. This course is graded on a Satisfactory/Unsatisfactory basis.

SUR-4635 Basic Case Preparation

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: SUR-4633, grade of “C” (2.00) or better in BIO-1772 and concurrent enrollment in SUR-4636. Course is graded A-E.

This course builds on the previously acquired knowledge of human anatomy and physiology, introduction to surgical technology, basic instrumentation, surgical equipment and supplies; sutures and stapling devices will be discussed and demonstrated. The student will learn the proper care, handling, use and assembly of instruments and equipment. Also discussed during this course will be draping techniques and maintenance of the sterile field.

SUR-4636 Basic Case Preparation Laboratory

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: SUR-4633 , grade of "C" (2.00) or better in BIO-1772 and concurrent enrollment in SUR-4635. Course is graded S/U.

This laboratory course is designed to build on the student's knowledge of basic surgical technology skills, professionalism, and ethics. The role of the surgical technologist is developed and applied in laboratory procedures. This course is graded on a Satisfactory/Unsatisfactory basis.

SUR-4637 Surgical Procedures I

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: SUR-4633 , grade of "C" (2.00) or better in BIO-1772 and concurrent enrollment in SUR-4638. Course is graded A-E.

This course is designed to acquaint the student with the operating room procedures and techniques necessary to function as an assistant in the Operating Room. Discussed during this course will be the relevant anatomy, indications for surgery, special equipment and supplies, purpose and expected outcome and possible complications for procedures in the following surgical specialties: General and Gastrointestinal, Obstetric and Gynecologic, and Orthopedic. 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.

SUR-4638 Surgical Procedures I: Clinical

3 credit hours, 15 contact hours (0 hours lecture, 0 hours lab, and 15 hours clinical). Prerequisite: SUR-4633 , grade of "C" (2.00) or better in BIO-1772 and concurrent enrollment in SUR-4637. 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 and Orthopedic 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.

SUR-4639 Surgical Procedures II

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: SUR-4638, grade of "C" (2.00) or better in BIO-1773 and concurrent enrollment in SUR-4640. Course is graded A-E.

This course is an extension of Surgical Procedures I. Discussed during this course will be the relevant anatomy, indications for surgery, special equipment and supplies, purpose and expected outcome and possible complications for procedures in the following surgical specialties: ophthalmic, ear/nose/throat, dental/oral/maxillofacial, plastic and reconstructive and neurological surgery.

SUR-4640 Surgical Procedures II: Clinical

3 credit hours, 15 contact hours (0 hours lecture, 0 hours lab, and 15 hours clinical). Prerequisite: SUR-4638 , grade of "C" (2.00) or better in BIO-1772 and concurrent enrollment in SUR-4639. 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 ophthalmic, ear/nose/throat, dental/oral/maxillofacial, plastic and reconstructive and neurological surgical procedures. Emphasis is on further development of surgical skills. This course is graded on a Satisfactory/Unsatisfactory basis.

SUR-4641 Surgical Procedures III

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: SUR-4639 and concurrent enrollment in SUR-4642. Course is graded A-E.

This course is an extension of Surgical Procedures II. 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 the following surgical specialties: thoracic, cardiovascular, peripheral vascular, and urologic. 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.

SUR-4642 Surgical Procedures III: Clinical

3 credit hours, 15 contact hours (0 hours lecture, 0 hours lab, and 15 hours clinical). Prerequisite: SUR-4639 and concurrent enrollment in SUR-4641. 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 urologic surgical procedures. Emphasis is on further development of surgical skills. This course is graded on a Satisfactory/Unsatisfactory basis.

SUR-4643 Pediatric Surgery

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: SUR-4639 and concurrent enrollment in SUR-4644. Course is graded A-E.

This course is designed to acquaint the student with pediatric patients and a variety of surgical procedures unique to the pediatric patients.

SUR-4644 Pediatric Surgery: Clinical

1 credit hour, 5 contact hours (0 hours lecture, 0 hours lab, and 5 hours clinical). Prerequisite: SUR-4639 and concurrent enrollment in SUR-4644. 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. Clinical experiences will emphasize adapting pediatric concepts in the surgical setting. Students 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. This course is graded on a Satisfactory/Unsatisfactory basis.

SUR-4645 Advanced Surgical Technology Practicum

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: SUR-4644 and concurrent enrollment in SUR-4646. Course is graded A-E.

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.

SUR-4646 Advanced Surgical Technology Practicum: Clinical

3 credit hours, 15 contact hours (0 hours lecture, 0 hours lab, and 15 hours clinical). Prerequisite: SUR-4644 and concurrent enrollment in SUR-4645. 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 are expected to perform in the clinical practice with minimal assistance. This course is graded on a Satisfactory/Unsatisfactory basis.

SUR-4647 Professional Trends and Issues in Surgical Technology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: SUR-4644. Course is graded A-E.

This course is designed to prepare the student for the workplace. 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.

SUR-4649 Surgical Technology Seminar

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: SUR-4647. Course is graded A-E.

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 discussed 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.

SUR-4651 Specialty Surgical Practice

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: SUR-4647 and concurrent enrollment in SUR-4652. Course is graded A-E.

This course is a continuation of Professional Trends and Issues in Surgical Technology with additional surgical specialties presented. For example: Transplant surgery, trauma, ophthalmology, cardiac surgery, orthopedic, plastic, and neurology surgery are covered. The student will select two specialty areas and specialize in those areas. The student will be expected to transfer and build on previous content and experiences.

SUR-4652 Specialty Surgical Practice: Clinical

3 credit hours, 15 contact hours (0 lecture hours, 0 hours lab, and 15 clinical hours). Prerequisite: SUR-4647 and concurrent enrollment in SUR-4651. Course is graded S/U.

This course is designed to build on the student's knowledge of surgical technology with emphasis on two specialty clinical surgical applications. The student is expected to select two specialty areas and focus on those surgical areas. This course is graded on a Satisfactory/Unsatisfactory basis.