Course Descriptions

Course prefix/number arranged alphabetically. The course number will appear as ENG 101 on transcripts, student schedules and web-based documents.

Course Title: ENG 101 (3)  
Course ID: 000467

Writing I
A course in writing emphasizing argument. Instruction and practice in reading critically, thinking logically, responding to texts, developing research skills, writing substantial essays through systematic revision, addressing specific audiences, and expressing ideas in standard and correct English. Includes grammar and mechanics review. NOTES: (a) credit not available by special examination; (b) ENG 101 and ENG 102 may not be taken concurrently.

Components: Lecture
Attributes: WC - Written Communication

Course Credit.
Variable credit is shown as (1-3).

Unique course identification

Course Description summarizes course content. May include information on course components, pre-requisites/co-requisites, and other course stipulations.

Courses are numbered as follows:
001 through 099 – Orientation and developmental courses 100 through 199 – Undergraduate credit 200 through 299 – Undergraduate credit; sophomore classification may be required.

Modular courses have four number or alpha characters with the first three numbers representing the parent course, e.g., BAS 1601 is the first module of BAS 160. The last character denotes the sequence of the module with either a numerical or alpha character. Course descriptions are published for recently approved courses, and those that have been offered in the preceding two-year period. Other active courses may be offered that are not published in the printed catalog.

- Pre-requisite – course which must be satisfactorily completed before enrolling in course — (example: ACC 201 is a pre-requisite for ACC 202)
- Co-requisite – course which must be taken at the same time as another course — (example: ACR 101 is a co-requisite for ACR 100)
ACC Accounting

ACC 201(3) Course ID:000927
Financial Accounting
Presents generally accepted accounting principles used for the measurement and reporting of financial information in the financial statements. Pre-requisite: Quantitative Reasoning College-Readiness or Consent of the Instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

ACC 202(3) Course ID:000001
Managerial Accounting
An introduction to the use of accounting data within an organization to analyze and solve problems and to make planning and control decisions. Pre-requisite: ACC 201 or ACT 101 and ACT 102. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

ACC 2011(1) Course ID:005946
Financial Accounting-Accounting as an Information System
Presents the accounting cycle and preparation of financial statements. Pre-requisite: Sophomore Standing (30 credit hours) or Consent of Instructor. Lecture: 1 credit (15 contact hours).

Components: Lecture

ACC 2012(1) Course ID:005947
Financial Accounting-Accounting for Merchandising Businesses
Presents accounting for merchandising businesses including inventories, receivables and internal control. Pre-requisite: Sophomore Standing (30 credit hours) or Consent of Instructor. ACC 2011 or equivalent. Lecture: 1 credit (15 contact hours).

Components: Lecture

ACC 2013(1) Course ID:005948
Financial Accounting-Long Term Assets and Long Term Financing Activities
Presents measuring and reporting of long term assets and long term financing activities. Pre-requisite: Sophomore Standing (30 credit hours) or Consent of Instructor ACC 2011 and ACC 2012 or equivalent. Lecture: 1 credit (15 contact hours).

Components: Lecture

ACC 2021(1) Course ID:005949
Cost Terms Concepts, and Classifications
Introduces the student to managerial accounting, differentiates between financial and managerial accounting, and presents cost and cost behaviors. Pre-requisite: ACC 201 or (ACT 101 and ACT 102). Lecture: 1 credit (15 contact hours).

Components: Lecture

ACC 2022(1) Course ID:005950
Planning and Control
Presents performance evaluation, and methods of financial statement analysis. Pre-requisite: ACC 201. Lecture: 1 credit (15 contact hours).

Components: Lecture

ACC 2023(1) Course ID:005951
Using Cost Data in Decision Making
Introduces the student to master and capital budgets. Pre-requisite: ACC 2022. Lecture: 1 credit (15 contact hours).

Components: Lecture

ACH Architectural Technology

ACH 100(3) Course ID:004679
Construction Documents I
This is the first course of a four-semester studio sequence. Proper methods and fundamentals of architectural construction documents and residential construction will be introduced. Drafting conventions utilizing basic hand drafting tools and computer-aided drawing techniques will be studied. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture
Attributes: Computer Literacy, Technical

ACH 110(1) Course ID:004680
Survey of the Architectural Profession
In this course, the student will gain an understanding of the language of architecture and develop an appreciation for building design strategies through direct analysis. In addition, various career opportunities in architecture and related professions will be explored. Lecture: 1 credit (15 contact hours).

Components: Lecture
Attributes: Technical

ACH 120(3) Course ID:004681
Theory and History of Architecture I
The development of architecture as it is related to world culture with an emphasis on design, structure, materials, eco-social, and political factors are considered. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACH 150(3) Course ID:004682
Construction Documents II
This is the second course of a four-semester studio sequence. Students develop architectural construction documents for multi-level framed construction. Students will further develop an understanding of programming, schematics, design development, and construction document production using current computer-aided technology. Emphasis will be placed on building codes and related discipline coordination. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).

Pre-requisite: ACH 100 or consent of instructor.

Components: Laboratory, Lecture
Attributes: Technical

ACH 160(3) Course ID:004683
Building Materials and Construction I
The essentials of the theory of selected building materials (Construction Specifications Institute, Divisions 2-7) and their assembly in appropriate systems are presented with particular attention to component selection and behavior under various loads, climatic conditions and fire. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACH 161(3) Course ID:004684
Building Materials and Construction II
The essentials of the theory of selected building materials (Construction Specifications Institute, Divisions 7-16) and their assembly in appropriate systems are presented with particular attention to component selection and behavior under various loads, climatic conditions and fire. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACH 170(3) Course ID:004685
Theory and History of Architecture II
A survey of the architectural periods from the neo-classic to the present is presented. This course is a continuation of ACH 120. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACH 175(3) Course ID:004686
Introduction to Systems
An overview of the various systems found in buildings and the influences that shape architectural design and construction is presented. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACH 180(1 - 3) Course ID:005463
Instructor Consent Required
Selected Topics in Architectural Technology (Topic)
The subject matter of this course may vary from semester to semester as new technology is developed and new issues evolve and/or to address local architectural issues. This course may be repeated with different topics to a maximum of six credit hours. Pre-requisite: Consent of instructor. Lecture: 1-3 credits (15-45 contact hours).

Components: Lecture
Attributes: Technical

ACH 190(1 - 3) Course ID:004687
Visual Composition
In this course, the student will study the aesthetic principles found in both two-dimensional and three-dimensional compositions. These principles will be applied in exercises involving drawing, model construction and creative writing. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (120 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

ACH 191(3) Course ID:004656
Computer Aided Drafting I
Students learn how computer hardware and software are used in preparing architectural documents. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

ACH 191(1 - 3) Course ID:015986
Practicum in Architectural Technology
Provides supervised, on-the-job work experience related to the student's educational objectives; students who participate in the practicum do not receive compensation. Pre-requisite: Completion of a minimum of 12 hours in Architectural Technology (ACH) courses with a min. cumulative GPA of 2.0 in all courses. Practicum: 1.0 - 3.0 credits (40-120 contact hours).

Components: Practicum
Attributes: Technical

ACH 200(3) Course ID:004688
Construction Documents III
This is the third course of a four-semester studio sequence. Students study the methods by which commercial buildings are designed and constructed. Basic skills are developed relating to the implementation of determinants in this process such as program analysis, applicable codes, construction methods and materials as well as computer applications. Through the completion of a series of structured projects including the preparation of a set of architectural construction documents for a medium-sized building, students apply the knowledge necessary to achieve these goals. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours). Pre-requisite: ACH 150 and ACH 185/ACH 195 or consent of instructor.

Components: Laboratory, Lecture
Attributes: Technical

ACH 225(3) Course ID:004689
Structures
Students study structural materials and systems including the design of simple structural components. Pre-requisite: ACH 175 and MAH 125, or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACH 250(3) Course ID:004690
Construction Documents IV
This is the fourth course of a four-semester studio sequence. Students prepare a set of advanced construction documents using current computer-aided drafting techniques. Emphasis will be placed on design principles and site development for a commercial construction project. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours). Pre-requisite: ACH 200 or consent of instructor.

Components: Laboratory, Lecture
Attributes: Technical

ACH 260(3) Course ID:004691
Office Practice
This course is intended to serve as a capstone course in the Architectural Technology program. Emphasis is placed on preparing students for the workplace by focusing on the professional, legal, and business aspects of the architectural and construction industries. Case studies are reviewed and projects are prepared by students with the goal of introducing them to a broader set of circumstances that affect how decisions are made in the practice of architecture. Lecture: 3 credits (45 contact hours). Pre-requisite: ACH 110 and ACH 200 or equivalent.

Components: Lecture
Attributes: Technical
ACH 275(3) Course ID:004692
Mechanical and Electrical Systems
Students engage in a qualitative and quantitative study of environmental control systems used in buildings. Pre-requisite: ACH 175 and MAT 125, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 280(2) Course ID:016138
Revit/Building Information Modeling
Introduces Building Information Modeling (BIM) using Autodesk Revit or other similar and related software, methods and processes. Provides students with skills to produce and present residential and commercial design models, construction documents, and to extract information and data from the model. Incorporates investigations into issues related to sustainable design and the integration of other software for related analysis. Pre-requisite: ACH 195, or consent of instructor. Lecture/Lab: 2 credits (45 contact hours).
Components: Integrated Laboratory, Integrated Lecture
Attributes: Technical

ACH 285(3) Course ID:005464
Computer-Aided Drafting II
Students learn how to modify selected computer aided drafting software to enhance construction document production. Integration of other software will also be discussed. Pre-requisite: ACH 185 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture

ACH 290(3) Course ID:004694
Building Codes I
Students will analyze the content and format of current building codes. The necessity for building codes, problems in interpretation and application as well as legal aspects will be discussed. The main objective is to familiarize students with the basic provisions and procedures associated with building code administration. Pre-requisite: ACH 150 and ACH 160, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 291(3) Course ID:004695
Construction Management
Students examine the principles and current practices of construction management with emphasis on project organization, scheduling, and cost control. Pre-requisite: ACH 150, ACH 160 and ACH 161, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 292(3) Course ID:004696
Building Codes II
This course will be continuation of ACH 290, Building Codes I, with a more in-depth study of current building codes. Pre-requisite: ACH 290 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 293(3) Course ID:004697
Presentation Techniques
Students will explore a variety of presentation and rendering techniques used in the architectural profession. Design skills and the understanding of spatial relationships will be further developed. Pre-requisite: ACH 100 or consent of instructor. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ACH 294(3) Course ID:004698
Specification Writing
This course provides an in-depth study of the importance of specifications in the design and construction process. Students will engage in research, evaluate the quality of building materials, study the methods of writing specifications, and gain exposure to industry-standard software in preparing a variety of specifications. Pre-requisite: ACH 150, ACH 160, ACH 161, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 295(3) Course ID:004693
Computer Aided Drafting II
Students learn how to modify selected computer aided drafting software to enhance construction document production. Integration of other software will also be discussed. Pre-requisite: ACH 195 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACH 297(3) Course ID:004699
Estimating Techniques
Students investigate the factors affecting the cost of construction, labor productivity, materials, overhead and profit, including area and volume computations. Current methods of cost estimating will be applied. Pre-requisite: ACH 150 and MAT 125; or consent of instructor. Lecture: 2.5 credits (37.5 contact hours); Laboratory: 0.5 credits (7.5 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ACH 298(3) Course ID:004700
Computer 3D Modeling
Students learn how computer hardware and software are used in preparing 3D architectural drawings and client-oriented presentations. Pre-requisite: ACH 150 and ACH 185 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 100(3) Course ID:000949
Reflexation Fundamentals
Introduces refrigeration piping and fundamentals of refrigeration including environmental issues associated with HVAC. Co-requisite: ACR 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 101(2) Course ID:000950
Reflexation Fundamentals Lab
Introduces fundamentals of refrigeration including environmental issues associated with HVAC and refrigerant piping. Develops proper hands-on techniques in the servicing and troubleshooting of basic systems. Stresses proper use and care of tools, equipment, materials, and safety. Co-requisite: ACR 100. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

ACR 102(3) Course ID:000951
HAC Electricity
Introduces students to basic physics of electricity. Covers Ohm's law; measuring resistance, voltage, ohms, watts and amps; constructing various types of electrical circuits; selecting wire and fuse sizes; and troubleshooting an electric motor and motor controls. Co-requisite: ACR 103. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 103(2) Course ID:000952
HAC Electricity Lab
Introduces students to basic physics of electricity. Provides for application of Ohm's law; and measure resistance, voltage, ohms, watts and amps; construct various types of electrical circuits; select wire and fuse sizes; and learn to troubleshoot an electric motor and motor controls. Co-requisite: ACR 102. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

ACR 112(3) Course ID:000953
Sheet Metal Fabrication
The student will learn to make patterns and lay out and construct common sheet metal duct fittings. Co-requisite: ACR 113. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 113(2) Course ID:000954
Sheet Metal Fabrication Lab
Provides lab time for students to lay out, cut, construct, and install common sheet metal duct fittings. Co-requisite: ACR 112. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

ACR 130(3) Course ID:000955
Electrical Components
Defines the electrical components of an air conditioning system. Includes different types of line voltages, wiring diagrams and solid state devices. Emphasizes safety. Pre-requisite: ACR 102 with a grade of C or greater. Co-requisite: ACR 131. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 131(2) Course ID:000956
Electrical Components Lab
Permits practice using different types of line voltages, reading wiring diagrams, and using solid state devices. Emphasizes safety. Pre-requisite: ACR 102 with a grade of C or greater. Co-requisite: ACR 130. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

ACR 170(3) Course ID:000957
Heat Load/Duct Design
Introduces fundamentals needed to calculate heat gain and heat loss, thereby determining air conditioner/furnace size which will be used to calculate the correct duct size. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 200(3) Course ID:000960
Commercial Refrigeration
Develops techniques for servicing and troubleshooting mechanical and electro-mechanical refrigeration components. Emphasizes electrical and refrigeration safety. Covers proper tool use and environmentally sound refrigerant handling. Pre-requisite: (ACR 100 and ACR 101) with a grade of C or greater. Co-requisite: ACR 201. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ACR 210(2) Course ID:000961
Commercial Refrigeration Lab
Provides techniques in servicing and troubleshooting mechanical and electro-mechanical refrigeration components. Emphasizes electrical and refrigeration safety. Covers proper tool use and environmentally sound refrigerant handling. Pre-requisite: (ACR 100 and ACR 101) with a grade of C or greater. Co-requisite: ACR 200. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

ACR 206(5) Course ID:007376
Boilers
Develops techniques for servicing, troubleshooting and performing preventive maintenance on steam generating systems. Emphasizes electrical and steam safety. Covers proper tool and instrument use and practices for the efficient applications on steam systems used in commercial and industrial settings. Pre-requisite: ACR 102 and ACR 103. Lecture/Lab: 5.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical
ACR 207(5) Course ID:007377

Commercial HVAC Systems
Develops techniques for servicing, troubleshooting and performing preventative maintenance on commercial HVAC systems. Emphasizes electrical and mechanical safety. Covers tools and instruments used in installing, troubleshooting, and preforming preventative maintenance on commercial HVAC systems. Pre-requisite: (ACR 100 and ACR 101 and ACR 102 and ACR 103) or Consent of the Instructor. Lecture/Lab: 5.0 credits (105 contact hours).

Components: Integrated Laboratory, Integrated Lecture
Attributes: Technical

ACR 208(4) Course ID:007378

Chillers
Develops techniques for servicing, troubleshooting and performing preventative maintenance on high-pressure, low-pressure and absorption chilled water systems. Emphasizes electrical and safety. Covers proper tool and instrument use and practices for the efficient applications on chilled water systems used in commercial and industrial settings. Pre-requisite: ACR 100 and ACR 102 and ACR 103. Lecture/Lab: 4.0 credits (75 contact hours).

Components: Lecture
Attributes: Technical

ACR 209(4) Course ID:007379

Manual N Commercial Load Calculation and Design
Covers fundamentals needed to calculate heat gain and heat loss for commercial buildings. Introduces design conditions, solar heat gain, ventilation, internal heat gains, psychrometric and distribution systems for air conditioning and heating, thereby determining the correct size of equipment needed for different commercial buildings. Lecture: 4.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical

ACR 210(3) Course ID:000962

Ice Machines
Introduces operation, checking, adjusting and troubleshooting commercial ice makers. Covers adjusting, checking, cleaning and troubleshooting commercial ice machines. Pre-requisite: (ACR 100 and ACR 102) with a grade of C or greater. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACR 250(3) Course ID:000963

Cooling and Dehumidification
Explains working characteristics of air conditioning units with air and water cooled condensers. Covers line, low voltage and pneumatic controls. Pre-requisite: (ACR 100 & ACR 101) with a grade of C or greater. Co-requisite: ACR 251. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACR 251(2) Course ID:000964

Cooling and Dehumidification Lab
Prepares the student for installing, servicing, and troubleshooting air conditioning systems with water and air cooled condensers and line and low voltage. Pre-requisite: (ACR 100 & ACR 101) with a grade of C or greater. Co-requisite: ACR 250. Laboratory: 2 credits (60 contact hours).

Components: Laboratory
Attributes: Technical

ACR 260(3) Course ID:000965

Heating and Humidification
Discusses principles of operation and application of heating systems from simple electric and fossil fuel furnaces through more complex systems such as oil burners, boilers, and hydronic systems. Concentrates on both line and control voltage circuitry pertaining to these systems. Pre-requisite: ACR 102 &103 or EET 154 & 155 or ETT 112 & 113 or IMT 110 & 111 or consent from the instructor, Co-requisite: ACR 262. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACR 262(2) Course ID:016230

Heating and Humidification Lab
Provides lab time for application of troubleshooting, checking, adjusting, and installing heating units currently in use. Pre-requisite: ACR 102 &103 or EET 154 & 155 or ETT 112 & 113 or IMT 110 & 111 or consent from the instructor. Co-requisite: ACR 260. Laboratory. 2.0 credits (60 contact hours).

Components: Laboratory
Attributes: Technical

ACR 270(3) Course ID:000967

Heat Pump Application
Explains reverse cycle heating systems, defrost cycles, reversing valves, and auxiliary heating. Concentrates on line and control voltage circuitry pertaining to these units. Pre-requisite: [(ACR 100 and ACR 102) with a grade of C or greater] or Permission of Instructor. Co-requisite: ACR 271. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACR 271(2) Course ID:000968

Heat Pump Application Lab
Provides for application of troubleshooting, checking, adjusting, and installing reverse cycle units. Pre-requisite: [(ACR 100 and ACR 102) with a grade of C or greater] or Permission of Instructor. Co-requisite: ACR 270. Laboratory: 2 credits (60 contact hours).

Components: Laboratory
Attributes: Technical

ACR 290(3) Course ID:000969

Journeyman Preparation
Includes lectures, discussions, and presentations pertaining to the proper application of HVAC codes. Prepares the student to pass the Kentucky Journeyman HVAC licensing exam. (This class should be taken at the end of the program.) Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACR 291(1) Instructor Consent Required
Special Problems I
A course designed for the student who has demonstrated specific special needs. Pre-requisite: Permission of Instructor. Laboratory: 1 credit (45 contact hours).

Components: Laboratory
Attributes: Technical

ACR 292(3) Instructor Consent Required
Special Problems II
A course designed for the student who has demonstrated specific special needs. Pre-requisite: Permission of Instructor. Laboratory: 2 credits (90 contact hours).

Components: Laboratory
Attributes: Technical

ACR 293(2) Instructor Consent Required
Special Problems III
A course designed for the student who has demonstrated specific special needs. Pre-requisite: Permission of Instructor. Laboratory: 3 credits (135 contact hours).

Components: Laboratory
Attributes: Technical

ACR 294(2) Instructor Consent Required
Practicum
Practicum provides supervised on-the-job work experience related to the student’s education objectives. Students participating in Practicum do not receive compensation. Pre-requisite: Permission of the Instructor. Practicum: 2 credits (150 contact hours).

Components: Practicum
Attributes: Technical

ACR 295(2) Instructor Consent Required
Cooperative Education Program
Co-op provides supervised on-the-job work experience related to the student’s educational objectives. Students participating in the Cooperative Education program receive compensation for their work. Pre-requisite: Permission of the Instructor. Co-op: 2 credits (150 contact hours).

Components: Co-Op
Attributes: Technical

ACT 101(3) Course ID:000004

Fundamentals of Accounting I
Students are introduced to accounting terminology and general theoretical principles. The major focus of the course is on the accounting cycle and the communication of financial information to decision-makers. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACT 102(3) Course ID:000005

Fundamentals of Accounting II
Basic financial accounting concepts and methods are expanded to include accounting for partnerships and corporations. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACT 177(3) Course ID:005238

Entrepreneurial Accounting
Includes issues and concerns that are vital to small and medium-size businesses. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

ACT 196(3) Course ID:000007

Payroll Accounting
The design and implementation of modern payroll systems will be introduced in this course. Pre-Requisite: ACC 201 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

ACT 277(3) Course ID:000008

Managerial Accounting Topics
The study of the uses of accounting information in managerial planning and control of organizations. Pre-requisite: ACC 202. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

ACT 279(3) Course ID:000010

Computerized Accounting Systems
Applying accounting concepts and principles by using accounting software, for both service businesses and merchandisers. Includes internal control principles for both manual and computerized accounting systems. Pre-requisite: ACC 201 or ACT 101 and ACT 102 or concurrent enrollment in ACT 102. Digital literacy 3.0 hours. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

ACT 281(3) Course ID:000013

Individual Taxation
The study of the theory and applications of federal and individual income taxes will be emphasized. Lecture: 3.0 credit hours. Pre-requisite: One semester of college accounting or consent of instructor.

Components: Lecture
Attributes: Technical

ACT 286(3) Course ID:000014

Financial Accounting Topics
Additional in-depth exposure to financial accounting procedures for classifying, recording, reporting, and disclosure, intended primarily for students enrolled in the Accounting Technology AAS program and the Accounting Option in the Business Administration AAS Program. Pre-requisite: ACC 201 or ACT 101 and ACT 102. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical
ACT 1717(0.6) Course ID:005239
Rationale for a Well Designed Accounting System
Developing a well designed accounting system for the entrepreneur. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

ACT 1772(0.6) Course ID:005240
Contractual and Legal Reporting Requirements
Common contractual and legal reporting requirements. Lecture: 0.6 credits (9 contact hours). Pre-requisite: ACT 1771 or consent of the instructor.
Components: Lecture

ACT 1773(0.6) Course ID:005241
Overview of Accounting for the Entrepreneur
Overview of accounting for the entrepreneur. Lecture: 0.6 credits (9 contact hours). Pre-requisite: ACT 1772 or consent of the instructor.
Components: Lecture

ACT 1774(0.6) Course ID:005242
Introduction to Computer Accounting Software to Record Basic Accounting Transactions
Computer accounting software to record basic accounting transactions. Lecture: 0.6 credits (9 contact hours). Pre-requisite: ACT 1773 or consent of instructor.
Components: Lecture

ACT 1775(0.6) Course ID:005243
Introduction to Computer Accounting Software to Generate Financial Statements
Computer accounting software to generate financial statements. Lecture: 0.6 credits (9 contact hours). Pre-requisite: ACT 1774 or consent of the instructor.
Components: Lecture

ACT 1861(0.5) Course ID:006117
Payroll Reporting
Introduces the records required for today’s payroll or human resource manager. Covers the relationship between Payroll and Human Resources and their common laws. Concludes with salary computations and methods to compute Gross Payroll. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

ACT 1962(0.5) Course ID:006118
Payroll Taxes
Covers federal and state tax withholding and employer-side payroll expenses. Pre-requisite: ACT 1961. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

ACT 1963(0.5) Course ID:006119
Accounting for Payroll
Covers federal and state unemployment laws and accounting for payroll. Pre-requisite: ACT 1961. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

ACT 1964(1) Course ID:006120
Manual Payroll
Requires the student to complete a Quarterly Payroll Simulation. Pre-requisite: ACT 1962 & 1963. Lecture: 1 credit (15 contact hours).
Components: Lecture

ACT 1965(0.5) Course ID:006121
Computerized Payroll
Requires the student to complete a Computerized Payroll Simulation. Pre-requisite: ACT 1962 & 1963. Lecture: 0.5 credit (7.5 contact hours).
Components: Lecture

ACT 2791(1) Course ID:015824
Computer Accounting Basics
Presents accounting concepts and principles for a merchandiser using computerized accounting software. Pre-requisite: ACC 201 or ACT 101 and ACT 102 or concurrent enrollment in ACT 102. Digital literacy 3.0 hours. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

ACT 2792(1) Course ID:015823
Computer Accounting Procedures
Presents computerized accounting concepts and principles for businesses including service providers. Pre-requisite: ACT 2791. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

ACT 2793(1) Course ID:015824
Advanced Features and Controls
Presents accounting concepts and principles for new businesses, including merchandisers, and covers internal controls. Pre-requisite: ACT 2792. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

ADX 120(3) Course ID:000983
Basic Automotive Electricity
Introduces the student to the principles, theories, and concepts of the automotive electrical system that include the unique diagramming, coding and locating of wiring, and component devices. Co-requisite: ADX 121. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

ADX 121(2) Course ID:000984
Basic Automotive Electricity Lab
Provides hands-on work designed to allow the student to use the concepts, principles, and theories covered in Basic Automotive Electricity. ADX 120, in practical application. Provides the student a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Co-requisite: ADX 120 Lab: 2.0 credits (90 contact hours).
Components: Laboratory Attributes: Technical

ADX 150(3) Course ID:000985
Engine Repair
Provides a series of lectures and demonstrations on the fundamentals of engine repair, troubleshooting, and engine operation and maintenance. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

ADX 151(2) Course ID:000986
Engine Repair Lab
Provides practical experiences and applications relating to engine repair, inspection, trouble shooting and maintenance. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Co-requisite or Pre-requisite: ADX 150. Lab: 2.0 credits (90 contact hours).
Components: Laboratory Attributes: Technical

ADX 170(3) Course ID:000987
Climate Control
Introduces the theory and operation of heating and air conditioning systems, air conditioning terminology, and servicing and troubleshooting mechanical and electrical circuits of heating and air conditioning systems. Co-requisite: ADX 171. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

ADX 171(1) Course ID:000988
Climate Control Lab
Provides opportunities to trouble shoot, repair and perform maintenance on heating and air conditioning systems. Provides experiences in safety precautions, special tool uses, component operation and how to service and trouble shoot the complete system. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Co-requisite: ADX 170. Lab: 1.0 credit (45 contact hours).
Components: Laboratory Attributes: Technical

ADX 260(3) Course ID:000989
Electrical Systems
Focuses on the theory and principles relating to automotive electrical/electronic components. Co-requisite: ADX 261. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

ADX 261(2) Course ID:000990
Electrical Systems Lab
Provides practical applications and experiences related to the theory and principles of automotive electrical/electronic components. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Co-requisite: ADX 260. Lab: 2.0 credits (90 contact hours).
Components: Laboratory Attributes: Technical

AET 102(4) Course ID:006359
Introduction to Energy
Introduces the scientific principles of energy and fuels and investigates specific topics: nature and extent of energy resources, economics and environmental effects, alternative energy, energy technology, health and safety. Lecture/Lab: 4.0 credits (75 contact hours).
Components: Lecture Attributes: Technical

AET 190(4) Course ID:006370
Industrial Computer Programming Concepts
Covers programming concepts specifically directed toward industrial programmable devices such as PLCs. Pre-requisite: Consent of instructor. Lecture/Lab: 4.0 credits (75 contact hours).
Components: Lecture Attributes: Technical

AET 250(4) Course ID:006376
PLC Networking
Introduces the basic concepts in PLC networking to include networking protocols specific to industrial controllers, ASCII codes, bus topologies, and handling of remote I/O. Pre-requisite: AET 190. Lecture/Lab: 4.0 credits (75 contact hours).
Components: Lecture Attributes: Technical

AET 270(4) Course ID:006378
Advanced PLC Programming
Introduces the student to the wide range of capabilities, beyond basic programming needs, which are available to the modern PLC user. Includes data Manipulation; shift register and sequencer instructions; binary, octal and hexadecimal numbering systems; and analog inputs and outputs. Pre-requisite: EET 276 and EET 277. Lecture / Lab: 4.0 credits (75 contact hours).
Components: Lecture Attributes: Technical

AFS 1111(1) Course ID:005359
Aerospace Studies I
A course designed to provide the student with a basic understanding of the nature and principles of war, national power, and the Department of Defense role in the organization of national security. The student also develops leadership abilities by participating in a military organization, the cadet corps, which offers a wide variety of situations demanding effective leadership. Co-requisite: AFS 112. Lecture: 1 credit (15 contact hours).
Components: Lecture Attributes: Technical

AFS 1121(1) Course ID:005360
Leadership Laboratory I
A course designed for development of basic skills required to be a manager, including communications, human relations, and administration of equal opportunity. Credit will not be granted toward the hours requirements for the degree. Pass/Fail only. Co-requisite: AFS 111. Laboratory: 1 credit (45 contact hours).
Components: Laboratory Attributes: Technical
A course designed to provide the student with a basic understanding of the contribution of aerospace power to the total U.S. strategic offensive and defensive military posture. The student also develops leadership abilities by participating in a military organization, the cadet corps, which offers a wide variety of situations demanding effective leadership. Pre-requisite: AFS 111. Lecture: 1 credit (15 contact hours).

Components: Lecture
Attributes: Other

AGR 114(1) Course ID:005362
Leadership Laboratory I
A continuation of AFS 113. A course designed to develop managerial skills including superior/subordinate relationships, communications, customs and courtesies, basic drill movements and career progression requirements. Credit will not be granted toward the hours requirements for the degree. Pass/Fail only. Co-requisite: AFS 113. Laboratory: 1 credit (45 contact hours).

Components: Laboratory
Attributes: Other

AFS 211(1) Course ID:005222
Aerospace Studies II
Introduces the study of air power from a historical perspective; focuses on the development of air power into a primary element of national security. Leadership experience is continued through active participation in the cadet corps. Pre-requisite: AFS 111, 113 or PAS approval. Lecture: 1.0 credit hour; leadership, laboratory, one hour.

Components: Lecture
Attributes: Technical

AFS 212(1) Course ID:005223
Leadership Laboratory II
A course designed for development of advanced skills required to be a manager/leader, including leadership studies, public speaking, group dynamics, motivation and preparation for field training. Credit will not be granted toward the hours requirements for the degree. Pass/Fail only. Co-requisite: AFS 211.

Components: Laboratory
Attributes: Technical

AFS 213(1) Course ID:005235
Aerospace Studies II
Provides a foundation for understanding how air power has been employed in military and non-military operations to support national objectives. Examines the changing mission of the defense establishment, with particular emphasis on the United States Air Force. Leadership experience is continued through participation in the cadet corps. Lecture, one hour; leadership laboratory, one hour per week. Pre-requisite: AFS 111, 113 or PAS approval.

Components: Lecture
Attributes: Other

AFS 214(1) Course ID:005236
Leadership Laboratory II
A continuation of AFS 213. A course designed to develop supervisory management skills to include communications, techniques of critique, social actions, personnel evaluation procedures, problem solving, role playing and field training preparation. Credit will not be granted toward the hours requirements for the degree. Pass/Fail only. Co-requisite: AFS 213.

Components: Laboratory
Attributes: Other

AGR 101(3) Course ID:000750
The Economics of Food and Agriculture
Introduces the field of agricultural economics and some of the basic tools and concepts of decision-making. Illustrates concepts in terms of selected current social and economic issues including the role of agriculture in both a national and international dimension. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SB - Social Behavior Science, Technical

AGR 115(3) Course ID:015713
Agriculture Maintenance
Provides a study of basic maintenance issues (electrical, plumbing, fencing, building construction and repair, and safety) that arise in farming operations; and the practical troubleshooting and problem solving techniques. Lecture/ Lab: 3.0 credits (75 contact hours).

Components: Lecture
Attributes: Technical

AGR 125(3) Course ID:002209
Introduction to Fertilizers and Soils
Introduces practical aspects of soils and fertilizers as related to plant growth and production. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credits (30 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

AGR 130(2) Course ID:005135
Field Applications in Agriculture
Includes methods of solving many application problems encountered in agriculture using applied mathematical and logic skills. Emphasizes practical mathematical skills already acquired from secondary education to address agricultural situations involving computations necessary for upper level courses in agriculture. Requires some knowledge of agricultural situations. Pre-requisite: MAT 055 or equivalent placement level. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

AGR 135(3) Course ID:015714
Herbaceous Plant Production
Introduces the identification, selection, requirements, care, and use of herbaceous plant materials commonly found in food/agronomic production, including scientific name and common pests. Discusses Annuals, perennials, bulbs, and grasses. Lecture/Lab: 3.0 (60 contact hours).

Components: Lecture
Attributes: Technical

AGR 140(3) Course ID:000021
Issues in Agriculture
Provides an introduction to agriculture and current issues pertaining to the agricultural industry. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

AGR 145(3) Course ID:015715
Technology in Agriculture
Provides students with a basic introduction to the newest technological advancements in the agricultural industry, including the involvement of computer-based applications. Introduces students to computer integrated management of agricultural operations, including livestock, crop, financial management, and recordkeeping. Develops understanding of equipment and farm monitoring technology and their integration with smart devices. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical

AGR 150(3) Course ID:000022
Agricultural Power
Provides an introduction to farm equipment and their power units through classroom instruction that concentrates on specific principles that govern the equipment. Includes a lab that applies the principles learned in the classroom. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (45 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

AGR 155(3) Course ID:015716
Greenhouse Production

Components: Lecture
Attributes: Technical

AGR 160(3) Course ID:004279
Horticultural Science
A study of the practical principles and practices used in horticulture. Lecture: 3 credits (45 contact hours).

Components: Lecture

AGR 170(3) Course ID:000024
Introduction to Equipment, Machines, and Engines
Provides an introduction to tractors, combines, balers, forage harvesters and winnowers and various attachments. Includes a study of the operation, adjustments, and repairs. Covers an introduction to engines in which theory and minor repairs will be discussed. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (90 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

AGR 173(2) Course ID:015717
Agriculture Marketing and Sales
Enables students to gain a fundamental knowledge of marketing and sales strategies as they are directly related to the agriculture industry. Focuses on market research, marketing management, promotions, produce handling, packaging, distribution, customer relations and sales techniques. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

AGR 180(2) Course ID:000025
Agricultural Internship I
Provides the opportunity to broaden the educational experience through appropriate observation and individualizes work assignments related to the pre-requisite and/or co-requisite course objectives. The students will spend 80 hours of supervised field experience in an approved Agricultural Industry. Pre-requisite Or Co-requisite: (AGR 150 and AGR 140) or Consent of Instructor. Lab: 2.0 credits (75 contact hours).

Components: Laboratory
Attributes: Technical

AGR 190(2) Course ID:000026
Agricultural Internship II
Provides the opportunity to broaden the educational experience through appropriate observation and individualizes work assignments related to the pre-requisite and/or co-requisite course objectives. The students will spend 80 hours of supervised field experience in an approved Agricultural Industry. Pre-requisite: (AGR 125 and AGR 180 and AGR 170) or Consent of Instructor. Lab: 2.0 credits (75 contact hours).

Components: Laboratory
Attributes: Technical

AGR 200(2) Course ID:000028
Agricultural Internship III
Provides the opportunity to broaden the educational experience through appropriate observation and individualizes work assignments related to the pre-requisite and/or co-requisite course objectives. The students will spend 80 hours of supervised field experience in an approved Agricultural Industry. NOTE: Internship III is a variable credit (1-2 credit hours) with a total 2 credit hour program requirement. Students must take a minimum of one credit hour of internship in their last semester of enrollment or after all agricultural classes have been completed. Pre-requisite: AGR 180 and AGR 190. Lab: 2.0 credits (75 contact hours).

Components: Laboratory
Attributes: Technical
AGR 205(3) Course ID:015718
Forage Management
Includes the study of the management, production, and utilization of forage grasses and legumes for harvested and grazed production. Includes subject areas such as varietals selection, planting, calculating yields, production costs, growth management, and harvesting techniques. Focuses on annual and perennial legume and grass production. Emphasizes establishment, winter survival, fertilization, cutting management, forage storage, and variety selection. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical
AGR 215(3) Course ID:015719
Weed Management
Examines the nature of crop/weed interactions and explores various weed control methods. Explores weed identification, biology, ecology, and modern management principles. Pre-requisite: AGR 250. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical
AGR 220(3) Course ID:000030
Computers In The Agricultural Environment
Provides an introduction to computers as they relate to the agricultural environment. Pre-requisite: GIS 100. Lecture 2.0 credits (30 contact hours), Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical
AGR 225(3) Course ID:015720
Fruit and Vegetable Production
Provides knowledge required for development of skills in the following areas: commercial vegetable production; variety selection; production methods; growth and development; harvesting; and pest control. Pre-requisite: AGR 250. Lecture/Lab: 3.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical
AGR 230(3) Course ID:005136
Career Development in Agriculture
Includes essential aspects of career preparation, entry, adjustment, and advancement in agriculture and related fields. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical
AGR 235(3) Course ID:015721
Field Crop Production
Gain an understanding of the major U.S. field crops with emphasis on their growth requirements, development, uses, management, and physiology. Pre-requisite: AGR 250 Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical
AGR 240(3) Course ID:000032
Introduction to Animal Science
Provides a limited overview of the farm species of livestock. Includes the study of major livestock breeds of beef and dairy cattle, sheep, swine, poultry, and horses. Covers management application for livestock production as well as production facilities. Lecture: 2.0 credits (30 contact hours), Lab: 1.0 credits (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical
AGR 245(3) Course ID:015722
Pest Management
Provides a study of agricultural pest control, including insects, diseases, and weeds, of common agricultural and horticultural crops. Discusses management techniques including chemical, biological, IPM, and organic methods. Pre-requisite: AGR 250 Intro to Plants/Crop Production. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical
AGR 250(3) Course ID:015723
Foraging/Crop Production
Familiarizes students with the basic principles and theories involved in field crop production. Provides a limited understanding of how crops are grown as a prelude to growing crops successfully. Covers pest and pesticides as well as plant disease and protection. Lecture: 2.0 credits (30 contact hours), Lab: 1.0 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical
AGR 255(3) Course ID:015724
Agriculture Business and Records
Provides students with an introduction to farm business management and record keeping. Emphasis is placed on business structures, developing a business plan, budgeting and basic accounting principles, agriculture tax code, and record keeping. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical
AGR 260(3) Course ID:007388
Introduction to Sustainable Agriculture
Provides students with a clear perspective on the principles, history, and practices of sustainable agriculture in both local and global communities. Provides understanding of the challenges to sustainability in our present system of agriculture. Enables students to identify principles of sustainable agriculture as they relate to basic production practices. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical
AGR 265(3) Course ID:015725
Value Added Production
Provides students the knowledge and skills necessary to add economic value to raw farm products. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical
AGR 270(3) Course ID:015726
Livestock Management
Covers management practices involved in the production of swine, horses, cattle, sheep and goats. Emphasizes selection, reproduction, feeding, diseases, marketing, handling, and parasite control. Laboratory exercises teach and reinforce livestock management techniques. Pre-requisite: AGR 240 Introduction to Animal Science. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical
AGR 280(3) Course ID:015727
Farm Financial Management
Provides an overview of the basic concepts needed to understand commodity futures and option markets. Discuss risks and rewards, as well as other topics needed to successfully trade in these markets. Pre-requisite: AGR 101 Economics of Food and Agriculture. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical
AGR 285(3) Course ID:015728
Agriculture Capstone
Designed to be taken by the agriculture student in their final semester as a programmatic review to bridge previous courses together. This course seeks to ensure students are ready to enter the workforce upon graduation as well as pass the capstone exam. Pre-requisite or Co-requisite: Sophomore Standing, Final Semester. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

AHS Allied Health

AHS 100(2) Course ID:001515
Human Growth and Development
Course focus is on the promotion of health through assessment of individuals’ growth and development across the life span. Consideration is given to the family, cultural, environmental, spiritual, and genetic influences when meeting basic human needs. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical
AHS 105(3) Course ID:000037
Introduction to Health Occupations
Basic health care concepts and skills for students interested in or planning a career in health care are introduced. Basic body mechanics, health care delivery systems, caregiver/client relationships, infection control, basic assessment skills, first aid, cardiopulmonary resuscitation certification, team-building skills and problem-based learning are included. Lecture: 2.5 credit hours (37.5 contact hours); Lab: 5 credit hours (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical
Course Also Offered in Modules, Technical
AHS 109(4) Course ID:001516
Introduction to Body Structure and Functions
Provides knowledge of the structure and function of the human body with emphasis on normalcy. Includes interaction of all body systems in maintaining homeostasis and promotes an understanding of health maintenance. Not intended as a general education science course. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Technical
AHS 115(5) Course ID:003808
Medical Terminology
A study of anatomical, physiological and pathological terminology with emphasis on word structures and definition of root words, suffixes, and prefixes from Greek and Latin. Additional emphasis is placed on spelling and pronunciation. Primarily designed for individuals preparing for a career in health care. No previous knowledge of Greek or Latin is required. Lecture: 3 hrs.
Components: Lecture
Attributes: Course Also Offered in Modules, Technical
AHS 120(1) Course ID:001517
Medical Terminology
Basic medical word techniques emphasizing anatomical, physiological and medical terms. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical
AHS 140(3) Course ID:005520
Introduction to Public and Community Health
Introduces students to the management of public health emergencies. Topics include human epidemics and pandemics, agricultural and plant diseases, and emergency medicine. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical
AHS 203(3) Course ID:005479

Diversity in Health Care
Introduces students to health care consumers from various cultural backgrounds. Emphasizes the cultural heritage and diversity existing in contemporary society and cultural factors that affect nontraditional and underrepresented consumers' access to and use of health care resources. Broadens self-awareness and understanding of health/wellness and the variety of meanings these terms carry for members of differing sociocultural populations.
Components: Lecture 3 credits (45 contact hours).
Attributes: Technical

AHS 1151(1) Course ID:016312

Medical Terminology Word Roots
Emphasizes word structures and the definition of root words, suffixes, and prefixes from Greek and Latin. Lecture: 1 credit (15 contact hours).
Components: Lecture

AHS 1152(1) Course ID:016313

Basic Elements of Terminology
Focuses on basic elements of medical words from Greek or Latin roots, together with additional emphasis on spelling and pronunciation. Pre-requisite: AHS 1151. Lecture: 1 credit (15 contact hours).
Components: Lecture

AHS 1153(1) Course ID:016314

Advanced Word Roots & Systems
Focuses on advanced word structures and the definition of root words, suffixes, and prefixes from Greek and Latin that are related to human body structures; also includes the study of commonly used medical abbreviations. Pre-requisite: AHS 1152. Lecture: 1 credit (15 contact hours).
Components: Lecture

AIM 100(3) Course ID:016284

Principles of Advanced Integrated Manufacturing
Introduces the founding principles/practices of manufacturing safety and health in a modern manufacturing environment. Covers current manufacturing quality control concepts and techniques used in industry with an emphasis on proper statistical methods and relevant software. Pre-requisite: Reading and math assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours). 
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

AIM 100(1.5) Course ID:0165683

Basic Safety in Manufacturing
Introduces basic manufacturing safety and ergonomic techniques. Pre-requisites: Reading and math assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture/Lab: 1.5 credits (30 contact hours).
Components: Lecture

AIM 102(1.5) Course ID:0165648

Manufacturing With Quality
Introduces basic quality and auditing techniques as well as basic statistical tools used in the manufacturing environment. Lecture/Lab: 1.5 credits (30 contact hours).
Components: Lecture

AIM 110(1) Course ID:016585

Industrial Materials and Safety
Addresses safety in a traditional and CNC machining environment and introduces industrial materials and their properties. Pre-requisite: Reading and math assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture/Lab: 1.0 credits (20 contact hours)
Components: Lecture

AIM 110(2) Course ID:016586

Metal Removal and Metrology
Introduces the science of measurement and metal removal fundamentals for various industrial processes and materials. Pre-requisites: AIM 1101. Lecture: 1.0 credit (20 contact hours)
Components: Lecture

AIM 110(3) Course ID:016588

CNC-Nontraditional Machining
Introduces different types of nontraditional machining and CNC (G and M) coding used to control nontraditional machining. Pre-requisites: AIM 1102 or consent of instructor. Lecture/Lab: 1.0 credits (20 contact hours)
Components: Lecture

AIM 120(1) Course ID:016589

Introduction to Plastics
Introduces polymers and the plastic industry. Includes safety in the plastic manufacturing environment as well as the history of plastic polymers and industry advancements. Pre-requisite: Reading and math assessment scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture: 1.0 credit (20 contact hours).
Components: Lecture

AIM 120(2) Course ID:016590

Plastic Formulation and Design
Presents the different polymer formulations (polymerization) and applications. Discusses product considerations, design for manufacturability (DFM) and extrusion. Pre-requisite: AIM 1201 or Consent of Instructor. Lecture/Lab: 1.0 credits (20 contact hours).
Components: Lecture

AIM 120(3) Course ID:016591

Plastic Molding Processes
Presents the industry standards and process techniques of thermoforming, injection molding and laminating. Discusses different types of plastic resin and the proper handling and preparation for production. Pre-requisite: AIM 1202 or Consent of Instructor. Lecture/Lab: 1.0 credit (20 contact hours).
Components: Lecture

AIT 120(3) Course ID:005957

Equipment Installation
Focuses on the installation of electrical, hydraulic, and pneumatic industrial systems. Emphasizes motor installation, wiring/box selection, conduit preparation and installation, hydraulic/pneumatic supply piping, controls, and various lifting and rigging techniques. Pre-requisite: AIT 100 or consent of instructor. Lecture/Lab: 3.0 credits (75 contact hours). (30:1 Ratio Lab).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

AIT 130(4) Course ID:005958

Measurement and Instrumentation
Covers measurement and instrumentation concepts and applications, choice of proper instrumentation and calibration, manual and automated measurement processes. Pre-requisite: AIT 140 or consent of instructor. Lecture/Lab: 4.0 credits (90 contact hours). (30:1 Ratio).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

AIT 135(3) Course ID:007384

Industrial Refrigeration - I
Presents refrigeration fundamentals and associated components for individuals interested in safe, effective, and efficient maintenance and operation of industrial refrigeration equipment who may also be seeking RETA credentialing. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

AIT 140(4) Course ID:005959

Industrial Controls I
Provides instruction in the integrated application of basic electrical and fluid power controls. Emphasizes electrical motor controls with starting, reversing, and stopping devices, as well as various hydraulic and pneumatic valves and speed control circuits. Pre-requisite: AIT 110 or consent of instructor. Lecture/Lab: 4 credits (90 contact hours). (30:1 Ratio).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules

AIT 145(6) Course ID:017229

Utility Technician I
Introduces the basics of safely constructing power lines. Covers pole climbing techniques, bucket truck operation and digger/derrick operation. Provides introductory training on all power line construction tools and equipment. Lecture: 1 credit hour (15 contact hours), Laboratory: 5 credit hours (225 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

AIT 160(1) Course ID:005961

Workplace Safety
Focuses on general industry safety practices as defined by the Occupational Safety and Health Administration. Covers PPE, hazard identification, walking and working surfaces, as well as other recognized workplace safety issues. Students will earn the OSHA 10-hour General Industry safety card upon successful completion of the course. Pre-requisite: Reading assessment scores above KCTCS development placement level or successful completion of prescribed developmental courses. Lecture: 1 credit hour (15 contact hours).
Components: Lecture
Attributes: Technical

AIT 220(3) Course ID:006565

The Integrated Power Grid
Introduces students to types of power plants that are tied to the electric grid other than fossil power plants. Provides overviews of nuclear, hydro, and many forms of renewable energy. Includes forms of alternative energy power plants such as solar, wind, and bio-mass power plants. Lecture: 3.0 (45 contact hours)
Components: Lecture
Attributes: Course Also Offered in Modules, Technical
AIT 245(6) Course ID:017228 Utility Technician II Covrs construction of power lines. Teaches framing and use of tools required in construction. Emphasizes safety in establishing a work zone and utilizing rescue techniques. Pre-requisite: AIT 145. Lecture: 1 credit hour (15 contact hours). Laboratory: 5 credit hours (225 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

AIT 290(0.1 - 5) Course ID:005965 Instructor Consent Required Selected Topics in Advanced Integrated Technology Includes selected topics in integrated technology, due to rapidly changing technology or in response to local needs. Covers topics which may vary from semester to semester at the discretion of the instructor. May repeat course with different topics to a maximum of five credit hours. Pre-requisite: Consent of instructor. Lecture/Lab: Varies by topic.

Components: Lecture
Attributes: Technical

AIT 1001(2) Course ID:006150 Basic Electrical Knowledge Introduces electrical power systems used in industry. Provides introductory theory and application of DC/AC circuits, control transformers, and operation of DC power supplies. Pre-requisite: Reading and Mathematics assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 2.0 credits (45 contact hours).

Components: Lecture

AIT 1002(1) Course ID:006151 Power Development Introduces electrical power systems used in industrial settings, including basic theory and application of alternators, electric motors, and three-phase. Pre-requisite: AIT 1001 or Consent of Instructor. Lecture/Lab: 1.0 credit (22.5 contact hours).

Components: Integrated Lecture

AIT 1003(1) Course ID:006152 Hydraulic/Pneumatic Fundamentals Introduces basic theory and application of hydraulic and pneumatic industrial power systems. Pre-requisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses. Lecture/Lab: 1.0 credit (22.5 contact hours).

Components: Integrated Lecture

AIT 1101(1) Course ID:006153 Electrical Power Distribution Provides instruction in the use of electrical power as it applies in industry. Includes basic principles of pressure and flow, basic hydraulic/pneumatic circuits including pumps, valves, cylinders, and motors. Pre-requisite: AIT 1003 or consent of instructor. Lecture/Lab: 1.0 credits (22.5 contact hours).

Components: Lecture

AIT 1102(2) Course ID:006154 Fluid Power Distribution Provides instruction in the use of hydraulic and pneumatic power as it applies to industry. Includes basic principles of pressure and flow, basic hydraulic/pneumatic circuits including pumps, valves, cylinders, and motors. Pre-requisite: AIT 1003 or consent of instructor. Lecture/Lab: 2.0 credit (45 contact hours).

Components: Laboratory, Lecture

AIT 1201(1) Course ID:006155 Electrical Installation Focuses on the installation of electrical industrial systems, including print reading, wiring/box selection, component installation, raceways and conduit, control wiring, and wiring techniques. Pre-requisite: AIT 1101 or consent of instructor. Lecture/Lab: 1.0 credit (25 contact hours).

Components: Laboratory, Lecture

AIT 1202(1) Course ID:006156 Piping, Pneumatic, & Installation Focuses on the installation of pneumatic industrial systems, including interpretation of drawings and diagrams, fabrication of pipe and piping systems, pneumatic supply lines, piping safety, and pipe installation for pneumatic systems. Pre-requisite: AIT 1102 or consent of instructor. Lecture/Lab: 1 credit (25 contact hours).

Components: Laboratory, Lecture

AIT 1203(1) Course ID:006157 Mechanical Installation Includes motor and machine mounting, speed, torque, power measurement, and various lifting and rigging techniques. Pre-requisite: Reading assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab: 1 credit (25 contact hours).

Components: Laboratory, Lecture

AIT 1301(2) Course ID:006158 Principles of Instrumentation Introduces measurement and instrumentation concepts and applications by examining the four main components of instrumentation: temperature, pressure, flow, and level. Pre-requisite: AIT 1401 or consent of instructor. Lecture/Lab: 2.0 credit (45.0 contact hours).

Components: Laboratory, Lecture

AIT 1302(2) Course ID:006159 Integrated Process Control Covers measurement and instrumentation concepts and applications and introduces the concept of loop controls and the proper calibration of loops. Examines the importance of PID controllers in a control loop. Pre-requisite: AIT 1301 or consent of instructor. Lecture/Lab: 2.0 credits (45 contact hours).

Components: Laboratory, Lecture

AIT 1401(2) Course ID:006161 Basic Electrical Controls Provides instruction in the integrated application of basic electrical controls including electrical motor controls with starting, reversing, and stopping devices. Pre-requisite: AIT 1101. Lecture/Lab: 2.0 credits (45 contact hours).

Components: Laboratory, Lecture

AIT 1402(1) Course ID:006162 Basic Pneumatic Controls Introduces the student to pneumatic speed control circuits. Uses air pressure regulators and flow control devices to obtain cylinder speeds. Pre-requisite: AIT 1102 or consent of instructor. Lecture/Lab: 1.0 credit (22.5 contact hours).

Components: Laboratory, Lecture

AIT 1403(1) Course ID:006163 Basic Hydraulic Controls Provides instruction in hydraulic speed and pressure control; includes flow control valves, metering circuits, pressure reducing valves, and sequence valves. Pre-requisite: AIT 1102 or consent of instructor. Lecture/Lab: 1.0 credit (22.5 contact hours).

Components: Laboratory, Lecture

AIT 1501(2) Course ID:006164 Intermediate Electrical Controls Provides instruction in the integrated application of electrical and electrical controls for electrical systems. Emphasizes variable frequency drives, proximity sensors, SCR speed controls. Pre-requisite: AIT140 or AIT1403 or consent of instructor. Lecture/Lab: 2.0 credits (45 contact hours).

Components: Laboratory, Lecture

AIT 1502(1) Course ID:006165 Intermediate Pneumatic Controls Provides instruction in the integrated application of advanced industrial controls for pneumatic systems. Emphasizes pneumatic logic circuits. Pre-requisite: AIT 1402 or consent of instructor. Lecture/Lab: 1.0 credit (22.5 contact hours).

Components: Laboratory, Lecture

AIT 1503(1) Course ID:006166 Intermediate Hydraulic Controls Provides instruction in the integrated application of advanced industrial controls for hydraulic systems. Emphasizes hydraulic synchronization circuits and multi-pressure circuits. Pre-requisite: AIT 1403 or consent of instructor. Lecture/Lab: 1.0 credit (22.5 contact hours).

Components: Laboratory, Lecture

AIT 1901(1) Course ID:006562 Water and Steam Systems Provides instruction in the main components and integration of water and steam systems within a fossil fuel power plant. (Reading and Mathematics assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses) OR consent of instructor. Lecture: 1.0 credits (15 contact hours).

Components: Lecture

AIT 1902(1) Course ID:006563 Air and Gas Flows Provides instruction in the main components and integration of air and gas flows within a fossil fuel power plant. (Reading and Mathematics assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses) OR consent of instructor. Lecture: 1.0 credits (15 contact hours).

Components: Lecture

AIT 2001(2) Course ID:006167 Integrated Process Management Emphasizes project team organization. Introduces the following concepts: cycle time, production time, first pass yield, and barrier identification. Pre-requisite: AIT 130 or Consent of Instructor. Lecture/Lab: 2.0 credits (45 contact hours).

Components: Integrated Laboratory, Integrated Lecture

AIT 2002(2) Course ID:006168 Quality Control and SPC Introduces quality control including understanding acceptance criteria with tolerances, data collection, and data reporting. Pre-requisite: AIT 130 or Consent of Instructor. Lecture/Lab: 2.0 credits (45 contact hours).

Components: Integrated Laboratory, Integrated Lecture

AIT 2101(1) Course ID:006169 Predictive/Preventive Maintenance and Lubrication Focuses on maintenance techniques and procedures used with advanced and highly technical industrial machinery. Pre-requisite: AIT 1101 or consent of instructor. Lecture/Lab: 1.0 credit (22.5 contact hours).

Components: Laboratory, Lecture

AIT 2102(1) Course ID:006170 Power Transmission Systems Focuses on maintenance techniques and procedures used with advanced and highly technical industrial machinery including v-belt and shaft drives, couplings, chain drives, bearings and seals, brakes and clutches. Pre-requisite: Reading and Mathematics assessment exam scores above KCTCS developmental placement level or successful completion of prescribed developmental courses or consent of instructor. Lecture/Lab 1.0 credit (22.5 contact hours).

Components: Lecture
in a system-by-system format relating structure to function and the fundamentals of human embryology/ malformation with adult anatomy. The central nervous system will be emphasized. Pre-requisite: Introductory biology or zoology. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: SN - Science

ANT Anthropology

ANT 101(3) Course ID: 004855
Introduction to Anthropology
Introduces the student to the study of human cultures, past and present. Offers a comprehensive introduction to anthropology, emphasizing the concepts and methods of the major sub-fields i.e., cultural, biological, archaeology, and linguistics. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SB - Social Behavior Science

ANT 130(3) Course ID: 000044
Introduction to Comparative Religion
Introduces students to a comparative analysis of world religions, emphasizing beliefs, rituals, artistic expressions, and cultural and social organization. Includes both Eastern and Western religions. (Same as ANT 130). Lecture: 3 credits (45 contact hours).

Components: Lecture
Course Equivalents: REL 130
Attributes: Cultural Studies, AH - Arts and Humanities, SB - Social Behavior Science

ANT 160(3) Course ID: 002204
Cultural Diversity in the Modern World
Introduces the student to the diversity of human cultural experience in the contemporary world. Focuses on gaining an appreciation for the common humanity and uniqueness of all cultures; creating sensitivity toward stereotypes and ethnocentrism, and understanding the distinctions between 'race', ethnicity and racism. Features extended descriptions of the cultural dynamics of the culture(s) with which the instructor has worked. Directed at non-majors. Lecture: 3 credits.

Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

ANT 220(3) Course ID: 000043
Introduction to Cultural Anthropology
Examines variations in beliefs, behaviors, and institutions of different peoples. Acquaints the student with knowledge of how anthropological concepts and knowledge are used to understand and appreciate cultural diversity. Pre-requisite: ACT, COMPASS, or ASSET scores for college level reading OR completion of developmental reading courses. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

ANT 221(3) Course ID: 002196
Native People of North America
Surveys the aboriginal Native American cultures of North American, and of the impact of four centuries of British, French, Spanish and Russian contact on the Indian communities. Consider the status of Native Americans in present-day North America. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

ANT 223(3) Course ID: 007065
Culture Change and Globalization
Introduces the historical development of anthropology, its role in colonialism and globalization, and types of cultural change processes. Includes discussions of how human societies have struggled for political and economic identity in a post-colonial world and for cultural survival and development. Pre-requisite: ACT, COMPASS, or ASSET scores for college level reading OR completion of developmental reading courses. Lecture: 3.0 credit hours (45 contact hours).

Components: Lecture
Attributes: SB - Social Behavior Science

ANT 235(3) Course ID: 002205
Food and Culture
Examines the way values and behaviors related to food production and consumption are shaped by the physical and cultural environment. Draws data from non-Western and Western cultures. Discusses implications of cultural factors for contemporary issues in nutrition. Pre-requisite: ACT, COMPASS, or ASSET scores for college level reading OR completion of developmental reading courses. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

ANT 240(3) Course ID: 002206
Introduction to Archaeology
Introduces the theories, techniques, and strategies used by archaeologists to recover and interpret information about past cultures. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

ANT 241(3) Course ID: 000045
Origins of Old World Civilization
Surveys cultural developments in the Old World from the earliest times to the beginning stages of civilization. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

ANT 242(3) Course ID: 000046
Origins of New World Civilization
Surveys the origin and growth of prehistoric Native American cultures as revealed by archaeological data. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science
APT 106(2) Course ID:004538
Process Chemistry
Presents fundamental knowledge of chemistry necessary for process operations. Focuses on the basics of chemistry as they apply to water treatment and hydrocarbon processing. Includes, but are not limited to: basic chemical terminology, molecular formulas, structural formulas, common chemical symbols, and the chemical nature of the operator's job, work environment, and products. Pre-requisite: Test at MAT126 eligible or MAT 065 or Consent of Instructor. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

APT 108(2) Course ID:004539
Stationary Equipment
Presents fundamental knowledge in the operation and troubleshooting of stationary equipment. Provides a solid foundation upon which to build sound maintenance and operations programs. Covers common equipment designs, operating instructions, troubleshooting aids to help identify malfunctions, guides to handling emergency situations and routine scheduled maintenance tasks. Includes topics on heat exchangers, heat transfer, cooling towers, and refrigeration. Pre-requisite: Test at MAT126 eligible or MAT 065 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

APT 142(4) Course ID:004541
Instrumentation
Develops an understanding of how to control and operate processes. Involves work on real life simulators to ensure an understanding of process operations has been achieved. Includes measurement fundamentals and control strategies as applied to unit operations, industrial chemical operations, and operating tactics and strategies. Provides basic instruction in process control instrumentation as it relates to the manufacturing operations and will promote smoother, more efficient control of automated systems. Pre-requisite: APT 108 with a grade of "C" or greater OR Instructor Consent. Lecture/Lab: 4.0 credits (105 contact hours).
Components: Lecture
Attributes: Technical

APT 144(4) Course ID:004542
Process Operations
Develops an understanding of modern processing techniques, practical examples of normal and abnormal operating situations, and advanced training in enhancing productivity while cutting operating costs. Provides maintenance personnel and technicans an understanding of the overall process and their roles in maintaining efficient production rates. Involves work on real life simulators to ensure an understanding of process operations. Includes unit operations, industrial chemical operations, and a variety of equipment used in industrial processes. Pre-requisite: APT 108 with a grade of "C" or greater or Permission of Instructor. Lecture: 2 credits (30 contact hours). Laboratory: 2 credits (120 contact hours/60:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

APT 146(2) Course ID:004543
Process Applications
Develops an understanding of how to control and operate processes. Involves work on real life simulators to ensure an understanding of process operations. Includes a study of interactive control strategies in unit operations, industrial chemical operations, and compressor operations and applications. Pre-requisite: APT 108 with a grade of "C" or greater or Permission of Instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

APT 148(2) Course ID:004544
Process Operation Safety
Develops an understanding of how to safely start-up, shut down, control and operate industrial processes. Includes safe operating tactics and strategies, and procedures as they apply to unit operations and industrial chemical operations. Pre-requisite: APT 108 with a grade of "C" or greater or Permission of Instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

APT 151(2) Course ID:005336
Power Plant Practice
Develops an understanding of power plant basics, systems, and equipment and how they are utilized to safely start-up, shut down, control, and operate a power generation unit. Includes safe operating tactics, strategies, and procedures as they apply to normal and abnormal unit operations. Applies various safety and protection equipment and procedures to unit operations. Pre-requisite: APT 108 with a grade of "C" or greater. Lecture: 4 credits (60 contact hours). Laboratory: 2 credits (120 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

APT 156(2) Course ID:005337
Power Plant Protection
Develops an understanding of how to safely start-up, shut down, control and operate a power generation unit. Includes safe operating tactics, strategies, and procedures as they apply to unit operations and various safety and protection equipment incorporated into unit operations. Pre-requisite: APT 108 with a grade of "C" or greater. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

APT 158(3) Course ID:005510
Lineman Technology I
Trains the student in the use of/assembly of materials, tools, and equipment common to the electric utility industry. Provides an overview of the energy delivery system, personal responsibility in regard to safety and job requirements, qualifies the student to climb poles, and trains the student to perform tasks typically required of entry-level apprentices. Pre-requisite: APT 108 or Consent of Instructor. Co-requisite: APT 159, EET 150, EET 151. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

APT 159(4) Course ID:005511
Lineman Technology I Lab
Provides hands on experience in the use of/or assembly of intermediate materials, tools, and equipment common to the electric utility industry. Provides an opportunity for the student to load/unload and set poles, operate bucket truck and other hydraulic equipment, and perform tasks typically required of intermediate-level apprentices. Pre-requisite: APT 158, APT 159, EET 150, EET 151. Co-requisite: APT 258. Laboratory: 4 credits (240 contact hours).
Components: Laboratory
Attributes: Technical

APT 202(3) Course ID:004545
Federally Mandated Training
Presents a fundamental knowledge of OSHA, EPA and DOT regulations as concerned with hazardous waste generators and the fundamental knowledge necessary for process operations to qualify for hazardous waste response to incidents. Covers the regulatory rules and requirements for HAZWOPER Operations level response. Includes, but are not limited to: Hazcom, HAZWOPER Operations level, personal protective equipment, working at elevated heights, respirators, SCBAs, and specific hazardous materials. Pre-requisite: Consent of Instructor. Lecture / Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

APT 204(1) Course ID:004546
Safety Skills Training
Presents a fundamental knowledge of OSHA, EPA and DOT regulations as concerned with hazardous waste generators. This fundamental knowledge is necessary for process operations to qualify for hazardous response to incidents. The student will be trained in the required skills to qualify them for HAZWOPER Operations level response. The course studies include, but are not limited to:

HCazcom, Hazwoper Operations level, personal protective equipment, working at elevated heights, respirators, SCBAs, and specific hazardous materials. (This course will be presented in a semester format.) Pre-requisite: APT 140 with a grade of "C" or greater. Co-requisite: APT 202. Laboratory: 1 credit (60 contact hours/60:1 ratio).
Components: Laboratory
Attributes: Technical

APT 251(2) Course ID:001036
Application of Process Operations
Prepares the student to demonstrate a working knowledge of the application of the basic components involved in process operations. Pre-requisite: Instructor Consent. Lecture/Lab: 2.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical

APT 258(3) Course ID:005512
Lineman Technology II Lab
Provides hands on experience in the use of/or assembly of intermediate materials, tools, and equipment common to the electric utility industry. Provides an opportunity for the student to load/unload and set poles, operate bucket truck and other hydraulic equipment, and perform tasks typically required of intermediate-level apprentices. Pre-requisite: APT 158, APT 159, EET 150, EET 151. Co-requisite: APT 258. Laboratory: 4 credits (240 contact hours).
Components: Laboratory
Attributes: Technical

APT 291(2 - 3) Course ID:001037
Instructor Consent Required
Special Problems in Applied Process Technologies
Provides additional experience in identified areas of student's need. The subject area and/or tasks must be approved by an assigned instructor. Must also have a component where the student is evaluated by an industry professional. Pre-requisite: Consent of Instructor. Discussion: 2.0 - 3.0 credits (45-135 contact hours).
Components: Discussion
Attributes: Technical

ART 100(3) Course ID:000049
Introduction to Art
Presents a basic overview of the study, language, history and cultural relevance of visual art and is designed primarily for non-art majors. Utilizes visually-enhanced lectures and may include optional introductory studio experiences. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, Course Also Offered in Modules

ART 104(3) Course ID:004346
Introduction to African Art
Examines the arts of Africa, including sculpture, painting, pottery, textiles, architecture, all art, human adornment and performance art, on the basis of stylistic influences, and in relation to religious, political, market, and daily contexts. Explores the ways in which Africa has been conceived and deconstructs the assumptions shaping each approach. Addresses the processes (and problems) of collecting and displaying African art throughout the course. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities
ART 105(3) Course ID:000035
Ancient Through Medieval Art History
Surveys the historical development of art and architecture with primary emphasis on cultures of Egypt, Western Asia, Greece, Rome and Medieval Europe. Pre-requisite: English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course(s). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ART 106(3) Course ID:000036
Renaissance Through Modern Art History
Surveys the historical development of Western art and architecture from the 14th Century through the present. Pre-requisite: English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course(s). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ART 108(3) Course ID:007380
Introduction to World Art
Provides a basic overview of the study, language, history, and relevance of the visual art from world cultures and designed primarily for non-art majors. Utilizes visually-enhanced lectures and may include optional introductory visual experiences. Pre-requisite: RDG 185, ENC 091. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

ART 109(3) Course ID:017674
Women in Art & Art History
Provides a basic overview of the visual art, artistic contributions, and lives of artists who identify as women from a global perspective. Utilizes visually-enhanced lectures and may include optional introductory visual experiences. Pre-requisite: English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course(s). Pre-requisite or Co-requisite: English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course(s). Pre-requisite: ART 110. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

ART 110(3) Course ID:004110
Drawing I
Introduction to basic drawing skills and concepts. Projects in line, value, space and composition are among the topics that will be explored in a variety of media. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 112(3) Course ID:004111
Dimensional Design
Investigates design principles of balance, unity and variety, emphasis and rhythm, and their application to the elements of art, including line, shape, value and color. Uses a variety of media. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 113(3) Course ID:004112
Dimensional Design
Investigates three-dimensional form and spatial design, including line, plane, mass, surface and structure. Includes the study of various materials, tools, and sculptural techniques. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 121(3) Course ID:004015
School Art
Introduction to art and to the teaching of art in the lower (1-3) elementary grades. Lecture: 3 credits. Laboratory: 0 credits.
Components: Laboratory, Lecture

ART 201(3) Course ID:000621
Ancient Art History
Examines the art and architecture of the ancient Mediterranean, focusing on one or more of the cultures of Greece, Rome, Egypt, and the Near East. Pre-requisite: (English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course(s) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ART 202(3) Course ID:000457
Modern Art History
Examines the art in Europe from the 14th to 18th centuries, with emphasis on the major styles, artists, and developments from the early Renaissance through the age of the Baroque. Pre-requisite: (English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course(s) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ART 203(3) Course ID:000186
Renaissance Art History
Examines the art in Europe from the 14th to 18th centuries, with emphasis on the major styles, artists, and developments from the early Renaissance through the age of the Baroque. Pre-requisite: (English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course(s) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ART 204(3) Course ID:000086
Modern Art History
Examines the visual arts from the 18th through the 20th centuries, with primary emphasis on Europe and the United States. Pre-requisite: (English and Reading assessment exam scores above the developmental placement level or the successful completion of prescribed developmental course(s) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ART 205(3) Course ID:015848
African American Art
Provides an introduction to African American Art. Examines the evolution of the painting, sculpture, graphic arts, photography, and performance art from the early settlements of the United States to the present. Pre-requisite: Current placement scores for college level-reading established by KCTCS, or completion of RDG 030 or RDG185, and ENC 091. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

ART 208(3) Course ID:000017
Introduction to Art Education
Investigates the theoretical, historical, psychological, and sociological foundations of art education in a lecture-lab format. Provides a critical examination of individual and group activities currently offered in the elementary school art program and includes lectures, curriculum design, evaluation of processes and techniques. Exploration and analysis of design, media and concepts, with special attention to classroom application. ART 208 satisfies the state art requirement for general elementary teacher requirement certification (4 hours of field work required). Lecture: 1.0 credit hours; Laboratory: 2.0 credit hours.
Components: Laboratory, Lecture
Attributes: Other

ART 210(3) Course ID:004114
Drawing II
Advanced studio investigation of drawing techniques and concepts. Projects in line, value, composition and space will be investigated through individual development of style and expression, with extensive use of figure models. Pre-requisite: ART 110. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 211(3) Course ID:004113
Life Drawing
Introduces basic life drawing skills and concepts. Explores topics such as projects in line, value, space, and composition in a variety of media with the human form as the subject matter. Includes drawings in class from a nude human model. Pre-requisite: ART 110. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 220(3) Course ID:004115
Painting I
Studio investigation of the technical and formal concerns of painting, including an understanding of color theory, materials, paint application, and image making. Pre-requisite: ART 110 or Consent of Instructor. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 221(3) Course ID:004116
Painting II
Includes advanced studio investigation of the technical and formal concerns of painting. Continues the development of individual style and expression. Pre-requisite: ART 220. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 231(3) Course ID:007075
Jewelry/Metals I
Introduces the aesthetic and technical issues relating to basic metalsmithing techniques such as sawing, filing, piercing, forging, forming, soldering, and finishing. Offers demonstrations and hands-on work to present the concepts of metal manipulation. Emphasizes instructor-led critiques. Provides an introduction to historical and contemporary metal work. Lecture/Lab: 3.0 credit (90 contact hours).
Components: Lecture
Attributes: Other

ART 232(3) Course ID:007076
Jewelry/Metals II
Continues the development of techniques introduced in Jewelry/Metals I. Emphasizes problem-solving skills and the development of personal creativity. Stresses the aesthetic and technical issues relating to raising, enameling, forging, casting, and more advanced sculptural processes. Includes discussion and critique as integral parts of the coursework. Pre-requisite: ART 231 or Consent of Instructor. Lecture/Lab: 3.0 credit hours (90 contact hours).
Components: Lecture
Attributes: Other

ART 240(3) Course ID:004117
Ceramics I
Introduces a variety of forming and finishing techniques used in working with clay and glaze. Hand building, wheel throwing, surface alteration and glazing will be investigated, along with a brief overview of ceramic history, aesthetics and studio safety. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other, Course Also Offered in Modules

ART 241(3) Course ID:004118
Ceramics II
Continues studio investigation of ceramic techniques in hand-building and/or wheel throwing, glazing, surface decoration, glazing and firing. Continued development of individual style and personal expression. Pre-requisite: ART 240. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other
ART 251(3) Course ID:016141
Graphic Communication I
Provides an introduction to graphic design principles and methods and techniques used to incorporate type and image. Applies the elements and principles of design and basic color theories for design concepts. Pre-requisite or Co-requisite: ART 110 & ART 112, OR consent of instructor. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 252(3) Course ID:016142
Typography
Introduces core principles of typography through a series of progressively complex studio assignments supported by readings, lectures, and software tutorials. Pre-requisite: ART 251 OR consent of instructor. Lecture/Lab: 3.0 credit hours (90 contact hours).
Components: Lecture
Attributes: Other

ART 260(3) Course ID:004119
Sculpture I
Studio investigation of the technical and formal concerns of three-dimensional expression. Basic sculptural methods of modeling, casting, carving and assembling will be explored in a variety of media. Pre-requisite: ART 110, ART130. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 261(3) Course ID:006207
Sculpture II
Continues the development of sculptural techniques started in Sculpture I. Exploration of subject matter and personal creativity will be emphasized. Students will develop and utilize problem solving skills. Pre-requisite: ART 260 or consent of instructor. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 270(3) Course ID:006208
Printmaking I
Introduces the possibilities and potential of the printmaking media for generating fine arts ideas and images. Explores traditional and contemporary printmaking processes of monoprint and monoprint, relief, lithography, intaglio, and stencil. Covers black and white and multiple color printing methods. Introduces printmaking vocabulary and aesthetics. Pre-requisite: (ART 110 and ART 120) or consent of instructor. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 271(3) Course ID:006209
Printmaking II
Explores concepts and techniques in intaglio, lithography, screen-print and/or relief printing with an introduction to contemporary computer/digital aided printmaking processes. Stresses individual expression by creating original imagery while continuing to learn about printmaking as a process. Emphasizes two-dimensional design and color theory concepts and drawing skills. Pre-requisite: ART 270 or permission of instructor. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 281(2) Course ID:006211
Digital Photography
Introduction to the skills, techniques and applications needed to create and manipulate digital photographs and to develop an understanding of photography as a fine art medium. Instruction will include the use of the digital camera and its controls to compose and capture photographs, scanning, printing and using Adobe Photoshop as a "digital darkroom". Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 282(3) Course ID:006212
Digital Photography II
Emphasizes the creation of fine art photographs that reflect the intent and vision of the photographer. Stresses the technical and aesthetic issues relating to image capture, manipulation, printing and presentation. Explores visual and conceptual skills, professional workflow and photographic history. Pre-requisite: ART 281 or permission of instructor. Lecture/Lab: 3.0 credits (90 contact hours).
Components: Lecture
Attributes: Other

ART 290(3) Course ID:006213
Survival Skills for Artists
Introduces skills needed to attain a higher level of education and/or a career in the visual arts. Explores the wording and formatting of credentials and statements. Covers the critical language of art, digital and printed portfolios, exhibiting artwork, marketing, career opportunities, the hazards of art materials and setting up an art studio. Pre-requisite: 9 credits of ART 100 / 200 level classes or permission of instructor. Lecture: 2.0 credits (30 contact hours), Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture

ART 298(1 - 3) Course ID:006214
Instructor Consent Required
Directed Studies in Art: (Topic)
Provides an opportunity to cover topics outside the normal range of studio classes or further investigation of topics and techniques covered in studio classes. Pre-requisite: Consent of instructor. Laboratory: 1-3 credits (30-90 contact hours).
Components: Laboratory
Attributes: Other

ASL 101(3) Course ID:005753
American Sign Language I
A functional-orientational approach to learning beginning American Sign Language (ASL). Development of basic knowledge of and understanding of conversational ASL and cultural features of the language and community. Lecture: 3 credits (45 contact hours). Laboratory: 0 credits (15 contact hours).
Components: Laboratory
Attributes: Foreign Language, Cultural Studies, University Course (Eastern Kentucky University)

ASL 102(3) Course ID:005754
American Sign Language II
Continued development of basic knowledge of and understanding of conversational ASL and cultural features of the language and community. Pre-requisite: ASL 101 with a minimum grade of C or permission of instructor. Lecture: 3 credits (45 contact hours). Laboratory: 0 credit (15 contact hours).
Components: Laboratory
Attributes: Foreign Language, Cultural Studies, University Course (Eastern Kentucky University)

AST 101(3) Course ID:000058
Frontiers of Astronomy
Covers the life histories of stars, the nature of black holes and quasars, the origin of the universe, planets of the solar system, and the possibilities for extraterrestrial life. Includes observation-based activities. A one-semester introductory course for non-science majors. Credit is not given to students who have received credit for AST 191 or AST 192. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

AST 155(3) Course ID:006341
Astrobiology
Examines topics related to the origins of planets, the requirements for life, the search for life away from Earth, the societal implications of discovering other forms of life, and the future of life on Earth and in space from a multidisciplinary perspective. Credit not available for both BIO 155 and AST 155. Pre-requisite: MT065 and ENC091r equivalent as determined by KCTCS placement examination. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: BIO 155
Attributes: SN - Science

AST 191(3) Course ID:000060
The Solar System
Emphasizes the nature, origin, and evolution of planets, satellites, and other objects in the Solar System. Includes historical astronomy, the naked eye phenomena of the sky, and modern solar system discoveries made by spacecraft. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

AST 192(3) Course ID:000062
Stars, Galaxies and the Universe
Emphasizes the Sun and the universe outside the Solar System. Has a principal theme of the origin and evolution of stars, galaxies and the universe at large. Includes topics of black holes, quasars, and the big bang model of the universe. Pre-requisite: MAT085 or a minimum ACT math score of 18. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

AST 195(1) Course ID:000065
Introductory Astronomy Laboratory
Involves performance of exercises in both planetary and stellar astronomy, including Kepler's Laws of Planetary Motion and Newton's Laws of Motion. Examines the functions and limitations of different types of telescopes and mounts. Includes observation of the sun, moon, planets, binaries, galaxies, and nebulae. Pre-requisite or co-requisite: AST101 or AST191 or AST192; MAT 085 or two years of high school algebra, or consent of the instructor. Lab: 1.0 (15 Contact Hours).
Components: Laboratory
Attributes: SL - Science Laboratory

ATE 100(1) Course ID:007113
Aviation Math
Covers mathematics related to the aerodynamic and physical forces acting on an aircraft in flight. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 1.0 credit (40.5 contact hours).
Components: Lecture
Attributes: Technical

ATE 102(3) Course ID:007114
Introduction to Aircraft Maintenance I
Teaches knowledge and skills necessary in measuring, calculating, and documenting aircraft weight and balance. Provides instruction in the identification, cause, prevention, removal and treatment of corrosion. Includes interior and exterior cleaning of the aircraft. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture
Attributes: Technical

AST 103(3) Course ID:007118
Astronomy
Covers stars, galaxies, the universe, and the societal implications of discovering other forms of life. Includes observation-based activities. A one-semester introductory course for non-science majors. Credit is not given to students who have received credit for AST 191 or AST 192. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

AST 200(3) Course ID:007122
Astronomy
Covers the life histories of stars, the nature of black holes and quasars, the origin of the universe, planets of the solar system, and the possibilities for extraterrestrial life. Includes observation-based activities. A one-semester introductory course for non-science majors. Credit is not given to students who have received credit for AST 191 or AST 192. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

AST 201(3) Course ID:007123
Astronomy
Examines topics related to the origins of planets, the requirements for life, the search for life away from Earth, the societal implications of discovering other forms of life, and the future of life on Earth and in space from a multidisciplinary perspective. Credit not available for both BIO 155 and AST 155. Pre-requisite: MT065 and ENC091r equivalent as determined by KCTCS placement examination. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: BIO 155
Attributes: SN - Science

AST 250(3) Course ID:007124
Astronomy
Examines topics related to the origins of planets, the requirements for life, the search for life away from Earth, the societal implications of discovering other forms of life, and the future of life on Earth and in space from a multidisciplinary perspective. Credit not available for both BIO 155 and AST 155. Pre-requisite: MT065 and ENC091r equivalent as determined by KCTCS placement examination. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: BIO 155
Attributes: SN - Science

AST 251(3) Course ID:007125
Astronomy
Covers the life histories of stars, the nature of black holes and quasars, the origin of the universe, planets of the solar system, and the possibilities for extraterrestrial life. Includes observation-based activities. A one-semester introductory course for non-science majors. Credit is not given to students who have received credit for AST 191 or AST 192. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

Astronomy
ATE 104(3) Course ID:007115
Introduction to Aircraft Maintenance II
Provides instruction on the aerodynamic and physical forces acting on an aircraft in flight, basic electricity theory, concepts, components, physics, meter operation and use, battery construction and servicing, and basic principles of physics as related to aviation maintenance. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 108(3) Course ID:007117
Introduction to Aircraft Maintenance IV
Provides an understanding of basic hydraulic functions, the fabrication of tubing and flex hoses as well as seal compatibility. Includes instruction in structural inspection, materials and fasteners, and repair methods. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 202(3) Course ID:007118
Aircraft Structures I
Covers the principles of sheet metal layout, bending, and rivet installation. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 206(3) Course ID:007120
Aircraft Structures III
Includes inspection of airframes to determine airworthiness. Covers the methods and techniques used in the assembly of subunits and major components of the airframe; and the rigging of primary, secondary and auxiliary control surfaces. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 222(3) Course ID:007122
Aircraft Systems I
Covers the repair of hydraulic and pneumatic power systems components. Includes the inspection, check, service, and repair of landing gear, retraction systems, shock strut, brakes, wheels, tires, and steering system. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 224(3) Course ID:007123
Aircraft Systems II
Covers checking, inspecting, troubleshooting and repair of aircraft electrical system and system components. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 226(3) Course ID:007124
Aircraft Systems III
Covers checking, inspection, servicing, repair and troubleshooting of fuel systems and components, heating, cooling, air conditioning, pressurization, and oxygen systems; and rain and ice control and removal systems. Includes types of fuels used in various aircraft and a discussion of the problems associated with fueling and various techniques in fueling. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 242(3) Course ID:007125
Aircraft Powerplants I
Covers theory and development of the aircraft internal combustion engine as well as instruction in the use of engine construction and repair. Pre-requisite: ((ATE 100 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 244(3) Course ID:007127
Aircraft Powerplants II
Covers inspection, checking, servicing and the repair of opposed and radial engines and reciprocating engine installation. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 246(3) Course ID:007128
Aircraft Powerplants III
Includes construction, repair and overhaul of turbine engines. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 248(3) Course ID:007129
Aircraft Powerplants IV
Includes construction, repair and overhaul of turbine engines. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 252(3) Course ID:007130
Aircraft Powerplants I
Includes the purpose, use, and selection of lubricants; repair of engine lubrication system components; and the inspection, checking, servicing, troubleshooting and repairing of engine lubrication systems, propeller synchronization and ice control systems, fixed-pitch, constant-speed, and feathering propellers, and propeller governing systems. Provides for the identification and selection of propeller lubricants, balance propellers, and repair of propeller control system components. Covers the installation, troubleshooting and the removal of propellers. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 254(3) Course ID:007131
Aircraft Powerplants II
Includes construction, repair and overhaul of turbine engines. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 256(3) Course ID:007132
Aircraft Powerplants III
Includes the inspection, checking, troubleshooting, servicing and repair of engine ice and rain control systems, heat exchangers, superchargers, carburetor air intake and induction manifolds. Covers the repair of engine electrical system components, and the installing, checking, and servicing of engine electrical wiring, controls, switches, indicators, and protective devices. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical

ATE 258(3) Course ID:007133
Aircraft Powerplants IV
Includes the operation, inspection and repair of fuel systems and components of aircraft fuel systems and fuel metering systems. Includes the inspection and repair of engine cooling system components, engine exhaust system components, and engine fire detection and extinguishing systems. Pre-requisite: ((ATE 100 and ATE 102 and ATE 104 and ATE 106 and ATE 108) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 3.0 credits (96 contact hours).
Components: Lecture Attributes: Technical
AUT 142(2) Course ID:001057
Emission Systems Lab
Introduces skills necessary to diagnose, service and repair automotive advanced ignition, fuel, and emission systems, including related components are developed. The student may be provided a work-study experience alternating between periods of work off campus and work in a classroom laboratory setting. Pre-requisite or Co-requisite: AUT 142. Lab: 2.0 credits (90 contact hours).
Components: Laboratory Attributes: Technical

AUT 160(3) Course ID:001058
Suspension and Steering
Presents the automotive suspension system, the diagnosing of suspension problems, identifying components, recognizing tire wear problems, wheel balancing and the use of alignment. Lecture: 3.0 credits (45 contact hours)
Components: Lecture Attributes: Technical

AUT 161(2) Course ID:001059
Suspension and Steering Lab
Introduces skills necessary in the diagnosis and repair of automotive suspension systems, wheel alignment, and wheel balancing. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Pre-requisite or Co-requisite: AUT 160. Lab: 2.0 credits (90 contact hours).
Components: Laboratory Attributes: Technical

AUT 180(3) Course ID:001060
Automatic Transmission/Transaxle
Involves the study of engine operation of rear and front wheel drive automatic transmissions and transaxles and the testing and diagnostic process. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

AUT 181(2) Course ID:001061
Automatic Transmission/Transaxle Lab
Develops diagnostic and repair skills related to the operation of rear and front wheel automatic transmissions and transaxles. The student may be provided a work experience alternating between periods of work off campus and work in a classroom laboratory setting. Pre-requisite or Co-requisite: AUT 180. Lab: 2.0 credits (90 contact hours).
Components: Laboratory Attributes: Technical

AUT 198(1) Course ID:001062
Instructor Consent Required Practicum
The Practicum provides supervised on-the-job work experience related to the student's educational objectives. Students who participate in the practicum do not receive compensation. Pre-requisite: Permission of the Instructor. Practicum: 1 credit (75 contact hours).
Components: Practicum Attributes: Technical

AUT 140(3) Course ID:001054
Basic Fuel and Ignition Systems
Includes the theory, component identification, application, operation, service and repair of the basic automotive ignition, fuel, and emission systems, including related components. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

AUT 141(2) Course ID:001055
Basic Fuel and Ignition Systems Lab
Provides skills necessary to diagnose and repair the automotive basic ignition, fuel, and emission systems and related components are developed. The student may be provided a unique work experience alternating between periods of work on-site and work in a classroom laboratory setting. Pre-requisite or Co-requisite: AUT 140 Lab: 2.0 credits (90 contact hours).
Components: Laboratory Attributes: Technical

AUT 142(3) Course ID:001056
Emission Systems
Presents the theory, component identification, application, operation, service and repair of advanced automotive ignition, fuel, and emission systems, including related components. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical
### BAS Business Administration System

**BAS 110(3) Course ID:001239**
**Worksheets in Business Applications**
Focuses on the application of worksheet features to business practices. Provides students with the knowledge and skills necessary to apply worksheet enhanced formulas to derive charts, graphs and tables to aid in analyzing business data. Provides students the opportunity to think critically and find solutions to realistic business problems through use of available data analysis tools. Pre-requisite: Computer Literacy or Consent of Instructor. Lecture: 3 credits (45 contact hours).

**Components:** Lecture
**Attributes:** Technical

**BAS 120(3) Course ID:000095**
**Personal Finance**
Provides information needed to make intelligent choices and to take effective action in the management of personal resources. Applies financial planning, buying, borrowing, saving, budgeting, investing, insurance, and taxes to personal finances. Pre-requisite: Completion of or concurrent enrollment in MAT 65 or higher level math or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture
**Attributes:** Course Also Offered in Modules, Technical

**BAS 125(3) Course ID:016879**
**Social Media Marketing: Fundamental Concepts, Skills, and Strategies**
Cultivates a basic to intermediate understanding of social media history, terminology, and concepts as they apply to the marketing and business sectors. Integrates a working knowledge of platform management and simple social media marketing strategy. Lecture: 3.0 credits (45 contact hours). Pre-requisite: Placement scores for college level reading or completion of developmental reading courses.

**Components:** Lecture
**Attributes:** Technical

**BAS 126(2) Course ID:016880**
**Social Media Marketing: Project Management and Implementation Strategies**
Prepares students to create a comprehensive social media marketing campaign, applicable to any business or organization. Learn intermediate social media strategies and best practices for engagement. Introduces the student to social media policy, procedure, and engagement guidelines that will explain how all stakeholders and groups in an organization should monitor and participate in social media interactions. Pre-requisite: BAS 125. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture
**Attributes:** Technical

**BAS 155(3) Course ID:000100**
**Personal Selling**
Introduces the professional selling process involving a series of interrelated activities with emphasis on planning and delivery of sales presentations and simulation and role playing of sales techniques. Examines the six selling steps including—prospecting, qualifying, presenting, answering objections, closing, and the after-sale service. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture
**Attributes:** Technical

**BAS 160(3) Course ID:000101**
**Introduction to Business**
Introduces business careers, terminology, and the interrelationships of business topics. Presents the complexities of business and the impact on communities and their economies. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture
**Attributes:** Course Also Offered in Modules, Technical

**BAS 170(3) Course ID:005244**
**Entrepreneurship**
Prepresents topics such as product development, finance, and business plan preparation and their impact on entrepreneurship/small business management. Pre-requisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture
**Attributes:** Course Also Offered in Modules, Technical

**BAS 200(3) Course ID:000104**
**Small Business Management**
Introduces the facets of establishing and operating and/or owning a small business, including legal forms of business organization, finance, accounting, insurance, governmental regulations and assistance, economics, marketing, and small business and marketing. Pre-requisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture
**Attributes:** Course Also Offered in Modules, Technical

**BAS 282(3) Course ID:000109**
**Principles of Marketing**
Introduces marketing functions as it applies to various types of business organizations with attention to the marketing concept, including the marketing mix of product, price, promotion, and distribution decisions; international marketing; and social responsibility. Pre-requisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture
**Attributes:** Course Also Offered in Modules, Technical

**BAS 256(3) Course ID:000280**
**International Business**
Identifies the business and managerial processes in a global context. Examines the importance and impact of the economic, cultural, and political environment on business functions. Determines the effect of management functions as they apply across various cultures. Pre-requisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

**Components:** Lecture
**Attributes:** Course Also Offered in Modules
BAS 283(3)  Course ID:000110  Principles of Management
Examines the functional framework of planning, organizing, leading, and controlling as it is utilized to introduce the management process. Introduces the interdisciplinary nature of management with the inclusion of relevant aspects of human behavior and rational decision making. Pre-requisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 284(3)  Course ID:000112  Applied Management Skills
Applies management theories and techniques with emphasis on the action-skills that managers need for success. Examination of various course topics in this capstone course include: delegating, motivating employees, team building, conflict management, coaching, and managing change. Pre-requisite: (BAS 160 and BAS 283) or prior supervisory experience. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 287(3)  Course ID:000115  Personal and Organizational Leadership
Recognizes personal leadership skills that are essential for effective team and organizational guidance while examining organizational leadership theories that promote personal and organizational goal setting, ethical management, time management, human relations, effective communication, and fundamentals of synergy. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 289(3)  Course ID:005531  Operations Management
Introduces the fundamental concepts, principles, and practices of operations management. Introduces and examines operations management careers, terminology and concepts in both manufacturing and service organizations. Pre-requisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 290(3)  Course ID:005579  Management, Ethics and Society
Examines the business leadership-government-society relationship. Includes business leadership, ethics, decision-making, social costs, corporate responsibility, governance, global trends and the role of government in business. Pre-requisite: BAS 283 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BAS 291(3)  Course ID:000116  Retail Management
Examines retail structure, merchandising, promotions, store control, and decision. Identifies fundamental principles of store organization, consumer behavior, and customer service. Includes retailing trends, opportunities, and problems. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

BAS 293(3)  Course ID:005249  Principles of Finance
Explains fundamentals of financial concepts and valuation, corporate decisions (with emphasis in financial instruments), the banking system, financial planning, money and interest rates, and capital structure and investments. Pre-requisite: BAS 160 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

BAS 299(0.1 - 6)  Course ID:000119 Instructor Consent Required
Selected Topics in Business Management: (Option Topic)
Technological developments, new business issues, and/or business topics are presented and studied. Pre-requisite: Consent of Instructor. Lecture: 0.1-6.0 credits (1.5-90 contact hours).

Components: Lecture
Attributes: Technical

BAS 2875(0.6)  Course ID:005159  Decision Making and Problem Solving in a Quality Culture
Identifies principles of effective decision making and problem solving with emphasis on enhancing quality workplace cultures. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

BBT  Broadband Technology

BBT 100(3)  Course ID:016692  Introduction to HFC/Cable-TV
Introduces the basics of the HFC (Hybrid Fiber Coaxial) portion of the broadband industry. Focuses on primary areas: cable and wire - the design of the cables physically and electrically and how to splice them; print reading - construction drawings and system maps/circuit diagrams; station installation - installation of customer materials and equipment and teaching the customers how to properly use the equipment; basic troubleshooting - finding and repairing trouble in materials and equipment; processing requirements for various signals used in the HFC system and signal level meters and signal testing. Covers the transmission of voice and data signals and how they are transmitted to the subscriber and back to the central office. Includes troubleshooting and fault locating techniques used to repair and maintain subscriber equipment. Pre-requisite: MAT 065 or Equivalent Placement Level or Consent of Instructor. Lecture/Lab: 3.0 credits (75 contact hours).

Components: Lecture
Attributes: Technical

BBT 200(2)  Course ID:016694  Introduction to Cellular Technology
Introduces the world of wireless communications. Provides information to enhance an understanding of how we use radio frequencies to transmit signals, data, and voice over the airwaves. Provides information regarding how to correctly set up and troubleshoot a variety of equipment used in radio communications. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

BEX  Basic Electricity

BEX 100(3)  Course ID:001118  Basic Electricity for Non-Majors
This course introduces non-majors to the basic physics of electricity. Students apply Ohm's law, measure resistance, voltage, ohms, watts and amps; construct various types of electrical circuits; select wire and fuse sizes; and learn to troubleshoot an electric motor and coil. Co-requisite: BEX 101. Lecture: 1.0 credits (36 contact hours).

Components: Lecture
Attributes: Technical

BEX 101(2)  Course ID:001119  Basic Electricity Lab for Non-Majors
This is a hands-on class designed to allow the student to use the concepts, principles, and theories covered in Basic application. Electricity for non-majors BEX 100. Co-requisite: BEX 100. Laboratory: 2 credits (90 contact hours).

Components: Laboratory
Attributes: Technical

BIO  Biological Sciences

BIO 112(3)  Course ID:000127  Introduction to Biology
Basic study of structure, function and interactions of living organisms including cell theory, genetics, energetics, evolution and ecology. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SN - Science, Course Also Offered in Modules

BIO 113(1)  Course ID:000133  Introduction to Biology Lab
Emphasizes basic laboratory studies of structure, function and interactions of living organisms including cell theory, genetics, energetics, evolution, and ecology. Pre-requisite/Co-requisite: BIO 112 (If a student taking the course concurrently fails or withdraws from BIO 112, they may continue to complete and earn credit for BIO 113 with instructor’s consent.). Laboratory: 1 credit (30 contact hours).

Components: Laboratory
Attributes: SN - Science

BIO 114(3)  Course ID:000167  Biology I
Examines basic biological concepts such as cell structure and function, metabolism, the chemical basis of biology, protein synthesis, genetics, and evolution with emphasis placed on the cellular level. Co-requisite: BIO 115. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: SN - Science

BIO 115(1)  Course ID:000165  Biology Laboratory I
A two-hour laboratory to be offered concurrently with BIO 114. Designed to acquaint the student with the use of analytical techniques in biology, theory, and methods involved in experimentation, in order to facilitate a greater understanding of concepts presented in lecture and the way in which information is gathered in science. Laboratory: 1 credit (30 contact hours). Co-requisite: BIO 114.

Components: Laboratory
Attributes: SL - Science Laboratory

BIO 116(3)  Course ID:000168  Biology II
Examines basic biological concepts such as ecology, biological diversity (to include the kingdoms of life), reproduction, growth, and development, with emphasis placed on multicellular systems. Co-requisite: BIO 117. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: SN - Science

BIO 117(1)  Course ID:000166  Biology Laboratory II
A two-hour laboratory to be offered concurrently with BIO 116. Designed to acquaint the student with the use of analytical techniques in biology, theory, and methods involved in experimentation in order to facilitate a greater understanding of concepts presented in lecture and the way in which information is gathered in science. Laboratory: 1 credit (30 contact hours). Co-requisite: BIO 116.

Components: Laboratory
Attributes: SL - Science Laboratory

BIO 118(3)  Course ID:004988  Microbes and Society
An introduction to the science of microbiology addressing the role of microorganisms in nature and in human welfare. Contemporary topics will include infectious diseases, genetic engineering, the environment and biological warfare. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SN - Science
BIO 120(3)  Course ID:000126
Human Ecology
Interrelationships among humans, other organisms and the environment including principles of energy and matter, resource use, biogeochemical cycling, trophic structures, sustainability and environmental impacts by humans. Lecture: 3 credits (45 contact hours). Components: Lecture
Attributes: SN - Science
BIO 121(1)  Course ID:000519
Human Ecology Laboratory
Basic laboratory studies of interactions among living organisms and their environment including biogeochemical cycling, trophic structures, sustainability and human impacts on the environment. Pre-requisite/Co-requisite: BIO 120 or BIO 124. Laboratory: 1 credit (30 contact hours). Components: Laboratory
Attributes: SL - Science Laboratory
BIO 122(3)  Course ID:000175
Introduction to Conservation Biology
Historical and current perspectives on species extinction and global loss of biological diversity is presented. Methods used to conserve plant and animal life in the United States and around the world are surveyed, and conservation activities and needs are discussed in societal, cultural, economic, and political contexts. Pre-requisite: High school biology recommended. Lecture: 3 credits (45 contact hours). Components: Lecture
Attributes: SN - Science
BIO 124(3)  Course ID:000177
Principles of Ecology
Study of the principles and interrelationships between organisms and their environment with emphasis on the analytical and statistical methods of ecology. Pre-requisite: College Readiness in Math, Writing and Reading. Lecture: 3.0 credits (45 contact hours). Components: Lecture
Attributes: SN - Science
BIO 130(3)  Course ID:000170
Aspects of Human Biology
Aspects of human biology will be introduced from the molecular level to the integrated whole. Attention will be given to the biological bases of various health and wellness issues. Lecture: 3 credits (45 contact hours). Components: Lecture
Attributes: SN - Science
BIO 135(4)  Course ID:000169
Basic Anatomy and Physiology with Laboratory
Presents the fundamental structure of the human body and the physiological mechanisms involved in normal functioning are presented through lecture and student participation in laboratory activities. Pre-requisite: Minimum ACT Composite score 16 (or KCTCS determined equivalency); OR completion with "C" or better of any college biology or chemistry course; OR ACT of 13-15 with co-requisite OR supplemental instruction; OR consent of instructor. Lecture: 3.0 credits (45 contact hours), Lab: 1.0 credit (30 contact hours). Components: Lecture
Attributes: SL - Science Laboratory, SN - Science
BIO 135S1(2)  Course ID:017507
Supplemental Instruction for Human Anatomy and Physiology with Laboratory
Attributes: Other, Supplemental Science
BIO 137(4)  Course ID:000172
Human Anatomy and Physiology I with Laboratory
The interrelationship of structure and function of each body system will be presented in two semesters. The first semester will include basic chemistry, cell structure, cell physiology, metabolism, tissues, and integumentary, skeletal, muscular, and nervous systems. Pre-requisite: College readiness in math, reading, and English; OR successful completion (C or better) of a college biology or chemistry course; OR consent of instructor for enrollment in co-requisite supplemental instruction; OR consent of instructor. Lecture: 3.0 credits (45 contact hours); Lab: 1.0 credit (30 contact hours). Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science, Course Also Offered in Modules
BIO 137S1(2)  Course ID:017259
Supplemental Instruction for Human Anatomy and Physiology I
Provides supplementary instruction for students who do not meet college readiness standards for BIO 137. Covers content necessary for success in BIO 137 as needed. Pre-requisite: Consent of BIO 137 Instructor. Co-requisite: BIO 137. Lecture: 1.0-2.0 credit hours (15-30 contact hours) Components: Lecture
Attributes: Other, Supplemental Science
BIO 139(4)  Course ID:000174
Human Anatomy and Physiology II with Laboratory
The second semester continues the study of the interrelationships of organ systems, including the endocrine, reproductive, cardiovascular, lymphatic, digestive, respiratory, and urinary systems. Pre-requisite: BIO 137. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours). Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science, Course Also Offered in Modules
BIO 140(3)  Course ID:000130
Botany
The anatomy, physiology, and biodiversity of plants emphasizing life processes, the cell, development, heredity, plant systems, evolution, taxonomy, phyllogeny and ecology. Pre-requisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours). Components: Lecture
Attributes: SN - Science
BIO 141(4)  Course ID:000178
Botany with Laboratory
The anatomy, physiology, and biodiversity of plants emphasizing life processes, the cell, development, heredity, plant systems, evolution, taxonomy, phyllogeny and ecology. Includes laboratory studies of the morphology, physiology, and reproduction of plants with emphasis on flowering plants. Pre-requisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours). Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science, Course Also Offered in Modules
BIO 142(3)  Course ID:000128
Zoology
The anatomy, physiology, and biodiversity of animals emphasizing life processes, the cell, development, heredity, body systems, evolution, taxonomy, phyllogeny and ecology. Pre-requisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours). Components: Lecture
Attributes: SN - Science
BIO 143(4)  Course ID:000180
Zoology with Laboratory
The anatomy, physiology, and biodiversity of animals emphasizing life processes, the cell, development, heredity, body systems, evolution, taxonomy, phyllogeny and ecology. Pre-requisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours). Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science
BIO 144(3)  Course ID:002215
Insect Biology
Presents an overview of the biology of both beneficial and detrimental insects including physiology, behavior, ecology, and evolution. Lecture: 3 credits (45 contact hours). Components: Lecture
Attributes: SN - Science
BIO 145(1)  Course ID:017085
Insect Biology Laboratory
Investigate insect structure and function utilizing basic biological laboratory methodologies including study in taxonomy, phyllogeny, behavior and ecology. Pre-requisite or Co-requisite: BIO 144 - Insect Biology. Lab: 1 credit hour (30 contact hours). Components: Laboratory
Attributes: SL - Science Laboratory
BIO 148(3)  Course ID:016082
Introductory Biology I
BIO 148 introduces the student to the biological mechanisms operating at the molecular cellular and population level that contribute to the origin and maintenance and evolution of biodiversity including the origins and history of the evolutionary process. Course material is presented within a phylogenetic context emphasizing the shared history of all living organisms on earth through the common ancestor. The first semester of an integrated one-year sequence (BIO 148 and BIO 152). Pre-requisites: Math ACT of 23 or above or MA 109, past or current enrollment in CHE 105. (KCTCS equivalents: MA 109=MAT 150, CHE 105=CHE 170). Lecture: 3.0 credits (45 contact hours) Components: Lecture
Attributes: University Course (University of Kentucky)
BIO 150(3)  Course ID:000135
Principles of Biology I
Principles of biology principles at the cellular and molecular levels, similarities and differences in structure and function of simple and complex cells and theories on the origin and evolution of biological systems. Part one of a two semester sequence (BIO 150 and BIO 152). Lecture: 3 credits (45 contact hours). Pre-requisite: (CHE 170 or concurrent enrollment) or consent of instructor. Components: Lecture
Attributes: SN - Science
BIO 151(2)  Course ID:000136
Principles of Biology Laboratory I
Includes studies of cellular and molecular biology. Laboratory: 2 credits (60 contact hours). Pre-requisite: BIO 150 or Concurrent enrollment. Components: Laboratory
Attributes: SL - Science Laboratory
BIO 152(3)  Course ID:000137
Principles of Biology II
Presents knowledge of organismal, population and community biology. Part two of a two semester sequence (BIO 150 and BIO 152). Lecture: 3 credits (45 contact hours). Pre-requisite: BIO 150 or consent of instructor. Components: Lecture
Attributes: SN - Science
BIO 153(2)  Course ID:000138
Principles of Biology Laboratory II
Includes organismal, population and community biology. Laboratory: 2 credits (60 contact hours). Pre-requisite: BIO 152 or concurrent. Components: Laboratory
Attributes: SL - Science Laboratory
BIO 155(1)  Course ID:016428
Introductory Biology Laboratory
This course is designed to provide a broad introduction into the data, results, and information associated with biological research, and into some of the analytical approaches used to test biological hypotheses. Communication of these aspects of biological research is crucial, and much of this lab course will be focused on the development of effective writing skills for the delivery of this information. Pre-requisite: Math ACT of 23 or above or MA 109, past or current enrollment in CHE 105 (KCTCS equivalents: MA 109=MAT 150; CHE 105=CHE 170). Laboratory: 1 credit hour (2 contact hours). Components: Laboratory
Attributes: University Course (University of Kentucky)
BIO 155(3) Course ID:006342
Astrobiology
Examines topics related to the origins of planets, the requirements for life, the search for life away from Earth, the societal implications of discovering other forms of life, and the future of life on Earth and in space from a multidisciplinary perspective. Credit not available for both BIO 155 and AST 155. Pre-requisite: MT065 and ENC091 or equivalent as determined by KCTCS placement examination. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: AST 155
Attributes: SN - Science

BIO 209(2) Course ID:000142
Introductory Microbiology Laboratory
Laboratory exercises in general microbiology. Laboratory: 4 hours. Pre-requisite: One unit of chemistry or consent of instructor. BIO 208/226 should be taken concurrently.
Components: Laboratory
Attributes: SL - Science Laboratory, SN - Science

BIO 220(3) Course ID:000139
The Genetic Perspective
Covers introductory genetics for non-science majors examining how heredity affects humans and the remainder of the living world and providing some insights into other fields of science from the geneticist's perspective. Pre-requisite: BIO 112 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

BIO 225(4) Course ID:000182
Medical Microbiology with Laboratory
The characteristics of microorganisms and their relation to health and disease are studied. Pre-requisite: BIO 137 and BIO 139 or equivalent. Lecture: 2 credits (30 contact hours); Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science, Course Also Offered in Modules

BIO 226(3) Course ID:000140
Selected Topics In Biology: (Topic)
Instructor Consent Required
Examines topics related to the origins of planets, the requirements for life, the search for life away from Earth, the societal implications of discovering other forms of life, and the future of life on Earth and in space from a multidisciplinary perspective. Credit not available for both BIO 155 and AST 155. Pre-requisite: MT065 and ENC091 or equivalent as determined by KCTCS placement examination. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: AST 155
Attributes: Other

BIO 1121(0.75) Course ID:006122
Science, Biochemistry, and Hierarchy of Life
Covers basic studies of the scientific method, the molecules of life and the hierarchy of life. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

BIO 1122(0.75) Course ID:006123
Cell Structure, Function, Energetics, and Cell Division
Covers basic studies of cell structure, function, energetics, and cell division. Pre-requisite: BIO 1121. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

BIO 1123(0.75) Course ID:006124
Classification System, Genetics, and Evolution
Covers basic studies of the classification system, genetics, and evolution. Pre-requisite: BIO 1122. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

BIO 1124(0.75) Course ID:006125
Ecology and Population Dynamics
Covers basic studies of ecology and population dynamics. Pre-requisite: BIO 1123. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

BIO 1351(1) Course ID:016826
Cells, Skin & Bones
Presents the fundamental structure of the human body including Cell and Cellular Physiology, the Integumentary System, and the Skeletal System. Covers the physiological mechanisms involved in normal functioning presented through lecture and student participation in laboratory activities. Pre-requisite: Reading and English assessment exam scores above the KCTCS developmental level and a mathematics placement score above the score range for MAT 065 or successful completion of the prescribed developmental course(s) or consent of the instructor. Laboratory: 0.75 credits (11.25 contact hours). Clinical: 0.25 credits (7.5 contact hours).
Components: Clinical, Laboratory

BIO 1352(1) Course ID:016827
Muscle, Regulators & Generation
Presents the fundamental structure of the human body including the Muscular System, Nervous system, Endocrine System, and Reproductive System. Covers the physiological mechanisms involved in normal functioning presented through lecture and student participation in laboratory activities. Pre-requisite: BIO 1351 or Consent of Instructor. Lecture: 0.75 credits (11.25 contact hours). Laboratory: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

BMT 130(4) Course ID:005953
Essentials of Analog and Digital Electronics for BMEs: Level 2
Emphasizes advanced analog and digital devices and associated circuits as well as their use within medical equipment. Pre-requisite: BMT 120. Lecture/Lab: 4 credits (75 contact hours) (30:1 Ratio Lab)
Components: Lecture

BMT 215(4) Course ID:005966
Principles and Practices of Medical Equipment Maintenance and Management
Investigates key aspects of a Medical Technology Management Program. Emphasizes medical device service principles and practices including inspecting, testing, maintenance, calibration, and repairs. Pre-requisite: BMT 110. Co-requisite: BMT 230. Lecture/Lab: 4 credits (75 contact hours) (30:1 Ratio Lab).
Components: Lecture

BRX 110(2) Course ID:001146
Basic Blueprint Reading for Machinist
Basic applied math, lines, multi-view drawings, symbols, various schematics and diagrams, dimensioning techniques, sectional views, auxiliary views, threads and fasteners, and sketching typical to all shop drawings are presented. Safety will be emphasized as an integral part of the course. Lecture: 2 credit hours (30 contact hours).
Components: Lecture
Attributes: Technical

BRX 112(4) Course ID:001147
Blueprint Reading for Machinist
Provides the student with a beginning and advanced series of lectures, demonstrations, and practice exercise in the study of prints. Safety will be emphasized as an integral part of this course. Lecture: 4 credits (90 contact hours).
Components: Lecture

BRX 120(3) Course ID:001148
Basic Blueprint Reading
Includes basic applied math, lines, multi-view drawings, symbols, various schematics and diagrams, dimensioning techniques, sectional views, auxiliary views, threads and fasteners, and sketching typical to all shop drawings. Emphasizes safety as an integral part of the course. Lecture: 3 credits (45 contact hours).
Components: Lecture

BRX 210(2) Course ID:001151
Mechanical Blueprint Reading
Provides the student with an advanced series of lectures, demonstrations, and practice exercises in the study of prints involving math (both decimal and metric), combination of lines, multi-view drawings, assembly drawings, fasteners, machining and construction processes, datum coordinates, numerical control prints, sheet metal prints, welding, casting and forging prints. Safety will be emphasized; Lecture: 2 credits (30 contact hours). Pre-requisite: BRX 110 with a grade of C or greater or Consent of Instructor.
Components: Lecture
Attributes: Technical

BRX 220(3) Course ID:001150
Blueprint Reading for Construction
Provides a series of lectures, demonstrations, and practice exercises in the study of symbols, views, sections, details, and material lists found on architectural working drawings, building materials and specifications lists, and construction dimensioning systems and charts/schedules. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

BRX Blueprint Reading

BRX 110:2
Basic Blueprint Reading for Machinist

BRX 112:4
Blueprint Reading for Machinist

BRX 120:3
Basic Blueprint Reading

BRX 210:2
Mechanical Blueprint Reading

BRX 220:3
Blueprint Reading for Construction
BRX 1201(1) Course ID:005631
Print Reading Fundamentals
Provides basic applied math, lettering, lines, multiview drawings, title blocks, material lists, and the drawing change system. Lecture: 1 credit (15 contact hours).

Components: Lecture

BRX 1202(1) Course ID:005632
Drawing Views and Setup
Provides sketching, auxiliary, and sectional views. Pre-requisite: (BRX 1201 with a grade of C or better) or consent of instructor. Lecture: 1 credit (15 contact hours).

Components: Lecture

BRX 1203(1) Course ID:005633
Dimensioning and Tolerances
Provides print dimensioning and tolerances and thread specifications. Pre-requisite: (BRX 1202 with a grade of C or better) or consent of instructor. Lecture: 1 credit (15 contact hours).

Components: Lecture

BRX 2201(1) Course ID:016150
Basic Construction Prints
Provides a series of lectures, demonstrations, and practice exercises in the study of symbols, views, sections, details, and material lists found on architectural working drawings and construction dimensioning systems and measurements. Lecture: 1.0 credits (15 contact hours).

Components: Lecture

BRX 2202(2) Course ID:016151
Construction Blueprints
Provides a series of lectures and practice exercises in the study of symbols, views, sections, details, and material lists found on architectural working drawings, building materials and specifications lists, and charts/schedules. Pre-requisite: BRX 2201 or Consent of Instructor. Lecture: 2.0 credits (30 contact hours).

Components: Lecture

BTN 101(1) Course ID:004277
Introduction to Biotechnology
Introduces current and future applications of biotechnology. Covers biotechnology career opportunities and bioethics. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
Attributes: Technical

BTN 105(3) Course ID:007346
Applied Laboratory Calculations for Biotechnology
Introduces concepts, techniques, and applications of common basic laboratory calculations that are routinely used in the biotechnology laboratory. Emphasizes application of basic computational concepts required of biotechnicians. Requires students to apply strategies to calculate amounts of chemicals required to make solutions, calibrate instruments, collect data, and interpret data. Introduces some computer applications. Pre-requisite: MAT 065 or equivalent as determined by KCTCS examination. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

BTN 106(3) Course ID:007280
Fundamentals of Scientific Communication
Introduces methods and strategies necessary for written, oral, and visual communications as they are used in popular science. Lecture: 3.0 credits (45 contact hours).

Components: Laboratory
Attributes: Technical

BTN 110(4) Course ID:004984
Nucleic Acid Methods
Covers theory of DNA structure and function. Emphasizes laboratory skills in a variety of DNA manipulations. Pre-requisite: One semester of college biology with lab or college chemistry with lab or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

BTN 115(4) Course ID:007347
Biomanufacturing
Surveys basic biomanufacturing principles and procedures designed to assure the quality and safety of a product as the manufacturing team moves the product down the biotechnology production pipeline. Introduces upstream and downstream manufacturing processes through a combination of lecture and laboratory activities. Emphasizes the role of government oversight and regulation during discovery, development, and manufacturing of bioproducts as outlined in the Good Laboratory and Good Manufacturing Practices (GLP and GMP) of the Food and Drug Administration (FDA). Pre-requisite: Completion of BTN 201 and BTN 202 with a grade of C or better, or permission of the program coordinator. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

BTN 125(2) Course ID:007349
Bioinformatics I
Introduces the concepts and tools used in the application of information technology to the field of biology. Includes methods for data collection, storing and accessing biological data, fundamentals of sequence alignment, biological molecule structure prediction, and data mining and analysis. Pre-requisite or Co-requisite: Completion of, or concurrent enrollment in BTN 201 and BTN 202. Lab: 2.0 credits (60 contact hours).

Components: Laboratory
Attributes: Technical

BTN 126(2) Course ID:007350
Bioinformatics II
Applies concepts introduced in BTN 125 in the design and implementation of basic programming related to bioinformatics problems. Emphasizes current trends in bioinformatics programming language, databases, and technology. Pre-requisite: Completion of BTN 125 with a grade of C or better or permission of program coordinator. Lab: 2.0 credits (60 contact hours).

Components: Laboratory
Attributes: Technical

BTN 201(4) Course ID:005620
Biotechnology Techniques I
Introduces theory and techniques for media and solution preparations, use of analytical equipment, and laboratory safety. Includes various nucleic acid techniques, gene expression and purification, and bioinformatics. Pre-requisite: A semester of college biology with lab or college chemistry with lab or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

BTN 202(4) Course ID:005621
Biotechnology Techniques II
Introduces theory and techniques for media and solution preparations, use of analytical equipment, and laboratory safety. Includes various nucleic acid techniques, gene expression and purification, and bioinformatics. Pre-requisite: Completion of BTN 201 and BTN 202 with a grade of C or better, or permission of the program coordinator. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

BTN 210(4) Course ID:004985
Cell Culture and Function
Covers use of cell culture in modern biotechnological applications with emphasis on laboratory skills in a variety of cell culture techniques. Pre-requisite: (BTN 110 with a grade of C or better) or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

BTN 220(4) Course ID:004986
Immunological Methods
Covers immunological theory and applications with focus on techniques such as isolation, purification, and labeling of antibody molecules. Pre-requisite: (BTN 110 with a grade of C or better) or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

BTN 225(4) Course ID:007352
Protein Bioseparation Methods
Introduces the strategies to purify proteins as part of a biotechnology process. Introduces specific methods such as activity assays for enzymes, extraction of proteins from bacterial cells, salting out, dialysis, ion exchange chromatography, and polyacrylamide gel electrophoresis. Pre-requisite: Completion of BTN 201 and BTN 202 with a grade of C or better, or permission of the program coordinator. Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).

Components: Laboratory
Attributes: Technical

BTN 295(1 - 3) Course ID:007353
Independent Investigation in Biotechnology
Investigates specific topics or problems in the field of the biotechnology under direction of the faculty. May be repeated for a maximum of six credits. Laboratory varies with credit. Pre-requisite: Permission of instructor. Lab: 1.0 - 3.0 credits (30-90 contact hours).

Components: Laboratory
Attributes: Technical

BTN 298(1 - 8) Course ID:007354
Biotechnology Learning Laboratory
Provides contextual, real-world experience and an opportunity to reinforce previously learned concepts, skills, and critical thinking ability related to business and technical job functions typical of biotechnology companies. Prepares students to conduct mentored activities on various workforce projects assigned by Biotechnology faculty/staff or in collaboration with biotechnology companies at the Learning Laboratory. Emphasizes twenty-first century skills and workforce readiness. May be repeated for a maximum of 8 credits. Pre-requisite or Co-requisite: Completion of BTN 201 and BTN 202 with a C or better, or permission of program coordinator. Practicum: 1.0 - 8.0 credits (60-480 contact hours).

Components: Practicum
Attributes: Technical

BTN 299(1 - 3) Course ID:007355
Selected Topics in Biotechnology
Addresses recent trends and discoveries in selected areas of biotechnology in a seminar format. Emphasizes discussion and critical thinking. May be repeated for a maximum of 12 credits if topics and/or learning outcomes vary. Pre-requisite: Permission of instructor. Lecture: 1.0 - 3.0 credits (15-45 contact hours).

Components: Lecture
Attributes: Technical

BTS Biomedical Technology Systems

BTS 100(1) Course ID:007224
Biomedical Technology Systems: A Career Perspective
Offers insight into the profession for which services are provided to Biomedical Technology Systems with regards to career opportunities, job expectations, and professional growth. Pre-requisite: RDG 30 or equivalent based on KCTCS placement exam. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
Attributes: Technical
**BTS 110(1) Course ID: 007225**

Environmental Risks and Precautionary Measures for the BTS Service Professional

Presents potential risks for which those involved with Biomedical Technology Systems will encounter and precautionary measures taken to assure that no harm is done. Focuses on safety awareness and management throughout the entire healthcare setting including identifying risks associated with the use and maintenance of medical technologies. Pre-requisite: RDG 30 or equivalent based on KCTCS placement exam. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
Attributes: Technical

**BTS 120(2) Course ID: 007226**

Essentials of Biomedical Electronics I

Presents basic analog and digital semiconductor devices and their applications within medical products. Addresses how to read electronic schematics and apply basic troubleshooting skills to circuits that utilize both discrete components and integrated circuits. Focuses on such devices as diodes, transistors, thyristors, logic gates and flip-flops, and digital timing devices. Pre-requisite: AIT 1101 with a grade of C or better. Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Technical

**BTS 125(2) Course ID: 007227**

Essentials of Biomedical Electronics II

Continues the presentation of analog and digital semiconductor devices by introducing more complex devices and their applications within medical products than those introduced in BTS 120. Addresses how to read electronic schematics and apply basic troubleshooting skills to circuits that utilize integrated-packaged devices and the systems that comprise them. Focuses on such devices as operational amplifiers, combinational and sequential logic devices, microprocessors, microcontrollers, and programmable logic devices.

Emphasis is also given to communication circuits used in medical products. Pre-requisite: BTS 120 with a grade of C or better. Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Technical

**BTS 130(2) Course ID: 007228**

Medical Equipment Management I

Presents medical technology management, principles and practices with regard to medical equipment assessment, planning, acquisition, acceptance, and replacement and disposal. Pre-requisite: BTS 100, BTS 110 and AIT 1101 (each with a grade of C or better). Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Technical

**BTS 140(1) Course ID: 007229**

Science Principles Employed in Medical Technologies

Presents physical and chemical science principles that are incorporated into medical devices and systems for the purpose of providing greater understanding into the design and operation of such technologies. Focuses on medical technologies that utilize principles involving light, sound, fluid dynamics, heat transfer, and electrochemistry. Pre-requisite: PHY 171. Pre-requisite or Co-requisite: BTS 125. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
Attributes: Technical

**BTS 200(2) Course ID: 007230**

Patient Care Support and Management Systems

Presents systems employed throughout healthcare in support of patient care and patient management efforts with regard to their application, operation, and routine evaluation. Emphasizes systems that influence patient care in an indirect manner rather than directly providing patient care. Focuses on variety of systems including utility power systems, water and medical gas systems, nurse call systems, patient beds, sterilizers, infant abduction systems, and telemedicine. Pre-requisite: BTS 125 with a grade of C or better. Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Technical

**BTS 210(2) Course ID: 007231**

Diagnostic Medical Equipment and Non-Radiographic Imaging Modalities

Presents medical equipment and instrumentation used to assess biophysical signals and images for diagnostic purposes. Examines such technology in terms of principles of operation and measuring its performance. Focuses on a variety of diagnostic technologies including the electrocardiograph and electroencephalograph machines, the pulmonary function analyzer, video endoscopy systems, ultrasound-generating machines, and magnetic resonance imaging (MRI) systems. Pre-requisite: BIO 135, BTS 110, BTS 125, and BTS 140 (each with a grade of C or better). Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Technical

**BTS 220(2) Course ID: 007232**

Laboratory Devices, Instruments, and Analyzers

Presents instruments employed in the clinical laboratory setting with regard to purpose, design, maintenance, and management. Focuses on technologies such as centrifuges, microscopes, hematologic analyzers, blood gas analyzers, electrolyte analyzers, clinical chemistry analyzers, and tissue processors. Pre-requisite: BIO 135 with a grade of C or better. BTS 110 with a grade of C or better BTS 125 with a grade of C or better BTS 140 with a grade of C or better. Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Technical

**BTS 230(2) Course ID: 007233**

Medical Equipment Management II

Presents medical technology management principles and practices with regard to ongoing training of staff, ongoing medical equipment maintenance, ongoing risk management, and ongoing quality assurance necessary to assure that equipment is safe and adequately maintained. Focuses on record keeping and compliance with codes, standards, and regulations. Pre-requisite: BTS 130 with a grade of C or better. Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Technical

**BTS 250(2) Course ID: 007234**

Introduction to Medical-Based IT Networks and Standards

Presents IT networks employed throughout the healthcare setting that are interconnected to patient care equipment and record management systems. Includes communication standards and risk management standards used by such networks. Pre-requisite: CIT 180. Pre-requisite or Co-requisite: CIT 180. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

**BTS 260(2) Course ID: 007235**

Radiographic Imaging Modalities

Presents radiographic imaging systems routinely employed in health care settings with regard to the technology, theory of operations, and quality assurance testing. Examines a variety of technologies including both analog and digital radiographic and fluoroscopic machines, mammography units, computed axial tomography (CAT) scanners, and bone densitometers. Pre-requisite: BIO 135, BTS 110, BTS 125, BTS 140 and BTS 230 (each with a grade of C or better). Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Technical

**BTS 270(2) Course ID: 007236**

Therapeutic Equipment Modalities I

Presents therapeutic medical equipment typically utilized with the perioperative and intensive care settings. Focuses on clinical applications, circuit design and circuit operation, operator controls and equipment setup, managing device alarms, addressing maintenance requirements, and meeting performance and safety standards. Emphasizes a variety of medical technologies including IV pumps, electrosurgical units, defibrillators, mechanical ventilators, anesthesia machines, infant incubators, and surgical lasers. Pre-requisite: BIO 135, BTS 125, and BTS 140 (each with a grade of C or better). Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Technical

**BTS 275(2) Course ID: 007237**

Therapeutic Equipment Modalities II

Presents therapeutic medical equipment typically utilized outside the perioperative and intensive care settings primarily towards physical therapy and treatment interventions. Focuses on clinical applications, circuit design and circuit operation, operator controls and equipment setup, managing device alarms, addressing maintenance requirements, and meeting performance and safety standards. Emphasizes a variety of medical technologies including therapeutic ultrasound units, electrical stimulation units, dialysis machines, oxygen concentrators, and hyperbaric chambers. Pre-requisite: BTS 270 and BTS 230 (each with a grade of C or better). Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Technical

**BTS 280(2) Course ID: 007238**

General Care Monitoring and Instrumentation

Presents various physiological parameters measured in low and mid-acuity situations typically encountered in general care settings along with the instrumentation used to obtain such information. Focuses on how the technology works and how to evaluate its performance and safety. Emphasis is given to a variety of medical technologies including scales, thermometers, general electrocardiograph monitors, non-invasive blood pressure monitors, pulse oximeters, and spirometers. Pre-requisite: BIO 135, BTS 125, and BTS 140 (each with a grade of C or better). Pre-requisite or Co-requisite: BTS 230. Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Technical

**BTS 285(2) Course ID: 007239**

Critical Care Monitoring and Instrumentation

Continues the presentation of various physiological parameters measured in mid and high acuity situations typically encountered in intensive/critical care settings along with the instrumentation used to obtain such information. Focuses on how the technology works and how to evaluate its performance and safety. Emphasizes a variety of medical technologies including advanced electrocardiograph monitors, invasive pressure monitors, cardiac output monitors, anesthetic gas monitors, and fetal monitors. Pre-requisite: BTS 280 and BTS 230 (both with a grade of C or better). Pre-requisite or Co-requisite: BTS 250. Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Technical

**BTS 290(2) Course ID: 007240**

Clinical Experience in Biomedical Technology Systems

Provides an opportunity for the student to apply their knowledge and skill regarding various biomedical technology systems and equipment within a real-world environment. Requires the student to complete 120 contact hours of experiential training under the guidance of an assigned clinical supervisor. Pre-requisite: BTS 200, BTS 220, and BTS 230 (each with a grade of C or better). Pre-requisite or Co-requisite: BTS 250, BTS 260, BTS 275, and BTS 285. Clinical: 2.0 credits (120 contact hours).

Components: Clinical
Attributes: Technical
CAD Computer-Aided Design

CAD 100(3) Course ID:000216
Introduction to Computer Aided Design
Applies fundamental principles and capabilities of CAD, basic drafting conventions, and operations. Provides an in-depth study of computer aided drafting commands, terminology, command utilization, and skill development. Lecture: 1.0 credit (15 contact hours). Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CAD 102(4) Course ID:004052
DRAFTING FUNDAMENTALS
Explores the fundamentals of drafting in the use of equipment through measurement of lines, angles, circles, arcs, and irregular curves; alphabet of lines; freehand sketching; geometric constructions; orthographic projection; characteristics of lines and planes; lettering; and dimensioning techniques. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 108(3) Course ID:005186
Introduction to Surveying
Introduces the elements of surveying including measurements, distance corrections, leveling, angles, area computation, computer calculations, topographic surveying, electronic distance measuring instruments, construction surveying, GPS, and GIS. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CAD 112(4) Course ID:004054
Engineering Graphics
Explores lines and planes as they relate to orthographic projection to show the size and shape of objects, as well as for descriptive geometry in solving advanced problems. Includes application of principles and graphic elements of sectioning; techniques involved in oblique projections, axonometric projections, and perspective drawings; and dimensioning techniques and symbol usage common to all drafting disciplines. Pre-requisite: CAD 102 with a grade of C or better or Approval of Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 120(4) Course ID:004067
Introduction to Architecture
Introduces a practical approach to architectural drafting using board and/or computer aided drafting methods as it relates to residential and commercial architecture, specifications, and structural systems including wood, masonry, concrete, and steel. Pre-requisite: CAD 100 OR CAD 103 with a grade of C or better or Approval of Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 120(4) Course ID:004067
Introduction to Architecture
Introduces a practical approach to architectural drafting using board and/or computer aided drafting methods as it relates to residential and commercial architecture, specifications, and structural systems including wood, masonry, concrete, and steel. Pre-requisite: CAD 100 OR CAD 103 with a grade of C or better or Approval of Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 130(4) Course ID:004057
Descriptive Geometry
Examines the spatial relationships between points, lines, and planes in various orthographic projections with graphical solutions; explores the processes to solve problems using auxiliary view projection methods, revolutions, intersections, and developments. Pre-requisite: CAD 112 with a grade of C or better or Approval of Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 150(4) Course ID:002017
Programming in CAD
Introduces fundamental principles of the computer language interface that represents and interfaces with the main CAD software. Includes writing subroutines and programs to perform CAD functions not available in the main CAD software. Pre-requisite: CAD 100 OR CAD 103 with a grade of C or better or approval of the Instructor. Lecture: 2.0 credits (30 contact hours), Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CAD 200(4) Course ID:000218
Intermediate Computer Aided Drafting
Introduces advanced drafting techniques and the use of software to perform engineering design and development tasks. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 201(4) Course ID:000219
Parametric Modeling
Introduces parametric modeling and design of a CAD workstation in exploring the techniques associated with drafting and design using parametric modeling software. Introduces creation of parametric models and explores associative function and flexibility of concurrent part design. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 210(4) Course ID:004059
Industrial Drafting Processes
Explores weldment design, welding symbols, welding processes, and fabrication techniques, tool and die, and jig and fixture drawings. Includes design specifications, pattern drawings, casting, forming processes, and mechanical drawing principles in relation to the manufacturing industry. Covers screw-thread design and related fastening concepts as they relate to manufactured items and construction. Pre-requisite: CAD 100 OR CAD 103 with a grade of C or better or Approval of the Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 216(4) Course ID:016429
Building Information Modeling
Introduces Building Information Modeling (BIM), an intelligent model-based process that provides insight to help plan, design, construct, manage buildings and infrastructure through three dimensional models, and generate construction drawing sheet sets. Creates structures for analytical purposes such as visualization, quality take off, cost estimating, scheduling, coordination and facility management across various fields, including architectural, structural and mechanical, electrical, and plumbing. Using BIM technology enables discovery of potential conflicts between these fields. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 220(4) Course ID:004068
Architectural Design
Applies the theory of architectural design and presentation techniques. Deals with site selection, use of materials in design, spatial relationships, and aesthetics. Explores traditional and contemporary design, designers, processes, and historical milestones. Uses board and computer techniques to illustrate interiors and exteriors of student designs. Pre-requisite: CAD 120 with a grade of C or better or Approval of Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 222(4) Course ID:004061
Mechanical Design
Explores the design principles, mechanical adaptation, and drafting practices involved in the development of mechanical working drawings and the design principles in various manufacturing disciplines; gear drawing and design, and cam and follower drawing and design; mechanical assemblies, machine design, power transmission, bearings, and seals in assemblies. Includes shop processes in these mechanical designs. Pre-requisite: CAD 100 with a grade of C or better or Approval of Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 230(4) Course ID:003996
Construction Techniques
Examines the design principles, mechanical adaptation, and drafting practices involved in the development of mechanical working drawings and the design principles in various manufacturing disciplines; gear drawing and design, and cam and follower drawing and design; mechanical assemblies, machine design, power transmission, bearings, and seals in assemblies. Includes shop processes in these mechanical designs. Pre-requisite: CAD 120 with a grade of C or better or Approval of Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 240(4) Course ID:004008
Advanced Dimensioning and Measurement
Examines the design principles, mechanical adaptation, and drafting practices involved in the development of mechanical working drawings and the design principles in various manufacturing disciplines; gear drawing and design, and cam and follower drawing and design; mechanical assemblies, machine design, power transmission, bearings, and seals in assemblies. Includes shop processes in these mechanical designs. Pre-requisite: CAD 120 with a grade of C or better or Approval of Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 252(4) Course ID:004070
Commercial Drafting
Examines commercial drafting building codes, building structure, materials, and structural drawing and detailing. Emphasizes calculations to determine appropriate structural members. Pre-requisite: CAD 120 with a grade of C or better or Approval of the Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 262(4) Course ID:005185
Commercial Drafting
Examines commercial drafting building codes, building structure, materials, and structural drawing and detailing. Emphasizes calculations to determine appropriate structural members. Pre-requisite: CAD 120 with a grade of C or better or Approval of the Instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CAD 291(2) Course ID:004063
Special Problems
 Allows the student to gain intermediate experience in their perspective fields through projects and tasks assigned by the instructor based on applications the student may one day experience as a professional. Sets the foundation for more in-depth projects that will be included in the student's future portfolio. Focuses on various assignments and curriculum determined by the program instructor. Pre-requisite: Permission of the Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

CAD 292(4) Course ID:005188
Department Consent Required
Industrial Applications
Emphasizes the development of a portfolio of mechanical drawings specific to the occupational opportunities in specific geographical locations. Focuses on various assignments and curriculum determined by the program instructor. Pre-requisite: Approval of instructor. Lecture: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical
CAR 126(3) Course ID:001152
Intro to Construction
Provides a discussion of the different employment opportunities of carpentry-related careers within the construction industry including different construction systems and methods as well as basic management of a construction project. Emphasizes the different building materials and the correct use of hand and power tools. Introduces the application of information about the properties of concrete, vertical piers and column form systems, on grade curb forms, horizontal beam forms, fireproofing, and material estimating. Lecture: 3 credits (45 contact hours).
Components: Attributes: Technical
CAR 127(1) Course ID:001153
Intro to Construction - Lab
Permits students to research different employment opportunities of carpentry-related careers. Introduces the student to different construction systems and methods as well as practice basic management methods of a construction project. Permits student to become familiar with common building materials and the correct use of hand and power tools. Implements shop and job-site safety. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical
CAR 190(3) Course ID:001158
Light Frame Construction I
Emphasizes methods of floor, wall and stair framing, layout and construction. Provides discussion of industry safety standards and building codes. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical
CAR 191(2) Course ID:001159
Light Frame Const. I-Lab
Permits the student to practice floor, wall, and stair framing layout and construction techniques including the implementation of building codes and industry safety standards during lab or job-site practice. Co-requisite: CAR 190. Laboratory: 2 credits (60 contact hours).
Components: Laboratory Attributes: Technical
CAR 140(3) Course ID:001154
Surveying & Foundations
Enables the student to become familiar with construction surveying methods, site layout procedures and materials used in the construction of foundation systems as well as discussion on the use of the builders level, transit and laser levels. Covers the characteristics of concrete, excavation procedures, forming methods and material estimating. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical
CAR 141(2) Course ID:001155
Surveying & Foundations-Lab
Familiarizes the student with construction surveying methods, site layout procedures and materials used in the construction of foundation systems as well as the application of the builders level, transit and laser levels. Covers the application of concrete procedures, excavation procedures, forming methods and material estimating. Co-requisite: CAR 140. Laboratory: 2 credits (60 contact hours).
Components: Laboratory Attributes: Technical
CAR 151(2) Course ID:001157
Concrete Formwork
Introduces the carpentry student to heavy and commercial concrete form construction methods. Provides for the application of information about the properties of concrete, forming, concrete wall form systems, above grade floor systems, vertical piers and column form systems, on grade curb forms, horizontal beam forms, fireproofing, and material estimating. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical
CAR 191(2) Course ID:001159
Light Frame Const. II-Lab
Permits the student to practice floor, wall, and stair framing layout and construction techniques including the implementation of building codes and industry safety standards during lab or job-site practice. Co-requisite: CAR 190. Laboratory: 2 credits (60 contact hours).
Components: Laboratory Attributes: Technical
CAR 198(1 - 6) Course ID:005344
Instructor Consent Required
Special Topics in Carpentry
Includes various Construction Carpentry Technology topics, issues and trends. Topics may vary semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours. Pre-requisite: Consent of Instructor. Lecture: 1-6 credits (15-90 contact hours), Laboratory: 1-6 credits (30-180 contact hours).
Components: Lecture Attributes: Technical
CAR 199(2 - 4) Course ID:016145
Co-op in Construction I
Co-op in Construction I
Refines the techniques and skills taught in the previous carpentry courses. Provides supervised on-the-job experience related to the student’s educational and career training objectives. Pre-requisite: ISX 100 and/or permission from program Coordinator. Co-op: 2-0-4.0 credits (150-300 contact hours).
Components: Co-Op Attributes: Technical
CAR 200(3) Course ID:001162
Light Frame Const. III-Lab
Provides an opportunity for students to perform basic applications of the concepts of interior and exterior finish materials and methods of installation. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical
CAR 201(2) Course ID:001163
Light Frame Const. IV-Lab
Provides an opportunity for students to perform basic applications of the concepts of interior and exterior finish materials and methods of installation. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical
CAR 211(2) Course ID:001165
Light Frame Const. III-Lab
Provides an opportunity for students to perform basic applications of the concepts of interior and exterior finish materials and methods of installation. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical
CAR 270(3) Course ID:007299
Green Building
Integrates principles of green building technologies and methods of sustainable construction. Emphasizes green materials used in the construction of buildings along with alternative and/or renewable energy systems. Introduces Leadership in Energy and Environmental Design (LEED) and the National Green Building Standard (NBGS) rating systems for the certification process of green buildings. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical
CAR 298(2) Course ID:001166
Practicum in Construction
Refines the techniques and skills taught in the previous carpentry courses. Provides supervised on-the-job experience related to the student’s educational and career training objectives. Practicum can be performed on the college campus with work assignments supervised by your program coordinator. Consists of a minimum of 150 contact hours. Two credit hours will be granted after completion. Students participating in the Practicum do not receive compensation as in the co-op program. Pre-requisite: ISX 100 and/or Permission from program Instructor. Practicum: 2 credits (150 contact hours).
Components: Practicum Attributes: Technical
CAR 299(2) Course ID:001167
Co-op in Construction
Refines the techniques and skills taught in the previous carpentry courses. Provides a supervised on-the-job experience related to the students educational and career training objectives. The program will consist of a minimum of 150 contact hours. 2.0 credit hours will be granted after completion. Pre-requisite: ISX 100 and/or permission from program Instructor. Co-op: 2 credits (150 contact hours).
Components: Co-Op Attributes: Technical

CAR 2001(1) Course ID:016152
Light Frame Construction III - Interior
Presents the concepts of interior finish materials and methods of installation. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CAR 2002(1) Course ID:016153
Light Frame Construction III - Exterior
Presents the concepts of exterior finish materials and methods of installation. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CAR 2003(1) Course ID:016154
Light Frame Construction III - Scheduling
Presents the concepts of interior and exterior finish materials and methods of installation. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

CAR 2011(1) Course ID:016155
Light Frame Construction III Lab Interior
Provides an opportunity for students to perform basic applications of the concepts of interior finish methods for light frame construction. Co-requisite: CAR 2001, Pre-requisite OR Co-requisite: CAR 2001. Laboratory: 1.0 credits (30 contact hours).
Components: Laboratory

CAR 2012(1) Course ID:016156
Light Frame Construction III Lab Exterior
Provides an opportunity for students to perform basic applications of the concepts of exterior finish methods for light frame construction. Co-requisite: CAR 2002, Pre-requisite OR Co-requisite: CAR 2002. Laboratory: 1.0 credits (30 contact hours).
Components: Laboratory

CDH Community Dental Health

CDH 110(3) Course ID:016830
Dental Health Communication Skills
Provides an overview of oral health communication, oral health literacy, and patient assessment interviewing skills for the Community Dental Health Coordinator. Emphasizes impact of oral health literacy on one’s health. Includes communication strategies, verbal and nonverbal communication skills. Covers motivational interviewing, human behaviors, and health concepts emphasizing oral health. Incorporates patient assessment, feedback, education, and behavior change interventions for dental patients. Pre-requisite: Graduate or current enrollment in Commission on Dental Accreditation (CODA) accredited dental hygiene program or KCTCS dental assisting program OR a certified dental assistant OR a registered dental assistant with 5 years experience OR consent of CDHC Program Coordinator. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

CDH 115(3) Course ID:016831
Dental Health Coordination, Documentation, Reporting, and Finance
Provides an overview of coordination, documentation and reporting approaches for working with families as well as individuals. Includes family assessment, case documentation and overview of the services system. Covers health care finance, the referral process and components of case management. Pre-requisite: Graduate or current enrollment in Commission on Dental Accreditation (CODA) accredited dental hygiene program or KCTCS dental assisting program OR a certified dental assistant OR a registered dental assistant with 5 years experience OR consent of CDHC Program Coordinator. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

CET Civil Engineering Technology

CET 150(3) Course ID:004703
Civil Engineering Graphics
This course provides the opportunity for the student to learn the basic techniques necessary to generate and understand typical civil engineering working drawings. The student will develop graphic communication skills using current industry standard software. Pre-requisite: CAD 100. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture Attributes: Technical

CET 200(3) Course ID:004704
Civil Engineering Materials
The course will provide a practical look at current practice in the use of materials for civil engineering applications. Students will learn test procedures, design considerations, and overall evaluation methods for these materials. The course will include the study of soils, aggregates, concrete, and asphalt cement. Pre-requisite: Consent of Instructor. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture Attributes: Technical

CET 210(3) Course ID:004705
Infrastructure Analysis and Design
Covers infrastructure for civil engineering technology students, including different types of building loads and their effect upon the various materials used by architects, engineers and technologists. Introduces infrastructure construction techniques utilizing applicable materials and methods. Utilization of industry manuals, specifications, and computer programs to familiarize the student with current technology. Pre-requisite: Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical

CHE Chemistry

CHE 120(3) Course ID:000237
Chemistry in Society
Introduces non-science majors to the main concepts and applications of chemistry in our society. (Math ACT 18 or higher) OR (Completion of quantitative reasoning co-requisite course). Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: SN - Science, Course Also Offered in Modules

CHE 125(1) Course ID:006172
Chemistry in Society Laboratory
Reinforces concepts covered in CHE 120 and introduces scientific inquiry through selected experiments. Pre-requisite: OR Co-requisite: CHE 120. Laboratory: 1 credit (45 contact hours) (45:1 ratio).
Components: Laboratory Attributes: SL - Science Laboratory
CHE 130(3) Course ID:0017266
Introductory General and Biological Chemistry
Prepares students to understand the fundamental principles of general, organic, and biological chemistry. Pre-requisite: (Math ACT 19 or higher) OR (Completion of MAT 085, MAT 110, MAT 116, MAT 126, or MAT 150 with a grade of “C” or better). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science Laboratory

CHE 135(1) Course ID:0017260
Introductory General and Biological Chemistry Laboratory
Reinforces concepts covered in CHE 130 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments pertaining to chemical and physical properties, quantitative analysis, qualitative analysis, and the reactions of organic and biomolecules. Pre-requisite or Co-requisite: CHE 130 concurrent enrollment OR CHE 130 with a grade of “C” or better. Laboratory: 1 credit hour (30 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

CHE 140(3) Course ID:000224
Introductory General Chemistry
Introduces topics in general chemistry, including properties of matter, stoichiometry, gases, atomic structure, bonding, acids and bases, oxidation and reduction, and nuclear chemistry. Intended for students interested in a one-semester course in general chemistry and recommended for students seeking careers in allied health fields. Pre-requisite: (Math ACT 19 or higher) OR (Completion of MAT 085, MAT 110, MAT 116, MAT 126, or MAT 150 with a grade of “C” or better). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science Laboratory

CHE 145(1) Course ID:000239
Introductory General Chemistry Laboratory
Reinforces concepts covered in CHE 140 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments dealing with chemical and physical properties, qualitative analysis, and quantitative analysis. Pre-requisite or Co-requisite: CHE 140. Laboratory: 1 credit (45 contact hours, 45:1 ratio).
Components: Laboratory
Attributes: SL - Science Laboratory

CHE 150(3) Course ID:000226
Introduction to Organic and Biological Chemistry
Continues the sequence begun in CHE 140. Introduces topics in organic chemistry and biochemistry. Introduces organic functional groups, their reactions, and the chemistry of proteins, nucleic acids, carbohydrates, and lipids. Pre-requisite: CHE 140 with a grade of C or better Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science Laboratory

CHE 155(1) Course ID:006173
Introduction to Organic and Biological Chemistry Laboratory
Reinforces concepts covered in CHE 150 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments dealing with the preparation, characterization, and purification of organic compounds. Pre-requisite: CHE 140 and CHE 145. Pre-requisite or Co-requisite: CHE 150. Laboratory: 1 credit (45 contact hours, 45:1 ratio).
Components: Laboratory
Attributes: SL - Science Laboratory

CHE 160(2) Course ID:000238
Preparation for General College Chemistry
Prepares students for CHE 170. Introduces vocabulary and nomenclature and provides students with practice in dimensional analysis, stoichiometry, and other critical skills. Offered on a Pass/Fail basis only. Pre-requisite: (Math ACT 19) OR (Intermediate Algebra with a grade of C or better). Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Other

CHE 170(4) Course ID:000225
General College Chemistry I
Focuses on major chemical topics, including stoichiometry, atomic structure, properties of matter and the relationship between molecular structure and chemical behavior. Emphasizes solving of mathematical problems which illustrate the principles of chemistry. Designed for students in the sciences, engineering, and pre-professional programs. Pre-requisite: (ACT math score of 22) OR (College Algebra with a grade of “C” or better) OR (CHE 130 OR CHE 140 with a grade of “C” or better) OR (Appropriate score on chemistry placement exam). Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: SN - Science Laboratory

CHE 175(1) Course ID:000240
General College Chemistry Laboratory I
Reinforces concepts covered in CHE 170 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments. Emphasizes both quantitative and qualitative techniques. Pre-requisite or Co-requisite: CHE 170. Laboratory: 1 credit (45 contact hours, 45:1 ratio).
Components: Laboratory
Attributes: SL - Science Laboratory, SN - Science

CHE 180(4) Course ID:000227
General College Chemistry II
Continues CHE 170. Focuses on major chemical topics, including acid-base chemistry, kinetics, thermodynamics, and chemical equilibrium. Emphasizes solving of mathematical problems which illustrate the principles of chemistry. Designed for students in the sciences, engineering, and pre-professional programs. Pre-requisite: (CHE 170 with a grade of “C” or better) AND (Completion of College Algebra Readiness course or higher with a grade of “C” or better). Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: SN - Science Laboratory

CHE 185(1) Course ID:000241
General College Chemistry Laboratory II
Reinforces concepts covered in CHE 180 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments. Emphasizes both quantitative and qualitative techniques. Pre-requisite: CHE 175 with a grade of C or better. Pre-requisite or Co-requisite: CHE 180. Laboratory: 1 credit (45 contact hours, 45:1 ratio).
Components: Laboratory
Attributes: SL - Science Laboratory

CHE 270(3) Course ID:000230
Organic Chemistry I
Presents the fundamental principles of organic chemistry. Emphasizes the structures and properties of carbon-containing compounds. Introduces organic reactions, their mechanisms, and applications to synthesis. Pre-requisite: CHE 180 with a grade of C or better. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science Laboratory

CHE 275(2) Course ID:000231
Organic Chemistry Laboratory I
Introduces common techniques used in the laboratory for purification, separation, identification, and reactions of organic compounds. Pre-requisite: CHE 185 with a grade of C or better. Pre-requisite or Co-requisite: CHE 270. Laboratory: 2 credit (60 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

CHE 280(3) Course ID:000232
Organic Chemistry II
Presents further applications of the principles of organic chemistry. Continues the study of organic reactions, their mechanisms, synthesis and modern spectroscopic techniques. Pre-requisite: CHE 270 with a grade of C or better. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science Laboratory

CHE 285(2) Course ID:000233
Organic Chemistry Laboratory II
Explores the synthesis, purification, and characterization of organic compounds in the laboratory. Pre-requisite: CHE 275 with a grade of C or better. Pre-requisite or Co-requisite: CHE 280. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: SL - Science Laboratory

CHE 290(1 - 3) Course ID:0006175
Instructor Consent Required
Selected Topics in Chemistry: (Topic)
Selects a topic in chemistry chosen by the instructor. Topics may vary from semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours. Pre-requisite: Consent of instructor. Lecture: 1-3 credits (15-45 contact hours).
Components: Lecture

CHE 295(1 - 3) Course ID:0006176
Instructor Consent Required
Laboratory Research in Chemistry: (Topic)
Introduces non-science majors to selected topics in chemistry through selected experiments. Emphasizes the structures and properties of carbon-containing compounds. Introduces organic reactions, their mechanisms, and applications to synthesis. Pre-requisite: CHE 180 with a grade of “C” or better) AND (Completion of College Algebra Readiness course or higher with a grade of “C” or better). Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: SN - Science Laboratory

CHE 1201(0.75) Course ID:0006126
Fundamentals
Introduces non-science majors to the fundamentals and applications of chemistry in our society. Pre-requisite: (Completion of one developmental math course above Pre-Algebra with a grade of “C” or better) OR (College level math ACT score) OR equivalent. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

CHE 1202(0.75) Course ID:0006127
Intro to Organic & Biochemistry
Introduces non-science majors to the fundamentals and applications of organic and biochemistry in society. Pre-requisite: CHE 1201. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

CHE 1203(0.75) Course ID:0006128
Selected Topics in Chemistry and Culture
Introduces non-science majors to selected topics in chemistry and culture. Pre-requisite: CHE 1201 or 1202. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

CHE 1204(0.75) Course ID:0006129
Special Topics: Fields of Chemistry
Introduces non-science majors to different fields in chemistry through applied special topics. Pre-requisites: CHE 1201, 1202, or 1203. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

CHE 1205 Course ID:0006130
Preparation for Organic Chemistry
Prepares students for CHE 180. Introduces vocabulary and nomenclature and provides students with practice in dimensional analysis, stoichiometry, and other critical skills. Offered on a Pass/Fail basis only. Pre-requisite: (Math ACT 19) OR (Intermediate Algebra with a grade of C or better). Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Other
CHW 101(1) Course ID:017382
Communication for Health Worker
Teaches effective and purposeful communication by
listening carefully and communicating respectfully in ways
that help build trust and rapport with clients, community
members, colleagues and other professionals.
Considers effective communication to include a mix of
listening, speaking, gathering and sharing information,
and resolving conflict. Explains the Community Healthcare
Workers roles, responsibilities, and limits with regards
to protecting client privacy and confidentiality. Lecture 1
credit (15 contact hours).
Components: Lecture
Attributes: Technical

CHW 102(1) Course ID:017383
Organizational and Community Outreach
Explores the use of a variety of outreach methods, such as
phone calls, in-person conversations, group presentations,
distribution of print and electronic information, and
social media, and effectively written reports that will be
sent to supervisors and patients as needed. Provides
knowledge on effective outreach based on learning
about community needs and strengths, knowledge about
available resources, and sensitivity to personal and cultural
dynamics that affect behavior and relationships. Lecture: 1
credit (15 contact hours).
Components: Lecture
Attributes: Technical

CHW 103(1) Course ID:017384
Advocacy
Teaches advocacy and capacity building that can help
create conditions and build relationships that lead to better
health. Explores capacity building requirements such as
planning, cooperation, and commitment. Examines working
to change public awareness, organizational rules, institutional practices, or public policy.
Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

CHW 104(1) Course ID:017385
Health Coaching
Teaches education for healthy behavior change
including providing people with information, tools, and
encouragement to help them improve their health and stay
healthy over time. Explores working with clients, family or
community members, and with providers to address issues
that may limit opportunities for healthy behavior. Examines
the Community Healthcare Workers role as educator and
coach, using a variety of techniques to motivate and
support behavior change to improve health. Lab: 1 credit
hour (30 contact hours).
Components: Laboratory

CHW 105(1) Course ID:017386
Organization for Community Health Worker
Teaches how to promote coordinated and effective
services by documenting their work activities, including
writing summaries of client and community assessments.
Examines presenting information to agency colleagues
or community partners about their clients and issues
they face. Explores the use of computer technology and
communication in English. Discusses alternative language
arrangements utilizing valuable linguistic capacities,
cultural experience, and community relationships. Lecture: 1
credit (15 contact hours).
Components: Lecture
Attributes: Technical

CHW 106(1) Course ID:017387
Legal and Ethics for Community Health Worker
Teaches how to handle ethical challenges as Community
Healthcare Workers address legal and social challenges
facing the clients and the communities they serve. Discusses
cient confidentiality and privacy rights in the context
of employer and legal reporting requirements. Explores
balancing care for clients with care for self. Examines
following agency rules and the regulations governing public
and private resources while exercising creativity in helping
community members meet their individual and family needs.
Lecture 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

CIS 2301(0.9) Course ID:005848
Word Processing Level 3
Uses advanced functions of word processing. Includes
working with complex documents and creating and
preparing data for distribution on the Web. Pre-requisite:
(CIS 130 or CIS 1301) or consent of instructor. Lecture: 0.9
credit (13.5 contact hours).
Components: Lecture

CIS 2302(0.9) Course ID:005849
Spreadsheets Level 3
Uses advanced functions of spreadsheets. Includes
working with complex spreadsheets and the creation and
preparation of data for distribution on the Web. Pre-
requisite: (CIS 130 or CIS 1302) or consent of instructor.
Lecture: 0.9 credits (13.5 contact hours).
Components: Lecture

CIS 2303(0.9) Course ID:005850
Databases Level 3
Uses advanced functions of databases. Includes working
with complex databases and the creation and preparation
of data for distribution on the Web. Pre-requisite: (CIS 130
or CIS 1303) or consent of instructor. Lecture: 0.9 credit
(13.5 contact hours).
Components: Lecture

CIS 2304(0.3) Course ID:005851
Presentation Software Level 3
Uses advanced functions of presentation software.
Includes working with complex presentations and the
creation and preparation of data for distribution on the
Web. Pre-requisite: (CIS 130 or CIS 1304) or consent
of instructor. Lecture: 0.3 credit (4.5 contact hours).
Components: Lecture

CIT 105(3) Course ID:004710
Introduction to Computers
Provides an introduction to the computer and the
convergence of technology as used in today’s global
environment. Introduces topics including computer
hardware and software, file management, the Internet,
e-mail, the social web, green computing, security and
computer ethics. Presents basic use of application,
programming, systems, and utility software. Basic
keyboarding skills are strongly recommended. Pre-
requisite: RDG 20 or Consent of instructor. Lecture: 3.0
credits (45 contact hours).
Components: Lecture

CIT 120(3) Course ID:016259
Introduction to Game Development
Presents an overview of the game development process
including game development history, platforms, goals,
genres, players, story and character development, gameplay,
levels, interfaces, audio, development processes, development
team roles, marketing, and maintenance. Offers students the opportunity to play
and analyze games facilitating discussion on game design and
function. Completion of partial game design will occur. Pre-
requisite: CIT 105 OR IMD 100 OR Consent of Instructor.
Co-requisite: CIT221 OR IMD221. Lecture: 3.0 credits (45
contact hours).
Components: Lecture

CIT 125(3) Course ID:006901
Intro to Digital Maps
Provides basic theories and concepts of geographical
information systems including basic-GIS capabilities, data
analysis, data types, coordinate systems, cartography
and mapping concepts. Introduces GIS software using
industry-specific applications and technology to provide
a conceptual base to build expertise in GIS. Pre-requisite:
CIT 105 OR Consent of Instructor. Lecture: 3.0 credits (45
contact hours).

CIT 130(3) Course ID:004713
Productivity Software
Utilizes current word processing, spreadsheet, database,
and presentation application software to solve common
business problems. Covers basic features of each software
application. Pre-requisite: CIT 105 OR OST 105 OR IMD
100 OR Consent of Instructor. Lecture: 3.0 credits (45
contact hours).

CIT 140(3) Course ID:004714
JavaScript I
Provides students with an overview of the JavaScript
scripting language. Includes coding, testing, and
debugging JavaScript programs; using variables,
operators, and data types; creating dynamic web pages
using JavaScript; controlling the behavior of forms, buttons,
and text elements; and using control structures, pattern
matching, objects, and application scripts. Pre-requisite:
CIT 120 OR CTH 150 or CIT 155 or Consent of
Instructor. Lecture: 3.0 credits (45 contact hours).

CIT 141(3) Course ID:005037 PHP I
Introduces students to fundamental programming concepts
using the PHP programming language. Includes data types,
control structures, simple data structures, error-handling,
modular programming, and information in file processing.
Pre-requisite: CIT 120 OR Consent of Instructor. Lecture:
3.0 credits (45 contact hours).

CIT 142(3) Course ID:006902 C++ I
Introduces students to fundamental programming concepts
using the C++ programming language. Includes data types,
control structures, simple data structures, error-handling,
object-oriented programming, graphical user interfaces,
and modular programming. Pre-requisite: CIT 120 OR
Consent of Instructor. Lecture: 3.0 credits (45 contact
hours).

CIT 143(3) Course ID:006247 C# I
Introduces students to fundamental programming concepts
using the C# programming language. Includes data types,
control structures, simple data structures, error-handling,
object-oriented programming, graphical user interfaces,
and modular programming. Pre-requisite: CIT 120 OR
Consent of Instructor. Lecture: 3.0 credits (45 contact
hours).
<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIT 144(3)</td>
<td>Course ID:006190</td>
<td>Python I: Introduces students to fundamental programming concepts using the Python programming language. Includes data types, control structures, simple data structures, error-handling, modular programming, object-oriented programming, graphical user interfaces and file processing. Pre-requisite: CIT 120 or Consent of Instructor. Lecture: 3 credits (45 contact hours). Attributes: Technical</td>
</tr>
<tr>
<td>CIT 145(3)</td>
<td>Course ID:004715</td>
<td>Perl I: Provides students with an overview of the PERL scripting language. Includes coding, testing, and debugging PERL programs; using variables, operators, and data types; and using control structures, pattern matching, objects, and application scripts. Pre-requisite: CIT 120 OR Consent of the Instructor. Lecture: 3.0 credits (45 contact hours). Components: Lecture Attributes: Technical</td>
</tr>
<tr>
<td>CIT 146(3)</td>
<td>Course ID:017099</td>
<td>Swift I: Introduces students to fundamental programming concepts using the Swift programming language. Includes data types, data structures, error-handling, modular programming, and using Xcode. Pre-requisite: CIT 120 OR Consent of Instructor. Lecture: 3 credit hours (45 contact hours). Attributes: Technical</td>
</tr>
<tr>
<td>CIT 147(3)</td>
<td>Course ID:006903</td>
<td>Programming I: Language: Introduces students to fundamental programming concepts using an industry-specific or emerging programming language. Includes data types, control structures, simple data structures, error-handling, modular programming, information and file processing, and uniqueness of the language used in the course. Pre-requisite: CIT 120 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours). Components: Lecture Attributes: Technical</td>
</tr>
<tr>
<td>CIT 148(3)</td>
<td>Course ID:004716</td>
<td>Visual Basic I: Introduces students to fundamental programming concepts using the Visual Basic programming language. Includes data types, control structures, simple data structures, error-handling, modular programming, event-driven programming, graphical user interfaces, and file processing. Pre-requisite: CIT 120 OR Consent of Instructor. Lecture: 3 credits (45 contact hours). Attributes: Lecture Attributes: Technical</td>
</tr>
<tr>
<td>CIT 149(3)</td>
<td>Course ID:004717</td>
<td>Java I: Introduces students to fundamental programming concepts using the Java programming language. Includes data types, control structures, simple data structures, error-handling, object-oriented programming, graphical user interfaces, and modular programming. Pre-requisite: CIT 120 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours). Components: Lecture Attributes: Technical</td>
</tr>
<tr>
<td>CIT 150(3)</td>
<td>Course ID:004718</td>
<td>Internet Technologies: Provides students with a study of traditional and emerging Internet technologies. Covers topics including Internet fundamentals, Internet applications, Internet delivery systems, and Internet client/server computing. Provides a hands-on experience and some rudimentary programming in an Internet environment. Pre-requisite: CIT 105 OR Consent of Instructor. Pre-requisite Or Co-requisite: CIT 120. Lecture: 3.0 credits (45 contact hours). Components: Lecture Attributes: Course Also Offered in Modules, Technical</td>
</tr>
<tr>
<td>CIT 151(3)</td>
<td>Course ID:007390</td>
<td>Social Media I: Introduces students to the study of social media. Covers topics including the uses, basic tools, and impact of social media upon society. Examines the benefits for business to leveraging the use of social media as well as employing social media policy. Pre-requisite: Digital Literacy or Consent of Instructor. Lecture: 3.0 credits (45 contact hours). Components: Lecture Attributes: Course Also Offered in Modules, Technical</td>
</tr>
<tr>
<td>CIT 152(3)</td>
<td>Course ID:007391</td>
<td>Social Media Tools and Technologies: Introduces students to web-based social media tools. Explores and researches online applications, social networks, and web branding. Develops skills to leverage social media applications and niche markets to increase business presence. Pre-requisite: CIT 150 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours). Components: Laboratory Attributes: Technical</td>
</tr>
<tr>
<td>CIT 155(3)</td>
<td>Course ID:006904</td>
<td>Web Page Development: Introduces web page design through the use of HTML and CSS. Uses text and/or web editors to create web documents with various formats and page layouts, multimedia, tables and forms. Emphasizes W3C web design and accessibility standards. Pre-requisite: CIT 105 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours). Components: Lecture Attributes: Technical</td>
</tr>
<tr>
<td>CIT 157(3)</td>
<td>Course ID:006905</td>
<td>Web Site Design and Production: Introduces web site production processes with particular emphasis on design involving layout, navigation, interactivity, and using web production software. Pre-requisite: CIT 105 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours). Attributes:</td>
</tr>
</tbody>
</table>
CIT 204(3) Course ID:016721
VMware Optimize and Scale
Provides advanced skills for configuring and maintaining a highly available and scalable virtualization infrastructure. Utilizes techniques to optimize resources in a virtualized data center to support infrastructure as a service (IaaS) architectures. Satisfies the VMware Certified Professional/Data Center Virtualization (VCP-DCV) course requirement. Pre-requisite: CIT 203 or Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical

CIT 205(3) Course ID:007297
Cloud Infrastructure and Services
Provides a comprehensive introduction to cloud computing deployment and service models, cloud infrastructure, and the key considerations in migrating to cloud computing. Examines the required technology essentials across all domains including server, storage, networking, applications, and databases to help develop a strong understanding of virtualization and cloud computing technologies. Pre-requisite: (CIT 201 and CIT 203) or consent of instructor. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical

CIT 206(3) Course ID:017347
Amazon Web Services Practitioner
Introduces the fundamentals of the services available in Amazon Web Services (AWS). Teaches an overall understanding of AWS Cloud, independent of specific technical roles. Uses a hands-on approach to solution development using actual AWS cloud services. Provides a detailed overview of cloud concepts, AWS services, security, architecture, pricing, and support. Prepares students for the AWS Certified Cloud Practitioner exam. Pre-requisites: CIT 170 AND CIT 161 OR CIT 160) or consent of the instructor. Integrated Lecture/Lab 3.0 credits (60 contact hours).

Components: Integrated Laboratory, Integrated Lecture
Attributes: Technical

CIT 207(3) Course ID:017414
Amazon Web Services Architecting
Covers building IT infrastructure on Amazon Web Services (AWS). Teaches how to optimize use of the AWS platform by understanding AWS services and how those services fit into cloud-based solutions. Teaches how to develop and maintain a well-architected AWS cloud solution. Covers cloud solution reliability, efficiency, and cost-optimization strategies. Emphasizes best practices for the AWS cloud including the process of architecting optimal solutions. Offers a hands-on development approach to solution development using actual AWS cloud services. Pre-requisites: CIT 206 AND CIT 167, or consent of instructor. Integrated Lecture/Lab: 3 credits (50 contact hours).

Components: Integrated Laboratory, Integrated Lecture
Attributes: Technical

CIT 209(4) Course ID:015645
Scaling Networks
Covers the architecture, components, and operations of routers and switches in a larger and more complex network. Helps students learn how to configure routers and switches for advanced functionality. Helps students to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Helps students to develop the knowledge and skills needed to implement DHCP and DNS operations in a network. Pre-requisite: CIT 167 or Consent of instructor. Lecture: 4.0 credits (60 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 212(4) Course ID:004723
Connecting and Scaling Networks
Covers WAN technologies and network services required by converged applications in a complex network. Enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Helps students to develop the knowledge and skills needed to implement virtual private network (VPN) operations in a complex network. Develops skills in network security using OSPFv2, ACLs, NAT. Covers network automation, troubleshooting and virtualization. Pre-requisite: CIT 209 OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 213(3) Course ID:006192
Microsoft Client Configuration
Covers installation and configuration of the current Microsoft Windows client operating system. Helps prepare students for exams in the Microsoft certification exam series. Pre-requisite: (CIT 111 AND (CIT 160 OR CIT 161)) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 214(3) Course ID:006914
Microsoft Server Configuration
Provides students with the knowledge and skills to install, configure and administer a network server infrastructure including DNS, DHCP, Hyper-V, including the design and implementation of an Active Directory environment. Helps to implement and configure secure network access, implement fault tolerant storage technologies, enable network technologies most commonly used with Windows Servers and IP-enabled networks, configure an Active Directory environment, and work with virtual drives and devices. Assists in preparing students for various Microsoft certification exam series. Pre-requisite: (CIT 111 AND (CIT 160 OR CIT 161)) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 215(3) Course ID:015661
Microsoft Server Administration
Covers the skills needed to maintain and administer a Windows Server 2012 environment, including user and group management, network access, and data security at an intermediate level. Helps prepare students to implement a core Windows Server infrastructure in an enterprise environment (second in a series of three courses). Pre-requisite: CIT 214 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 216(3) Course ID:015648
Microsoft Server Advanced Services
Covers the advanced configuration tasks necessary to deploy, manage, and maintain a Windows Server environment, including fault tolerance, certificate services, and identity federation. Helps prepare students to implement a core Windows Server 2012 infrastructure in an enterprise environment (third in a series of three courses). Pre-requisite: CIT 214 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 217(3) Course ID:004724
UNIX/Linux Administration
Developed in 1986, the UNIX operating system shaped the development of the Internet and is still used extensively in servers, workstations, and mobile devices. Learn the fundamental skills necessary to install UNIX/Linux and maintain a UNIX/Linux system on a day-to-day basis. Pre-requisite: (CIT 111 AND (CIT 160 OR CIT 161)) OR Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 218(3) Course ID:004725
UNIX/Linux Net Infrastructure
Establishing secure networking environments is a key strength of the UNIX/Linux operating system. Explores naming, messaging, file transfer, remote login, routing, address assignment, distributed file systems, web, and email services in a standard UNIX/Linux server environment. Pre-requisite: CIT 217 OR Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical

CIT 219(3) Course ID:006915
Internet Protocol
Provides an in-depth exploration of the components of the TCP/IP protocol suite and the associated underlying technologies required to support them. Includes design, installation, configuration, management, and troubleshooting of TCP/IP networks. Pre-requisite: (CIT 160 OR CIT 163 OR CIT 162) OR Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical

CIT 221(3) Course ID:006916
Computer Graphics
Introduces basic computer graphics with an emphasis on graphics for game design. Instructs students in practical aspects of graphics such as color, ray tracing, rasterization, shading, mapping, light, and shadow. Pre-requisite: CIT 105 OR IMD 100 OR Consent of Instructor. Co-requisite: CIT 124 OR IMD 124. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Course Equivalents: IMD 221
Attributes: Technical

CIT 222(3) Course ID:016260
3D Modeling for Video Games
Instructs students in the use of industry-standard 3D modeling software specific to the video-game industry. Emphasizes both architectural and character modeling. Familiarizes the student with key 3D modeling concepts and methods, workflow, and the creation and preparation of 3D assets for use specifically in a video-game application. Allows students to create a variety of 3D assets. Pre-requisite: CIT/IMD 221 OR Consent of Instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture
Course Equivalents: IMD 222
Attributes: Technical

CIT 223(3) Course ID:006917
3D Animation for Video Games
Exposes students to the specialized process of animating 3D assets for gaming applications. Familiarizes students with animating both organic and inorganic assets, lighting scenes, rendering and producing cut-scenes, and preparing character assets for in-game motion. Allows students to acquire the necessary skills and techniques to integrate audio with their animations using basic sound-engineering software and processes. Pre-requisite: CIT/IMD 124 AND CIT/IMD 222 OR Consent of Instructor. Co-requisite: CIT 273 OR IMD 273. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Course Equivalents: IMD 223
Attributes: Technical

CIT 225(3) Course ID:006918
GIS Data Analysis
Explores Geographical Information System extensions. Introduces and identifies popular advanced extensions used for image analysis, spatial analysis, and 3D analysis. Collection and analysis of field data utilizing GPS devices and data collection applications. Pre-requisite: CIT 125 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CIT 229(3) Course ID:006919
Selected Topics in GIS
Explores selected topics in Geographical Information Systems such as homeland security, agriculture, government applications, remote sensing, spatial modeling, GPS techniques, or cartography. (Course may be repeated with different topics to a maximum of six credit hours.) Pre-requisite: CIT 125 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical
CIT 232(3) Course ID:006193
Help Desk Operations
Introduces a variety of tools and techniques to provide user support in help desk operations. Explores help desk concepts, customer service skills, troubleshooting problems, writing for end users, help desk operations and software, needs analysis, facilities management, and other topics related to end user support. Pre-requisite: CIT 111 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 234(3) Course ID:004727
Advanced Productivity Software
Uses advanced functions of word processing, presentation, and email software. Includes working with complex documents creating and preparing data distribution on the web. Pre-requisite: CIT 130 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 236(3) Course ID:004728
Adv Data Organization Software
Uses advanced functions of databases and spreadsheets. Explores complex databases and spreadsheets for the creation and preparation of data distribution on the Web. Pre-requisite: CIT 130 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 237(3) Course ID:017021
iOS Programming
Introduces students to fundamental iOS mobile application development concepts. Prepares students to design, code, test, and publish iOS mobile applications for iOS platforms. Pre-requisite: CIT 146 OR Consent of Instructor. Lecture: 3 credit hours (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 238(3) Course ID:016862
Android Programming I
Introduces students to fundamental Android mobile application development concepts. Prepares students to design, code, test, and publish Android mobile applications for a variety of mobile device platforms. Includes secure coding learning modules for Java and Android. Pre-requisite: CIT 149 OR INF 120 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 241(3) Course ID:006920 PHP II
Explores the dynamic features of PHP and how it can interact to form sophisticated websites and dynamic feature rich content. Pre-requisite: CIT 141 OR Consent of Instructor. Lecture: 3.0 (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 242(3) Course ID:006921 C++ II
Introduces students to advanced programming concepts using C++. Includes advanced data structures, concurrency, innovative algorithms, advanced file processing, and topics that are unique to C++. Pre-requisite: CIT 142 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 243(3) Course ID:006248 C# II
Provides students with an extensive overview of designing and developing advanced object-oriented applications using the C# programming language. Includes advanced graphical user interfaces, event-driven programming, advanced data types and structures, concurrency, file and data base processing, mobile computing, and other advanced topics. Pre-requisite: CIT 143 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 244(3) Course ID:015649 Python II
Provides students with an extensive overview of designing advanced computer applications using the Python programming language. Includes graphical user interfaces, event-driven programming, modular programming, advanced object-oriented programming, advanced data types and structures, input validation, error-handling, database processing, and client/server programming. Pre-requisite: CIT 144 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 247(3) Course ID:006923 Programming II: Language
Introduces students to advanced programming concepts using an industry-specific or emerging programming language. Includes advanced features of the language studied, such as, advanced data structures, concurrency, innovative algorithms, advanced file processing, and topics that are unique to the language studied. Pre-requisite: CIT 147 (for the same programming language) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 249(3) Course ID:004729 Visual Basic II
Provides students with an extensive overview of designing advanced computer applications using the Visual Basic programming language. Includes graphical user interfaces, event-driven programming, modular programming, object-oriented programming, advanced data types and structures, input validation, error-handling, and file and database processing. Pre-requisite: CIT 148 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 250(3) Course ID:005208 Java II
Provides students with an extensive overview of designing and developing advanced object-oriented applications using the Java programming language. Includes input and output streams (file processing), polymorphism, inheritance, multithreading, recursion, and other advanced topics. Pre-requisite: CIT 149 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 251(3) Course ID:007392 Social Media II
Provides students with skills, knowledge, and experience to respond to the challenges of a rapidly changing world through the implementation of social media strategies. Examines social media plans for building social profiles, selecting appropriate audiences, and effective communication through identified social media tools. Covers additional trends, case studies, and research on the creation on utilization of web and social media technologies and practices. Pre-requisite: CIT 151 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

CIT 253(3) Course ID:005039 Data Driven Web Pages: (Topic)
Provides students with the knowledge and skills to design, implement, and manage a database-driven web site. Includes the study of databases and web servers in e-commerce, transaction processing, and client-side and server-side Web scripting. Includes the creation of a database-driven Web site. Pre-requisite: (CIT 150 OR CIT 155 OR CIT 157) AND CIT 170 AND Approved Level I Programming Language) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 255(3) Course ID:005104 Web Server Administration
Provides an in-depth study of the functions required to run a safe and stable web server. Considers multiple Web services on multiple platforms from installation to configuration, availability, and security. Requires hands-on experiences with web services. Pre-requisite: (CIT110 OR CIT115 OR CIT157) AND CIT124 OR CIT126 OR CIT262 AND CIT219 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 257(3) Course ID:006925 Applied Internet Technologies
Provides a framework for integrating the content of the Internet Technologies Web Programming track into a complete and functioning web site. Creates a portfolio of a fully functional web site to aid in student employment within the Web Programming field. Pre-requisite or Co-requisite: CIT 253 or Co-Requisite of CIT 255 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 258(3) Course ID:005211 Internet Technologies Seminar
Incorporates research, study, and discussion of current and emerging topics, issues, and trends in Internet technologies. Requires participation in class presentations, as well as individual and/or group projects involving Internet technologies. Pre-requisite or Co-requisite: CIT 253 or Co-Requisite of CIT 255 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 260(3) Course ID:004730 Network Hardware Installation and Troubleshooting
Provides students with the knowledge and skills necessary to design, install, configure, and troubleshoot cable systems and equipment used to connect a local area network. Pre-requisite: CIT 160 OR CIT 161 OR Consent of Instructor. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture

CIT 261(3) Course ID:005209 MS Active Directory Services
Provides students with the knowledge and skills necessary to install, configure, and administer Microsoft Windows Directory Services. Focuses on implementing Group Policy and understanding the Group Policy tasks required to centrally manage users and computers. Assists in preparing students for exams in the Microsoft certification exam series. Prerequisite: (CIT 111 AND (CIT 160 OR CIT 161)) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CIT 262(3) Course ID:005210 MS Network Infrastructure
Provides students with the knowledge and skills necessary to install, configure, manage, and support a network infrastructure using a Microsoft Windows server operating system. Assists in preparing students for exams in the Microsoft certification exam series. Pre-requisite: (CIT 111 AND (CIT 160 OR CIT 161)) OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical
Advanced Topics in Microsoft Windows: (Topic) Course ID:006246
Covers concepts and/or skills from special areas of interest in Microsoft Windows operating systems. Focus on specific topics that will vary from semester to semester at the discretion of the instructor. Pre-requisite: CIT 213 or consent of instructor. Lecture: 1-6 credits (15-90 contact hours).
Components: Lecture
Attributes: Technical

Microsoft Server Management Course ID:006194
Focuses on the concepts and skills required to manage and maintain Microsoft Windows Servers. Topics include configuration and management of storage solutions, deployment images, Hyper-V implementations, and Windows containers. Pre-requisite: CIT 262 OR Consent of Instructor. Lecture: 3 credit hours (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

MS Application Servers Course ID:006195
Focuses on the deployment, configuration and management of Microsoft servers that support users and applications, especially web servers, Remote Desktop servers, SharePoint servers and file servers. Pre-requisite: CIT 213 OR Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

UNIX/Linux Network Services Course ID:017561
Focuses on installing and managing network services in a UNIX/Linux environment. Pre-requisite: CIT 218 OR Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

Game Design Theory Course ID:016261
Introduces students to the experience-oriented standards and techniques of gaming on a digital platform. Includes hands-on conceptualization and writing of a game created by the student. Emphasizes creativity, player experiences and motivations, styles of play, types of games, character creation, world creation, and story-driven narrative within a video game. Offers students the opportunity to complete an industry-quality Game Design Document. Pre-requisite: CIT/IMD 124 OR Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

Game Production Course ID:016262
Provides students with the opportunity to produce a fully playable 3D video game using assets and materials created in previous courses. Offers students the opportunity to employ an industry-standard game engine to meld 3D content, audio, narrative, character, and environment into a professional and enjoyable video game experience. Pre-requisite: CIT/IMD 124 AND CIT/IMD 222 OR Consent of Instructor. Co-requisite: CIT 223 OR IMD 223. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: IMD 273
Attributes: Technical

Seminar in Game Development Course ID:016263
Encompasses the three phases of game design and development: conception, creation, and marketing in this project-oriented seminar. Requires participation in class presentations, individual and group projects, development of a game, and creation of a portfolio. Pre-requisite: CIT/IMD 223 AND CIT/IMD 273 OR Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: IMD 274
Attributes: Technical

Programming III: Language Course ID:006927
Introduces students to complex programming concepts using an industry-specific or emerging programming language. Includes complex features of the language not previously covered in Programming I and Programming II. Comprehensive projects will be developed that model work performed in a corporate environment. Pre-requisite: CIT 247 (for the same programming language) OR Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

Visual Basic III Course ID:006928
Provides students with the knowledge and skills to design, develop, and implement distributed Web client applications using the Visual Basic programming language. Includes advanced application and user interface design, custom libraries, ActiveX Objects, stored procedures, and distributed applications. Pre-requisite: CIT 248 OR Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

Computer Forensics Course ID:006929
Provides basic knowledge on methods and processes for computer forensics, intrusion detection, evidence collection, disk imaging, and report writing. Pre-requisite: CIT 180 OR Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

MS Windows OS Security Course ID:006930
Provides students with the knowledge and skills necessary to secure the Windows operating system. Pre-requisite: CIT 180 AND (CIT 214 OR CIT 262) OR Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

UNIX/Linux OS Security Course ID:006931
Provides students with the knowledge and skills necessary to secure the UNIX/Linux operating system and to utilize the UNIX/Linux operating system for security functions. Emphasizes use of freely available security tools. Pre-requisite: CIT 180 AND CIT 217 OR Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

Cisco OS Security Course ID:006932
Provides students with comprehensive understanding of network security concepts. Includes installation, troubleshooting and monitoring of network devices to maintain integrity, confidentiality and availability of data and devices. Covers implementation of hosts and perimeter edge device firewalls and defense in-depth prevention systems. Pre-requisite: CIT 167 OR CIT 212 OR Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

Network Security Course ID:006197
Provides students with the knowledge and skills necessary to understand and defend against a variety of computer and network attacks. Focuses on both the offensive techniques used to launch attacks and the defensive techniques required to defend computers and networks. Pre-requisite: (CIT 180 AND Level 1 Network Technologies Specialization Sequence) OR Consent of Instructor. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

Instructor Consent Required Course ID:004733
Internship
Provides on-the-job experience in computer and information technologies, requiring a minimum of 120 clock hours of appropriate experience approved by the faculty member (40 clock hours per credit); requires a learning contract, signed by the student, faculty member, and supervisor. Note: Course is offered on pass-fail basis only. Pre-requisite: Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

Capstone
Apply acquired techniques, knowledge, and skills to successfully analyze, design, and plan a CIT project. Develop key project management and system analysis deliverables in a portfolio. Pre-requisite: 36 credit hours of CIT Courses OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

Independent Problems in CIT: Topic Course ID:004741
Explores concepts and/or skills from special areas of interest in Computer & Information Technologies. Topics vary from semester to semester. May be repeated up to two times with different topics to a maximum of 6 credit hours. Pre-requisite: Consent of Instructor. Lecture: 1.0 - 3.0 credits (15 - 45 contact hours).
Components: Lecture
Attributes: Technical

Special Topics in CIT: (Topic) Course ID:004742
Explores concepts and/or skills from special areas of interest in computer and information systems. May be repeated with different topics to a maximum of 6 credit hours. Pre-requisite: Consent of Instructor. Lecture: 1.0 - 3.0 credits (15-45 contact hours).
Components: Lecture
Attributes: Technical

Career Path Employability Assessment Course ID:017008
Attributes: Technical

System and Utility Software Course ID:006973
Introduces file management and presents basic use of systems and utility software. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.6 credits (9.0 contact hours).
Components: Lecture
CIT 1053(0.8) Course ID:006974
Internet, Email, and Networks
Introduces the Internet, e-mail, course management systems and networking. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1054(0.5) Course ID:006975
Globalization and the Cloud
Introduces globalization and impact and use of cloud computing. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

CIT 1055(0.6) Course ID:006976
Software Basics
Presents basic use of application and programming software. Pre-requisite: RDG 20 OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CIT 1301(0.8) Course ID:006980
Word Processing Applications
Utilizes word processing application software to solve common business problems. Pre-requisite: CIT 105 OR OST 105 OR IMD 100 OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1302(0.8) Course ID:006981
Spreadsheet Applications
Utilizes spreadsheet application software to solve common business problems. Pre-requisite: Computer Literacy OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1303(0.8) Course ID:006982
Database Applications
Utilizes database application software to solve common business problems. Pre-requisite: Computer Literacy OR Consent of Instructor. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

CIT 1304(0.6) Course ID:006983
Presentation Software Apps
Utilizes current presentation software application software to solve common business problems. Pre-requisite: Computer Literacy OR Consent of Instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture

CLA Classical Languages and Literature

CLA 131(3) Course ID:000274
Medical Terminology from Greek and Latin
Latin and Greek roots, prefixes, and suffixes as found in medical terminology. Primarily for pre-medical, pre-dental, pre-nursing, and pre-veterinary students, but others will be admitted for help in vocabulary building. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Other

CMM Comp Manufacturing & Machining

CMM 110(3) Course ID:001812
Fundamentals of Machine Tools - A
Provides the basic principles needed for a solid foundation in machine tool technology. Covers shop safety, benchwork, drill press, power saw, measurement, and laths. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture Attributes: Technical

CMM 112(3) Course ID:001813
Fundamentals of Machine Tools - B
Provides the basic principles needed for a solid foundation in machine tool technology. Includes shop safety, benchwork, drill press, power saw, measurement, and laths. Pre-requisite: ((CMM 110 and CMM 112) or CMM 114) with a grade of C or greater) or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory Attributes: Technical

CMM 114(6) Course ID:001814
Fundamentals of Machine Tools
Provides the skills and knowledge that is needed to progress through the machine tool program. Includes safety and benchwork. Introduces the basic power equipment and machine tools that are used in the machine trades which include: drill presses, power saws, measurement instruments, mills, and lathes. Lecture: 1.0 credits (15 contact hours). Lab: 5.0 credits (150 contact hours/30:1 ratio).
Components: Laboratory, Lecture Attributes: Technical

CMM 118(2) Course ID:001815
Metrology/Control Charts
Provides the basic principles in using precision measurement instruments and their application to inspection and quality control. Lecture/Lab: 2.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

CMM 120(3) Course ID:001816
Applied Machining I
Consists of intermediate level skills using machining machines and surface grinders. Includes the selection of grinding wheels. Pre-requisite: ((CMM 110 and 112) or CMM 114) with a grade of C or greater) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture Attributes: Technical

CMM 122(3) Course ID:001817
Applied Machining II
Carries the student to higher levels in the operation of machine tools. Pre-requisite: (CMM 120 with a grade of C or greater) or Consent of Instructor. Lecture: 3.0 credits (90 contact hours).
Components: Laboratory Attributes: Technical

CMM 124(6) Course ID:001818
Applied Machining
Allows the student to begin performing skills that will combine the use of different types of machine and begin to give them a complete picture of the machine tool career. Pre-requisite: ((CMM 110 and CMM 112) or (CMM 114) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 6.0 credits (165 contact hours).
Components: Lecture Attributes: Technical

CMM 130(3) Course ID:001819
Manual Programming
Introduces the student to CNC codes and programming, set-up and operation of CNC machine tools. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture Attributes: Technical

CMM 132(3) Course ID:001820
CAD/CAM/CNC
Introduces the student to CAD/CAM/CNC systems which includes CAM software. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture Attributes: Technical

CMM 134(6) Course ID:001821
Manual Programming CAD/CAM/CNC
Introduces the student to CAD/CAM/CNC systems, CNC format, the Cartesian Coordinate System, CNC codes and programming, set-up and operation of CNC machine tool. Pre-requisite: ((CMM 110 and CMM 112) or CMM 114) with a grade of C or greater) or Consent of Instructor. Lecture: 2.0 credits (30 contact hours); Laboratory: 4.0 credits (120 contact hours/30:1 ratio).
Components: Laboratory, Lecture Attributes: Technical

CMM 138(6) Course ID:006243
Intro. to Programming & CNC Machines
Introduces CAD/CAM equipment. Covers program codes and set up operations used on a variety of machine tools including technologies like waterjet. Pre-requisite: ((CMM 110 and CMM 112) or (CMM 114) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 6.0 credits (150 contact hours) Lab: 30:1 Ratio Lab.
Components: Lecture Attributes: Technical

CMU 150(2) Course ID:005089
Shop Theory
Covers shop theory, processes, and basic concepts of machine tool applications utilized in the tool and die field. Includes areas and machine concepts: safety, measurement, layout work, bench work, saws, drills, drilling machines, mills and lathes. Lecture: 2.0 credits (30 contact hours).
Components: Lecture Attributes: Technical

CMU 151(3) Course ID:005090
Machinery's Handbook and Metallurgy
Introduces the Machinery's Handbook as a reference source for solving manufacturing problems and provides a working knowledge of the principles and concepts contained in the Handbook. Explores processes involved in heat-treating steels to a specific hardness, toughness, wear capability. Covers the identification, classification, application, and processing of Tool Steels. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

CMU 152(3) Course ID:005091
Jigs, Fixtures and Gaging
Introduces jigs, fixtures and work holding devices, including separate uses and principles. Applies machining processes to design jigs and fixtures. Uses print knowledge to identify part datums for gaging points. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

CMU 153(3) Course ID:005092
Mold Theory
Presents mold-making including thermoplastic and thermostetting materials, compression mold, transfer mold, injection molds and mold components, the heating and cooling of molds and the methods of producing cores and cavities. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

CMU 154(3) Course ID:005093
Die Theory
Presents basic die making including die sets, punch presses, blanking dies, piercing dies, screw and dowell holes, punch and punch blocks, die life, bending dies, pilots, die block construction, stock strippers, stock guides, progressive dies, stock strips and secondary operations of notch, trim, and shave. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical
CMM 210(3) Course ID:001822
Industrial Machining I
Covers the classification of metals, identification of tool steels and their applications. Requires the student to perform advanced milling machine operations that simulate industry standards. Pre-requisite: (CMM 122 or CMM 124) with a grade of C or greater) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory, Lecture
Attributes: Technical

CMM 212(3) Course ID:001823
Industrial Machining II
Permits the student to receive instruction in any area where advanced work is needed or an area where there is student interest. Pre-requisite: (CMM 210 with a grade of C or greater) or Consent of Instructor. Lab: 5.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

CMM 214(6) Course ID:001824
Industrial Machining
Covers the classification of metals, identification of tool steels and their applications. Requires the student to perform advanced milling machine operations that simulate industry standards. Includes special projects in this course so the student will receive instruction in a specific area. Pre-requisite: (CMM 122 or CMM 124) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 6.0 credits (165 contact hours).
Components: Lecture
Attributes: Technical

CMM 218(8) Course ID:005530
Advanced Machining Techniques for Manufacturing
Allows for construction of sinker electrodes in the production of die and mold forms. Includes wire edger/edc machines (edm) machining of die sections, punch retainers, stripper plates, punch forms, and use of cylindrical grinder ID and OD and angular grinding on die and mold components. Pre-requisite: CMM 216 with a grade of C or greater. Lecture: 2.0 credits (30 contact hours). Laboratory: 6.0 credits (180 contact hours).
Components: Laboratory, Lecture

CMM 220(4) Course ID:001825
Advanced Industrial Machining I
Allows for construction of electrodes and the production of parts by the use of an Electrical Discharge machine. (National Standards require EDM and cylindrical grinder training. Colleges lacking this equipment can only present theory. KCTCS is presently trying to acquire EDM and cylindrical grinders.) Pre-requisite: ((CMM 130 and CMM 132) or (CMM 134) and (CMM 212 or CMM 214) with a grade of C or greater) or Consent of Instructor. Laboratory: 4 credits (120 contact hours/30:1 ratio).
Components: Laboratory
Attributes: Technical

CMM 222(2) Course ID:001826
Advanced Industrial Machining II
Advances students to a higher level of industrial standards by exposing them to additional tasks using a cylindrical grinder. **National Standards require EDM and cylindrical grinder training. Those programs lacking this equipment can only present theory. KCTCS is presently trying to acquire EDM and cylindrical grinders.** Pre-requisite: (CMM 221 or CMM 214 with a Grade of C or greater) or Consent of Instructor. Lab: 2.0 credits (60 contact hours/30:1 ratio).
Components: Laboratory
Attributes: Technical

CMM 224(6) Course ID:001827
Advanced Industrial Machining
Designed to allow for the construction of electrodes and the production of parts by the use of an Electric Discharge Machine (EDM), cylindrical grinder, and other type of grinders. **National Standards require EDM and cylindrical grinder training. Colleges lacking this equipment can only present theory. KCTCS is presently trying to acquire EDM and cylindrical grinders.** Pre-requisite: (CMM 134 and (CMM 212 or CMM 214) with a grade of C or greater) or Consent of Instructor. Laboratory: 6.0 credits (180 contact hours or 270 Clinical Contact). Components: Laboratory
Attributes: Technical

CMM 230(6) Course ID:001828
Instructor Consent Required
Conversational Programming
Introduces the student to conversational programming of CNC machine tools. Pre-requisite: Consent of Instructor. Lecture/Lab: 6.0 credits (150 contact hours).
Components: Lecture
Attributes: Technical

CMM 234(6) Course ID:006244
CNC Machines & Coding Practices
Introduces the student to conversational programming of CNC machine tools to include conversational setup and run options found on a CNC water jet machine. Pre-requisite: ((CMM 130 and CMM 132) or (CMM 134 or CMM 138) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 6.0 credits (150 contact hours). 
Components: Lecture
Attributes: Technical

CMM 240(6) Course ID:001829
Introduction to 3-D Programming
Introduces 3-D Programming using CAM systems to effect engineering changes that enhance productivity. Uses CAM system to create and produce complex 3-D parts. Pre-requisite: ((CMM 130 and CMM 132) or (CMM 134 or CMM 138) with a grade of C or greater) or Consent of Instructor. Lecture: 2.0 credits (30 contact hours). Lab: 4.0 credits (120 contact hours or 180 clinical contact).
Components: Lecture
Attributes: Technical

CMM 244(6) Course ID:006245
Advanced Programming/Setup Practices
Uses CAM systems to effect engineering changes that enhance productivity to create and produce complex shapes on the CNC milling, lathe, EDM and water jet machines. Pre-requisite: ((CMM 2301 and CMM 2302) or (CMM 230) with a grade of C or greater) or Consent of Instructor. Lecture/Lab: 6.0 credits (150 contact hours).
Components: Lecture
Attributes: Technical

CMM 250(1) Course ID:001830 Instructor Consent Required
Practicum
Provides supervision on-the-job work experience related to the student's educational objectives. (Students participating in the Practicum do not receive compensation.) Pre-requisite: Permission of the Instructor. Practicum: 1.0 credit (75 contact hours).
Components: Practicum
Attributes: Technical

CMM 250(3) Course ID:001831
Instructor Consent Required
Cooperative Education Program
Provides supervised-on-the-job work experience related to the student's educational objectives. (Students participating in the co-op do receive compensation.) Pre-requisite: Permission of Instructor. Co-op: 1.0 credit (75 contact hours).
Components: Co-op
Attributes: Technical

CMM 2301(3) Course ID:005085
Introduction to Conversational Programming
Introduces students to conversational programming guidelines which will include program preparation, conversational input, and minor editing. Pre-requisite: Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Lecture

CMM 2302(3) Course ID:005086
Conversational Editing and Subroutines
Introduces students to performing editing routines, to subroutines, and to programs that contain loops. Requires students to interpret error messages from the control. Pre-requisite: CMM 2301 or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Lecture

CMM 2401(3) Course ID:005087
Introduction to 3D Code Sequencing and Tool Path Production
Introduces students to creation of 3-D models and allows use of those models to be used in creation of tool paths for CNC machine tools. Pre-requisite: ((CMM 130 and CMM 132) or (CMM 134 with a grade of C or greater) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Lecture

CMM 2402(3) Course ID:005088
Advanced 3D Code Sequencing and Macro Systems
Introduces 3-D Programming using CAM systems to effect engineering changes that enhance productivity. Uses the CAM system to create and produce complex 3-D parts. Pre-requisite: ((CMM 130 and CMM 132) or (CMM 134 or CMM 138) and (CMM 2401) with a Grade of C or greater) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Lecture

CMM Communications

CMM 105(3) Course ID:000292
Multimedia Production and Applications I
Students are introduced to the technologies and applications of multimedia systems including production, presentation, and transmission of video, voice, and data. Lecture: 2.0 credit hours; Laboratory: 2.0 credit hours.
Components: Laboratory, Lecture
Attributes: Technical

CMM 141(1 - 4) Course ID:000294
Communications Practicum
Student works a minimum of two hours each week with the college radio station or TV station. Independent Study: 1 - 4 credits (15 - 60 contact hours).
Components: Independent Study

CMM 142(1 - 4) Course ID:000295
Communications Practicum
Student works a minimum of two hours each week with the college newspaper. Practicum: 1-4 credit hours (30-120 contact hours). Course may be repeated for a total of 4 credit hours.
Components: Practicum
Attributes: Other

CMM 155(3) Course ID:000625
Introduction to Broadcasting
Introduces the history of the broadcast media in the United States and to current operating practices including Internet distribution. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

CMM 157(3) Course ID:000300
Basic Photography
Photographic techniques such as composition, lighting, exposure control, and skills needed by a photojournalist. Other topics may include using digital cameras, digital file formats, enhancing the digital image, and structuring the digital image. Lab component may include the use of a computer with photo imaging software and/or a darkroom using film cameras and enlargers. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
COE Cooperative Education

1991(1-8)  Course ID:000309
Cooperative Education: (Associate in Applied Science Degree, Diplomas, and Certificate Programs)
Cooperative Education is a planned and evaluated work experience related to the student's educational objective for which the student receives both financial remuneration and academic credit. One credit hour is awarded for completion of additional required activities. While the maximum amount of credit granted for cooperative education experience varies by curriculum, the amount may never exceed eight hours in an Associate in Applied Science Degree, diploma or certificate program. This course is available only to students enrolled in Associate in Applied Science Degree, diploma and certificate program that list Cooperative Education as an approved course. Pre-requisite: Completion of at least 12 credit hours in the Associate in Applied Science Degree, diploma or certificate program of study and/or marketable skills in the area in which the student is enrolled, and minimum cumulative grade point average (GPA) of 2.0.
Components: Co-Op
Attributes: Technical

COED Cooperative Education

199(1 - 9)  Course ID:005265
Practicum
Provides a planned and evaluated work experience related to the student's educational objective for which the student receives academic credit but no financial remuneration. Practicum: 1-9 credits (45-405 contact hours). Pre-requisite: Consent of Instructor.
Components: Practicum
Attributes: Technical

COE 199(3)  Course ID:001203
Cooperative Education I
Cooperative education is a planned and evaluated work experience related to the students educational objective. The student receives both financial and remuneration and academic credit for this class. One credit hour is awarded for successful completion of 60 hours of approved work experience. Pre-requisite: Completion of at least 12 credit hours in the Associate in Applied Science Degree, diploma or certificate program.
Components: Co-Op
Attributes: Technical

COM Communications

101(3)  Course ID:000310
Introduction to Communications
Introduces the process of communication as a critical element in human interaction and in society. Enhances effective communication and informed use of the mass media. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

101(3)  Course ID:000311
Basic Public Speaking
Applies the basic principles and techniques in research, organization, and delivery of speeches for informative and persuasive speaking purposes. Provides practical platform experience in developing speaking abilities to enable the student to communicate orally in clear, coherent language appropriate to the purpose, occasion, and audience. Pre-requisite: Current KCTCS placement scores for college level reading and writing OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: OC - Oral Communication

184(1)  Course ID:000313
Intercollegiate Debating
Preparation for and participation in intercollegiate debating. May be repeated to a maximum of two credits. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Other

205(3)  Course ID:016093
Business and Professional Communication
Provides opportunity to examine and develop oral communication strategies appropriate to business and professional environments. Includes oral presentations, interpersonal communication strategies, intercultural communication, interviewing, communicating in teams, leadership communication and conflict resolution skills. Does not substitute for COM 161 for Business transfer students. Pre-requisite: Current KCTCS placement scores for College level reading and writing, or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: OC - Oral Communication

249(3)  Course ID:000314
Mass Media Communication
Examines mass media messages, audiences, technologies, and regulations in a global society. Pre-requisite: Current KCTCS placement scores for College level reading and writing, or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: SOC 249
Attributes: SB - Social Behavior Science

252(3)  Course ID:000315
Introduction to Interpersonal Communication
Examines basic verbal and nonverbal concepts affecting the communication process in various interpersonal contexts. Requires participation in written and oral activities designed to develop and improve interpersonal skills. Includes perspective-taking, relationship and communication management, effective listening, conflict management, communication climate, communication anxiety, and cultural/gender differences in interpersonal communication. Pre-requisite Or Co-requisite: Current KCTCS placement scores for college level reading and writing, or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: OC - Oral Communication, Course Also Offered in Modules

254(3)  Course ID:004552
Introduction to Intercultural Communication
Introduces intercultural communication with an emphasis on the relationships between culture and communication, social/psychological variables, verbal/nonverbal language systems, intercultural communication perceptions, and conflict resolution. Includes the practical application of contemporary issues in cross-cultural interaction, media representation, and daily social interactions to intercultural communication concepts. Pre-requisite or Co-requisite: Current KCTCS placement scores for college level reading and writing, or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

281(3)  Course ID:000316
Communication in Small Group
Examines communication processes in small group situations including conflict, leadership, and decision making. Includes participation in group discussion and the development of skills in an authoring group performance. Pre-requisite Or Co-requisite: Current KCTCS placement scores for college level reading and writing, or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: OC - Oral Communication

284(1)  Course ID:002198
Intercollegiate Debating
Preparation for and participation in intercollegiate debating. May be repeated to a maximum of four credits. Lecture: 1 credit hour (15 contact hours).
Components: Lecture
Attributes: Other

287(2)  Course ID:000317
Persuasive Speaking
Examines the processes involved in attitude change, with emphasis on the preparation and delivery of persuasive messages. Pre-requisite: COM 181. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: OC - Oral Communication

299(3)  Course ID:004257
Special Topics in Communication
A sophomore level study of a selected topic in communication. Pre-requisite: COM 161 or COM 252 or consent of instructor. Lecture: 3.0 credit hours.
Components: Lecture
Attributes: Other

1111(1)  Course ID:015806
Public Speaking Essentials
Applies the basic principles and techniques in research, organization and delivery of speeches appropriate to the purpose, occasion, and audience. Pre-requisite: Current KCTCS placement scores for college level reading and writing OR Consent of Instructor. Lecture: 1 credit (15.0 contact hours).
Components: Lecture

1112(1)  Course ID:015807
Basic Informative Speaking
Provides practical platform experience in developing speaking abilities to enable the student to communicate orally in clear, coherent language appropriate to the presentation of informative speeches. Pre-requisite: COM 111. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

1113(1)  Course ID:015808
Basic Persuasive Speaking
Provides practical platform experience in developing speaking abilities to enable the student to communicate orally in clear, coherent language appropriate for the presentation of persuasive speeches. Pre-requisite: COM 112. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

2051(1)  Course ID:016231
Communication Foundations
Demonstrates the role of oral communication in culturally diverse business and professional settings and develops an understanding of self-concept and perception/impression management. Pre-requisite: Current KCTCS placement scores for college level Reading and Writing or Consent of Instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture

2052(1)  Course ID:016232
Communication In A Job Search
Provides experience in communication developing communication skills for use in technology-based job exploration with an emphasis on ethics, interviewing, active listening, and verbal and nonverbal communication for use in culturally diverse business and professional settings. Pre-requisite: COM 2051. Lecture: 1 credit (15 contact hours).
Components: Lecture

2053(1)  Course ID:016233
Communication In Organizations
Provides experience in developing communication competence in leadership roles, conflict management, and effective, informative, and persuasive communication skills for use in culturally diverse business and professional settings. Pre-requisite: COM 2052. Lecture: 1 credit (15 contact hours).
Components: Lecture

2521(1)  Course ID:005800
Looking In
Examines basic verbal and nonverbal concepts affecting the interpersonal process. Includes both verbal and nonverbal elements affecting communication between individuals in settings ranging from the family, peer groups, and work contexts. Pre-requisite Or Co-requisite: Current KCTCS placement scores for college level reading and writing, or consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

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**COM 2522(1)** Course ID:005801
**Communicating and Responding**
Examines basic verbal and nonverbal concepts affecting the communication process in various interpersonal contexts. Topics include both verbal and nonverbal elements affecting communication between individuals in setting ranging from the family, peer groups, and work contexts. Pre-requisite: COM 2521. Lecture: 1 credit (15 contact hours).
Components: Lecture

**COM 2523(1)** Course ID:005802
**Looking at Relational Dynamics**
Examines basic verbal and nonverbal concepts affecting the communication process in various interpersonal contexts. Includes the basic needs in developing interpersonal relationship with emphasis on the types of relations and the components involved in such relationships including compliance-gaining and conflict resolution. Pre-requisite: COM 2522. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

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**COS Cosmetology**

**COS 107(14)** Course ID:017362
**Student Teaching I**
Introduces teaching methods used in training cosmetology, esthetics, and nail technology students. Demonstrates teaching methods of theory, media use, and testing methods. Develops and applies the methods used to teach the practical application of skills. Demonstrates the Kentucky Board of Cosmetology rules and regulations.
Lecture: 3 credits (45 contact hours). Laboratory: 11 credits (330 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

**COS 108(6)** Course ID:017165
**Cosmetology I Theory**
Identifies attitudes and behaviors for successful Cosmetology practice. Describes Kentucky Statutes and regulations, safety, bacteriology, sanitation, infection control, basic first aid, structure of the hair and nails and disorders of the scalp and nails as related to hairstyling, shaping, manicures and pedicures. Pre-requisite: High school diploma or equivalent. Lecture: 6 credit hours (90 contact hours).
Components: Lecture
Attributes: Technical

**COS 109(6)** Course ID:017166
**Cosmetology I Practical Application**
Demonstrates the practical application of skills. Focuses on nail, hair and skin care services utilizing safety precautions, sanitation and infection control procedures. Pre-requisite: High school diploma or equivalent. Co-requisite: COS 108. Laboratory: 6 credit hours (270 contact hours).
Components: Laboratory
Attributes: Technical

**COS 114(14)** Course ID:001213
**Cosmetology I, 1-1**
This course is designed to cultivate proper attitude and behavior patterns needed to create a successful Cosmetologist. Kentucky Statutes and regulations, safety, bacteriology, sanitation, infection control, first aid treatment, structure and disorders of the nail are studied. An introduction to the basic fundamentals of hair, skin and nail care, hair styling and shaping, manicures and pedicures, chemical and thermal services, and wigs. The student in developing manipulative skills and practicing procedures utilizes mannequins and classmates. After 300 hours student begin to apply procedures on clients under the direct supervision of the instructor. Lecture: 14 credits (450 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

**COS 116(14)** Course ID:001214
**Cosmetology II, 6-2**
A study of basic chemistry with emphasis placed on the physical and chemical properties of cosmetic materials. Electricity and light therapy are discussed and an in-depth study of anatomical structures affected by cosmetological services including disorders of the skin, scalp, hair, and nails. The instructor gives the students progressively more difficult assignments with close supervision. Lecture: 14 credits (450 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

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**COS 117(14)** Course ID:017365
**Student Teaching II**
Expands teaching methods used in training cosmetology, esthetics, and nail technology students. Demonstrates advanced teaching methods of theory, media use, and testing methods. Develops and applies the methods used to teach the practical application of skills. Provides preparatory work to prepare the apprentice instructor for the Kentucky Board of Hairdressers and Cosmetologists instructor examination. Pre-requisite: COS 107. Lecture: 3 credits (45 contact hours). Laboratory: 11 credits (330 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

**COS 118(5)** Course ID:017167
**Cosmetology II Theory**
Examines chemistry with emphasis placed on the physical and chemical properties of cosmetic materials, chemical application techniques to hair (natural and artificial). The study of anatomical structures affected by cosmetology services including disorders of the skin, scalp, hair, and nails. Pre-requisite: Successful completion of COS 114 or COS 108 & COS 109. Lecture: 5 credit hours (75 contact hours).
Components: Lecture
Attributes: Technical

**COS 119(7)** Course ID:017168
**Cosmetology II Practical Application**
Apply the chemical application techniques to skin, hair (natural and artificial) and nails. Pre-requisite: Successful completion COS 114 or COS 108 & COS 109. Co-requisite: COS 118. Laboratory: 7 credit hours (315 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

**COS 135(1 - 8)** Course ID:001223
**Instructor Consent Required**
Individual Requirements I
Provides additional lecture/laboratory time to meet licensure requirements of 1800 clock hours. Pre-requisite: Consent of Instructor. Lecture: 1.0 - 8.0 credit hours (15 -120 contact hours). Laboratory: 1.0 - 8.0 credit hours (30 - 240 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

**COS 136(13)** Course ID:017367
**Esthetics I**
Covers the history of esthetics, today's career opportunities, and professional image. Includes Kentucky Statutes and Regulations, analysis of skin types for facial treatments, hair removal procedures and applications. Includes the study of anatomical structures, including disorders of the skin, scalp, hair, and nails. Pre-requisite: Successful completion of COS 114 or COS 108 & COS 109. Co-requisite: COS 118. Laboratory: 7 credit hours (315 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

**COS 138(8)** Course ID:017564
**Salon Assistant I**
Provides knowledge and the techniques of all blow-drying services include any of the following services performed on an individual's hair: Arranging, cleaning, cutting dressing, blow drying and performing any other similar procedures. Lecture: 6 credits (90 contact hours). Laboratory: 2 credits (120 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

**COS 139(9)** Course ID:017565
**Salon Assistant II**
Provides knowledge and the techniques of all blow-drying services include any of the following services performed on an individual's hair: Arranging, cleaning, cutting dressing, blow drying and performing any other similar procedures. Lecture: 6 credits (90 contact hours). Laboratory: 3 credits (180 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

**COS 146(13)** Course ID:017368
**Esthetics II**
Covers organic/inorganic chemistry and cosmetic ingredients. Focuses on facial treatments and applications including hair removal procedures and applications. Includes the study of skin conditions, disorders and diseases, and those treatable by the esthetician. Explains treatments related to skin and skin disorders. Covers procedures for business and management, the practice of esthetic setup, disinfection, application techniques, advanced esthetics which include peels, deep pore cleansing, chemical skin care, aroma therapy, and spa/body treatments. Includes Kentucky Board of Cosmetology statutes and regulations. Provides for the study of the functions and benefits of electrotherapy including pre- and post-operative care for physician treatments and the application of various cosmeceutical products. Pre-requisite: COS 136 or Instructor permission. Lecture: 7 credits (105 contact hours). Laboratory: 6 credits (270 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

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**COS 147(15)** Course ID:017563
**Nail Technology**
Provides knowledge of the art and science of nail technology. Applies the rules and regulations of the Kentucky Board of Cosmetology as it should be used in the salon. Introduces bacteriology and infection control through the practice of disinfection procedures. Structures the study of the cells, and structure of the hand and arm. Recognizes the structure of the nail and their diseases and disorders. Demonstrates the study of beauty salon management including the practice of interacting with clients, co-workers, and supervisors. (Students practice on classmates and progress to work on clients.) Lecture: 8 credits (120 contact hours). Laboratory: 8 credits (360 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

**COS 170(17)** Course ID:017562
**Accelerated Student Teaching**
Introduces and expands teaching methods used in training cosmetology, esthetics, and nail technology students. Demonstrates teaching methods of theory, media use, and testing methods. Develops and applies the methods used to teach the practical application of skills. Demonstrates the Kentucky Board of Cosmetology rules and regulations. Provides preparatory work to prepare the apprentice instructor for the Kentucky Board of Cosmetology instructor’s examination. Pre-requisite: Cosmetologist’s license, one year work experience, and Apprentice Cosmetologists’ Instructor’s License. Lecture: 8 credits (120 contact hours). Laboratory: 4 credits (180 contact hours). Practicum: 5 credits (450 contact hours).
Components: Laboratory, Lecture, Practicum
Attributes: Technical

**COS 218(20)** Course ID:015567
**Teaching I**
Introduces teaching methods used in training cosmetology, esthetics, and nail technology students. Demonstrates teaching methods of theory, media use, and testing methods. Develops and applies the methods used to teach the practical application of skills. Pre-requisite: Cosmetologist’s License, one year work experience, and Apprentice Cosmetologists Instructor’s License. Lecture: 6.0 credits (90 contact hours). Lab: 14.0 credits (420 contact hours).
Components: Laboratory, Lecture
Attributes: Technical
COS 217(20) Course ID:015568
Teaching II
Expands teaching methods used in training cosmetology, esthetics, and nail technology students. Demonstrates advanced teaching methods of theory, media use, and testing methods. Develops and applies methods used to teach the practical application of skills. Provides preparatory work to prepare the apprentice instructor for the Kentucky Board of Hairdressers and Cosmetologist’s instructor examination. Pre-requisite: COS 216. Lecture: 6.0 credits (90 contact hours). Lab: 14.0 contacts (420 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

COS 218(14) Course ID:001215
Cosmetology III, 6-3
Provides knowledge of the structure and function of the human body, including the interaction of all the body systems in maintaining homeostasis. All phases of beauty salon management are studied, including interacting with clients, co-workers and supervisors. Laboratory experience is advanced with performance expectations set at a higher level. Lecture/Laboratory: 14 credits (450 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

COS 220(12) Course ID:001216
Cosmetology IV, 6-4
This course is designed for a total review of the cosmetology curriculum. A comprehensive written and practical exam is given in preparation for the State Board Licensure exam. Students implement their own judgement of procedures and solutions to be used on clients with supervision. Lecture/Laboratory: 14 credits (450 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

COS 222(6) Course ID:017092
Cosmetology Review
Designed as a total review of the Cosmetology curriculum. A comprehensive written and practical exam is given in preparation for the State Board Licensure exam. Students implement their own judgment of procedures and solutions to be used on clients with supervision. Pre-requisite: COS 114, 116, 218 or consent of instructor. Lecture: 4 credit hours (60 contact hours) Lab: 2 credit hours (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

COS 228(5) Course ID:017169
Cosmetology III Theory
Provides knowledge of the structure and function of the human body, including all the body systems. A concept of artificial hair, hair enhancements, braiding and extensions, electricity and light therapy and business skills are studied. Pre-requisite: Successful completion of COS 116 or COS 118 & COS 119. Lecture: 5 credit hours (75 contact hours).
Components: Lecture
Attributes: Technical

COS 229(7) Course ID:017170
Cosmetology III Practical Application
Illustrates laboratory experiences with advanced performance expectations, including interacting with clients, co-workers and supervisors. The application of general anatomy is applied in laboratory settings and the techniques of all areas relating to salon business skills. Pre-requisite: Successful completion of COS 116 or COS 118 & COS 119. Co-requisite: COS 229. Laboratory: 7 contact hours (315 contact hours).
Components: Laboratory
Attributes: Technical

COS 235(1 - 8) Course ID:004413
Instructor Consent Required
Individual Requirements II
Provides additional lecture/laboratory time to meet licensure requirements of 1800 clock hours. Pre-requisite: Consent of Instructor. Lecture/Lab: 1.0 - 8.0 credit hours (15 - 120 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

COS 238(6) Course ID:017171
Cosmetology IV Theory
Recall the comprehensive written exam in preparation for the Kentucky Board Licensure exam. Pre-requisite: Successful completion of COS 218 or COS 228 & COS 229. Lecture: 6 credit hours (90 contact hours).
Components: Lecture
Attributes: Technical

COS 239(6) Course ID:017172
Cosmetology IV Practical Application
Demonstrate the comprehensive practical exam in preparation for Kentucky Board Licensure exam. Pre-requisite: Successful completion of COS 218 or COS 228 & COS 229. Co-requisite: COS 238. Laboratory: 6 credit hour (270 contact hours).
Components: Laboratory
Attributes: Technical

COS 1141(3) Course ID:004994
Introduction to Cosmetology
An introduction to professionalism and communication. Topics include Kentucky Statutes and Regulations, safety and decontamination. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Lecture

COS 1142(3) Course ID:004995
Basics of Cosmetology
Provides fundamental principles and skills of manicures, pedicures, facials, and scalp and hair care. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Lecture

COS 1143(3) Course ID:004996
Principles of Hair Design
Provides design elements and principles of hairstyling. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Lecture

COS 1144(1) Course ID:004997
Cosmetology Skills A
Focus on developing design elements of hair. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

COS 1145(1) Course ID:004998
Hair Structure, Disorders and Diseases
Focuses on the structure, diseases, and disorders of hair. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 1146(1) Course ID:004999
Cosmetology Skills B
Provides basic principles of hair design and safety. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

COS 1147(1) Course ID:005000
Nail Structure: Diseases and Disorders
Focuses on nail structure, diseases, and disorders. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 1148(1) Course ID:005001
Skin: Structure, Disorders and Diseases
Focuses on skin structure, diseases, and disorders. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 1161(3) Course ID:005002
Introduction to Cosmetic Chemistry
Basic study of cosmetic chemistry. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Laboratory

COS 1162(3) Course ID:005003
Chemical Services
Basic chemical services. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Laboratory

COS 1163(3) Course ID:005004
Massage Techniques
Study of massage techniques. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Laboratory

COS 1164(1) Course ID:005005
Cosmetic Techniques Lab
Provides an opportunity to apply chemical services. Focuses on perms, color application and straightening of hair. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

COS 1165(1) Course ID:005006
Electricity & Light Therapy for Cosmetology
Study of electricity and light therapy. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 1166(1) Course ID:005007
Intermediate Hair Design Lab
Continues the application of hair design theory and skills. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

COS 1167(1) Course ID:005008
Facials
Theory of facials. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 1168(1) Course ID:005009
Makeup and Hair Removal
Provides the theoretical base for application of makeup. Hair removal principles and techniques. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 2181(3) Course ID:005010
Anatomy for Cosmetology I
Study of the structures and functions of the human body. Application of these studies in cosmetology services. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Laboratory, Lecture

COS 2182(3) Course ID:005011
Anatomy for Cosmetology II
Study of the interaction of all body systems and the maintenance of homeostasis. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Laboratory, Lecture

COS 2183(3) Course ID:005012
Salon Management
The study and application of all phases of salon management. Lecture: 1 credit (15 contact hours); Laboratory: 2 credits (90 contact hours).
Components: Laboratory, Lecture

COS 2184(1) Course ID:005013
Intermediate Chemical Services Lab
The study of the interaction of all the body systems in maintaining homeostasis. Application of these studies in cosmetology services. Pre-requisite: ((COS 1161 and COS 1162 and COS 1163 and COS 1164 and COS 1165 and COS 1166 and COS 1167 and COS 1168) or COS 116 with a grade of C or greater). Laboratory: 1 credit (45 contact hours).
Components: Laboratory

COS 2185(1) Course ID:005014
Hair Enhancements
Study of artificial hair. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 2186(1) Course ID:005015
Client Services Lab
Provides the student with the opportunity to demonstrate client services. Emphasis is on communication and positive public relation techniques. Laboratory: 1 credit (45 contact hours).
Components: Laboratory

COS 2187(1) Course ID:005016
Intermediate Hair Shaping
Hair shaping techniques for the intermediate practitioner. Lecture: 1 credit (15 contact hours).
Components: Lecture

COS 2188(1) Course ID:005017
Cosmetology Trends and Issues
Trends and issues of cosmetology are covered. Lecture: 1 credit (15 contact hours).
Components: Lecture
CPR 100(1) Course ID:001239
Cardiopulmonary Resuscitation

CPR for Healthcare Professionals
d Cardiopulmonary resuscitation (Adult/Infant/Child) is a course designed to teach current emergency techniques relative to cardiac and/or respiratory arrest, as put forth by the American Heart Association, National Safety Council or American Red Cross. The American Heart Association, National Safety Council or American Red Cross standardized course qualifies a student for certification of cardiopulmonary resuscitation. Lecture: 1 credit (15 contact hours).

Components: Lecture
Attributes: Technical

CRA 230(5) Course ID:016091
Building Controls I

Develops techniques for servicing, troubleshooting, and performing necessary maintenance on modern building control system devices. Emphasizes electrical and mechanical safety. Covers equipment used in building control systems. Pre-requisite: ACR 100 and (ACR 102 or comparable electrical course) and 10 semester credit hours of Building Controls Technician technical electives or consent of instructor. Lecture/Lab: 5.0 credits (105 contact hours)

Components: Lecture
Attributes: Technical

CRA 232(5) Course ID:016092
Building Controls II

Develops techniques for configuring, tuning and troubleshooting a networking building control system. Covers networked field equipment and central computer-controlled building control systems. Pre-requisite: CRA 230 or content of instructor. Lecture/Lab: 5.0 credits (105 contact hours)

Components: Lecture
Attributes: Technical

CRI 106(4) Course ID:007357
Advanced Firearms and Less Than Lethal Weapons

Provides an advanced working knowledge of the use, care, safety, and legal application of firearms and less than lethal weapons. Includes live fire with the use of pistols, shotgun, rifle, and less than lethal weapons. Pre-requisite: CRJ 107 and (Current placement scores for RDG 030 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 2.0 credits (30 contact hours), Lab: 2.0 credits (69 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

CRI 110(3) Course ID:001495
Principles of Asset Protection

Provides an introductory understanding of private security procedures. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 201(3) Course ID:000899
Introduction to Criminalistics

Provides a basic knowledge of crime scene protection, collection, preservation, and identification of evidence, including proper search, dusting latent prints, casting fingerprint classification, and use of crime laboratory in crime detection and prosecution. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 202(3) Course ID:004196
Issues and Ethics in Criminal Justice

Provides an understanding of the issues and ethical dilemmas confronting practitioners within the criminal justice system. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 210(3) Course ID:004192
Introduction to Corrections

Provides an introduction to the development of correctional systems, and the processes, procedures, and issues of current correctional systems, both juvenile and adult. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credit hours (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 215(3) Course ID:004202
Introduction to Law Enforcement

Provides an introduction to the study of law enforcement. Introduces the historical developments of law enforcement, police operations and programs. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 216(3) Course ID:004203
Criminal Law

Provides an overview of the definitions and functional components of criminal law in the field of criminal justice. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 217(3) Course ID:004204
Criminal Procedure

Provides an overview of the different criminal procedural laws by examining the specific Amendments that outline the guidelines of the administration of substantive laws. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Same As Offering: CRI 217
Attributes: Technical

CRI 217(3) Course ID:004204
Criminal Procedure

Provides an overview of the different criminal procedural laws by examining the specific Amendments that outline the guidelines of the administration of substantive laws. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Same As Offering: CRI 217
Attributes: Technical
CRI 218(3) Course ID:004193
Police Supervision
Provides an overview of the administrative, supervisory, and leadership roles that are required within a law enforcement agency. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090) AND CRJ 100 or CRJ 215 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 219(4) Course ID:007358
Police Recruit Defensive Tactics
Provides the proper methods of police defensive tactics, emphasizes necessary skills, and establishes an understanding of use of force policies and legal implications. Pre-requisite: CRJ 215 and (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090) AND CRJ 100 or CRJ 215 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

CRI 220(3) Course ID:005220
Introduction to Computer Forensics for Criminal Justice
Introduces the study of cybercrime with an emphasis on planning, detection, and response with the goals of countering and overcoming hacker attacks and computer-related offenses. Malicious activities will be logged and forensic tools will be used to gather court-admissible evidence. Pre-requisite: Completion of an approved Computer Literacy Course with a grade of C or greater, or computer literacy demonstrated by competency exam; AND (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 222(3) Course ID:004205
Prison & Jail Administration
Introduces the correctional procedures and administration of jails and prisons by focusing on historical and current perspectives of penology, administrative responsibilities of correctional leaders, and correctional staff responsibilities. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 224(4) Course ID:007359
Basic Traffic Collision Investigation
Introduces basic vehicle collision investigation, from a law enforcement perspective, and entails evidence and investigation techniques and mathematical calculations. Pre-requisite: CRJ 204 and MAT 110 and (Current placement scores for RDG 030 or higher or completion of RDG 020) and (Current placement for ENC 091 or higher or completion of ENC 090). Lecture: 2.0 credits (30 contact hours). Lab: 2.0 credits (60 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

CRI 225(4) Course ID:007360
Driving and Traffic Enforcement for Law Enforcement
Provides an understanding of vehicle offenses, tactical police driving, and traffic stops, in a scenario-based environment that demonstrates applied skills. Pre-requisite: CRJ 215 and (Current placement scores for RDG 030 or higher or completion of RDG 020) and (Current placement for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

CRI 228(3) Course ID:017566
Unmanned CRI Technology Applications
Examines the use of advanced technologies used in the field of criminal justice. Discuss constitutional considerations and ethical issues related to the use of advanced technologies. Explores use of new technologies in the areas of crime scene reconstruction, use of force, criminal investigation, tactical responses, surveillance, search and rescue, and security. Discusses the use of drones, robotics, and video equipment as key technologies that are changing criminal justice practice. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 230(3) Course ID:006233
Criminal Justice Courthouse Procedures
Covers research, study, and discussion of current and emerging topics, issues, and trends in courtroom procedures. Includes basic courtroom procedures and the roles of the key personnel within the courtroom setting. Includes practical preparation procedures for witness presentation of testimony. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 231(3) Course ID:006234
Legal Aspects of Corrections
Covers research, study, and discussion of current and emerging topics, issues, and trends in corrections. Introduces legal aspects of corrections. Includes a historical perspective, as well as applicable case law, in the areas of corrections operations, practices, and procedures. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 235(3) Course ID:017567
Serial Killers
Examines serial, mass, and spree killing. Explores the process of investigating serial killing. Discuss the elements of serial killing and the individual characteristics of serial killers. Examines case studies to illustrate the components of serial killing characteristics and the psychological and sociological foundations of serial killing. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 240(3) Course ID:006102
Introduction to Corporate & Industrial Security
Includes research, study, and discussion of current and emerging topics, issues, and trends in corporate and industrial security. Covers basic corporate and industrial security procedures and the roles of the key personnel within the private security arena. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 245(3) Course ID:006232
Introduction to Business and Industrial Fraud
Includes research, study, and discussion of current and emerging topics, issues and trends in business and industrial fraud. Covers basic concepts of occupational fraud and abuse and the roles of the key personnel within the criminal justice system. Includes practical procedures for identifying, investigating business and industrial fraud. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 255(3) Course ID:017568
Correctional Intervention Strategies
Examines current correctional intervention strategies. Discuss the development of evidence-based programs based on decades of correctional research. Explore mental health disorders, substance abuse, and personality disorders, and also the best strategies for working with individuals with these issues. Discuss the principles of effective intervention, as well as foundational theoretical ideas in the context of creating successful correctional programming. Explore the elements of classification and treatment modalities as they relate to risk, need, and responsivity. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 271(3) Course ID:006804
Introduction to Criminology
Provides an introduction to the understanding of criminal behavior by focusing on crime trends and patterns, the amount of crime, and the theories of crime. Theories of crime will include the biological, psychological, sociological, and integrated explanations of behavior. Theories of crime will be utilized to address the procedures and administration of criminal justice in society. Pre-requisite: If yes, list: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 278(3) Course ID:017569
Victimology
Examines characteristics of crime victims, different perspectives of victimology, and theories of victimization. Discuss the historical development of victimization and victims’ rights movement and also the societal impacts of victim concern on social policy and practice in the criminal justice system. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 279(3) Course ID:005781
Terrorism and Political Violence
Provides an introduction to the study of terrorism and terrorist organizations. Introduces the student to the diverse definitions of terrorism and the social and political consequences of varying definitions, behavioral aspects of terrorist and the various justifications for terrorist activities. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 280(3) Course ID:017570
Drugs, Crime, and Society
Examines drug use, addiction, treatment, and trafficking. Explore the connection between drug use and other types of crime. Review drug control policies, including the impact of the media and politics. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

CRI 290(3) Course ID:004206
Internship in Criminal Justice
Allows the criminal justice student the opportunity to broaden their educational experience through observation and work assignments at a recognized criminal justice agency. Pre-requisite: (Current placement scores for RDG 30 or higher or completion of RDG 020) and (Current placement scores for ENC 091 or higher or completion of ENC 090) AND Sophomore Standing and completion of at least 12 semester hours of Criminal Justice work. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical
CRT 289(1) Course ID:000929

Instructor Consent Required

Non-Structural Analysis and Damage Repair

Provides instruction in the analysis, repair and replacement of non-structural panels on unibody and frame cars. Co-requisite: CRT 293. Lecture: 3.0 credits (90 contact hours).

Components: Lecture
Attributes: Technical

CRT 291(1) Course ID:000940

Special Projects I

Designed for students to satisfactorily complete collision repair tasks or to enhance their skills in the occupational area. Pre-requisite: Consent of Instructor. Lab: 1.0 credit (45 contact hours).

Components: Laboratory
Attributes: Technical

CRT 293(2) Course ID:000941

Special Projects II

Designed for students to satisfactorily complete collision repair tasks or to enhance their skills in the occupational area. Pre-requisite: Consent of Instructor. Lab: 2.0 credits (90 contact hours).

Components: Laboratory
Attributes: Technical

CRT 295(3) Course ID:000942

Special Projects III

Designed for students to satisfactorily complete collision repair tasks or to enhance their skills in the occupational area. Pre-requisite: Consent of Instructor. Lab: 3.0 credits (135 contact hours).

Components: Laboratory
Attributes: Technical

CRT 298(2) Course ID:000943

Instructor Consent Required

Advanced Practicum

Provides supervised on-the-job work experience related to the students’ education objectives. Students participating in the practicum do not receive compensation. Pre-requisite: Consent of Instructor. Independent Study: 2.0 credits (150 contact hours).

Components: Independent Study
Attributes: Technical

CS 115(3) Course ID:000321

Introduction to Computer Programming

This course teaches introductory skills in computer programming using a high-level computer programming language. There is an emphasis on both the principles and practice of computer programming. Covers principles of problem solving by computer and requires completion of a number of programming assignments. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: University Course (University of Kentucky)

CS 215(4) Course ID:007198

Introduction to Program Design, Abstraction, and Problem Solving

The course covers introductory object-oriented problem solving, design, and programming engineering. Fundamentals elements of data structures and algorithm design will be addressed. An equally balanced effort will be devoted to the three main threads in the course: concepts, programming language skills, and rudiments of object-oriented programming and software engineering. Pre-requisites: CS 115, 221 or equivalent. Lecture: 4.0 credits (60 contact hours).

Components: Lecture
Attributes: University Course (University of Kentucky)

CS 216(3) Course ID:007199

Introduction to Software Engineering

Software engineering topics include: life cycles, metrics, requirements specifications, design methodologies, validation and verification, testing, reliability and project planning. Implementation of large programming projects using object-oriented design techniques and software tools in a modern development environment will be stressed. Pre-requisites: CS215. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: University Course (University of Kentucky)
CS 221(2) Course ID:000325 First Course in Computer Science for Engineers
Characteristics of a procedure-oriented language; description of a computer as to internal structure and the representation of information; introduction to algorithms. Emphasis will be placed on the solution of characteristic problems arising in engineering. Pre-requisite: Not open for students who have received credit for CS115. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)

CS 270(3) Course ID:010097 Systems Programming
This course provides an introduction to computer systems and explores computer architecture, operating systems, and networks from a programmer's perspective. The course also introduces advanced programming and debugging tools. Topics include hardware instruction sets, machine language and C language program representations, linking/loading, operating systems (process management, scheduling, memory management, interprocess communication, and file systems), network programming (socket programming and web protocols), and common security attacks and solutions. Pre-requisites: EEE 280 and CS 216. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: University Course (University of Kentucky)

CS 275(4) Course ID:007200 Discrete Mathematics

CUL 100(2) Course ID:004209 Introduction to Culinary Arts
Provides an introduction to several aspects of the food industry. Introduces an overview of the history of the profession and current career opportunities and trends. Introduces proper terminology for various types of equipment and cooking methods. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

CUL 105(2) Course ID:004210 Applied Introduction to Culinary Arts
Provides an applied introduction to several aspects of the food industry. Includes an overview of the history of the profession and current career opportunities and trends. Introduces proper terminology for various types of equipment and cooking methods in a laboratory setting. Lecture: 1.0 credit (15 contact hours), Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 125(2) Course ID:004212 Sanitation and Safety
Develops an understanding of the basic principles of sanitation and safety and to be able to apply them in the food service operations. Reinforces personal hygiene habits and food handling practices that protect the health of the consumer. Lecture 2 credits (30 contact hours)
Components: Lecture
Attributes: Technical

CUL 211(4) Course ID:004213 Basic Food Production
This course provides a study of the basic principles of food selection, storage, and preparation; identification and classification of fruits and vegetables; preparation of stocks, soups and sauces; basic principles of cooking; baking; kitchen operations; and a study of breakfast food. Pre-requisite or Co-requisite: CUL 100 and CUL 125 or consent of instructor. Lecture/Lab: 4 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 215(4) Course ID:004214 Basic Baking
Appplies fundamentals of baking science to preparation of a variety of products and to learn and use care of equipment in bake shop and/or baking area. Pre-requisite or Co-requisite: CUL 100 and CUL 125 or consent of instructor. Lecture: 2.0 credits (30 contact hours), Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 220(4) Course ID:004215 Advanced Baking & Pastry Arts
Appplies fundamentals of baking science to the preparation of a variety of baked products including chocolate paste, frozen desserts, and creams, custards, and related sauces. Emphasis will be placed on nutritional aspects of baked products and finishing techniques. Pre-requisite: CUL 215. Lecture: 2.0 credits (30 contact hours), Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 225(4) Course ID:005137 Professional Confection and Pastry Arts
Finishing techniques for concoctions and pastries, creating decorative centerpieces, sugar artsy, and cake decorating. Fundamentals of baking science along with advanced finishing techniques. Pre-requisite: CUL 215. Lecture: 2 credits (30 contact hours); Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 230(3) Course ID:004216 Basic Nutrition
Describes the characteristics, functions, and food sources of the major nutrients and how to maximize nutrient retention in food preparation and storage. Applies the principles of nutrient needs throughout the life cycle through menu planning and preparation for specialty diets. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CUL 235(3) Course ID:017086 Farm to Table
Introduces local, seasonal, and sustainable cooking emphasized through the management of fruit, grain, and vegetable production while applying various cooking techniques. Utilize fresh ingredients in the preparation of appetizers, salads, entrees, and desserts. Incorporates canning and preserving methods for when fresh ingredients are out of season. Pre-requisite: CUL 100, CUL 125, CUL 211, CUL 215, OR Instructor Approval. Lecture: 2 credit hours (30 contact hours) Lab: 2 credit hours (60 contact hours)
Components: Laboratory, Lecture
Attributes: Technical

CUL 240(4) Course ID:004217 Meats, Seafood, & Poultry
This course focuses on the identification of various cooking techniques for the preparation of meats, seafood, and poultry. Pre-requisite: CUL 100 and CUL 125. Pre-requisite or Co-requisite: CUL 211 or consent of the instructor. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 250(4) Course ID:004211 Garde Manger
This course includes the production of hot and cold sandwiches, hors d’oeuvre, canapes and salads. Garnishing techniques along with cold food production are discussed. Decorative skills as related to buffets and exhibits are explored. Pre-requisite: CUL 211 AND CUL 215 OR Consent of instructor. Lecture/Lab: 4 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 260(4) Course ID:004218 International & Classical Cuisine
This course focuses on the study and preparation of international and classical cuisine. Pre-requisite: CUL 100 and CUL 125. Co-requisite: CUL 211, CUL 215 and CUL 240 or consent of instructor. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

CUL 270(3) Course ID:004219 Human Relations Management
This course provides information necessary for the transition from student to a supervisory role in the Food and Beverage industry. Styles of leadership and skill development in human relations and personnel management are also covered. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CUL 280(3) Course ID:004221 Cost and Control
Provides students with the opportunity to perform business and math skills using mathematical functions related to food service operations in the areas of cost, control, purchasing and receiving. Pre-requisite: A mathematics placement score above the score range for MAT 065 or successful completion of the prescribed developmental course(s) or consent of the instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CUL 285(3) Course ID:004222 Front of the House
Focuses on the operations in front of the house management including service techniques and dining room service, beverage service (non-alcoholic and alcoholic beverages), POS systems, and menu planning. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CUL 290(4) Course ID:004223 Front of the House-Catering
Focuses on the operations in front of the house management including service techniques and dining room service, beverage service (non-alcoholic and alcoholic beverages), POS systems, and menu planning. Pre-requisite: (CUL 211, CUL 215, and CUL 240) or Consent of Instructor. Lecture/Laboratory: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

CUL 295(3) Course ID:005138 Doing Business as a Personal Chef
A general overview of the business aspects of starting and operating a personal chef service. Pre-requisite: All Technical Core Courses as outlined in the current Culinary Arts Curriculum. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

CUL 297(1 - 6) Course ID:004224 Selected Topics in Culinary Arts
Various culinary arts topics, issues, and trends will be addressed. Topics may vary from semester to semester at the discretion of the instructors; courses may be repeated with different topics to a maximum of six credits. Lecture: varies by topic; Lab: varies by topic. Pre-requisite: Consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

CUL 298(2 - 3) Course ID:004225 Culinary Arts Practicum Experience
Practicum enhances the student’s transition from class to the work of work by providing unpaid work experience in a simulated or on-campus setting that utilizes the skills required to achieve the student’s occupational goal. Pre-requisite: Consent of Instructor. Practicum: 2.0 - 3.0 credits (120-180 contact hours).
Components: Practicum
Attributes: Technical
DHG 120(3) Course ID:000337  
Dental Hygiene

Pre-Clinical Dental Hygiene
Stresses basic assessment and clinical skills, related theory, and professional role and responsibilities of the dental hygienist as a member of the dental health team. Pre-requisite: Admission into the Dental Hygiene Integrated Program. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (120 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

DHG 130(3) Course ID:000338  
Clinical Dental Hygiene I
Focuses on preparing the student to provide patient treatment that includes preventive and therapeutic procedures to maintain oral health and assist the patient in achieving oral health goals. Pre-requisite: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, and DHG 120. Lecture: 1.5 credits (22.5 contact hours). Lab: 0.5 credits (60 contact hours). Clinical: 1.0 credit (120 contact hours).

Components: Clinical, Laboratory, Lecture
Attributes: Technical

DHG 132(2) Course ID:004331  
Pharmacology
Examines the disciplines of pharmacology and therapeutics as related to dental hygiene. Pre-requisite: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, and DHG 120. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

DHG 134(2) Course ID:006811  
Dental Nutrition
Presents basic principles of nutrition with emphasis on nutritional counseling in relationship to dental health, determination of patient nutritional status, and application to oral health and effects of nutritional deficiencies. Pre-requisite: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, and DHG 120. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

DHG 136(1) Course ID:000340  
Periodontology
Focuses on the clinical, histological, and radiographic differences between healthy and unhealthy periodontal tissues. Pre-requisite: Minimum grade of C in DAH 101, DAH 121, DAH 124, DAH 135, and DHG 120. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
Attributes: Technical

DHG 220(4) Course ID:000341  
Clinical Dental Hygiene II
Focuses on providing comprehensive dental hygiene care in a clinical setting while emphasizing the treatment of periodontal and special needs patients. Pre-requisite: Minimum grade of C in DAH 131, DHG 130, DHG 132, DHG 134, and DHG 136; Lecture: 2.0 credits (30 contact hours). Clinical: 2.0 credits (240 contact hours).

Components: Lecture
Attributes: Technical

DHG 221(2) Course ID:004778  
Local Anesthesia and Nitrous Oxide Sedation
Presents a conceptual framework and clinical skills necessary to administer local dental anesthetics and nitrous oxide sedation in accordance with state dental practice acts. Pre-requisite: Minimum grade of C in DAH 131, DHG 130, DHG 132, DHG 134, DHG 136, and current enrollment in the Dental Hygiene Integrated Program. Lecture: 1.25 credit (19 contact hours). Lab: 0.75 credit (26 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

DHG 226(2) Course ID:000342  
Advanced Periodontology
Focuses on the role of the dental hygienist in the prevention, diagnosis and treatment of periodontal diseases. Pre-requisite: Minimum grade of C in DAH 131, DHG 130, DHG 132, DHG 134 and DHG 136. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

DHG 228(1) Course ID:017676  
Evidence-Based Practice for the Dental Hygienist
Focuses on scientific methods in the problem-solving process utilized for making evidence-based decisions pertaining to the delivery of dental care. Pre-requisite: Minimum grade of C in DHG 220 and DHG 226. Lecture: 1.0 credit (15 contact hours). Clinical: 2.0 credits (240 contact hours).

Components: Lecture
Attributes: Technical

DHG 230(3) Course ID:000343  
Clinical Dental Hygiene III
Focuses on mastery of dental hygiene clinical skills for patient care and preparation for written and clinical board examinations. Pre-requisite: Minimum grade of C in DHG 220 and DHG 226. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

DHG 238(2) Community Dental Health Issues
Examines basic concepts in assessing community dental health needs and planning, implementing, evaluating, and presenting dental health programs to various community groups. Pre-requisite: Minimum grade of C in DHG 220 and DHG 226. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

DHP Dental Hygiene

DHP 120(4) Course ID:004859  
Dental Hygiene I
Includes basic assessment and clinical skills, related theory, professional role and responsibilities of the dental hygienist as a member of the dental health team. Pre-requisite: Acceptance into the Dental Hygiene Program; Computer Literacy or equivalency; and CPR certification. BIO 137 and BIO 139 or equivalent, with a grade of "C" or better. Lecture: 2.5 credits (37.5 contact hours); Clinical: 1.5 hours (180 contact hours).

Components: Clinical, Lecture
Attributes: Technical

DHP 122(2) Course ID:006832  
Dental Nutrition
Presents basic principles of nutrition with emphasis on nutritional counseling in relationship to dental health, determination of patient nutritional status, and application to oral health and effects of nutritional deficiencies. Pre-requisite: Acceptance into the Dental Hygiene Program; Computer Literacy or equivalency; and CPR certification. BIO 137 and BIO 139 or equivalent, with a grade of "C" or better. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

DHP 130(3) Course ID:000337  
Oral Pathology and Pharmacology
Introduces the disciplines of pharmacology and pharmacology, and therapeutics as related to dental hygiene care. Pre-requisite: DHP 120, DHP 122, DHP 123, DHP 124 and (BIO 225 or BIO 226, or equivalent) all with a minimum grade of C. Integrated Lecture: 2.5 credits (37.5 contact hours). Integrated Lab: 1.5 credits (67.5 contact hours).

Components: Laboratory, Integrated Lecture
Attributes: Technical

DHP 135(3) Course ID:004863  
Dental Radiology
Introduces theory and clinical practice of oral radiography. Presents the history, development, properties and uses of x-radiation. Emphasizes radiation hygiene and safety. Covers digital technology and all types of radiographic systems. Introduces radiographic anatomical landmarks and pathology seen on radiographs. Pre-requisite: DHP 120, DHP 122, DHP 123, DHP 124, and (BIO 225 or BIO 226, or equivalent) all with a minimum grade of C. Lecture: 2.5 credits (37.5 contact hours). Laboratory: 0.5 credit (30 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

DHP 136(2) Course ID:004864  
Periodontics I
Introduces the clinical, histological, and radiographic differences between healthy and unhealthy periodontal tissues. Emphasizes etiology, risk factor assessment, pathogenesis, and classification of periodontal diseases. Pre-requisite: DHP 120, DHP 122, DHP 123, DHP 124, and (BIO 225 or BIO 226, or equivalent) all with a minimum grade of C. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

DHP 220(3) Course ID:000485  
Dental Hygiene III
Emphasizes the continued treatment of clinical patients. Focuses on treatment and management of dental patients with special needs and emphasizes appropriate changes in dental treatment in response to a patient's medical condition. Pre-requisite: DHP 130, DHP 132, DHP 135 and DHP 136 all with a minimum grade of C. Lecture: 2.0 credits (240 contact hours). Discussion: 1.5 credit (15 contact hours).

Components: Clinical, Discussion
Attributes: Technical

DHP 222(3) Course ID:005040  
Special Needs Patients
Focuses on the special oral health care needs of persons with a variety of medical, disabling or mental conditions and provides for discussion of innovative approaches to serving populations with special oral health care needs. Emphasizes special pharmacological considerations and treatment modifications. Pre-requisite: DHP 130, DHP 132, DHP 135, and DHP 136 all with a minimum grade of C. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical
DIT 226(2) Course ID:004867
Periodontics II
Emphasizes the role of the dental hygienist in the identification and treatment of periodontal diseases. Focuses on non-surgical interventions and current surgical therapies in dentistry. Introduces implant management, advanced instrumentation and the dental laser. Pre-requisite: DIT 130, DIT 132, DIT 135 and DIT 136 all with a minimum grade of C. Lecture: 1.25 credits (18.75 contact hours). Lab: 0.75 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DIT 229(2) Course ID:004850
Local Anesthesia and Nitrous Oxide Sedation
Presents a conceptual framework and clinical skills necessary to administer local dental anesthetics and nitrous oxide sedation in accordance with Kentucky state dental practice act. Pre-requisite: DIT 130, DIT 132, DIT 135 and DIT 136 all with a minimum grade of C. Lecture: 1.25 credits (18.75 contact hours). Lab: 0.75 credit (45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DIT 230(3) Course ID:004868
Dental Hygiene IV
Focuses on mastery of all dental hygiene clinical skills utilized in treating all types of patients. Pre-requisite: DIT 220, DIT 222, DIT 226, and DIT 229 all with a minimum grade of C. Clinical: 2.0 credits (240 contact hours). Discussion: 1.0 credit (15 contact hours).
Components: Clinical, Discussion
Attributes: Technical

DIT 235(1) Course ID:004869
Principles of Practice
Emphasizes the legal, ethical, and managerial aspects of dental hygiene practice. Pre-requisite: DIT 220, DIT 222, DIT 226, and DIT 229 all with a minimum grade of C. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

DIT 238(3) Course ID:004870
Community Dental Health
Examines the assessment, planning, implementation and evaluation of community oral health needs. Focuses on reading and interpreting evidence-based literature. Relates current trends and best practices in oral health education. Emphasizes the presentation of dental health programs and educational research projects to community groups. Pre-requisite: DIT 220, DIT 222, DIT 226 and DIT 229 all with a minimum grade of C. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

DIT 299 - 4 Course ID:004851
Instructor Consent Required
Independent Study in Dental Hygiene
Consists of a special project or experience, approved by an instructor, provides an objective for independent study for dental hygiene technology students. This course may be repeated to a maximum of six credit hours. This is not a dental hygiene program requirement. Pre-requisite: Consent of instructor. Lecture: variable. Lab: Variable.
Components: Laboratory, Lecture
Same As Offering: DIT 299
Attributes: Technical

DIT 103(2) Course ID:001273
Preventive Maintenance Lab
Instruction on preventive maintenance practices, scheduled procedures, documents, and O.C.T. required record system and on determining the needs for repair. Laboratory: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

DIT 105(1) Course ID:006815
Mechanical Principles
Provides opportunities to practice hands on skills of measuring with precision measurement tools such as micrometers, dial indicator and caliper. This class also provides opportunities for the student to practice drilling and tapping. Proper rigging techniques are illustrated and practice to ensure that the student will know how to safely lift large and awkward items. Laboratory: 1.0 credit (45 contact hours).
Components: Laboratory
Attributes: Technical

DIT 110(3) Course ID:001274
Introduction To Diesel Engines
Covers fundamental concepts of the operation of two- and four-stroke diesel and gasoline engines. Includes basic engine components and their functions, engine performance terminology, two- and four-stroke operation, combustion principles, and engine disassembly with basic hand tools. Co-requisite: DIT 111. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 111(2) Course ID:001275
Introduction To Diesel Engines Lab
Includes the hands-on concepts covered in DIT 110. Covers the inspection, diagnosis and repair strategies for the basic repair of internal combustion diesel engines. Co-requisite: DIT 110. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

DIT 112(3) Course ID:001276
Diesel Engine Repair
Includes how to take a disassembled engine and evaluate the condition of each component. Includes the identification and use or function of each component of the engine. Covers cylinder block and components, cylinder heads and valve train components, and engine lubrication systems. Pre-requisite: DIT 110 or ADX 150. Co-requisite: DIT 113. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 113(2) Course ID:001277
Diesel Engine Repair Lab
Includes the hands-on concepts covered in DIT 112. Covers the inspection, diagnosis and repair strategies of internal combustion late model diesel engines. Pre-requisite: DIT 111 or ADX 151. Co-requisite: DIT 112. Laboratory: 2 credits (30 contact hours).
Components: Laboratory
Attributes: Technical

DIT 120(3) Course ID:001278
Introduction to Maintenance Welding
This course provides training in the identification, inspection and maintenance of welding electrodes. Training will be given in the principles and processes of welding plates and pipes. Instruction will be given in lab safety and basic oxy fuel cutting. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 121(3) Course ID:001279
Introduction to Maintenance Welding Lab
Provides laboratory experiences in which students acquire the manipulative skills needed to weld surface, fillet, and groove welds in flat and horizontal positions. The students will perform oxy fuel cutting operations. Lab: 3.0 credits (135 contact hours).
Components: Laboratory
Attributes: Technical

DIT 122(3) Course ID:001280
Undercarriage
Students learn the theory and operation of undercarriage systems and their components. These components include endless track, roller track, roller frames, idlers, roller supports, and mainframes. Co-requisite: DIT 123. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 123(3) Course ID:001281
Undercarriage Lab
Provides opportunities to troubleshoot and repair some parts of undercarriage systems and their components. These components include endless track, roller track, roller frames, idlers, roller supports, and mainframes. Lab: 3.0 credits (135 contact hours).
Components: Laboratory
Attributes: Technical

DIT 140(3) Course ID:001282
Hydraulics
Covers the theory and operation of a hydraulic system including pumps, filters, reservoirs, valves and actuators. Co-requisite: DIT 141. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 141(2) Course ID:001283
Hydraulics Lab
Includes the hands-on concepts covered in DIT 140. Covers the inspection, diagnosis and repair strategies of hydraulic systems. Co-requisite: DIT 140. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

DIT 150(3) Course ID:001284
Power Trains
Covers the theory and operation of the power train systems on medium and heavy duty trucks. Covers the diagnosis and repair techniques of the power train system. Co-requisite: DIT 151. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 151(2) Course ID:001285
Power Trains Lab
Provides for practical application of concepts taught in DIT 150. Covers topics covered that will include clutches, transmission, and drive axles on medium and heavy duty trucks. Co-requisite: DIT 150. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

DIT 152(3) Course ID:001286
Powertrain for Construction Equipment
Students learn the theory and principles of the operation of power transmissions. They learn to diagnose and repair power train units including torque connectors, standard and automatic transmissions. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 153(2) Course ID:001287
Powertrain for Construction Equipment Lab
Students troubleshoot, disassemble, evaluate parts and reassemble components of a power train system, such as torque connectors, standard and automatic transmissions, and drive lines. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

DIT 160(3) Course ID:001288
Steering and Suspension
Covers the theory, operation and diagnosis of the steering and suspension systems on medium and heavy duty trucks. Co-requisite: DIT 161. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DIT 161(2) Course ID:001289
Steering and Suspension Lab
Provides for practical application of concepts taught in DIT 160. Introduces skills necessary in the diagnosis and repair of truck suspension systems, wheel alignment, and wheel balancing. Pre-requisite: DIT 160. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical
to computers security, troubleshooting, and methods for enhancing work and life. Pre-requisite: RDG 20 or Consent of Instructor. Lecture: 3 credit hours (45 contact hours).

Components: Lecture
Attributes: Digital Literacy, Course Also Offered in Modules

DLC 101(1) Course ID:017023
Digital Essentials
Introduces students to computer classifications, how to use an operating system, and how to use email. Pre-requisite: RDG 20 or Consent of Instructor. Lecture: 1 credit (15 contact hours).

Components: Lecture

DLC 1012(1) Course ID:017024
Digital Intermediate
Introduces students to the legal and ethical use of computers. Introduces students to the use of productivity software. Pre-requisite: DLC 1011 or Consent of Instructor. Lecture: 1 credit (15 contact hours).

Components: Lecture

DLC 1013(1) Course ID:017025
Digital Advanced
Introduces students to the principles of computer and network security, basic troubleshooting techniques, and how to use computers to enhance life and work. Pre-requisite: DLC 1012 or Consent of Instructor. Lecture: 1 credit (15 contact hours).

Components: Lecture

DLC 108(4) Course ID:017127
Radiographic Positioning & Procedures I
Provides the knowledge base necessary to perform imaging procedures of the upper extremities and shoulder girdle, lower extremities and pelvic girdle, bony thorax, chest, upper airway, and plain abdomen. Covers criteria for optimal diagnostic images, including anatomical structures shown, as well as corrective positioning action to be taken for sub-optimal images. Pre-requisite: BIO 137. Lecture: 2 credit hours (30 contact hours). Lab: 2 credit hours (60 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

DLC 109(1) Course ID:017141
Radiography Practicum I
Designed to sequentially develop, apply, critical analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Provides structured clinical experience through sequential competency-based assignments that focus on the upper and lower extremities, bony and visceral thorax, and abdomen. Pre-requisite: Admission to the radiography program. Practicum: 1 credit hour (90 contact hour).

Components: Practicum
Attributes: Technical

DLC 111(3) Course ID:017645
Principles of X-Ray Production, Exposure, and Image Production
Establishes a basic knowledge of atomic structure and terminology. Presents the nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions with matter. Establishes a knowledge base in factors that govern the image production process. Imparts an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Includes factors that impact image acquisition, display, archiving and retrieval are discussed. Pre-requisite: MAT 150 or higher level quantitative reasoning course. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

DLC 112(2) Course ID:017139
Pharmacology for Radiographers
Provides basic concepts of pharmacology, venipuncture and administration of diagnostic contrast agents. Explains the classification and scheduling of drugs. Emphasizes the appropriate delivery of patient care during radiographic procedures requiring the administration of contrast agents. Pre-requisite: DMI 106 & DMI 108. Lecture: 2 credit hours (30 contact hours).

Components: Lecture
Attributes: Technical

DLC 114(4) Course ID:017138
Radiographic Positioning and Procedures II
Provides the knowledge base necessary to perform standard imaging procedures of the spine, cranial, facial bones, paranasal sinuses, upper gastrointestinal, lower gastrointestinal, and urinary system. Covers criteria for optimal diagnostic images, including anatomical structures shown, as well as corrective positioning action to be taken for sub-optimal images. Pre-requisite: DMI 108. Lecture: 3 credit hours (45 contact hours). Lab: 1 credit hour (30 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

DLC 120(2) Course ID:017137
Radiography Practicum II
Continues the DMI 110 clinical experience. Designed to sequentially develop, apply, critical analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Provides structured clinical experience through competency-based assignments that focus on the upper and lower extremities, bony and visceral thorax, abdomen, vertebral column, cranial, facial bones, and contrast studies of the digestive and urinary system. Pre-requisite: DMI 110. Practicum: 2 credit hours (180 contact hours).

Components: Practicum
Attributes: Technical
Radiographic Positioning and Procedures III
Course ID:017136
Provides the knowledge base and practical skills necessary to perform special diagnostic studies. Covers fluoroscopic procedures requiring informed consent, aseptic technique, and the administration of various contrast media. Considers the evaluation of optimal diagnostic images. Pre-requisite: DMI 108 & DMI 118. Lecture: 2 credit hours (30 contact hours). Lab: 1 credit hour (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

Radiography Practicum III
Course ID:017135
Continues the DMI 120 clinical experience. Designed to sequentially develop, apply, critical analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Provides structured clinical experience through sequential competency-based assignments that focus on the upper and lower extremities, bony and visceral thorax, abdomen, visceral column, cranium, facial bones, and contrast studies of the digestive and urinary systems, as well as surgical radiographic procedures. Pre-requisite: DMI 120. Practicum: 2 credit hours (180 contact hours).
Components: Practicum
Attributes: Technical

Radiographic Equipment and Quality Management
Course ID:017646
Establishes a knowledge base in design, construction requirement, functions and use of radiographic and fluoroscopic equipment, both fixed and mobile. Explains component and functions of various digital imaging processing and display systems. Provides a basic knowledge of quality control and federal regulation standards of operation for diagnostic radiographic equipment. Presents the principles of the digital system quality assurance, quality and data management, and maintenance. Pre-requisite: DMI 112. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

Radiography Practicum IV
Course ID:017133
Continues the DMI 130 clinical experience. Designed to sequentially develop, apply, critical analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Provides structured clinical experience through sequential competency-based assignments that focus on the upper and lower extremities, bony and visceral thorax, abdomen, visceral column, cranium, facial bones, and contrast studies of the digestive and urinary systems, surgical radiographic procedures and special diagnostic procedures such as myelograms, arthrogams, hepatobiliary studies, and venography. Pre-requisite: DMI 130. Practicum: 4 credit hours (360 contact hours).
Components: Practicum
Attributes: Technical

Image Analysis
Course ID:017132
Provides a basis for analyzing radiographic images. Includes the importance of optical imaging standards, discussion of a problem-solving technique for image evaluation and the factors that can affect image quality. Includes the analysis of actual radiographic images. Pre-requisite: DMI 108 & DMI 118. Lecture: 2 credit hours (30 contact hours).
Components: Lecture
Attributes: Technical

Radiation Protection and Biology for Radiographers
Course ID:017131
Presents an overview of the principles of radiation protection, including the responsibilities of the radiographer for patients, personal and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are evaluated. Provides an overview of the principles of the interaction or radiation with living systems. Presents radiation effects on molecules, cells, tissues and the whole body. Introduces the factors affecting biological response are presented, including acute and chronic effects of radiation. Pre-requisite: DMI 112. Lecture: 2 credit hours (30 contact hours).
Components: Lecture
Attributes: Technical

Radiographic Anatomy & Pathology
Course ID:017130
Introduces concepts related to the classification of disease, etiology, epidemiology, treatment and prognosis. Defines the appropriate imaging modality for the greatest diagnostic sensitivity. Describes the radiographic appearance of disease and its impact of exposure factor selections. Emphasized normal radiographic anatomy as an indicator and identification of pathologies. Pre-requisite: DMI 108, DMI 118, & DMI 126. Lecture: 3.0 credit hours (45 contact hours).
Components: Lecture
Attributes: Technical

Seminars in Radiography
Course ID:017129
Provides capstone information needed by the entry level radiographer; includes the radiography practitioner’s role in the health care delivery system, continuing education and professional development, advanced modalities, accreditation organizations, national registration and state licensure, as well as the benefits of membership and activity in professional societies. Examines the principles, practices and policies of health care organizations and the delivery of health care in the United States. Pre-requisite: Final semester in the radiography program. Lecture: 3 credit hours (45 contact hours).
Components: Lecture
Attributes: Digital Literacy, Technical

Radiography Practicum V
Course ID:017128
Continues the DMI 220 clinical experience. Designed to sequentially develop, apply, critical analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Provides structured clinical experience through sequential competency-based assignments that focus on the upper and lower extremities, bony and visceral thorax, abdomen, visceral column, cranium, facial bones, and contrast studies of the digestive and urinary systems, surgical radiographic procedures and special diagnostic procedures such as myelograms, arthrogams, hepatobiliary studies, and venography. Pre-requisite: DMI 220. Practicum: 4 credit hours (360 contact hours).
Components: Practicum
Attributes: Digital Literacy, Technical

Diagnostic Medical Sonographer
Course ID:004392
Sonography I
Provides a study of diagnostic foundations of clinical medicine pertinent to abdominal, superficial structures, musculoskeletal and non-cardiac chest sonography. Includes obtaining the clinical history, interpretation of clinical laboratory test, the pathophysiologic effects of disease, related clinical signs and symptoms, sectional anatomy, and normal/abnormal sonographic patterns. Includes a laboratory component for the practice and application of normal sonographic patterns, basic scanning techniques and protocol. Pre-requisite: Admission to Diagnostic Medical Sonography program; Computer Literacy; NAA 100 or equivalent; CPR certification. Lecture: 5.0 credits (75 contact hours) Lab: 2.0 credits (90 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

Instructor Consent Required
Sonography II
Covers the study of the clinical applications within the sonographic specialties of obstetrics and gynecology. Includes related clinical symptoms and laboratory tests, pathophysiologic effects of disease and anomalies, and normal/abnormal sonographic patterns. Includes basic scanning techniques and protocol. With an emphasis on the demonstration of clinical applications of theoretical principles and concepts. Pre-requisite: Admission to Diagnostic Medical Sonography program; Computer Literacy; CPR certification. Lecture: 4.0 credits (60 contact hours), Laboratory: 2.0 credits (90 contact hours), (45:1 Ratio).
Components: Laboratory, Lecture
Attributes: Technical

Diagnostic Medical Sonography
Course ID:004393
Ultrasound Physics and Instrumentation
Consists of lectures and related laboratory exercises covering the areas of ultrasonic propagation principles, transducer parameters, interactive properties of ultrasound with human tissue, possible biologic effects, basic equipment types, instrumentation and quality control procedures, hemodynamics and basic Doppler. Pre-requisite: Consent of Program Coordinator. Lecture: 6.0 credits (90 contact hours).
Components: Lecture
Attributes: Digital Literacy, Technical

Clinical Education I
Includes observation of all clinical duties performed in the ultrasound department. Covers basic instruction and scanning experience in abdomen, superficial structures, non-cardiac chest, embryo/fetus, gravid and non-gravid pelvic structures with basic competencies to be performed. Pre-requisite: Minimum grade of "C" in (DMS 109 and DMS 115) or (DMS 111 and DMS 116), Clinical: 3.0 - 4.0 credits (180 - 240 contact hours).
Components: Clinical
Attributes: Technical
DMS 146(12)  Course ID:017115  Cardiac Techniques I  
Provides a study of normal cardiovascular anatomy and physiology including hemodynamic concepts, electrophysiology, and the conduction system. Includes patient care and medical and legal issues of sonographers. Presents pathophysiologic conditions, signs and symptoms of valvular heart disease, ischemic cardiac disease, and infective endocarditis, and prosthetic heart valves and discussion of the various cardiac testing procedures used in diagnosis, includes a laboratory component to develop basic skills in 2D, M-mode, Doppler scanning techniques and standard measurements. Pre-requisite: Admission to Diagnostic Sonography program; Digital Literacy; NAA 100 or equivalent CPR certification. Co-requisite: DMS 147  Lecture: 8 credit hours (120 contact hours). Lab: 4 credit hours (180 contact hours).

Components: Integrated Laboratory, Integrated Lecture
Attributes: Technical

DMS 147(1)  Course ID:017116  Cardiac Clinical Education I  
Introduces the student to the clinical environment including the function and organization of the echocardiography department and the various testing procedures utilized in the diagnosis of cardiac diseases. Presents opportunities to observe and model the appropriate professional behaviors and communication expected in the clinical setting and initiates the performance of basic scan skills under the supervision of appropriately credentialed cardiac sonographers. Pre-requisite: Admission to the Diagnostic Medical Sonography program; Digital Literacy; NAA 100 or equivalent or CPR certification. Co-requisite: DMS 146. Clinical: 1 credit hour (60 contact hours).

Components: Clinical
Attributes: Technical

DMS 199(1)  Course ID:005938  Online Physics Review  
Includes a review of basic ultrasound physics, transducers, bioeffects, artifacts, quality assurance and principles of Doppler techniques. Pre-requisite: DMS 119 or DMS 121 with minimum "C" grade or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
Attributes: Technical

DMS 201(1)  Course ID:005937  Online Abdomen Review  
Provides a review of abdominal sonography to prepare the student for the related registry. Includes obtaining a clinical history, interpretation of clinical laboratory tests, pathologic basis for disease, related clinical signs and symptoms, sectional anatomy, and normal/abnormal sonographic patterns. Pre-requisite: DMS 109 or DMS 111 with minimum "C" grade or Consent of Program Coordinator. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
Attributes: Technical

DMS 202(1)  Course ID:005938  Online OB/GYN Review  
Provides a review of related clinical signs and symptoms, laboratory tests, and normal/abnormal sonographic patterns in preparation for the related Ob/Gyn registry. Pre-requisite: DMS 115 or DMS 116 with minimum "C" grade or Consent of Program Coordinator. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
Attributes: Technical

DMS 207(7)  Course ID:017117  Cardiac Techniques II  
Presents content on additional cardiac pathways including acquired and congenital heart diseases. Covers the relationship of echocardiography to patient history and physical examination, abstracting the clinical chart, indications for exam, and differential diagnoses. Discusses cardiovascular pharmacology, their potential effects on echocardiographic findings, and provocative agents and maneuvers. Includes a laboratory component to further develop scan skills and practice more advanced evaluations of Color Flow, Pulsed and Continuous wave Doppler findings, valvular stenosis severity, ventricular function, and abnormal cardiovascular hemodynamics and flow patterns and correlating Doppler findings. Pre-requisite: DMS 146 with a minimum "C" grade or Consent of Program Coordinator. Lecture: 4 credit hours (60 contact hours). Lab: 3 credit hours (135 contact hours).

Components: Integrated Laboratory, Integrated Lecture
Attributes: Technical

DMS 215(6)  Course ID:005944  Cardiac Sonography III  
Covers the basic embryology of the heart, fetal and postnatal circulation, and basic types of congenital heart defects found in the adult. Includes how systemic disease affects the heart and basic clinical problem solving techniques used in echocardiography. Pre-requisite: DMS 205 with minimum "C" grade. Lecture/Lab: 6.0 credits (270 contact hours).

Components: Lecture

DMS 230(5 - 8)  Course ID:004396  Clinical Education II  
Includes interaction in all clinical duties performed in all ultrasound departments. Covers abdomen, superficial structures, non-cardiac chest, embryo/fetus, and the gravid and non-gravid pelvic structures with performance of basic and advanced competencies to be performed. Pre-requisite: Admission to Diagnostic Medical Sonography Program; Computer Literacy; Minimum grade of "C" in BIO 135 or (BIO 137 and BIO 139) and (PHY 151 or PHY 152 or PHY 171) and MAT 150. Clinical: 5.0 - 8.0 credits (300 - 480 contact hours).

Components: Clinical
Attributes: Technical

DMS 240(5 - 8)  Course ID:004398  Clinical Education III  
Continues the clinical experience by student assuming a more active role in assisting the practicing sonographer and performing sonographic duties under direct supervision with the rate of progress dependent upon the student’s ability to comprehend and perform assignments. Pre-requisite: DMS 230 with Minimum "C" grade. Clinical: 5.0 - 8.0 credits (300 - 480 contact hours).

Components: Clinical
Attributes: Technical

DMS 247(2)  Course ID:017120  Cardiac Clinical Education II  
Includes observation of all clinical duties in the echocardiographic department including routine, stress, transesophageal echocardiography (TEE), and 3D echocardiography as possible. Emphasizes basic clinical scanning experience under the supervision of a credentialed Cardiac Sonographer. Pre-requisite: DMS 147 with a grade of Pass or Consent of Program Coordinator. Co-requisite: DMS 207. Clinical: 2 credit hours (120 contact hours).

Components: Clinical
Attributes: Technical

DMS 248(6)  Course ID:017121  Cardiac Clinical Education III  
Requires progressive clinical experience with student assuming a more active role in assisting the supervising Cardiac Sonographer with the rate of progress dependent upon the student’s ability. Emphasizes increased participation in performance of the complete adult echo examination including scanning competencies, and participation in non-routine procedures including transesophageal echocardiography (TEE) and stress echocardiographic studies. Pre-requisite: DMS 247 with a minimum "C" grade or Consent of Program Coordinator. Clinical: 6 credit hours (360 contact hours).

Components: Clinical
Attributes: Technical

DMS 255(6)  Course ID:005939  Vascular Technology  
Presents normal/abnormal sectional anatomy, hemodynamics, patient assessment and diagnostic testing related to vascular technology. Includes applications of pathophysiologic basis, clinical signs and symptoms and typical findings related to the peripheral vascular system. Includes therapeutic interventions, intraoperative monitoring and the use of contrast agents. Covers vascular physics including blood flow characteristics and pressure/flow/velocity relationships. Pre-requisite: Minimum "C" grade in (DMS 119 and DMS 240) or Consent of Program Coordinator. Lecture/Lab: 6.0 credits (120 contact hours).

Components: Lecture
Attributes: Technical

DMS 290(6)  Course ID:005940  Vascular Clinical Education  
Provides clinical experience by student actively assisting and performing vascular procedures under direct supervision of a Vascular Technologist. Completes competencies including cerebrovascular, upper/lower venous/arterial extremity, and abdominal vasculature. Pre-requisite: DMS 255 with minimum "C" grade. Clinical: 6.0 credits (360 contact hours).

Components: Clinical
Attributes: Technical

DPT 100(3)  Course ID:015703  Introduction to 3D Printing  
Provides an introduction to the world of additive manufacturing, or more commonly known as three-dimensional printing (3DP), and its applications in conjunction with computer technology. Introduces topics including computer hardware and software, 3D printing technologies, file management, the Internet, email, the social web, sustainability, security, and computer and intellectual property ethics. Presents basic use of applications, programming, systems, and utility software. Lecture: 2 credit hours (30 contact hours). Lab: 1 credit hour (30 contact hours).

Components: Integrated Laboratory, Integrated Lecture
Attributes: Digital Literacy, Technical

DPT 102(2)  Course ID:016604  3D Printing Technology Fundamentals  
Provides an introduction to the world of three-dimensional (3D) printing or additive manufacturing (AM) and its applications. Introduces topics including 3D printing technologies, basic use of 3D applications, programming, systems, 3D-scanning, and utility software. Pre-requisite or Co-requisite: CIT 105, demonstration of digital literacy competency by exam or certificate, or other approved course with digital literacy status. Lecture/Lab: 2.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

DPT 150(3)  Course ID:016605  Introduction to Engineering Mechanics for 3D Printing  
Provides an introduction to simplified engineering mechanical principles as they apply to 3D printing, or additive manufacturing, designs and products. Requires students to apply concepts related to simple force and stress analysis, material property selection, and deformation to their designs for the purpose of improving functional performance and overall printing success. Explores finishing and post-processing techniques to enhance the final appearance and marketability of their printed work. Pre-requisite: DPT 100 or DPT 102. Lecture/ Lab: 3.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical

DPT 210(3)  Course ID:017530  Introduction to Powder-Based Additive Manufacturing  
Prepares technicians for the advanced applications and utilization of powder-based additive manufacturing, or 3D printing, materials, and equipment. Requires students to demonstrate knowledge of related safety, additive manufacturing processes, lightweighting, generative design, appropriate equipment utilization, and quality control methodologies. Directs students in applying finishing and post-processing techniques through the use of conventional machining equipment to enhance the final appearance, strength, and marketability of their work. Pre-requisites: DPT 100, CIT 105. Integrated Lecture/Lab: 3.0 credits (60 contact hours).

Components: Integrated Laboratory, Integrated Lecture
Attributes: Technical
DPT 280(1)  Course ID:016606
Special Projects for 3D Printing, Level I
Allows the student to gain intermediate level experience in their prospective fields through projects and tasks assigned by the instructor and based on applications the student may one day experience as a professional. Focuses on various assignments and curriculum as determined by the program instructor. Pre-requisite: DPT 100 or DPT 102. Lecture/Lab: 1.0 credits (30 contact hours)
Components: Lecture
Attributes: Technical

ECO Economics

ECO 101(3)  Course ID:000445
Contemporary Economic Issues
Covers contemporary economic issues such as inflation, poverty and affluence, globalization, and environmental pollution. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Course Also Offered in Modules

ECO 150(3)  Course ID:006703
Introduction to Global Economics
Covers the causes and issues of global economic interdependence, with particular emphasis on cross-cultural implications of globalization. Includes global economic issues such as economic development, global economic governance, changing demographics, health care, world poverty, changing patterns of food production, global energy use, and the economic consequences of global environmental issues. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Course Also Offered in Modules

ECO 201(3)  Course ID:000447
Principles of Microeconomics
Covers the allocation of scarce resources from the viewpoint of individual economic units. Topics include supply and demand, elasticity, costs, and markets. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Course Also Offered in Modules

ECO 202(3)  Course ID:000449
Principles of Macroeconomics
Covers how society's needs are satisfied with the limited resources available. Includes issues such as inflation, unemployment, economic growth, globalization, and fiscal and monetary policy. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Course Also Offered in Modules

EDM Education

EDM 270(3)  Course ID:000411
Teaching and Learning in the Middle Grades
Provides students in middle school education with knowledge and experience critical for instruction of middle school students and management of middle school classrooms. Requires field experience of a minimum of 15 clock hours in instructor-approved education agencies. Pre-requisite: EDM 202 and EDU 201. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EDP Educational and Counseling Psychology

EDP 202(3)  Course ID:000452
Human Development and Learning
Presents theories and concepts of human development, learning, and motivation and applies them to interpreting and explaining human behavior and interaction in relation to teaching across the developmental span from early childhood to adulthood. Requires field experience of a minimum of 15 clock hours in instructor-approved educational agencies. Pre-requisite: PST 100 or FY 110. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other
Circuits and Networks I

An introductory course in circuit analysis including Kirchhoff's Laws, independent and dependent sources, power and energy, lumped linear fixed networks, power factor, phasors, and three-phase networks. Pre-requisite: MAT 185 Calculus II (C or better). Co-requisite: PHY 232 University Physics II. Lecture: 3 credits (37.5 contact hours). Lab: 0.50 credit hour (30 contact hours).

Components: Laboratory, Lecture
Attributes: University Course (Western Kentucky University)

EE 211(4) Course ID:000454

Circuits

Fundamental laws, principles and analysis techniques for DC and AC linear circuits whose elements consist of passive and active components used in modern engineering practice including the determination of steady state and transient responses. Pre-requisite: MA 114. Pre-requisite or concurrent: PHY 232, PHY 242.

Components: Lecture
Attributes: Technical

EES Electronics

EES 101(2) Course ID:001332

Basic Electronics

Provides the foundation for further study in technologies related to electricity or electronics. Addresses the following areas: basic electrical components and their properties, quantities, and units of measurement; calculation of voltage, current, resistance, energy, and power using Ohms Law; construction and analysis of series, parallel, and series/parallel circuits; principles of magnetism and electromagnetism; alternating current and voltage; reactive components; construction and analysis of RC, RL, and RLC circuits; sinusoidal and other waveforms. Lecture/Lab: 2.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical

EET Electrical Technology

EET 100(3) Course ID:017506

Electrical Safety in the Workplace

Introduces students to electrical hazards that are associated with working around electricity and the precautions that must be taken to ensure a safe working environment. Focuses on potential hazards that may be encountered on the job such as electrical shock and arc flash. Covers personal protective equipment, Lock-Out-Tagout practices, tool safety, equipment safety, and guidelines for working safely around hazardous environments according to OSHA and the NFPA 70E. Lecture: 3.0 credits (45 contact hours)

Components: Lecture
Attributes: Technical

EET 110(4) Course ID:004231

Voice & Data Installer Level I

Introduces students to the telecommunication industry. Provides an entry-level telecommunication cabling installers with the background, knowledge, and basic skills needed to function effectively on the job. Prepares students with little or no telecommunication installation experience. Pre-requisite: Basic physics/electricity courses are recommended but not required. Lecture: 4 credits (75 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

EET 112 (3) Course ID: 004232

Bsc Electrical Theory: TeleNet

Introduces the theory of electricity, magnetism, and the relationship of voltage, current, resistance, and power in electrical circuits as related to telecommunications. Develops an understanding of alternating and direct current fundamentals. Students will apply formulas to analyze the operation of AC and DC circuits. Co-requisite EET 113. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

EET 116(3) Course ID:004235

Fiber Optics Systems

Provides a technical level of understanding in the areas of networking connectivity, data communications concepts and communication protocols. Introduces students to communications and networking concepts including hardware, software, and transmission media; access methods and protocols; and network configurations area are addressed. Emphasizes local area networks, and installation of a basic network. Pre-requisite: EET 110 with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

EET 118 (3) Course ID: 004236

Residential Network Wiring

Provides students with the knowledge to design and install multimedia applications for residential structures; gain an understanding of industry-standards practices, codes, and ordinances that pertain to high-performance in-home systems. Introduces students to voice, data, security, video, audio, automation, control and entertainment systems, cable performance characteristics, and appropriate cabling media, connectors, blocks, jacks, panel, pathways and spaces. Pre-requisite: EET 110 with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

EET 119(5) Course ID:015852

Basic Electricity

Introduces basic electricity concepts applicable to AC and DC circuits pertinent to the electrical technology industry. Provides an in-depth study of Ohm’s Law, series, parallel, and series-parallel circuit characteristics. Focuses on providing students with an overview of common electrical safety practices, AC generation, AC and DC Principles, magnetic principles, transformers, capacitors, inductors, and basic electrical testing equipment along with a focus on the construction, calculation, measurement, and troubleshooting of various AC and DC circuits by way of laboratory exercises and classroom lecture. Pre-requisite: MAT 055 or equivalent placement level or consent of program advisor(s). Lecture/Lab: 5.0 credits (45 contact hours Lecture / 60 contact hours Lab)

Components: Lecture
Attributes: Technical

EET 127(1) Course ID:015853

Electrical Technology Capstone

Serves as the capstone course for the Electrical Technology degree program and all of its concentrations. Integrates prior learning outcomes into a single integrated learning experience. Includes an exit exam that all program graduates must take. Pre-requisite: Consent of Instructor. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
Attributes: Technical

EET 150(2) Course ID:001355

Transformers

Focuses on the operation, installation and application of AC single-phase and three-phase transformers. Emphasizes the testing and maintaining transformer equipment, with safely integrated as a core component of the study. Pre-requisite: (ELT 110 or EET 119) with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Co-requisite: EET 151. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

EET 151(1) Course ID:001356

Transformers Lab

Focuses on the operation, installation and application of AC single-phase and three-phase transformers. Emphasizes the testing and maintaining transformer equipment, with safely integrated as a core component of the study. Pre-requisite: (ELT 110 or EET 119) with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Co-requisite: EET 150. Lab: 1.0 credit (30 contact hours).

Components: Laboratory
Attributes: Technical

EET 154(2) Course ID:001358

Electrical Construction I

Introduces students to the materials and procedures used in construction wiring. Prerequisite: (ELT 110 or EET 119) with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Co-requisite: EET 155. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

EET 155(2) Course ID:001359

Electrical Construction I Lab

Provides students hands-on experiences with electrical materials and equipment in construction wiring. Prerequisite: (ELT 110 or EET 119) with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Co-requisite: EET 154. Laboratory: 2.0 credits (60 contact hours).

Components: Laboratory
Attributes: Technical

EET 198(2) Course ID:001361

Instructor Consent Required

Practicum

Provides supervised on-the-job work experience related to the student's educational objectives. (Students participating in the Practicum Education program do not receive compensation for their work.) Pre-requisite: Consent of Electrical Technology program advisor(s). 2.0 credits (150 contact hours).

Components: Practicum
Attributes: Technical
EET 199(2) Course ID:001362
Instructor Consent Required
Cooperative Education Program
Provides supervised on-the-job work experience related to the student’s educational objectives. (Students participating in the Cooperative Education program receive compensation for their work.) Pre-requisite: Consent of Electrical Technology program advisor(s). 2.0 credits (150 contact hours).
Components: Co-Op Attributes: Technical

EET 200(2) Course ID:017531
Robotic Systems I
Introduces students to the history, terminology, theory, and common applications of robotic systems. Provides instruction in basic robot programming techniques, file execution and manipulation, coordinate systems, and file maintenance. Focuses students on robotic system components and preventative maintenance tasks. Prepares students to identify safety devices and utilize safety procedures while working with robotic systems. Integrated Lecture/Lab: 2.0 credits (45 contact hours).
Components: Integrated Laboratory, Integrated Lecture Attributes: Technical

EET 201(2) Course ID:017532
Robotic Systems II
Introduces students to advanced robot programming concepts used in manufacturing. Prepares students to work with various power systems used with a robotic system. Provides a basic introduction of concepts and techniques used to maintain electrical and mechanical robotic systems. Provides an introduction into vision systems used within a manufacturing environment. Prepares students to identify safety devices and utilize safety procedures while working with robotic systems. Pre-requisite: EET 200 Robotic System I. Integrated Lecture/Lab: 2.0 credits (45 contact hours).
Components: Integrated Laboratory, Integrated Lecture Attributes: Technical

EET 202(2) Course ID:017533
Robotic Maintenance
Introduces students to robotic maintenance commonly performed on robots in manufacturing. Prepares students to back up software, isolate all electrical and mechanical power. Prepares students to perform preventative maintenance procedures according to manufacturer specifications. Pre-requisite: EET 201 Robotic Systems II OR IMT 200 Industrial Robotics and Robotic Maintenance. Integrated Lecture/Lab: 2.0 credits (45 contact hours).
Components: Integrated Laboratory, Integrated Lecture Attributes: Technical

EET 203(2) Course ID:017534
Robotic Vision Systems
Introduces students to vision systems commonly used with robots in manufacturing environments. Prepares students to setup, calibrate, and utilize vision systems. Prepares students to master the robot, create tool and user frames used with the vision system and process, and program the robot to respond to vision results. Provides hands on applications of procedures and utilization of common vision systems found in industry. Pre-requisite: EET 201 Robotic Systems II OR IMT 200 Industrial Robotics and Robotic Maintenance. Integrated Lecture/Lab: 2.0 credits (45 contact hours).
Components: Integrated Laboratory, Integrated Lecture Attributes: Technical

EET 250(4) Course ID:001410
National Electrical Code
Emphasizes the importance of the National Electrical Code as it applies to electrical installations: electrical safety issues, prevention of fire due to the use of electrical energy, prevention of loss of life and property from the hazards that might arise from the use of electrical energy, and proper selection of electrical equipment for hazardous and non-hazardous environments. Provides a learning resource in the preparation for electrical licensing examinations. Pre-requisite: ELT 110 OR EET 119 with minimum grade of “C” or consent of Electrical Technology Program advisor(s). Lecture: 4.0 credits (60 contact hours).
Components: Lecture Attributes: Technical

EET 252(2) Course ID:001411
Electrical Construction II
Expands the knowledge and skills needed to work in commercial and industrial construction wiring. Pre-requisite: Consent of Instructor or EET 154. Co-requisite: EET 253. Lecture: 2 credits (30 contact hours).
Components: Lecture Attributes: Technical

EET 253(2) Course ID:001412
Electrical Construction II Lab
Provides hands-on experiences needed to work in commercial and industrial construction wiring. Pre-requisite: EET 252. Laboratory: 2 credits (60 contact hours).
Components: Laboratory Attributes: Technical

EET 254(3) Course ID:001413
Electrical Construction
Focuses on the study of materials and procedures and expands the knowledge and skills needed to work in commercial and industrial construction wiring. Pre-requisite: (ELT 110 OR EET 119) with a minimum grade of “C” or consent of Electrical Technology program advisor(s). Co-requisite: EET 255. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical

EET 255(4) Course ID:001414
Electrical Construction Lab
Provides hands-on experiences with electrical materials and equipment related to commercial and industrial construction wiring. Pre-requisite: (ELT 110 OR EET 119) with a minimum grade of “C” or consent of Electrical Technology program advisor(s). Co-requisite: EET 254. Laboratory: 4 credits (120 contact hours).
Components: Laboratory Attributes: Technical

EET 264(2) Course ID:001425
Rotating Machinery
Focuses on the underlying principles of rotating electrical equipment including DC and AC motors and generating equipment construction, rotating applications, and the maintenance of DC and AC motors and generating equipment. Pre-requisite: (ELT 110 OR EET 119) with a minimum grade of “C” or consent of Electrical Technology program advisor(s). Co-requisite: EET 265. Lecture: 2.0 credits (30 contact hours).
Components: Lecture Attributes: Technical

EET 265(2) Course ID:001420
Rotating Machinery Lab
Focuses on the principles of operation, application and maintenance of single-phase and three-phase AC motors and AC alternators, DC motors, DC generators. Introduces students to the standards of the National Electrical Code and its use. Pre-requisite: (ELT 110 OR EET 119) with a minimum grade of “C” or consent of Electrical Technology program advisor(s). Co-requisite: EET 264. Lab: 2.0 credits (60 contact hours).
Components: Laboratory Attributes: Technical

EET 266(3) Course ID:001422
Rotating Machinery and Transformers Lab
Applies the principles of operation, application and maintenance of single-phase and three-phase AC transformers, motors and alternators, and DC motors and generators. Focuses on the compliance with current National Electric Code standards to insure safe installation methods. Pre-requisite: (ELT 110 OR EET 119) with a minimum grade of “C” or consent of Electrical Technology program advisor(s). Co-requisite: EET 266. Lab: 3.0 credits (90 contact hours).
Components: Laboratory Attributes: Technical

EET 268(3) Course ID:001423
Instructor Consent Required
Rotating Machinery Electrical Motor Controls I
Focuses on the construction, operation and maintenance of DC motors and generators and AC motors and alternators. Addresses the diversity of control devices and applications used in industry today. Emphasizes the importance safety and electrical lockouts are also included. Pre-requisite: (ELT 110 OR EET 119) with a minimum grade of “C” or consent of Electrical Technology program advisor(s). Co-requisite: EET 269. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

EET 269(4) Course ID:001424
Rotating Machinery and Motor Controls I Lab
Provides practical experience in the use of control devices and their applications in industry today. Focuses on the construction, operation and maintenance of AC motors and alternators, and DC motors and generators. Emphasizes the importance of safety and electrical lockouts. Pre-requisite: (ELT 110 OR EET 119) with a minimum grade of “C” or consent of Electrical Technology program advisor(s). Co-requisite: EET 264. Lecture: 4.0 credits (120 contact hours), Lab: 4.0 credits (120 contact hours).
Components: Laboratory Attributes: Technical

EET 270(2) Course ID:001425
Electrical Motor Controls I
Addresses the diversity of control devices and applications used in industry today. Emphasizes the importance of safety and electrical lockouts. Pre-requisite: (ELT 110 OR EET 119) with a minimum grade of “C” or consent of Electrical Technology program advisor(s). Co-requisite: EET 271. Lecture: 2.0 credits (30 contact hours).
Components: Lecture Attributes: Technical

EET 271(2) Course ID:001426
Electrical Motor Controls I Lab
Provides practical experience in the use of control devices and their applications in industry today. Emphasizes the importance of safety and electrical lockouts. Pre-requisite: (ELT 110 OR EET 119) with a minimum grade of “C” or consent of Electrical Technology program advisor(s). Co-requisite: EET 270. Lab: 2.0 credit (60 contact hours).
Components: Laboratory Attributes: Technical

EET 272(2) Course ID:001427
Electrical Motor Controls II
Introduces advanced study of motor controls in industry. Focuses on solid state relays, hall effect sensors, proximity detectors and photo detectors. Provides hands-on instruction to include sketching, installing, and troubleshooting the following; three phase controls, variable speed drives using relays as well as solid state devices. Provides an introduction to the installation and programming of Programmable Logic Controllers. Pre-requisite: EET 270 OR EET 264 OR EET 268 with a minimum grade of “C” or consent of Electrical Technology program advisor(s). Co-requisite: EET 273. Lecture: 2.0 credits (30 contact hours).
Components: Lecture Attributes: Technical
EET 273(2) Course ID:001428
Electrical Motor Controls II Lab
Provides hands-on experience in advanced studies in electrical controls used in industry including three-phase motor control and variable speed control using solid state devices and Programmable Logic Controllers. Prerequisite: EET 271 OR EET 265 OR EET 269 with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Co-requisite: EET 272. Laboratory: 2.0 credits (60 contact hours).

Components: Laboratory
Attributes: Technical

EET 274(3) Course ID:001429
Electrical Motor Controls
Addresses the diversity of control devices and applications used in industry today. Emphasizes the importance of safety and electrical lockouts. Focuses on the advanced study of motor controls in industry. Focuses on solid state relays, hall effect sensors, proximity detectors and photo detectors. Examines the sketching, installing and troubleshooting the following: three phase controls, variable speed drives, relays, solid state devices, and programmable controls. Prerequisite: (ELT 110 or EET 119) with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Co-requisite: EET 275. Lecture: 3.0 credits (45 contact hours).

Components: Laboratory
Attributes: Technical

EET 275(4) Course ID:001430
Electrical Motor Controls Lab
Provides practical experience in the use of control devices and their applications in industry today. Emphasizes the importance of safety and electrical lockouts. Provides hands-on experience in advanced studies in electrical controls used in industry including three-phase motor control and variable speed control using solid state devices and programmable controls. Prerequisite: (ELT 110 or EET 119) with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Co-requisite: EET 274. Lab: 4.0 credits (120 contact hours).

Components: Laboratory
Attributes: Technical

EET 276(2) Course ID:001431
Programmable Logic Controllers
Introduces principles and applications of programmable logic controllers including installation, logic fundamentals, and numbering systems; basic programming of inputs, outputs, timers, and counters, comparators, basic data manipulation, and safety circuits of industrial PLCs. Prerequisite: EET 270 OR EET 268 OR EET 274 with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Co-requisite: EET 277. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

EET 277(2) Course ID:001432
Programmable Logic Controllers Lab
Provides practical applications of programmable logic controllers including installation, logic fundamentals, and numbering systems; basic programming of inputs, outputs, timers, and counters, comparators, basic data manipulation, and safety circuits of industrial. Prerequisite: EET 271 OR EET 269 OR EET 275 with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Co-requisite: EET 276. Lab: 2.0 credits (60 contact hours).

Components: Laboratory
Attributes: Technical

EET 280(4) Course ID:017413
Multi-Platform Programmable Logic Controllers
Introduces students to multiple platforms of programmable logic controllers (PLC). Prepares students to wire, communicate with, program and troubleshoot multiple brands of PLCs. Introduces students to basic programming of inputs, outputs, internal relay, timers, counters, comparator, math and data manipulation instructions. Provides hands-on lab application of multiple platforms of programmable logic controllers found in industry. Prerequisite: EET 276 and EET 277 with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Integrated Lecture/Lab: 4 credits (90 contact hours).

Components: Integrated Laboratory, Integrated Lecture
Attributes: Technical

EET 283(2) Course ID:001436
Instructor Consent Required
Special Problems I
A course designed for the student who has demonstrated special needs. Pre-requisite: Permission of Instructor. Laboratory: 1 credit (45 contact hours).

Components: Laboratory
Attributes: Technical

EET 283/3 Course ID:001436
Instructor Consent Required
Special Problems II
A course designed for the student who has demonstrated special needs. Pre-requisite: Permission of Instructor. Laboratory: 2 credits (90 contact hours).

Components: Laboratory
Attributes: Technical

EET 285/3 Course ID:001437
Special Problems III
A course designed for the student who has demonstrated special needs. Pre-requisite: Permission of Instructor. Laboratory: 3 credits (135 contact hours).

Components: Laboratory
Attributes: Technical

EET 286(0) Course ID:004627
Programmable Logic Controllers II
Focuses on sequential instructions, shift registers, process control instructions, networking, communications, human to machine interfaces, and troubleshooting techniques used with programmable logic controllers. Prerequisite: (EET 276 with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Co-requisite: EET 287. Lecture: 2 credits (30 contact hours).

Components: Lecture
Attributes: Technical

EET 287(2) Course ID:004628
Programmable Logic Controllers II Lab
Provides hands on lab applications dealing with sequencers, shift registers, networks, communication software, human to machine interfaces, analog devices, and troubleshooting. Pre-requisite: (EET 277 with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Co-requisite: EET 286. Laboratory: 2 credits (60 contact hours).

Components: Laboratory
Attributes: Technical

EET 290(4) Course ID:017413
Troubleshooting Industrial Controls and Motors
Introduces students to basic electrical troubleshooting concepts pertinent to the electrical technology industry. Provides an in-depth study of electrical troubleshooting using schematics, wiring diagrams, digital multi-meters, programmable logic controllers, and motor analyzers. Prepares students to learn how to troubleshoot common electrical faults using a multi-meter. Focuses primarily on providing students with an overview of basic electrical faults and how to pinpoint them using a programmable logic controllers. Prerequisite: (EET 276 and EET 277) with a minimum grade of "C" or consent of Electrical Technology program advisor(s). Integrated Lecture/Lab: 4.0 credits (90 contact hours).

Components: Laboratory
Attributes: Technical

EET 295(4) Course ID:017416
Alternative Energy Photovoltaic and Wind Electrical Generations Systems
Introduces students to the methods and equipment necessary for the installation and maintenance of photovoltaic and wind electrical generation system. Covers the standards and requirements set forth by the National Electric Code and the National Association of Certified Energy Practitioners for alternative energy electrical generation systems. Pre-requisite: (ELT110 or EET119 and EET154 and EET155 and EET252 and EET253 or EET 254 and EET 255 and EET250) or electrical experience and consent of Electrical Technology program advisor(s). Lecture: 3 credits (45 contact hours). Lab: 1 credit (30 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

EEM Economics

EEM 100(3) Course ID:001440
Personal Financial Management
Successful completion of this course will result in an understanding of the role of the U.S. in a global economy and how an individual can function successfully in the U.S. economy. Students will explore the various aspects involved in being responsible consumers, the importance of personal financial planning, the relationship between employment opportunities and financial security, and other aspects of becoming successful and productive workers, consumers, and citizens. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Other, Enrichment Course Other

EGR Engineering

EGR 101(1) Course ID:009198
Engineering Exploration I
Engineering Exploration I introduces students to the engineering and computer science professions, College of Engineering degree programs, and opportunities for career path exploration. Topics and assignments include study skills, team development, ethics, problem solving and basic engineering tools for modeling, analysis and visualization. Open to students enrolled in the College of Engineering. Students who received credit for EGR 112 are not eligible for EGR 101. Pre-requisites: Enrolled in the College of Engineering or MA ACT of at least 23 or equivalent. Students who received credit for EGR 112 are not eligible for EGR 101. Lecture: 1.0 credit (30 contact hours).

Components: Lecture
Attributes: University Course (University of Kentucky)

EGY Energy Technologies

EGY 120(4) Course ID:006621
Outside Plant Communications
Introduces students to fiber optic communication systems and up-to-date fiber techniques including how to design, install, test and maintain fiber optic single mode networks. Emphasizes Single Mode fiber optic installation with the associated international standards, theory, and practices. Prepares the student to work with fiber optic splicing, testing and troubleshooting equipment that is found in the workplace. Pre-requisite: (ELT 110 and EET 110) or (electrical experience and consent of instructor). Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

271
ELT 224(3) Course ID:004648
Instructor Consent Required
Basic Telecommunications Installation and Maintenance
Provides an overview of concepts needed to complete the duties of a telecommunications service technician and provide the foundational basic skills and knowledge required to effectively perform the installation and maintenance job duties and functions. Introduces fiber optic transmissions and cable repair. Pre-requisite: Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 232(3) Course ID:000623
Computer Software Maintenance
Includes maintenance of the personal computer with an emphasis on installation, upgrading, and configuration of the operating system. Covers memory management, boot sequences, printing subsystem, application software and networking with troubleshooting as a main focal point including viruses. When combined with ELT 234, this course will help prepare students to take CompTIA A+ certification tests. Pre-requisite: (Computer literacy course or demonstrate competency) or consent of instructor. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 234(3) Course ID:000521
Computer Hardware Maintenance
Covers maintenance of the personal computer with an emphasis on installation, upgrading, and configuration of computer hardware. Covers network and Internet access, internal addressing, architecture, interrupts complete PC construction and basic troubleshooting. When combined with ELT 232, this course will help prepare students to take CompTIA A+ certification tests. Pre-requisite: (Computer literacy course or demonstrate competency) or consent of instructor. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 240(6) Course ID:004650
Communications Electronics
Provides the theory of AM and FM, RF communications, transmission, reception, multiplexing, and modern data communications. Pre-requisite: (ELT 220 and ELT 214) or Consent of Instructor. Lecture: 4.0 credits (60 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 244(4) Course ID:000644
Instructor Consent Required
Electrical Machinery and Controls
Covers the study of theory and utilization of electrical motors and generators, including AC and DC motors and drives. Includes theory and utilization of limit switches, solenoids, relays, contactors, and solid state devices in control circuits. Provides application of digital and analog control techniques, ladder logic, and programming techniques to industrial and manufacturing processes. Pre-requisite: Consent of instructor. Lecture: 3.0 credits (45 contact hours) Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 250(4) Course ID:000657
Programmable Logic Controllers
Covers the study of Programmable Logic Controllers with an emphasis on the function and use of PLCs in an industrial environment. Pre-requisite: ELT 244 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours) Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 260(5) Course ID:004652
Instructor Consent Required
Robotic and Industrial Automation
Introduces theory of robots including terminology, components, and basic programming. Provides theory and application of servo and non-servo robots. Includes robot types, controllers, manipulators, and basic robotic programming. Provides the theory and operation of flexible and computer-integrated manufacturing and control systems. Provides the opportunity to develop, set up work cells, and integrate work cells into a total computer-integrated manufacturing system at a beginning level. Pre-requisite: Consent of Instructor. Lecture: 3.0 credits (45 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

ELT 264(4) Mechanical Design
Covers study techniques associated with the design of machine elements, including structural members subjected to combined stresses resulting from shear or torsion coupled with axial and bending loadings. Includes material treatments, failure theories, failure prevention, and steady and variable (fatigue) elements, including rotating shafts, pressure vessels, power screws, and attachment schemes. Pre-requisite: (ELT 201 and PHY 211) or Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

ELT 265(3) Course ID:000697
Applied Fluid Power
Covers the fundamental types of hydraulic and pneumatic devices and circuits used in industry. Includes basic fluid mechanics, industrial hydraulic components, pneumatic components, circuit design and analysis, electrical control of fluid power circuits, and fluid power maintenance and safety. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ELT 269(1) Course ID:006806
Engineering and Electronics Technology Capstone
Serves as the capstone course for the Engineering and Electronics Technology degree program and all of its concentrations. Integrates prior learning outcomes into a single integrated learning experience. Includes an exit exam that all program graduates must take. Pre-requisite: (ELT 120 and ELT 210) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

ELT 290(1 - 4) Course ID:000742
Selected Topics in Engineering Technology: (Topic)
Offers selected topics in engineering technology, due to rapidly changing technology or in response to local needs. Includes various topics semester to semester at the discretion of the instructor. Course may be repeated twice or to a maximum of four credit hours. Pre-requisite: Consent of instructor. Lecture: 1.0-4.0 credit hours (15-60 contact hours); Laboratory: 0-3.0 credit hours (0-45 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

EM Engineering Mechanics
EM 221(3) Course ID:000462
Statics
Study of forces on bodies at rest. Vector algebra; study of force systems; equivalent force systems; distributed forces; internal forces; principles of equilibrium; application to trusses, frames and beams; and friction. Pre-requisite or concurrent: MA 215. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

EM 210(1) Course ID:005638
Basic Electricity
Introduces basic DC circuits, specifically safety, basic test equipment, electrical resistance and Ohm’s law. Pre-requisite: (MAT 055 or equivalent placement level) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

EM 212(1) Course ID:005639
Series and Parallel Circuits
Introduces basic DC circuits, specifically series and parallel circuits. Emphasizes design, construction, and troubleshooting of simple DC circuits in laboratory exercises. Pre-requisite: (ELT 1101 with a grade of C or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

EM 213(1) Course ID:005640
Introductory Circuit Analysis
Introduces basic DC circuits, specifically series-parallel circuit analysis techniques. Emphasizes design, construction, and troubleshooting of simple DC circuits in laboratory exercises. Pre-requisite: (ELT 1102 with a grade of C or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

EM 214(1) Course ID:005641
Magnetism and Alternating Current
Introduces basic AC circuits, specifically introductory magnetism and basic AC theory. Emphasizes design, construction, and troubleshooting of simple AC circuits in laboratory exercises. Pre-requisite: (ELT 1103 with a grade of C or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

EM 215(1) Course ID:005642
Capacitance and Inductance
Introduces basic AC circuits, specifically capacitance, inductance and transformer principles. Emphasizes design, construction, and troubleshooting of simple AC circuits in laboratory exercises. Pre-requisite: (ELT 1104 with a grade of C or better) or Consent of Instructor. Lecture: 0.6 credits (9 contact hours). Lab: 0.4 credits (12 contact hours).
Components: Laboratory, Lecture

EM 216(1) Course ID:005643
Digital Basics
Introduces basic digital circuits, specifically number systems and input output functions of gates and circuits. Pre-requisite: Consent of Instructor. Lecture: 0.66 credits (10 contact hours). Lab: 0.34 credits (10 contact hours).
Components: Laboratory, Lecture

EM 217(1) Course ID:005644
Logic Circuit Design
Introduces design methods for basic digital circuits. Pre-requisite: (ELT 201 with a grade of C or better) or Consent of Instructor. Lecture: 0.67 credits (10 contact hours). Lab: 0.33 credits (10 contact hours).
Components: Laboratory, Lecture

EM 218(1) Course ID:005650
Logic Circuit Components and Troubleshooting
Covers construction, troubleshooting and testing of logic circuits. Pre-requisite: (ELT 201 with a grade of C or better) or Consent of Instructor. Lecture: 0.67 credits (10 contact hours). Lab: 0.33 credits (10 contact hours).
Components: Laboratory, Lecture

Computer Science

CS 101(3) Course ID:000648
Computer Science I
Introduces basic computer science concepts, including algorithms, data structures, and programming languages. Pre-requisite: Consent of instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Technical

CS 102(3) Course ID:000649
Computer Science II
Continues study of computer science concepts, including object-oriented programming, data structures, and algorithms. Pre-requisite: Consent of instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Technical

CS 103(3) Course ID:000650
Computer Science III
Advanced topics in computer science, including advanced programming languages, software engineering, and computer architecture. Pre-requisite: Consent of instructor. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Technical
EMS 208(6) Course ID:017325 Principles of Paramedicine IV Provides concepts for of-out-of-hospital assessment, treatment, and field management of the trauma patient. Includes knowledge to manage disasters, multi-casualty incidents and rescue situations, utilize air medical resources, identify hazardous materials, perform vehicle extrication, and minimize the associated risks related to terrorism. Pre-requisite: Emergency Medical Technician or consent of Instructor. Lecture: 6 credits (90 contact hours). Components: Lecture Attributes: Technical

EMS 209(2) Course ID:017326 Paramedic Lab III Provides fundamental skills in a lab setting. Student are able to apply skills to simulated patients. A multitude of skills are covered including assessment and airway. Labs are interchangeable between EMS 204 Paramedic Lab I, EMS 207 Paramedic Lab II, and EMS 209 Paramedic Lab III and builds on knowledge of the previous. Pre-requisite: Emergency Medical Technician or consent of Instructor. Lab: 2 credits (60 contact hours). Components: Laboratory Attributes: Technical

EMS 210(3) Emergency Pharmacology Introduces students to the paramedic’s role and responsibilities of medication administration and the basic principles of pharmacology. Presents introductory core concepts of pharmacology including drug classifications, schedules, categories, delivery systems, calculations, and drug administration. Covers core concepts of emergency clinical pharmacology including major body systems, illness and injury, and methods drugs are used therapeutically to manage affected individuals. Integrates appropriate anatomy and physiology, medical terminology, and ethical and legal behaviors. Pre-requisite: EMS 200. Lecture: 3 credits (45 contact hours). Components: Lecture Attributes: Technical

EMS 211(2) Fundamentals Lab Encourages both an individual and group approach to simulated patient care in the laboratory setting. Includes fundamental skill sets such as patient assessment, airway and ventilation, and IV and fluid therapy. Co-requisite: EMS 200. Lab: 2 credits (90 contact hours). Components: Laboratory Course Equivalents: EMS 285 Attributes: Technical

EMS 212(4) Practicum III-Field Applies advanced didactic knowledge, psychomotor skills, and clinical instruction in the EMS field setting. Supervised by a paramedic preceptor in an environment that is instructional and evaluative. Pre-requisite: Emergency Medical Technician or consent of Instructor. Practicum: 4 credits (360 contact hours). Components: Practicum Course Equivalents: EMS 285 Attributes: Technical

EMS 213(2) Principles of Paramedicine V Provides the opportunity for application and review of didactic knowledge and psychomotor skills in preparation for psychomotor and cognitive testing. Pre-requisite: Emergency Medical Technician or consent of Instructor. Lecture: 2 credits (30 contact hours). Components: Lecture Attributes: Technical

EMS 214(6) Paramedic Theory for Registered Nurses (RNs) Provides the Registered Nurse with specialized knowledge and skills necessary to assess and manage ill and/or injured patients in the pre-hospital setting. Areas of specialized instruction include: pre-hospital environments, preparatory skills, airway management, patient...
assessment, trauma and medical patient management, obstetrical/gynecological conditions, pediatric and neonatal care, psychiatric and behavioral emergencies, and special considerations. Pre-requisite: Must be a registered nurse and EMT. Lecture/Lab: 6.0 credits (120 contact hours).

Components: Lecture
Attributes: Technical

EMS 215(1) Course ID:007307
Clinical Experience I
Applies didactic knowledge, psychomotor skills, and laboratory instruction with the realities of patient care in the hospital in field setting. Includes supervision by a registered nurse, nurse practitioner, physician, or paramedic preceptor in an environment that represents both an instructional and evaluative phase of the program focusing on the ambulance and field setting and the emergency department. Pre-requisite: EMS 211. Clinical: 1.0 credit (60 contact hours).

Components: Clinical
Course Equivalents: EMS 203
Attributes: Technical

EMS 220(3) Course ID:007308
Cardiovascular Emergencies
Provides a detailed study of cardiovascular emergencies and the assessment and management of patients requiring critical intervention. Includes anatomy and physiology, medical terminology, pathophysiology related to cardiac arrest, arrhythmia recognition and 12-lead ECG for field diagnosis, as well as pharmacological and electrical interventions. Pre-requisite: EMS 210 and EMS 211. Co-requisite: EMS 221. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

EMS 221(1) Course ID:007309
Cardiac and Trauma Lab
Designed to encourage both an individual and group approach to simulated patient care in the laboratory setting. Includes fundamental skill sets and the addition of cardiovascular and trauma emergency patient care and management. Co-requisite: EMS 220 and EMS 230. Lab: 1.0 credit (45 contact hours).

Components: Laboratory
Attributes: Technical

EMS 225(1) Course ID:007310
Clinical Experience II
Provides the opportunity for application of didactic knowledge, psychomotor skills, and laboratory instruction with the realities of patient care in the hospital setting. Supervised by a registered nurse, nurse practitioner, physician, or paramedic preceptor in an environment that represents both an instructional and evaluative phase of the program with a focus on the emergency department, operating room, and respiratory care. Pre-requisite: EMS 215. Clinical: 1.0 credit (60 contact hours).

Components: Clinical
Attributes: Technical

EMS 230(4) Course ID:007311
Traumatic Emergencies
Presents the advanced concepts of out-of-hospital trauma care and critical thinking activities leading to formulation of a field impression and implementation of an appropriate treatment plan and scene management. Includes the kinematics of trauma, assessment, resuscitation, management, monitoring, and transportation of trauma patients across the life span. Co-requisite: EMS 221. Lecture: 4.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical

EMS 231(1) Course ID:007312
Medical Lab
Designed to encourage both an individual and group approach to simulated patient care in the laboratory setting. Includes fundamental skill sets with a focus on application to medical emergencies. Co-requisite: EMS 240 and EMS 230. Lab: 1.0 credit (45 contact hours).

Components: Laboratory
Attributes: Technical

EMS 235(2) Course ID:007313
Clinical Experience III
Provides the opportunity for application of didactic knowledge, psychomotor skills, and laboratory instruction with the realities of patient care in the hospital setting. Supervised by a registered nurse, nurse practitioner, physician, or paramedic preceptor in an environment that represents both an instructional and evaluative phase of the program focusing on the emergency department, obstetric unit, mental health facility, and pediatric units. Pre-requisite: EMS 225. Clinical: 2.0 credits (120 contact hours).

Components: Clinical
Attributes: Technical

EMS 240(3) Course ID:007314
Medical Emergencies I
Provides an understanding of the anatomic structures, physiology, and pathophysiologies encountered during assessment and the provision of care for medical emergencies involving the respiratory system, nervous system, abdominal and gastrointestinal tracts, genitourinary and renal systems, gynecology, musculoskeletal system, and the eyes, ears, nose, and throat. Co-requisite: EMS 231. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

EMS 250(3) Course ID:007315
Medical Emergencies II
Provides an understanding of the anatomic structures, physiology, and pathophysiologies encountered during assessment and the provision of care for medical emergencies encompassing immunology, infectious disease including HIV/AIDS, the endocrine system, psychiatric conditions, toxicology, and hematology. Pre-requisite: EMS 240. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

EMS 260(3) Course ID:007316
Special Populations
Provides the opportunity to develop special knowledge and skills necessary to assess and manage ill or injured patients across the human life span. Focuses on the acquisition of clinical knowledge and skills in diverse populations that include obstetrics, neonatology, pediatrics, geriatrics, and special challenge topics. Pre-requisite: EMS 250. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

EMS 270(1) Course ID:007317
EMS Operations
Provides knowledge necessary to safely manage multi-casualty incidents and rescue situations, utilize air medical resources, identify hazardous materials, perform vehicle extrication, and minimize the associated risks related to terrorism and disaster. Lecture: 1.0 credits (15 contact hours).

Components: Lecture
Attributes: Technical

EMS 275(1) Course ID:007318
Seminar in Advanced Life Support (ALS)
Presents a comprehensive course encompassing advanced cardiac life support and pediatric advanced life support, or trauma life support, or other seminar course in relative subject matter such as medical emergencies or geriatric emergencies, to enhance the knowledge and skills acquired in the paramedic program. Addresses immediate life threatening conditions and critical interventions in a case study-scenario format where principles of assessment and intervention are applied in a team setting. Pre-requisite: EMS 225. Lab: 1.0 credit (45 contact hours).

Components: Laboratory
Attributes: Technical

EMS 285(5 - 6) Course ID:007319
Field Internship & Summation
Provides the opportunity for application of didactic knowledge, psychomotor skills, and clinical instruction with the realities of being the team leader delivering advanced patient care in the field setting. Supervised by a paramedic preceptor in an environment that represents both an instructional and evaluative phase of the program. Included is the summative phase of the Field Internship. Pre-requisite or Co-requisite: EMS 275. Lab: 1.0 credit (45 contact hours). Practicum: 4.0 - 5.0 credits (360- 450 contact hours).

Components: Laboratory, Practicum
Course Equivalents: EMS 212
Attributes: Technical

EMS 280(1) Course ID:017615
Principles of Paramedicine IV Part I
Provides concepts for of out-of-hospital assessment, treatment, and field management of the trauma patient. Because EMS 2081 and EMS 2082 are interchangeable, this course can be taken before or after EMS2082. Pre-requisite: Emergency Medical Technician or consent of instructor. Lecture: 4 credits (60 contact hours).

Components: Lecture

EMS 280(2) Course ID:017616
Principles of Paramedicine IV Part 2
Provides concepts for managing disasters, multi-casualty incidents and rescue situations, utilize air medical resources, identify hazardous materials, perform vehicle extrication, and minimize the associated risks related to terrorism. Because EMS 2081 and EMS 2082 are interchangeable, this course can be taken before or after EMS2081. Pre-requisite: Emergency Medical Technician or consent of instructor. Lecture: 2 credits (30 contact hours).

Components: Lecture

EMS 285(1) Course ID:016630
Field Internship I
Provides the opportunity for application of didactic knowledge, psychomotor skills, and clinical instruction with the realities of being the team leader delivering advanced patient care in the field setting. Supervised by a paramedic preceptor in an environment that represents both an instructional and evaluative phase of the program. Included is the summative phase of the Field Internship. Pre-requisite OR Co-requisite: EMS 275. Practicum: 3.0 credits (270 contact hours).

Components: Practicum

EMS 285(2 - 3) Course ID:016631
Field Internship II
Provides the opportunity for continued application of didactic knowledge, psychomotor skills, and clinical instruction with the realities of being the team leader delivering advanced patient care in the field setting. Supervised by a paramedic preceptor in an environment that represents both an instructional and evaluative phase of the program. Included is the summative phase of the Field Internship. Pre-requisite OR Co-requisite: EMS 285. Laboratory: 1.0 credit (45 contact hours), Practicum 2.0 credits (180 contact hours).

Components: Laboratory, Practicum

ENC English Composition

ENC 090(3) Course ID:000464
Foundations of College Writing I
Introduces students to writing as a process with an emphasis on paragraph-length assignments and writing in response to reading. Stresses basic conventions of standard English as these apply to students' own work as well as the use of technology to produce and share writing. Pre-requisite: Placement by KCTCS assessment and placement policy. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Remedial - English and Writing, Course Also Offered in Modules

ENC 091(3) Course ID:000465
Foundations of College Writing II
Applies writing as a process with instruction in intermediate writing skills and technology. Stresses organization, idea development through critical thinking, and editorial improvement through multi-paragraph introductions. Introduces basic research and documentation through writing in response to reading. Pre-requisite: Placement by KCTCS Assessment and Placement policy. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Remedial - English and Writing, Also Offered in Modules
ENC 096(4) Course ID:016247
Introduction to College Writing
Introduces and applies writing as a process, beginning with basic writing skills and paragraph length assignments and moving toward intermediate writing skills and multi-paragraph assignments. Stresses application of basic conventions of standard English. Emphasizes organization, topic development through critical thinking, editorial improvement through systematic revision, and the use of technology to produce and share writing. Introduces basic research and documentation through writing in response to reading. Pre-requisite: Placement by KCTCS Assessment and Placement Policy. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Remedial - English and Writing

ENC 091(1) Course ID:06746
Sentence Basics
Introduces the basic conventions of standard English as these apply to students’ own writing. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: 1.0 credit (15 contact hours)
Components: Lecture
Attributes: Remedial - English and Writing

ENC 090(2.25) Course ID:06747
Writing With Computers
Introduces the use of technology to produce and share writing. Pre-requisite: As determined by KCTCS Placement Policy or successful completion of ENC 0901. Lecture: 0.25 credits (3.75 contact hours)
Components: Lecture
Attributes: Remedial - English and Writing

ENC 090(0.75) Course ID:06748
Writing Paragraphs
Introduces the writing process with an emphasis on paragraph-length assignments. Pre-requisite: As determined by KCTCS Placement Policy or successful completion of ENC 0902. Lecture: 0.75 credits (11.25 contact hours)
Components: Lecture
Attributes: Remedial - English and Writing

ENC 090(1) Course ID:06749
Pathway to Writing
Provides practice in the writing process and stresses effective paragraphs with emphasis placed on writing in response to reading. Pre-requisite: As determined by KCTCS Placement Policy or successful completion of ENC 0903. Lecture: 1.0 credit (15 contact hours)
Components: Lecture
Attributes: Remedial - English and Writing

ENC 091(0.75) Course ID:06750
Intermediate Grammar
Introduces intermediate writing skills and editorial improvement, stressing the conventions of standard written English. Pre-requisite: As determined by KCTCS Placement Policy or successful completion of ENC 090. Lecture: 0.75 credits (11.25 contact hours)
Components: Lecture
Attributes: Remedial - English and Writing

ENC 091(1) Course ID:06751
Composition Strategies
Provides practice in the writing process, stressing organization, idea development, and editorial improvement. Pre-requisite: As determined by KCTCS Placement Policy or successful completion of ENC 0911. Lecture: 1 credit (15 contact hours)
Components: Lecture
Attributes: Remedial - English and Writing

ENC 091(0.25) Course ID:06752
Introduction to Research
Introduces basic research and documentation through writing in response to reading. Pre-requisite: As determined by KCTCS Placement Policy or successful completion of ENC 0912. Lecture: 0.25 credits (3.75 contact hours)
Components: Lecture
Attributes: Remedial - English and Writing

ENC 091(4) Course ID:006753
Writing as Process
Provides practice in the writing process, stressing organization, idea development, and editorial improvement. Pre-requisite: As determined by KCTCS Placement Policy or successful completion of ENC 0913. Lecture: 1.0 credit (15 contact hours)
Components: Lecture
Attributes: Remedial - English and Writing

ENG 100(2) Course ID:004574
English Workshop
Provides parallel and supplemental review of English skills needed for students with an English ACT of 18 or 19 or a Compass placement test score between 70-80 who are also enrolled in ENG 101. If these students withdraw from ENG 100, they must also withdraw from ENG 101. Credit cannot be received by special exam. Pre-requisite: Placement by KCTCS Assessment and Placement Policy. Lecture: 2 credits (30 contact hours)
Components: Lecture
Attributes: Other, Supplemental English/Writing

ENG 101(3) Course ID:00467
Writing I
Focuses on academic writing. Provides instruction in drafting and revising essays that express ideas in Standard English, including reading critically, thinking logically, responding to texts, addressing specific audiences, researching and documenting sources. Includes review of grammar, mechanics and usage. Notes: (a) credit not available by special examination; (b) English 101 and 102 may not be taken concurrently; (c) AP credit in the English Language and Composition category for ENG 101 awarded as indicated by AP scoring chart in current KCTCS catalog. Pre-requisite: Placement by KCTCS Assessment and Placement Policy. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: WC - Written Communication, Course Also Offered in Modules

ENG 102(3) Course ID:00468
Writing II
Emphasizes argumentative writing. Provides further instruction in drafting and systematically revising essays that express ideas in Standard English. Includes continued instruction and practice in reading critically, thinking logically, responding to texts, addressing specific audiences, and researching and documenting credible academic sources. NOTE: Credit is not available by special examination. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: WC - Written Communication, Course Also Offered in Modules

ENG 105(3) Course ID:00469
Instructor Consent Required
Writing: An Accelerated Course
Combines the content of ENG 101 and ENG 102 in an intensive course emphasizing argumentation and library research and fulfills the writing/accessing information requirements. Pre-requisite: ACT English score of 25 or COMPASS English score of 85 AND ACT Reading score of 20 or COMPASS reading score of 90. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: WC - Written Communication

ENG 107(3) Course ID:016136
Writing Craft: Introduction to Imaginative Writing
An introduction to the genres and craft of imaginative writing, including fiction, nonfiction, and poetry. Students will study and practice writing in various modes through composition, peer critique, and research. Lecture and workshop. Offers credit for the UK Core requirement in Intellectual Inquiry in Arts & Creativity. Fulfills ENG pre-major requirement and provides ENG minor credit. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: AH - Arts and Humanities, University Course (University of Kentucky)

ENG 135(3) Course ID:000275
Greek and Roman Mythology in Translation
Examines mythic literature, primarily Greek and Roman texts. Includes selections from primary works such as Works and Days, The Iliad, The Odyssey, Greek tragedy, The Metamorphoses and The Aeneid, with attention to their influence on later literature and culture. Pre-requisite: English ACT 18 and Reading ACT 20 OR completion of transitional reading and writing. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

ENG 161(3) Course ID:000470
Introduction to Literature
Introduces students to an analytical rather than historical approach to literature in order to deepen students’ insight into the nature and purpose of literature. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 190(3) Course ID:016988
Introduction to Dystopian Literature and Film
Analyzes literary texts and films within the Dystopian genre; examines the continuing relevance of the genre and its predictive nature; explores the social, political, and historical themes in literature and film from early works of the genre to contemporary; considers human nature in response to adversity; connects the genre to ongoing global concerns such as political systems, human rights, environmental change, and technological development. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 203(3) Course ID:000472
Business Writing
Provides instruction and experience in writing for business, industry and government. Emphasizes clarity, conciseness, and effectiveness in preparing letters, memos, and reports for specific audiences. Pre-requisite: [ENG 101 and (ENG 102 or Consent of Instructor)] or ENG 105. Lecture: 3.0 credits (45 contact hours)
Components: Lecture
Attributes: Other, Course Also Offered in Modules

ENG 204(3) Course ID:000474
Technical Writing
Provides instruction and experience in writing for science and technology. Emphasizes clarity, conciseness, and effectiveness in preparing instructions, proposals, and lab reports for specific audiences. Lecture: 3 credits (45 contact hours). Pre-requisite: [ENG 101 and (ENG 102 or Consent of Instructor)] or ENG 105.
Components: Lecture
Attributes: Other

ENG 207(3) Course ID:000477
Instructor Consent Required
Creative Writing: (Subtitle Required)
Provides instruction for beginners in the craft of writing, teaching students how to revise work in progress. Involves practice in aspects of craft and promotes experimentation with different forms, subjects, and approaches; outside reading provides models and inspiration. May be repeated under different subtitle to a maximum of six credit hours. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Other

ENG 208(3) Course ID:006704
Creative Writing: Short Story Workshop
Provides students with guidance in the craft of writing short fiction, how to read critically and how to revise work in progress. Includes practice and experimentation with forms, subjects, and approaches to short stories. Outside reading provides models and inspiration. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Other
ENG 221(3) Course ID:000479
Survey of English Literature I
Acquaints students with significant texts in English literature from the Middle Ages to the early 17th Century. Focuses on the literature in its social, political, and cultural contexts. Lecture: 3 credits (45 contact hours). Pre-requisite: ENG 101.
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 222(3) Course ID:000481
Survey of English Literature II
Covers the late 17th Century through the present with emphasis on important writers and cultural backgrounds. Focuses on social, political, and cultural contexts. Lecture: 3 credits (45 contact hours), Pre-requisite: ENG 101.
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 230(3) Course ID:004530
Literature and Theme (subtitle required)
Introduces students to close reading and argumentative writing about literature, in relation to a significant theme. Examines selected texts revolving around a single theme, teaching students how to relate texts to contexts, to read closely, and to use basic literary terms and concepts. Considers student writing, particularly devising a thesis, crafting an argument, and learning how to use supporting evidence. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 231(3) Course ID:004902
Literature and Genre (Subtitle required)
Explores one or two different literary forms or genres, i.e. the formal categories into which literary works are placed, including the conventions of each genre and related sub-genres. Considers student writing, Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 232(3) Course ID:004903
Literature and Place (Subtitle required)
Explores a number of selected literary texts with special attention to the author’s connection to place and how the author’s sense of place influences representations of experience. Considers student writing, Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 233(3) Course ID:004904
Literature and Identities (Subtitle required)
Explores a number of selected literary texts, with special attention to the construction of personal, ethnic, racial, or national identity and considers how race, class, sexuality, and/or nationality influence representations of experience. Includes attention to student writing. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

ENG 251(3) Course ID:000483
Survey of American Literature I
An analysis of significant texts in U.S. literature from the Colonial era to the Civil War focusing on social, political, and cultural contexts. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 252(3) Course ID:000485
Survey of American Literature II
An analysis of significant texts in U.S. literature from the post-Civil War era to the present focusing on its social, political, and cultural contexts. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 261(3) Course ID:000487
Survey of Western Literature from the Greeks Through the Renaissance
Studies the works of major Western authors from the Bible and Ancient Greek literature through the Renaissance. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 262(3) Course ID:000489
Survey of Western Literature from 1660 to the Present
Studies the works by major Western authors from mid-17th century to the present. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 264(3)
Major Black Writers
Provides a cross-cultural and historical approach to written and oral works by major Black authors of Africa, the Caribbean, and the United States. Includes writers such as Chinedu Chukwurah (Africa), Wilson Harris (Caribbean), and Toni Morrison (USA). Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

ENG 270(3)
The Old Testament as Literature
Surveys the major types of Old Testament literature in English translation. Examines historical backgrounds while emphasizing careful analysis of literary forms and techniques. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 271(3)
The New Testament as Literature
Surveys the major types of New Testament literature in English translation. Examines historical backgrounds while emphasizing careful analysis of literary forms and technique. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

ENG 281(3) Course ID:000495
Introduction to Film
Introduces the study of movies as a narrative art and a cultural document. Requires viewing of films outside of class. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Course Equivalents: HUM 281
Attributes: AH - Arts and Humanities

ENG 291(1 - 3)
Special Topics in English
Examines selected topics in English. Includes, but not limited to, individual authors, specified genres, and defined eras. Pre-requisite: ENG 101 or consent of instructor. Lecture: 1 - 3 credits (15-45 contact hours).
Components: Lecture
Attributes: Other

ENG 1011(0.75) Course ID:005787
Writing a Personal Essay
Focuses on personal writing. Provides instruction in reading critically, thinking logically, and responding to texts as a means of planning, drafting and revising essays that express thoroughly developed ideas in Standard English. Pre-requisite: Placement by KCTCS Assessment and Placement Policy at College Readiness Level. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

ENG 1012(0.75) Course ID:005788
Writing a Profile Essay
Focuses on academic writing. Provides instruction and practice in drafting, revising and editing essays which address specific audiences and enlist Standard English. Pre-requisite: ENG 1011. Lecture: 0.75 credits (11.25 contact hours)
Components: Lecture

ENG 1014(0.75) Course ID:005790
Writing with Sources
Focuses on academic writing. Provides instruction in reading critically, thinking logically, responding to texts, addressing specific audiences, researching and documenting sources. Pre-requisite: ENG 1013. Lecture: 0.75 credits (11.25 contact hours)
Components: Lecture

ENG 1021(1) Course ID:005791
The Language of Argument
Emphasizes argumentative writing. Provides further instruction in argumentation strategies and concepts, leading to the planning and drafting of a preliminary argumentative essay. Pre-requisite: ENG 101 or ENG 1014. Lecture 1.0 credits (15 contact hours)
Components: Lecture

ENG 1022(1) Course ID:005792
Argument Style and Design
Emphasizes argumentative writing. Provides instruction and practice in the primary elements of academic writing style, including word choice, evidence selection and organization. Pre-requisite: ENG 1021. Lecture: 1 credit (15 contact hours)
Components: Lecture

ENG 1023(1) Course ID:005793
Research and Argument
Emphasizes argumentative writing. Provides instruction in research, proposing and revising an argumentative position, gathering and synthesizing research findings in support and documenting sources appropriately. Pre-requisite: ENG 1022. Lecture: 1 credit (15 contact hours)
Components: Lecture

ENG 2031(1) Course ID:015859
Business Writing Basics
Introduces basic business writing concepts and forms to build a foundation for further study. Pre-requisite: [ENG 101 and (ENG 102 or Consent of Instructor)] or ENG 105. Lectue: 1.0 credit (15 contact hours).
Components: Lecture
ENG 2032(1) Course ID:015860
Specialized Business Messages
Enhances students’ skills in business writing through exploration of specialized business messages and modes, including writing for job search, technology-enabled writing, and writing for oral delivery. Pre-requisite: ENG 2031. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

ENG 2033(1) Course ID:015861
Reports and Proposals
Emphasizes lengthy and complex business messages, specifically researching for and writing business reports and business proposals. Pre-requisite: ENG 2032. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

ENM Energy Management
ENM 101(9) Course ID:007242
Energy Industry Fundamentals
Investigates competencies required for employment by various industries that manufacture energy sources. Introduces students to methods of power production, power distribution, and physics principles that are associated with both, and addresses competencies identified by the Center for Energy Workforce Development (CEWD) organization needed for power industries. Qualifies the student to take the CEWD Energy Industry Fundamentals Certification exam. Lecture/Lab: 9.0 credits (150 contact hours).
Components: Lecture Attributes: Technical

ENM 111(3) Course ID:007243
Sustainability Management
Examines the management of corporations as it relates to sustainability. Includes an overview of energy technology, energy resources, and emerging future energy technologies coupled with social and environmentally related legislation and its effect on corporations triple bottom line (people, profit, and planet. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

ENM 121(3) Course ID:007244
Solar Design and Applications
Educates students about alternative solar energy applications which will contribute to a reduction in fossil fuel energy usage and increase cost savings related to conventional energy consumption. Additionally, the course serves to satisfy the competencies needed to qualify students to complete the North American Board of Certified Energy Practitioners (NABCEP) Entry Level Solar Certification. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture Attributes: Technical

ENM 200(3) Course ID:007219
Commercial Energy Analysis
Examines ways to improve the energy efficiency of commercial buildings. Emphasizes the building envelope, lighting, HVAC, motors, appliances, water, electrical, and compressed air systems and their controls with a focus on an energy management system. Examines energy savings and reductions in operational expenses, commercial energy compliance needed will be used. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture Attributes: Technical

ENM 210(3) Course ID:007220
Smart Grid Applications
Introduces students to the components needed to renovate the current vertical structured power grid to a smart highway structure power grid that will allow energy to flow in different directions. Focuses on the application of different components within a smart grid system and how they integrate and communicate with each other for smooth transmission of electricity. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture Attributes: Technical

ENM 230(3) Course ID:007221
Building Automation
Introduces students to the components involved in a building automated system (BAS). Investigates the communication and components contained in an integrated building system that controls various components of a building system. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture Attributes: Technical

ENM 250(3) Course ID:007222
Regulatory and Environmental Issues in Energy Management
Examines building energy conservation code compliance adopted by various states. Complements other courses in the energy management program providing additional skills needed for energy efficient buildings. Qualifies students to take the LEED Green Associate exam upon completion of the course. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

ENM 250(3) Course ID:007223
Air Conditioning and Refrigeration Regulations
Analyzes the regulations associated with the 608 EPA certification. Outlines techniques and regulations associated with EPA policies. Complements other proposed energy management courses providing additional skills needed for energy efficient buildings. Qualifies students to take the 608 EPA Certification Examination at the completion of the course. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

ENM 1011(3) Course ID:016357
Energy Industry Basics
Investigates competencies required for employment by various industries that manufacture energy sources. Addresses the competencies identified by the Center for Energy Workforce Development (CEWD) organization that are needed for energy industries. Combines with the other two modules to qualify students to take the CEWD Energy Industry Fundamentals (EIF) certification exam. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture Attributes: Technical

ENM 1012(3) Course ID:016359
Power Creation and Distribution
Introduces students to methods of power production, power distribution, and physics principles that are associated with both. Addresses the competencies identified by the Center for Energy Workforce Development (CEWD) organization that are needed for energy industries. Combines with the other two modules to qualify students to take the CEWD Energy Industry Fundamentals (EIF) certification. Pre-requisite: ENM 1011. Lecture: 3 credits (45 contact hours).
Components: Lecture

ENM 1013(3) Course ID:016422
Energy Emerging Technologies
Introduces students to emerging technologies and careers in the energy industry. Addresses the competencies identified by the Center for Energy Workforce Development (CEWD) organization that are needed for energy industries. Combines with the other two modules to qualify students to take the CEWD Energy Industry Fundamentals (EIF) certification. Pre-requisite: ENM 1012. Lecture: 3 credits (45 contact hours).
Components: Lecture

ENV Environmental Technology
ENV 110(4) Course ID:001442
Introduction to Environmental Technology
Introduction to Environmental Technology provides a background in the historical and current developments in environmental problems, solutions, strategies, and regulations. Students explore the various aspects of water, land, and air pollution, pollution prevention and control, and the role of regulation at the local, state, and federal level. Lecture: 4 credits (60 contact hours).
Components: Lecture Attributes: Technical

EQM Equine Management
EQM 100(3) Course ID:004755
Introduction to Equine Studies
The intent of this course is to give students a general overview and basic understanding of the horse, its care and management. Course topics include identification, anatomy, health, nutrition, facility and equipment management. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture Attributes: Technical

EQM 120(3) Course ID:004756
Introduction to Commercial Breeding Practices
Introduces prospective horse farm personnel to the breeding farm environment. Includes topics that relate to commercial breeding farm management and the necessary record keeping requirements. Pre-requisite: EQM 100 or consent of instructor. Lecture: 3.0 credits (45 contact hours)
Components: Lecture Attributes: Technical

EQM 140(2) Course ID:004757
Equine Business Management I
Course in equine management that serves to introduce the student to private and commercial horse farm operations, economic trends in the horse industry, international marketplace, capital, credit and risk associated with the equine industry. Pre-requisite: EQM 100 and BA 160, or consent of instructor. Lecture: credits (30 contact hours).
Components: Lecture Attributes: Technical

EQM 240(2) Course ID:004852
Equine Business Management II
This course is a continuation of Equine Business Management I. Topics of discussion include types of farm ownership, structure of the horse farm as a business, and evaluation of farm financial performance through production levels, employee management, tax planning, bloodstock value, cash flow and budgeting. Pre-requisite: EQM 140 and concurrent enrollment in or successful completion of ACC 201 and ECO 201, or consent of instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture Attributes: Technical

EQM 242(3) Course ID:004758
Equine Law
This course explores the value of legal documents as they relate to commercial and recreational horse/horse farm owners. Topics discussed include review of current legislation governing horse activities, types of legal contracts, liability issues, and security interests. Pre-requisite: EQM 100 and BA 267, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical
EQA 246(1) Course ID:004759
Current Trends in the Equine Industry
Seminar course in the horse industry designed to provide students with the opportunity to investigate, evaluate and debate key issues confronting horse owners and horse industry participants. Students are encouraged to analyze controversial circumstances in the equine industry and provide insight and logical conclusion. Seminar topics may include such issues as equine adoption, slaughter, transport, medications, accurate wagering, and public image. Pre-requisite: EQM 242 or consent of instructor. Lecture 1 credit (15 contact hours).
Components: Lecture Attributes: Technical

EQA 250(3) Course ID:004760
Equestrian Practicum
A supervised, field-based learning experience in the equine industry, including observation and proactive participation in affiliated environments. Students are required to analyze their experiences throughout the semester to develop career objectives and strong interpersonal, communication and leadership skills. Pre-requisite: EQM 240, EQM 242, and concurrent enrollment in or successful completion of EQM 246. Practicum: 3 credits (180 contact hours).
Components: Practicum Attributes: Technical

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**EOS Equine Studies**

**EOS 104(3) Course ID:007321**
Equine Care Lab
Introduces principles of care for horses in an equine facility environment with students learning industry accepted standards and techniques while providing care for 1 or 2 horses. Lab: 3.0 credits (135 contact hours).
Components: Laboratory Attributes: Technical

**EOS 110(3) Course ID:005350**
Basic Equine Physiology
Introduces the study of equine care by examining the anatomy and physiology of equine body systems and applications of this knowledge to the raising, training and management of horses in general and racehorses in particular. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

**EOS 112(4) Course ID:005352**
Instructor Consent Required
Racerhorse Riding Skills I
Introduces basic horse riding skills and their application to racehorse riding. Presents and requires daily practice of proper rider position at walk, trot, canter, on turn and in straights. Includes discussion and round pen applications of center of gravity of horse, center of gravity of rider and center of gravity of the combination of horse and rider. Teaches proper techniques for cooling out after exercise and or racing. Pre-requisite: Department Consent. Lecture/Lab: 4.0 credits (150 contact hours).
Components: Lecture Attributes: Technical

**EOS 113(4) Course ID:005353**
Instructor Consent Required
Racerhorse Riding Skills II
Continues development of riding skills learned in EOS 112 by applying principles to riding racehorses in morning exercise situations. Includes application of balance to evaluate soundness in racehorses; basic starting gate techniques for riders; principles of teaching young horses to enter and leave the starting gate and techniques for handling unruly horses. Pre-requisite: EOS 112 and consent of the instructor. Lecture/Lab: 4.0 credit (150 contact hours).
Components: Lecture Attributes: Technical

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**EQA 115(3) Course ID:015655**
Equine Health and Medications
Presents principles of health management as it relates to the prevention and treatment of common diseases, parasites and wounds. Pre-requisite: EQS 110 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

**EQA 118(3) Course ID:005803**
Equine Bloodstock
Emphasizes skills in comprehending a sales page, marketing and preparing horses for sales, breeding and bloodline interpretation, and prospect analysis. Lecture: 3 credits.
Components: Lecture Attributes: Technical

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**EQA 125(3) Course ID:005804**
Equine Nutrition
Presents principles of nutritional management as it relates to the overall health and performance of the horse. Pre-requisite: EQS 110 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

**EQA 130(3) Course ID:005354**
Introduction to the Racing Industry
Introduces students to the business of racing, industry organizations, personnel, facilities and the rules of racing. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

**EQA 200(3) Course ID:005500**
Lameness in Racehorses
Expands on basic equine anatomy with emphasis on normal function of front and rear legs and methods of evaluating deviations from normal function presented as lameness in racehorses. Also discusses response to injury, forms of therapy and training methods for horses returning from injury. Pre-requisite: EQS 110 or permission of instructor. Co-requisite: Concurrent enrollment in EQS 110. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical

**EQA 223(4) Course ID:005507**
Training Principles and Practices
Covers techniques of how to handle horses safely in a variety of training situations as well as basic management and care for horses in training. Includes identification and application of equine training aids and equipment as well as identification and application of equine support and medicated bandages commonly used for horses in training. Pre-requisite or Co-requisite: EOS 104. Lecture/Lab: 4.0 credit (150 contact hours).
Components: Lecture Attributes: Technical

**EQA 225(3) Course ID:005508**
Instructor Consent Required
Life Skills for Horsemen
Explores concepts of goal setting, time management, marketing racehorses, marketing racing services, managing personal relationships as an equine professional, communication skills unique to equine professionals plus personal and family health and wellness plans. Prerequisite: EQS 222 and permission of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical

**EQA 240(3) Course ID:007322**
Equine Legal and Business Principles
Provides legal insights and practical tips for a successful horse business. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

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**EQA 299(1 - 9) Course ID:005626**
Equine Studies Cooperative Education
Provides a planned and evaluated work experience related to the student's educational objective for which the student receives both financial remuneration and academic credit. While the maximum amount of credit granted for Equine Cooperative Education experience varies by curriculum, the amount may never exceed nine hours in Associate in Applied Science Degree, diploma, or certificate program. It is available only to students enrolled in Associate in Applied Science in Equine Studies, Equine Studies Diploma and certificate program that list Equine Cooperative Education as an approved course. Pre-requisite: Consent of Instructor. Co-op: 1.0 - 9.0 credits (60 - 540 contact hours).
Components: Co-Op Attributes: Technical

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**ESL English as a Second Language**

**ESL 010(4) Course ID:006638**
Introduction to Reading and Vocabulary
High-beginning level students will improve fundamental reading skills and expand vocabulary as they interact with level-appropriate texts. Students will be recommended to this course based on the ESL placement examination. Lecture: 4 credits (60 contact hours).
Components: Lecture Attributes: Remedial - Reading

**ESL 011(4) Course ID:005308**
Beginning Listening and Speaking
High-beginning level students will improve the ability to speak and understand English in simple everyday and academic situations. The course will provide practice in pronunciation and basic oral communication functions. Beginning academic listening and speaking skills will also be covered. Students will be recommended to this course based on the ESL placement examination. Lecture: 4 credits (60 contact hours).
Components: Lecture Attributes: Developmental/Remedial Learning Skills

**ESL 012(4) Course ID:005230**
Intermediate Listening and Speaking
Low-intermediate level ESL students will improve comprehension and communication in English on a variety of everyday topics and in the academic setting. Students will develop and practice techniques for greater composure and confidence in oral expression. Practice will also be provided in pronunciation and intonation. Students will be recommended to this course based on the ESL placement examination or through completion of ESL 11. Lecture: 4 credits (60 contact hours).
Components: Lecture Attributes: Developmental/Remedial Learning Skills

**ESL 013(4) Course ID:005307**
Advanced Listening and Speaking
High-intermediate level ESL students will improve comprehension and communication in both social and academic settings. Instruction will include improving listening skills for academic note taking and small group discussion. Students will be expected to lead and share in class discussions based on reading and authentic listening materials. Students will also present orally in front of the class. Students will be recommended to this course based on the ESL placement examination or through completion of ESL 12. Lecture: 4 credits (60 contact hours).
Components: Lecture Attributes: Developmental/Remedial Learning Skills

**ESL 020(4) Course ID:005216**
Reading Improvement and Vocabulary Development for Low-Intermediate Non-Native English Speakers
Low-intermediate level students will review fundamental reading skills, learn and practice higher order reading skills, expand vocabulary and increase reading efficiency as they interact with level-appropriate texts. Pre-requisite: placement test. Lecture: 4 credits (60 contact hours).
Components: Lecture Attributes: Remedial - Reading
Components: Lecture

Attributes: Developmental/Remedial Learning Skills

ESL 031(3) Course ID:004037 Beginning Conversation for Non-Native English Speakers Beginning level ESL students will learn basic conversation and practice basic sounds and intonation patterns. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Developmental/Remedial Learning Skills, Course Also Offered in Modules

ESL 051(3) Course ID:004043 Introduction to College Reading for Non-Native English Students Beginning-level students will acquire or strengthen fundamental reading skills and expand vocabulary as they interact with level-appropriate texts. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Remedial - Reading

ESL 052(3) Course ID:004044 Improved College Reading for Low-Intermediate Non-Native English Speakers Intermediate-level students will review fundamental reading skills, learn and practice higher order reading skills, expand vocabulary and increase reading efficiency as they interact with level-appropriate texts. Pre-requisite: ESL 51. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Remedial - Reading

ESL 053(3) Course ID:004045 High-Intermediate Reading for Non-Native English Speakers High-intermediate level ESL students will master fundamental reading skills. They will be introduced to a variety of genres, such as newspaper articles and essays, poems, short stories, charts, graphs and college-level content textbooks. Through the selected readings, this course will foster cultural awareness, comprehension, and interaction. The readings and activities introduced in the course will allow students to engage in meaningful dialogue, and in the process, refine their English skills. Pre-requisite: ESL 020 or placement test. Lecture: 4 credits (60 contact hours).

Components: Lecture

Attributes: Remedial/Remedial Learning Skills

ESL 061(4) Course ID:004046 Foundations of College Writing I for Non-Native English Speakers Beginning level ESL students are introduced to composition with an emphasis on clarity, organization, development and correctness. Comprehensive review of mechanics, grammar and spelling as these apply to their own writing is also addressed in this course. Lecture: 4 credits (60 contact hours).

Components: Lecture

Attributes: Remedial - English and Writing

ESL 062(4) Course ID:004047 Foundations of College Writing II for Non-Native English Speakers Low-intermediate level ESL students continue to enhance their composition skills by receiving instruction in the following: the writing process, organization, multi-paragraph writings, editing, and critical reading. Grammar instruction focuses on key structures and provides a springboard for expanding students' abilities in all language skills. Pre-requisite: ESL 61. Lecture: 4 credits (60 contact hours).

Components: Lecture

Attributes: Remedial - English and Writing

ESL 063(4) Course ID:004048 Foundations of College Writing III for Non-Native English Speakers ESL 63 is designed to help students prepare for ENG 101. High-intermediate level ESL students continue to work on the writing process, editorial improvement and critical reading. Grammar instruction includes advanced grammatical points, such as modal auxiliaries, gerunds, infinitives, adjective and noun clauses. Pre-requisite: ESL 62 or placement test. Lecture: 4 credits (60 contact hours).

Components: Lecture

Attributes: Remedial - English and Writing

ESL 071(3) Course ID:007210 College Writing I for Non-Native Speakers Introduces writing modes, including description, narration, process, and persuasion; presents methods of pre-writing; emphasizes development of thesis statements, topic support, and organization; describes basic concepts of verb tense and syntax. Credit is not given to students who have received credit for ESL 61. Pre-requisite: Placement According to KCTCS Assessment and Placement Policy. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Attributes: Remedial - English and Writing

ESL 072(3) Course ID:007046 College Writing II for Non-Native Speakers Introduces writing modes, including description, narration, comparison and contrast, cause and effect, process, and persuasion; presents methods of pre-writing; emphasizes development of thesis statements, topic support, and organization; short essay organization is emphasized. A student cannot receive credit for both ESL 62 and ESL 72. Pre-requisite: Currently appropriate assessment scores and a writing sample or completion of ESL 71. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Attributes: Remedial - English and Writing

ESL 081(3) Course ID:007211 College Grammar I for Non-Native Speakers Introduces basic verb tenses, formation of questions, modals, clauses, and parts of speech to non-native speakers of English. Incorporates instructional methods that are designed for non-native speakers of English. Credit is not given to students who have received credit for ESL 61. Pre-requisite: Placement According to KCTCS Assessment and Placement Policy. Lecture: 3.0 credit hours (45 contact hours).

Components: Lecture

Attributes: Remedial - English and Writing

ESL 082(3) Course ID:007047 College Grammar II for Non-Native Speakers Introduces intermediate-level verb tenses, formation of questions, modal verbs, clauses, count and non-count nouns, and parts of speech to non-native speakers of English. Incorporates instructional methods that are designed for non-native speakers of English. A student cannot receive credit for both ESL 82 and ESL 62. Pre-requisite: Currently appropriate assessment scores or completion of ESL 81. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Attributes: Remedial - English and Writing

ESL 090(4) Course ID:005079 Beginning Writing High-beginning level ESL students will learn composition skills by receiving instruction in the following: the writing process, organization, sentence development, paragraph writing, and editing. Basic instruction in grammar provided. Students will be recommended to this course based on the ESL placement examination. Lecture: 4 credits (60 contact hours).

Components: Lecture

Attributes: Remedial - English and Writing

Intermediate Writing for Non-Native English Speakers Low-intermediate level ESL students will enhance their composition skills by receiving instruction in the following: the writing process, organization, multi-paragraph writings, editing, and critical reading. Basic instruction in grammar provided. Pre-requisite: placement test. Lecture: 4 credits (60 contact hours).

Components: Lecture

Attributes: Remedial - English and Writing

ESL 092(4) Course ID:005082 Advanced Writing for Non-Native English Speakers ESL 92 is designed to help students prepare for ENG 101. High-intermediate level ESL students continue to work on the writing process, editorial improvement, and critical reading. Students will be introduced to documenting sources. Grammar instruction includes advanced grammatical points. Pre-requisite: ESL 91 or placement test. Lecture: 4 credits (60 contact hours).

Components: Lecture

Attributes: Remedial - English and Writing

ESL 100(3) Course ID:016566 Listening for Academic Purposes This course cultivates skills to improve academic listening performance for non-native speakers of English enrolled in American university classes. Special attention is given to lecture styles, note-taking, interpersonal communication skills, research projects and presentations. This course is designed to raise students listening skills so they can participate in academic settings with competencies similar to their native peers. Lecture: 3 credits.

Components: Lecture

Attributes: Enrichment ESL, University Course (University of Kentucky)

ESL 110(3) Course ID:016517 Speaking for Academic Purposes This course cultivates skills to improve academic speaking performance for non-native speakers of English enrolled in American university classes. Special attention is given to effective academic presentations, interpersonal communication skills, pronunciation and accent. This course is designed to raise students’ speaking skills so they can participate in academic settings with competencies similar to their native-speaker peers. Pre-requisite: KCTCS assessment instrument scores as shown in Mandatory Placement policy. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Attributes: Enrichment ESL, University Course (University of Kentucky)

ESL 120(3) Course ID:016568 Reading for Academic Purposes This course cultivates skills to improve academic reading performance for non-native speakers of English enrolled in American university classes. Special attention is given to cross-disciplinary academic reading, reading rates and speeds, effective research methods, documentation and essay exams skills. This course is designed to raise students’ reading skills so they can participate in academic settings with competencies similar to their native-speaker peers. Pre-requisite: KCTCS Assessment instrument scores as shown in Mandatory Placement policy. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Attributes: University Course (University of Kentucky)
ESL 130(3) Course ID:016518
Writing for Academic Purposes
This course cultivates skills to improve academic writing performance for non-native speakers of English enrolled in American university classes. Special attention is given to cross-disciplinary research, collaboration, the writing process, content organization and development, editing and proofreading. This course is designed to raise students’ writing skills so they can participate in academic settings with competencies similar to their native-speaker peers. Pre-requisite: KCTCS assessment instrument scores as shown in Mandatory Placement policy. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Enrichment ESL, University Course (University of Kentucky)

ESP 0311(1) Course ID:007396
ESL Greetings & Farewells
Highlights greetings and introductions, giving and receiving personal information, and making plans and discussing the future. Introduces expressing the future using the verb “to go.” Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

ESP 101(3) Course ID:005324
Introduction to Energy Systems
Introduces energy generating systems including solar, wind, bioenergy, geothermal, hydroelectric, hydrogen-based, petrochemical-based, coal, and nuclear. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 213(3) Course ID:005322
Power Plant Operations III
Provides detailed training in the operations of water, steam, turbines and generator systems of a coal-fired (fossil fueled) power plant stressing proper operation during normal operations, startups and shutdowns, and transient conditions. Pre-requisite: ESP 211 or consent of the instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 214(3) Course ID:005321
Power Plant Operations IV
Provides detailed training in the operation of the auxiliary components of a power plant, including valves, traps, actuators, pumps, couplings, air compressors, seals, lubrication systems, air ejectors, heat exchangers, and switches. Proper operation of each type of component and its function in the plant will be stressed. Pre-requisite: ESP 211 or consent of the instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 220(3) Course ID:005495
Power Plant Thermodynamics
Introduces basic thermodynamic concepts and the applications of thermodynamics in a fossil-fueled power plant. Pre-requisite: PHY 151 or higher. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

ESP 280(2) Course ID:005496
Capstone in Energy Systems
Serves as the capstone course for the Energy Systems program by integrating prior learning into a single integrated learning experience. Requires planning, research, and completion of both individual and team-based reports based on real-world problems or projects in the Energy Systems field. Pre-requisite: ESP 213. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EST 150(4) Course ID:004744
Introductory Ecology
Introduces basic concepts and current applications of ecology relevant to environmental issues. Emphasizes relationships between organisms and the environment; influencing factors affecting distribution and abundance; population structure and dynamics; energy flow and nutrient cycling through the environment; and, development, structure, and response to disturbance of organismal communities. Includes weekly laboratories to provide hands-on field experiences to reinforce concepts learned in lecture. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: SL - Science Laboratory, SN - Science

EST 160(3) Course ID:004745
Hydrological Geology
This course provides an introduction to geology and hydrology with an emphasis on understanding natural processes and the effects of human activities. Major topics covered include: plate tectonics; formation and classification of rocks and minerals; the processes affecting the hydrologic cycle; soil formation and classification; subsurface geology and groundwater movement; stream formation and flow; floods; and human impacts to stream hydrology and morphology. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science

EST 170(2) Course ID:004746
Environmental Sampling Laboratory
A laboratory course which provides the fundamentals in evaluating and designing sampling approaches for different situations and different media. The course will provide students with field experience in sampling soil, surface water, groundwater, and benthic invertebrates. Laboratory: 2 credits (60 contact hours). Pre-requisite: EST 150 or consent of instructor.
Components: Laboratory
Attributes: SL - Science Laboratory

EST 220(3) Course ID:004747
Pollution of Aquatic Ecosystems
This course examines freshwater ecosystems and typical aquatic pollutants. Discussion topics focus on the sources, transport, fate, and effects of common pollutants such as domestic wastewater, metals, acidity, and pesticides. Methods to minimize or eliminate the sources and effects of pollutants are also explored. Pre-requisite or concurrent: EST 150, EST 160, CHE 105, and CHM 105 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EST 230(2) Course ID:004748
Aquatic Chemistry Laboratory
This course provides focused study on the chemistry of water. The course will provide students with laboratory experience in analyzing surface, ground, and drinking waters for a variety of chemical constituents. Laboratory: 2 credits (60 contact hours). Pre-requisite: CHE 105, CHM 105, and Pre-requisite or concurrent EST 220.
Components: Laboratory
Attributes: Technical

EST 240(4) Course ID:004749
Sources and Effects of Air Pollution
This course provides an introduction to the study of ambient and indoor air pollution with an emphasis on sources, dispersion, and health and welfare effects of the major pollutants. Both regulatory and engineering controls of stationary and mobile sources are explored. A laboratory provides experience with sampling and analysis of air pollutants. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (30 contact hours). Pre-requisite: EST 150 and CIT 130, or equivalent, or consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

EST 250(3) Course ID:004750
Solid and Hazardous Waste Management
This course examines methods of managing solid and hazardous waste, with an emphasis on pollution prevention. Topics covered include relevant legislation, recycling, incineration, landfill operations, management of radioactive waste, remediation of waste sites and site worker health and safety. Pre-requisite: EST 150 and EST 160, or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EST 260(2) Course ID:004751
Environmental Analysis Laboratory
This course provides an introduction to the fundamentals of analyzing environmental media. The course will provide students with laboratory experience in analyzing soil, surface water, groundwater, air and microbial samples. Laboratory: 2 credits (60 contact hours). Pre-requisite: CHE 105, CHM 105 and pre-requisite or concurrent EST 170.
Components: Laboratory
Attributes: Technical

EST 270(3) Course ID:004752
Environmental Law and Regulation
This course is structured to provide the student with a basic understanding of major current federal and state environmental legislation and regulation with an emphasis on those portions that affect the regulated community. The course will also include an examination of the role of common law and the branches of government in environmental protection. Pre-requisite or concurrent: EST 220, EST 240, and EST 250 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

EST 290(2) Course ID:017026
Applied Projects in Environmental Science Technology
Outlines varies as determined by project and instructor. Pre-requisite: Consent of EST Program Coordinator. Lecture: 1 credit (15 contact hours). Lab: 1 credit (30 contact hours).
Components: Lecture
Attributes: Technical

EST 299(1 - 3) Course ID:004754
Instructor Consent Required
Selected Topics in Environmental Science Technology
A special project or experience in Environmental Science will be selected to enhance core material in the Environmental Science Technology program. It provides the student an opportunity for independent study or specialized instruction as approved by an instructor. This course may be repeated to a maximum of 6 hours.
Pre-requisite: Consent of instructor. Lecture: 1-3 credits (15-45 contact hours).
Components: Lecture
Attributes: Technical
EX Experiential Education

EX 196(1 - 6) Course ID:000747
Instructor Consent Required
Experiential Education
A planned and evaluated learning work experience for which the student receives academic credits and may receive financial remuneration. The work experience may be related to the student's major or may be exploratory in nature. One credit may be awarded for each 40 hours of work experience. The course may be repeated for a maximum of 6 credits and is available on a Pass/Fail basis only. This course is open only to transfer, non-degree and undecided students. Lecture: Variable; Laboratory: Variable. Pre-requisite: Consent of instructor.
Components: Laboratory, Lecture
Attributes: Technical

FAM Family Studies

FAM 252(3) Course ID:000662
Introduction to Family Science
Introduces the scientific study of the family, including important theoretical frameworks in family science, historical trends in marriage and family life, gender role theory, family life theory, parenthood, communication, economics of family life, conflict, divorce, step-families and step-parenting, and family strengths. Analyzes contemporary family issues and requires written positions on those issues. Pre-requisite: 3.0 credit hours of social or behavioral science or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

FAM 253(3) Course ID:000666
Human Sexuality: Development, Behavior, and Attitudes
Studies human sexuality, including the process of gender and attitudes, sexual response patterns, sexual behavior, and attitudes. Pre-requisite: 3.0 credit hours in social or behavioral science or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

FAM 255(3) Course ID:000059
Child Development
Overviews the various aspects of development (physical, social, emotional, intellectual) for children ages birth through adolescence. Emphasizes techniques of directed observation. Pre-requisite: 3.0 credit hours of social or behavioral science or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other, Technical

FHM Health Mathematics Fundamental

FHM 100(2) Course ID:001463
Dosage Calculations
Provides an overview of basic math skills, a thorough knowledge of the system of measurement and conversion, and application skills to perform dosage calculations. Emphasis is placed on unit analysis to calculate medication dosages. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Enrichment Course Other, Technical

FIR Fire Science Tech

FIR 101(3) Course ID:017468
Basic Firefighting I
Introduces students to topics such as: fire department organization, firefighter safety, building construction, fire dynamics, extinguishers, and ladders. Lecture: 3 hours (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FIR 102(3) Course ID:017474
Basic Firefighting II
Introduces students to topics such as: personal protective equipment, fire hose practices, and ropes. Lecture 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 103(3) Course ID:017478
Basic Firefighting III
Introduces students to topics such as: communications, structural search & rescue, tactical ventilation, overhaul/property conservation, and fire origin/cause determination. Lecture 3.0 credits (15 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FIR 104(3) Course ID:017484
Basic Firefighting IV
Introduces students to topics such as: equipment maintenance, hose streams, community risk reduction, incident command, and forcible entry. Lecture 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FIR 105(3) Course ID:017489
Fire Suppression
Introduces students to topics such as: structural fire attack; supporting fire protection systems; vehicle fires; exterior class A fires; foam firefighting; liquid and gas fires; ground cover fires; building materials and dangerous building conditions associated with the effects of fire suppression activities. Pre-requisite: FIR 101, FIR 102, FIR 103, FIR 104. Lecture 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FIR 106(3) Course ID:017492
Intro to Special Responses
Introduces students to hazardous materials response at the operations level and specialized responses to incidents involving terrorism, weapons of mass destruction, and Active Shooter Hostile Events Response (ASHER). Components: Lecture Attributes: Technical

FIR 107(3) Course ID:017496
Intro to Rescue & Patient Care
Introduces students to topics such as: first aid, cardiopulmonary resuscitation, technical rescue awareness concepts, and vehicle extrication. 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

FIR 198(3) Course ID:017502
Practicum
Introduces students to a supervised on-the-job work experience related to the student's educational program. Pre-requisite: FIR 105 or Instructor Consent. Practicum: 3 credits (180 contact hours).
Components: Practicum
Attributes: Technical

FIR 202(3) Course ID:017503
Fire Instructor I
Prepares students with basic knowledge to perform at the Instructor I Level, as defined by National Fire Protection Association Standard 1041. Pre-requisite: Instructor Consent. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Technical

FIR 203(3) Course ID:017504
Fire Instructor II
Prepares students with basic knowledge to perform at the Instructor II Level, as defined by National Fire Protection Association Standard 1041. Pre-requisite: FIR 202 or Instructor Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 205(3) Course ID:017505
Fire Officer I
Prepares students with basic knowledge to perform at the Fire Officer I Level, as defined by National Fire Protection Association Standard 1021. Pre-requisite: Instructor Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 206(3) Course ID:017535
Fire Officer II
Prepares students with basic knowledge to perform at the Fire Officer II Level, as defined by National Fire Protection Association Standard 1021. Pre-requisite: FIR 205 or Instructor Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 210(3) Course ID:017536
Aircraft Rescue Firefighting
Prepares students with basic knowledge to perform as an airport firefighter, as defined by National Fire Protection Association Standard 1003. Pre-requisite: Instructor Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 212(3) Course ID:017537
Driver/Operator - Pumper
Prepares students with basic knowledge to perform as a pumper driver/operator, as defined by National Fire Protection Association Standard 1002. Pre-requisite: Instructor Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 213(3) Course ID:017538
Driver/Operator - Aerial
Prepares students with basic knowledge to perform at the aerial driver/operator, as defined by National Fire Protection Association Standard 1002. Pre-requisite: Instructor Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 215(3) Course ID:017539
Emergency Medical Responder
Introduces students to wide variety of topics in patient care at the emergency medical responder level as outlined in the United States Department of Transportation (USDOT) national standard curriculum. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 220(3) Course ID:017540
Hazardous Materials Technician
Prepares students with basic knowledge to perform as a hazardous materials technician, as defined by National Fire Protection Association Standard 1072. Pre-requisite: FIR 106 or FIR 1062 Hazardous Material Operations. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 225(1 - 3) Course ID:017541
Special Topics in Fire Science
Provides advanced study on a selected topic or emerging issue in the fire science. May be repeated to a maximum of six credits under different subtitles. Pre-requisite: Consent of Instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture
Attributes: Technical

FIR 230(6) Course ID:017542
Emergency Medical Technician
Introduces students to wide variety of topics in patient care at the emergency medical technician level as outlined in the United States Department of Transportation (USDOT) national standard curriculum. Pre-requisite: Minimum ACT Reading Score of 15 or Consent of Instructor. Integrated Lecture/Lab: 6 credits (150 contact hours).
Components: Integrated Laboratory, Integrated Lecture
Attributes: Technical

FIR 260(3) Course ID:017543
Principles of Emergency Services
Provides an overview to fire protection and emergency services: career opportunities in fire protection and related fields; culture and history of emergency services; fire loss analysis; and organization and function of public and private fire protection services. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical
FIR 261(3) Course ID: 017544
Building Construction
Introduces students to basic concepts of first aid, such as offering initial care for traumatic and medical emergencies.
Components: Lecture
Attributes: Technical

FIR 262(3) Course ID: 017545
Fire Behavior and Combustion
Explores the theories and fundamentals of how and why fires start, spread, and how they are controlled. Pre-requisite or Co-requisite: FIR 260 or Instructor Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 263(3) Course ID: 017546
Fire Service Safety & Wellness
Introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services. Pre-requisite or Co-requisite: FIR 260 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 264(3) Course ID: 017547
Fire Prevention
Provides fundamental knowledge relating to the field of fire prevention including; history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; and fire investigation. Pre-requisite or Co-requisite: FIR 260 Or Instructor Consent. Lecture: credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 265(3) Course ID: 017548
Fire Protection Systems
Provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers. Pre-requisite or Co-requisite: FIR 260 or Instructor Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 280(3) Course ID: 017549
Fire Service Legal Aspects
Addresses the Federal, State, and local laws that regulate emergency services and include a review of national standards, regulations, and consensus standards. Pre-requisite: Instructor Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 281(3) Course ID: 017550
Fire Service Administration
Introduces the student to the organization and management of a fire and emergency services department and the relationship of government agencies to the fire service. Pre-requisite: Instructor Consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

FIR 1071(B.26) Course ID: 017497
First Aid
Introduces students to basic concepts of first aid, such as offering initial care for traumatic and medical emergencies.
Components: Lecture

FLK 276(3) Course ID: 004779
Introduction to Folk Studies
An introduction to the study of folk traditions in different contexts, focusing on the concepts of folk group, cultural relativism, fieldwork, meaning and function, and the genres of folk narrative, folksong, folk custom and traditional material culture. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, AH - Arts and Humanities

FLK 280(3) Course ID: 004780
Cultural Diversity in the United States
Focuses on understanding, interpretation, and appreciation of the multicultural nature of American society. Emphasis on the varieties of cultural expression, customs and world view practiced by regional, ethnic, racial and sectarian cultures. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Other

FLM 112(4) Course ID: 016196
Filmmaking: Treatment to Short Screen Play
Provides project-based instruction on the basics of filmmaking. Familiarizes students with the process of creating a film treatment and proposal, and writing and revising a screenplay. Co-requisite: (FLM 122 AND FLM 132 AND FLM 140 OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

FLM 122(4) Course ID: 016197
Filmmaking: Storyboard through Production
Provides project-based instruction on basics of film production. Familiarizes students with directing, lighting, set design, cinematography, and audio. Co-requisite: (FLM 112 AND FLM 132 AND FLM 140) OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

FLM 132(4) Course ID: 016198
Filmmaking: Editing through Distribution
Provides experience in graphic design, editing, music production, and promotion. Emphasizes preparation for entry-level positions in the industry. Co-requisite: (FLM 112 AND FLM 122 AND FLM 140) OR Consent of Instructor. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

FLM 140(2) Course ID: 016199
Filmmaking: Lab
Covers the lab portion of all topics included in FLM 112, FLM 122, and FLM 132. Consists of guest lecturers, group projects, and hands on experience in film, ranging from pre-production and storyboards to post production. Co-requisite: (FLM 112 AND FLM 122 AND FLM 132) OR Instructor Consent. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

FLM 261(3) Course ID: 017464
Film Directing
Components: Lecture
Attributes: Technical

FLM 291(3) Course ID: 016194
Film Boot Camp
Focuses on completion of multiple short films or a feature length production. This course may be repeated two times for a maximum of 6 credits. Lecture: 1.0 credits (15 contact hours), Lab: 2.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical
FPX 100(0.3) Course ID:005625
Introduction to Fluid Power Lab
Introduces the basic concepts of fluid power and provides an opportunity to discuss the application of those concepts in the development of hydraulic and pneumatic systems. Includes a general discussion on the safe working practices required with fluid power systems. Co-requisite: FPX 101 or Consent. Laboratory: 2 credits (60 contact hours).

Components: Laboratory

FPX 101(2) Course ID:001465
Fluid Power Lab
Provides practical experiences in the study of fluid power theory, hydraulics and pneumatics component identification, schematic reading, and basic calculations related to pneumatic and hydraulic systems and their operations. Co-requisite: FPX 100 or Consent of Instructor. Laboratory: 2 credits (60 contact hours).

Components: Laboratory

FPX 1004(1) Course ID:005642
Hydraulic System Components and Applications Lab
Introduces the basic fundamentals of hydraulic component, system design, and operation. Covers the skills required to service modern pneumatic and air preparation systems. Includes a general discussion on the safe working practices required with fluid power systems. Co-requisite: FPX 101 or Consent. Laboratory: 0.4 credit (6.0 contact hours).

Components: Lecture

FPX 1005(1) Course ID:006543
Pneumatic Systems and Components Lab
Introduces the basic fundamentals of pneumatic components and operation. Covers higher level schematic layout and design as well as the specifics involved with the actual component selection. Provides the opportunity to design and build actual pneumatic circuits and then troubleshoot any faults that may be present in their design or construction. Includes a general discussion on the safe working practices required with fluid power systems. Co-requisite: FPX 101 or Consent. Laboratory: 1 credit (15 contact hours).

Components: Lecture

FPX 1101(0.3) Course ID:005676
Introduction to Fluid Power Lab
Introduces the basic concepts of fluid power and discusses the application of those concepts in the development of hydraulic and pneumatic systems. Includes a general discussion on the safe working practices required with fluid power systems. Co-requisite: FPX 101 or Consent. Lab: 0.3 credits (9 contact hours).

Components: Lecture

FPX 1102(0.3) Course ID:005677
Introduction to Hydraulic System Maintenance Lab
Introduces pneumatic system maintenance. Familiarizes students with hydraulic fluids, reservoirs, and filters. Covers the methodologies required when servicing a hydraulic system. Includes a general discussion on the safe working practices required with fluid power systems. Co-requisite: FPX 100 or Consent. Lab: .3 credit (9 contact hours).

Components: Laboratory

FPX 1013(0.3) Course ID:005678
Introduction to Pneumatic System Maintenance Lab
Introduces pneumatic system maintenance. Covers the skills required to service modern pneumatic and air preparation systems. Includes a general discussion of the safe working practices required with fluid power systems. Co-requisite: FPX 1003 or Consent. Lab: 0.3 credit (9 contact hours).

Components: Laboratory

FPX 1014(0.55) Course ID:006544
Hydraulic System Components and Applications Lab
Introduces basic fundamentals of hydraulic component, system design, and operation. Covers higher level schematic layout and design as well as the specifics involved with the actual component selection. Provides the opportunity to design and build actual hydraulic circuits and then troubleshoot any faults that may be present in their design or construction. Includes a general discussion of the safe working practices required with fluid power systems. Co-requisite: FPX 1004 or Consent. Lab: 0.55 credits (16.5 contact hours).

Components: Laboratory

FPX 1015(0.55) Course ID:006545
Pneumatic Systems and Components Lab
Introduces the application of basic fundamentals of pneumatic components and operation. Covers schematic layout and design as well as the specifics involved with the actual component selection. Provides the opportunity to design and build actual pneumatic circuits and then troubleshoot any faults that may be present in their design or construction. Includes a general discussion on the safe working practices required with fluid power systems. Lab component for FPX 1005. Co-requisite: FPX 1005 or Consent. Lab: 0.55 Contact Hours (16.5).

Components: Laboratory

FRE 101(4) Course ID:000866
Elementary French I
Introduces basic modes of communication in French. Stresses speaking, listening, reading and writing as target skills. Emphasizes everyday language and presents an overview of the cultures of various Francophone countries. Lecture: 4 credits (60 contact hours).

Components: Lecture

Attributes: Foreign Language, Cultural Studies

FRE 102(4) Course ID:000754
Elementary French II
Continues the study of basic French through grammar, reading, and oral practice. Stresses speaking, listening, reading and writing as target skills. Emphasizes everyday language and exploring the cultures of various Francophone countries. Pre-requisite: FRE 101. Lecture: 4 credits (60 contact hours).

Components: Lecture

Attributes: Foreign Language, Cultural Studies
Flight Rating. Includes in-depth demonstration of in-flight
Practical Test Standards exam and the FAA Instrument
Prepares students for the fixed wing FAA Instrument Flight
Attributes: Technical
IFR flight. Pre-requisites: FWT 101, FWT 102, and FWT 103. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical
FWT 106(2) Course ID:017579
Beverage Packaging
Prepares students in all aspects of packaging of fermented
beverages to include kegging, canning, and bottling
operations in a brewery. Pre-requisite: Students must be
21 years of age, FRM 100 & FRM 110. Lecture: 1 credit
(15 contact hours). Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical
FRT Fire/Rescue Training
FWT Fixed Wing Flight Training
FWT 101(4) Course ID:017519
Private Pilot Fixed Wing Ground School
Covers fundamentals of fixed wing flight, flight operations,
aviation weather, performance, navigation, aircraft
systems, aeronautical publications, FAA regulations, flight
planning, radio procedures, and metrology and human
factors. Prepares students for the FAA Fixed Private
Pilot Airman Knowledge Exam. Lecture: 4.0 credits (60
contact hours).
Components: Lecture
Attributes: Technical
FWT 102(2) Course ID:017520
Private Pilot Fixed Wing Flight Lab
Introduces the student to the fundamentals of fixed wing
flight and the practical application of aviation weather,
performance, navigation, FAA regulations, flight planning,
radio procedures, and human factors. Prepares students to
take the Federal Aviation Administration Fixed Wing Private
Pilot Practical Test Standards examination. Pre-requisites:
FWT 101 and Proof of valid Second Class (or higher)
Medical Certificate. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical
FWT 103(4) Course ID:017521
Fixed Wing Aircraft Instrument Pilot Ground School
Prepares students for the FAA fixed wing Instrument
Aviation Flight Regulations (FAI) navigation and
and procedures, aviation weather, applicable Federal Aviation
Regulations (FAI), and the instrument charts required for
IFR flight. Pre-requisites: FWT 101, FWT 102. Lecture: 4.0
credits (60 contact hours).
Components: Lecture
Attributes: Technical
FWT 104(2) Course ID:017522
Fixed Wing Instrument Pilot Flight Lab
Prepares students for the fixed wing FAA Instrument Flight
Practical Test Standards exam and the FAA Instrument
Flight Rating. Includes in-depth demonstration of in-flight
mastery of aircraft flight instruments. Features altitude
instrument flying, Instrument Flight Rules (IFR) navigation
and procedures, aviation weather procedures, applicable
Federal Aviation Regulations (FAR), and mastery of the
instruments required for IFR flight. Pre-requisites: FWT
101, FWT 102, and FWT 103. Laboratory: 2.0 credits (60
contact hours).
Components: Laboratory
Attributes: Technical
of earth's physical environment. Emphasis is placed on identifying interrelationships between atmospheric processes involving energy, pressure, and moisture; weather and climate; and terrestrial processes of vegetative biomes, soils, and landscape formation and change. Fulfills elementary certification requirements in education, and USP cross-disciplinary requirement. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SN - Science

GEO 131(1) Course ID:017639
Earth's Physical Environment Laboratory
Emphasizes basic laboratory studies of identifying interrelationships between atmospheric processes involving energy, pressure, and moisture; weather and climate; and terrestrial processes of vegetative biomes, soils, and landscape formation and change. Pre-requisite or Co-requisite: GEO 130. Laboratory: 1 credit (30 contact hours).

Components: Laboratory

GEO 131(1) Course ID:017508
Resilient Gardening Laboratory
Provides applications of ecological and geographical concepts, including activities related to the lithosphere, atmosphere, hydrosphere, and biosphere such as tree identification and care, soil analysis and care, pollinators and other beneficial insects, companion planting, solar requirements of plants, and water conservation. Pre-requisite or Co-requisite: GEO 130 or BIO 120. Laboratory: 1.0 credit hour (30 contact hours).

Components: Laboratory
Attributes: Other

GEO 152(3) Course ID:000398
Regional Geography of the World
Introduces regional geography with a focus on the world's physical and human landscapes. Emphasizes connections between regions and how each region affects and is affected by global issues such as economic restructuring, food production, and environmental change. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

GEO 160(3) Course ID:000422
Lands and Peoples of the Non-Western World
Provides a geographic study of world regions defined conceptually and historically as non-Western. Includes global patterns of social, cultural, economic and political differences between the West and Non-West and the processes key to making the Non-Western world, such as colonialism and imperialism. Considers significant current issues including sustainable development, environment, human rights, and gender relations. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

GEO 162(3) Course ID:007194
Introduction to Global Environmental Issues
This course addresses environmental questions of global importance, including population growth, resource consumption, environmental degradation, biodiversity conservation, toxic contamination and environmental justice. Fulfills Gen Ed Global Dynamics requirement at the University of Kentucky.) Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science, University Course (University of Kentucky)

GEO 163(3) Course ID:007195
Global Conflicts
This course will focus on the dynamics and effective of conflicts over boundaries, territory, environmental resources, and civil and political rights. A geographic lens will be used to understand contemporary world conflicts. This course introduces students to an understanding of conflict as both grounded in localities and an effect of global interconnections - political, economic, and cultural. The course will focus on six major contemporary conflicts. Students will become versed in the debates and possible options for solution of these problems. While lectures will provide students with an understanding of the coordinates of the conflicts, recitations sections provide an opportunity for discussion and debate. The readings are chosen to supplement lecture material, providing a greater depth of understanding of the issues at stake. (Fulfills the Global Dynamics requirement of General Education at the University of Kentucky.) Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science, University Course (University of Kentucky)

GEO 172(3) Course ID:000158
Human Geography
Presents a study of the spatial distributions of significant elements of human occupancy of the earth's surface including basic concepts of diffusion, population, migration, settlement forms, land utilization, and impact of technology on human occupancy of the earth. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

GEO 210(3) Course ID:000610
Pollution, Hazards, and Environmental Management
An introduction to environmental systems such as weather and climate, vegetation, land forms and soils, and how the quality of these systems is modified by human use. Resource issues discussed include: atmospheric pollution and global warming; groundwater, flooding, and flood plain management; volcanic activity and earthquakes; and biospheric processes associated with desertification and lake eutrophication. Case studies based upon important environmental problems illustrate how human activity and environmental systems interrelate. Fulfills USP Cross-Disciplinary requirement. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SB - Social Behavior Science

GEO 222(3) Course ID:000482
Cities of the World
Focuses on the historical development, contemporary character, and alternative futures of cities in both developing and developed regions. Emphasizes the spatial, social, economic, and political processes of major world cities. Includes a specific focus on contemporary urban problems. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SB - Social Behavior Science

GEO 240(3) Course ID:000434
Geography and Gender
Presents a geographic approach to the study of gender relations, emphasizing the role of space and place in shaping the diversity of gender relations throughout the world. Stresses the importance of gender relations in understanding a variety of issues through the application of case study analyses. Includes the design and use of basic principles of environmental science, functions of ecological systems, contemporary environmental conditions and problems, techniques for investigating these systems, and theories on humanity's place in the world's ecosystems and physical environment. Integrated Lecture/ Lab. 4 credit hours (60 contact hours).

Components: Integrated Laboratory, Integrated Lecture
Attributes: SL - Science Laboratory, SN - Science

GEO 299(1 - 3) Course ID:017372
Special Topics in Geography
Introduces specialized topics in the field of geography to meet current trends and investigations of contemporary issues in the discipline. May be repeated to a maximum of six credits under different subtitles. Pre-requisite: Consent of instructor. Lecture: Variable.

Components: Lecture
Attributes: Other

GER 101(4) Course ID:000884
Elementary German I
Includes fundamentals of German with development of the four basic skills: reading, writing, listening, and speaking. Lecture: 4 credits (60 contact hours).

Components: Lecture
Attributes: Foreign Language, Cultural Studies

GER 102(4) Course ID:000759
Elementary German II
Continues the fundamentals of GER 101 with further development of the four basic skills: reading, writing, listening, and speaking. Pre-requisite: GER 101 or Consent of Instructor. Lecture: 4 credits (60 contact hours).

Components: Lecture
Attributes: Foreign Language, Cultural Studies

GER 201(3) Course ID:000880
Intermediate German I
Includes the systematic review of grammar and furthering of reading, writing, listening, and speaking skills based upon cultural and literary materials. Pre-requisite: GER 102, or equivalent or placement test. Lecture : 3 credits (45 contact hours).

Components: Lecture
Attributes: Foreign Language, Cultural Studies

GER 202(3) Course ID:000820
Intermediate German II
Continues the study of intermediate German through grammar, reading, and oral practice. Pre-requisite: GER 201 or equivalent or placement test. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Foreign Language, Cultural Studies

GIS 110(3) Course ID:004761
Spatial Data Analysis and Remote Sensing Techniques
Introduces spatial analysis, the interpretation of map data, and the use of handheld Global Positioning Systems to collect data. Intended for those interested in a career in civil engineering or surveying. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (15 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

GIS 120(3) Course ID:004762
Introduction to Geographic Information Systems
Presents a comprehensive survey of the fundamental concepts of GIS, providing students a command over the software to import raster and vector data into a GIS and to conduct simple analyses over their data. Intended for those with limited experience with GIS who are exploring career opportunities in the field. Pre-requisite: GIS 110. Lecture: 3 credits (45 contact hours).

Components: Lecture

GIS 145(3) Course ID:016881
Remote Sensing
Introduces remote sensing of the earth with topics that include the physical principles of remote sensing, history
and future trends, sensors and their characteristics, image data sources, and image classification and analysis techniques. Pre-requisite or Co-requisite: CIT 125 or consent of instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

GSL 210(3)
Course ID:005042
Advanced Topics in GIS
Explores advanced topics in GIS. Teaches students how to create and import geodatabases into a GIS, edit and create new vector and raster data, build layouts for presentation purposes and manipulate tabular data. Exposes students to various extensions within the software in order to conduct advanced analyses on their data. Pre-requisite: GSL 120. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

GSL 255(3)
Course ID:016882
Geospatial Programming
Examines customization of GIS software applications by way of modified service interface elements while covering topics in theory and implementation of the various scripting languages currently used. Prepares students to solve geospatial problems and streamline GIS workflows through the creation and modification of scripts. Pre-requisite: CIT 125 or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

GSL 260(3)
Course ID:016883
Geospatial Web Mapping
Introduces the design, publishing, optimization and maintenance of geospatial servers, and basic geospatial web services and applications. Includes an introduction to browser and mobile enabled interactive applications. Pre-requisite: CIT 125 or consent of instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

GLY 101(3)
Course ID:000878
Physical Geology
Introduces the principles of physical geology, including study of minerals and rocks, volcanoes and earthquakes, plate tectonics, and the landforms of Earth's surface. Requires concurrent enrollment in GLY 111. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SN - Science

GLY 102(3)
Course ID:000757
Historical Geology
Covers the history of the Earth: its origin as part of the solar system, and subsequent evolution of the atmosphere, continents, seas, and life as interpreted from the rock record. Includes in addition to lecture illustrations, field trips and out-of-class exercises. Gives attention to the development of the basic principles used in interpretation. Pre-requisite: GLY 101 and GLY 111 or consent of the instructor. Co-requisite: GLY 112. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SN - Science

GLY 110(3)
Course ID:002218
Environmental Geology
Introduces and applies basic geological concepts to current environmental issues including the availability and use of water and soil resources, pollution causes, effects and solutions, and uses and prediction of environmental hazards including floods, landslides, subsidence, earthquakes and volcanoes. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SN - Science

GLY 111(1)
Course ID:000544
Physical Geology Laboratory
Identify minerals and rocks in hand specimens, interpret landscape features as shown on topographic maps, and study geologic maps. Co-requisite: GLY 101. Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory
Attributes: SL - Science Laboratory

GLY 112(1)
Course ID:000548
Historical Geology Laboratory
Interpret geologic maps and cross-sections, and study important invertebrate fossil groups. Requires one field trip. Pre-requisite: GLY 101 and GLY 111 or consent of the instructor. Co-requisite: GLY 102. Lab: 1.0 credit (30 contact hours).

Components: Laboratory
Attributes: SL - Science Laboratory

GLY 114(1)
Course ID:015662
Environmental Geology Laboratory
Introduces and applies basic geologic concepts in a laboratory setting to current environmental issues, including the availability, use, and testing of water and soil resources, as well as the effects, solutions, and causes of pollution. Pre-requisite or Co-requisite: GLY 110. Lab: 1.0 credit (30 contact hours).

Components: Laboratory
Attributes: SL - Science Laboratory

GLY 125(3)
Course ID:016917
Geology of the National Parks and Monuments
Introduces the principles of physical geology within the context of the U.S. National Parks and Monuments, including Earth materials, geologic time, plate tectonics, and the surface and internal processes that have shaped and continue to shape the Earth as related to specific National Park and Monument sites. Includes an overview of the history of the park system and its unique role in understanding and preserving our natural history and environment. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SN - Science

GLY 130(3)
Course ID:003781
Dinosaurs and Disasters: A Brief History of the Vertebrates
Examines dinosaurs' interactions with their environment, their indirect influence on mammals, and implications for humankind. Traces the history of dinosaurs from early vertebrate ancestors to their final extinction, and surveys the evolutionary, paleogeographic, environmental, and possible extraterrestrial causes for their rise to dominance and sudden fall. Lecture: 3.0 credit hours.

Components: Lecture
Attributes: SN - Science

GLY 131(1)
Course ID:007361
Dinosaur Laboratory
Augments GLY 130 in analysis and interpretation of fossils, scale models, and sedimentary rocks. Investigates specimens and examines features of dinosaurs and related fossils. Uses sedimentary rocks and fossils to interpret ancient environments, dinosaur anatomy, and geologic history. Demonstrates to students how science works. Pre-requisite or Co-requisite: GLY 130. Lab: 1.0 credit (30 contact hours).

Components: Laboratory
Attributes: SL - Science Laboratory

GLY 140(3)
Course ID:016864
Introduction to Oceanography
Investigates geologic, physical, biochemical, and biological processes that occur within the oceans of the world. Emphasizes connections between these processes and how those connections interact with our planet's life. Explores geologic evolution of the ocean floor, dynamic composition of ocean water, lithospheric and atmospheric interactions with the hydrosphere, marine life and ecosystems, and the impact of human activity on marine ecosystems. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: SN - Science

GLY 220(4)
Course ID:000847
Principles of Physical Geology
Learn how the Earth works: an integrated course in physical geology, covering the physical, chemical and biological processes that combine to produce geological processes. Focuses on plate tectonics, earth surface processes, and properties and formation of earth materials. Lab exercises emphasize identification and interpretation of geologic materials, geologic maps and cross sections. Lecture: 3 credits (45 contact hours); Laboratory: 1 credits (30 contact hours).

Components: Lecture
Attributes: SL - Science Laboratory, SN - Science

HCS 110(1)
Course ID:016971
Culture of Healthcare
Covers job expectations and roles of clinical personnel in a healthcare setting. Discusses healthcare organization inside a practice setting, privacy laws, professional and ethical issues encountered in the workplace, and common form of care delivery. Lecture: 1.0 credits (15 contact hours).

Components: Lecture
Attributes: Technical

HCS 125(1)
Course ID:016972
History in Healthcare
Introduces the concept of “meaningful use” of electronic health records as well as the development and background of the IT landscape in health care and public health, including experiments from the 1950s and 1960s culminating in the HITECH Act. Lecture: 1.0 credits (15 contact hours).

Components: Lecture

HCS 145(1)
Course ID:016973
Health IT Terminology
Explains terminology used by workers in health care, public health, or those who work with Health IT systems including common medical terms, technology systems, health data standards, and clinical terminology. Pre-requisite or Co-requisite: AHS 115 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).

Components: Lecture
Attributes: Technical

HCS 150(2)
Course ID:016974
Health IT Analysis & Quality
Introduces concepts of Health IT and practice workflow process analysis and redesign. Addresses how establishing a culture to support increased quality and safety is critical in the healthcare environment. Discusses the approaches to assessing patient safety issues, implementing quality management, and reporting through electronic systems. Pre-requisite or Co-requisite: CIT 105 AND HCS 145, or consent of Instructor. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

HCS 165(2)
Course ID:016975
Health Management Systems
Covers specific health care and public health applications. Introduces Health IT standards, health-related data structures, software applications, enterprise architecture in health care, and public health organizations. Pre-requisite or Co-requisite: CIT 105 AND HCS 145, or Consent of Instructor. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

HCS 180(1)
Course ID:016976
Usability and Human Factors
Introduces rapid prototyping, user-centered design and evaluation, and usability. Emphasizes the effects of new technology and workflow on downstream processes, as well as facilitation of a unit-wide focus group or simulation. Pre-requisite or Co-requisite: CIT 105 AND AHS 115 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).

Components: Lecture
Attributes: Technical

HCS 200(1)
Course ID:016977
Health IT Computer Systems
Provides an intermediate overview of computer architecture, data organization, representation, structure
of programming languages, networking, and data communication about Health IT Systems. Pre-requisite or Co-requisite: CIT 105 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).

Components: Lecture Attributes: Technical

HCS 210(3) Course ID:016978
Implementing Health IT Systems
Introduces the OSI model, including the purpose and content of each of its seven layers as well as hardware, processes, protocols, and tools at each layer. Provides a practical experience that will address approaches to assessing, selecting, and configuring EHRs (electronic health records) to meet the specific needs of customers and end-users. Emphasizes the principles underlying system configuration, including system selection, planning, testing, troubleshooting, and final deployment. Pre-requisite or Co-requisite: AHCS 145 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture Attributes: Technical

HCS 220(1) Course ID:016979
Working with HIT Systems
Identifies the components of Health IT systems and their applications. Introduces the potential threats to security and need for standards, high levels of usability, and awareness of how errors can occur. Lecture: 1.0 credits (15 contact hours).

Components: Lecture Attributes: Technical

HCS 230(2) Course ID:016980
Vendor-Specific Systems
Provides an in-depth discussion in Vendor-Specific Systems, focusing specifically on system and database architectures used in commercial Electronic Health Records (EHRs), vendor strategies for terminology, knowledge management, ways to assess decision support capabilities of EHRs, and vendor-specific training (go-live strategies). Pre-requisite or Co-requisite: HCS 200 or Consent of Instructor. Lecture: 2.0 credits (30 contact hours).

Components: Lecture Attributes: Technical

HCS 260(1) Course ID:016981
Health IT Instructional Design
Examines Health IT learning management systems, instructional design software tools, teaching techniques and strategies, evaluation of learner competencies, maintenance of training records, and measurement of training program effectiveness. Pre-requisite or Co-requisite: HCS 165 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).

Components: Lecture Attributes: Technical

HCS 280(1) Course ID:016982
Project Management & Teams
Introduces project management tools and techniques that result in the ability to create and follow a project management plan. Emphasizes the value of being "team players" by understanding roles, the importance of communication, and group cohesion. Lecture: 1.0 credits (15 contact hours).

Components: Lecture Attributes: Technical

HCS 281(1) Course ID:016983
Health IT Customer Service
Develops customer service skills to encourage effective communication across the team. Introduces roles that will be encountered in healthcare and public health settings. Lecture: 1.0 credit (15 contact hours).

Components: Lecture Attributes: Technical

HCS 290(1) Course ID:016984
Leadership for Health IT
Develops the processes and skills for leadership roles and effective management of teams. Emphasizes the leadership modes and styles best suited to Health IT system deployment. Pre-requisite or Co-requisite: HCS 150 or Consent of Instructor. Lecture: 1.0 credits (15 contact hours).

Components: Lecture Attributes: Technical

HCS 295(1) Course ID:016985
Health IT Capstone
Serves as the capstone course for the certificate program. Integrates prior learning outcomes into a single integrated learning experience. Includes preparation for and completion of the end of program assessment for the Health Care Specialist Certificate. Pre-requisite or Co-requisite: Consent of Instructor. Lecture: 1.0 credits (15 contact hours).

Components: Lecture Attributes: Technical

HEO Heavy Equipment Operation

HEO 106(7) Course ID:001522
Motorgrader Operator
Examines a broad base of skills required to operate heavy equipment with an emphasis on safety. Operation of a Motor-Grader will be learned by students. Pre-requisite: DIT 103. Lab: 7.0 credits (315 contact hours).

Components: Laboratory Attributes: Technical

HEO 107(7) Course ID:015676
Utility Tractor Loader Operator
Provides a broad base of skills required to operate heavy equipment with an emphasis on safety. Focuses on job awareness and industry requirements. Permits experience on dump truck and utility tractor loader. Pre-requisite or Co-requisite: DIT 103. Lab: 7.0 credits (210 contact hours).

Components: Laboratory Attributes: Technical

HEO 110(7) Course ID:015677
Power Shovel Backhoe Operator
Presents a background in the operation, maintenance, and safety considerations for a dump truck and power shovel backhoe. Pre-requisite or Co-requisite: DIT 103. Lab: 7.0 credits (210 contact hours).

Components: Laboratory Attributes: Technical

HEO 111(7) Course ID:001524
Bulldozer Operator
Presents a background in the operation, maintenance, and safety considerations for a dump truck and bulldozer. Pre-requisite: DIT 103. Lab: 7.0 credits (210 contact hours).

Components: Laboratory Attributes: Technical

HEO 115(7) Course ID:004571
Hydraulic Excavator Operator
Covers a broad base of skills required to operate heavy equipment safely. Includes how to operate a hydraulic excavator safely. Pre-requisite: HEO 151. Lecture: (45 contact hours). Lab: (180 contact hours).

Components: Laboratory, Lecture Attributes: Technical

HEO 125(5) Course ID:001525
Special Problems I
Reinforces material presented in HEO 150. 200, and 250. Discusses job orientation, blueprint reading, and equipment operation. Pre-requisite or Co-requisite: DIT 103. Lab: 3.0 credits (90 contact hours).

Components: Laboratory Attributes: Technical

HEO 130(5) Course ID:017609
Power Shovel Backhoe Operator
Identifies and describes the common uses, types, components, instruments, controls, and attachments of backhoes. Presents safety guidelines, prestart inspection procedures, and preventive maintenance requirements. Describes basic startup and operation, and covers common work activities associated with backhoes. Pre-requisite or Co-requisite: DIT 103. Laboratory: 5 credits (150 contact hours).

Components: Laboratory Attributes: Technical

HEO 131(5) Course ID:017606
Bulldozer Operator
Identifies and describes the common uses, types, and components of bulldozers. Presents safety guidelines, prestart inspection procedures, and preventive maintenance requirements. Describes basic startup and operation, and covers common work activities associated with bulldozers. Pre-requisite or Co-requisite: DIT 103. Laboratory: 5 credits (150 contact hours).

Components: Laboratory Attributes: Technical

HEO 132(5) Course ID:017610
Utility Tractor Loader Operator
Covers operation of general utility tractors in the construction industry. Describes duties and responsibilities of the operator, safety rules for operation, the attachment of implements, and basic preventive maintenance practices. Pre-requisite or Co-requisite: DIT 103. Laboratory: 5 credits (150 contact hours).

Components: Laboratory Attributes: Technical

HEO 133(5) Course ID:017608
Motor Grader Loader Operator
Identifies and describes the common uses and types of motor graders. Presents safety guidelines, prestart inspection procedures, and preventive maintenance requirements. Describes basic startup and operation, and covers common work activities associated with excavators. Pre-requisite or Co-requisite: DIT 103. Laboratory: 5 credits (150 contact hours).

Components: Laboratory Attributes: Technical

HEO 134(5) Course ID:017607
Hydraulic Excavator Operator
Identifies and describes the common uses, types, and components of excavators. Presents safety guidelines, prestart inspection procedures, and preventive maintenance requirements. Describes basic startup and operation, and covers common work activities associated with excavators. Pre-requisite or Co-requisite: DIT 103. Laboratory: 3 credits (45 contact hours).

Components: Lecture Attributes: Technical

HEO 141(3) Course ID:017611
Heavy Equipment Operating I
Instructs in the operation of heavy equipment such as bulldozers, backhoes, front-end loaders, graders, and scrapers. Explains techniques of operation such as digging, ditching, sloping, stripping, grading, backfilling, clearing fields, and foundation excavating. Pre-requisite or Co-requisite: DIT 103. Lecture: 3 credits (45 contact hours).

Components: Lecture Attributes: Technical

HEO 151(6) Course ID:015678
Heavy Equipment Operating I
Instructs students in the operation of heavy equipment such as bulldozers, backhoes, front end loaders, graders, and scrapers. Explains techniques of operation such as digging, ditching, sloping, stripping, grading, backfilling, clearing fields, and foundation excavating. Pre-requisite or Co-requisite: DIT 103. Lecture: 6.0 credits (90 contact hours).

Components: Lecture Attributes: Technical

HEO 201(6) Course ID:015679
Heavy Equipment Operating II
Reinforces material first presented in HEO 151. Provides intermediate instruction for students in the operation of heavy equipment such as bulldozers, backhoes, front end loaders, graders, and scrapers. Explains intermediate techniques of operation such as digging, ditching, sloping, stripping, grading, backfilling, clearing fields, and foundation excavating. Pre-requisite or Co-requisite: DIT
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**HEO 211(3) Course ID:017612**
Heavy Equipment Operating II
Reinforces material first presented in HEO 141. Provides intermediate instruction for students in the operation of heavy equipment such as bulldozers, backhoes, front-end loaders, graders, and scrapers. Practices techniques in digging, ditching, sloping, stripping, grading, backfilling, clearing trees and rubble, and foundation excavating. Demonstrates the proper care and maintenance of equipment. Pre-requisite: HEO 141. Laboratory: 3 credits (90 contact hours).

**HEO 225(3) Course ID:001528**
Special Problems II
Reinforces material presented in HEO 150, 200, and 250. Instructs all facets of project control. Pre-requisite Or Co-requisite: DIT 103. Lab: 3.0 credits (90 contact hours).

**HEO 231(3) Course ID:017613**
Heavy Equipment Operating III
Reinforces material presented in HEO 211. Provides advanced instruction in the operation of heavy equipment such as bulldozers, backhoes, front-end loaders, graders, and scrapers. Refines techniques in digging, ditching, sloping, stripping, grading, backfilling, clearing trees and rubble, and foundation excavating. Demonstrates in the proper care and maintenance of equipment. Pre-requisite: HEO 211. Lecture: 3 credits (45 contact hours).

**HEO 251(6) Course ID:015680**
Heavy Equipment Operating III
Reinforces material presented in HEO 151 and 201. Provides advanced instruction for students in the operation of heavy equipment such as bulldozers, backhoes, front end loaders, graders, and scrapers. Explains advanced techniques of operation such as digging, ditching, sloping, stripping, grading, backfilling, clearing fields, and foundation excavating. Pre-requisite or Co-requisite: DIT 103. Lecture: 6.0 credits (90 contact hours).

**HFL Healthcare Facility Management**

**HFL 100(3) Course ID:015593**
Introduction to Healthcare Facility Management
Introduces students to Healthcare Facility Leadership by presenting an overview of the history and development of healthcare engineering. The student will learn the importance of compliance with the various codes and standards applicable to the healthcare facility environment; explore the driving factors affecting the operations and maintenance of healthcare facilities; review the complexity of delivering engineering in a patient centered environment; gain understanding of the complex structure and reporting relationships that exist in the healthcare industry; understand how the facility environment impacts regulatory requirements, clinical needs, and financial bottom line of healthcare; and gain an understanding of his/her role within the facility management department and the hospital setting. Lecture: 3.0 credits (45 contact hours).

**HFL 110(2) Course ID:015594**
Introduction to Healthcare Industry
Introduces students to the healthcare industry by examining healthcare reporting relationships, organizational structures, personnel, facility types, department configurations, terminology, regulatory environment, and accreditation process. The course will also examine industry shifts related to an aging population and healthcare law changes. The student will have a clearer understanding of how to navigate the healthcare industry based on size and complexity. Lecture: 2.0 credits (30 contact hours).

**HFL 120(2) Course ID:015663**
Infection Control and Prevention
Examines the historical and evolving infection control complexities from both a clinical and physical environment perspective. Reviews changes the industry has taken to address this growing healthcare industry challenge. Studies how the critical environment and engineering practices during construction and maintenance impact infection control. Reviews infection control risk assessments and prevention documentation and techniques. Lecture 2.0 credits (30 contact hours).

**HFL 130(3) Course ID:015664**
Compliance, Codes and Standards I
Introduces students to the various codes & standards, regulatory, and accreditation agencies in Healthcare. Takes into consideration local, state, and federal regulatory bodies such as Occupational Safety and Health Administration (OSHA), National Fire Protection Association (NFPA), Building Owners and Managers Association (BOMA), Center for Medicare and Medicaid Services (CMS), American Society for Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE), International Organization for Standardization (ISO), National Electrical Code (NEC), International Building Code (IBC), The Joint Commission, and the DNV. Examines the facility leader’s role in coordination and participation in the accreditation and regulatory survey processes. Evaluates the role of a coordinator and participant in emergency management drill and training. Develops fire training and drill documentation coordination. Pre-requisite: HFL 100 Introduction to Healthcare Facility Management. Lecture: 3.0 credits (45 contact hours).

**HFL 140(3) Course ID:015665**
Maintenance and Operations I
Examines and reviews mechanical, electrical, plumbing, medical gas, fire protection, building envelope, medical, steam, and security systems that comprise most healthcare facilities. Reviews computer systems and software such as building automation, fire systems, work order systems, and CAD/BIM used by facility engineering. Understands equipment inventory, entry control, and disposition. Develops maintenance program for buildings, equipment, utilities, and grounds. Reviews energy management and benchmarking. Pre-requisite: HFL 100 Introduction to Healthcare Facility Management. Lecture: 3.0 credits (45 contact hours).

**HFL 150(2) Course ID:015666**
Planning, Design and Construction I
Covers project management delivery from concept, development, design, contracting, method, bidding, budgeting, equipment acquisition, specifications, and meeting management. Develops and reviews current Infection Control Risk Assessment (ICRA) practices and documentation. Develops and reviews interim Life Safety Measures (LSM) practices and documentation. Pre-requisite: HFL 100 Introduction to Healthcare Facility Management. Lecture: 3.0 credits (45 contact hours).

**HFL 200(3) Course ID:015667**
Compliance, Codes and Standards II
Examines the major codes, standards and regulatory rules that apply to the healthcare industry. Examines, National Fire Protection Association (NFPA) 101, 110, 99, 25, 20, 10; Facility Guidelines Institute (FGI) Guidelines; The Joint Commission Standards for accreditation; and to maintain standard specific documentation and checklists for accreditation surveys. Develops and maintains medical equipment and utility system programs. Develops and conducts environmental rounds and surveys. Develops standard specific policies and procedures, such as National Fire Protection Association (NFPA) 59 electrical equipment safety inspection requirements. Pre-requisite: HFL 130 Compliance, Codes and Standards I. Lecture: 3.0 credits (45 contact hours).

**HFL 210(3) Course ID:015668**
Maintenance and Operations II
Examines the administration and coordination of work order processes to include preventive maintenance, corrective maintenance, moves, and projects. Applies equipment risk assessments in developing a maintenance program. Tests, monitors, and documents air quality, air exchange, and pressure relationships. Maintain control access to key control systems and procedures. Develops competency based training programs. Manages low voltage systems (Nurse call, Closed Circuit Television System (CCTV), patient monitoring, Radio Frequency Identification (RFID) etc.), understands Performance Improvement (PI) processes. Pre-requisite: HFL 140 Maintenance and Operations I. Lecture: 3.0 credits (45 contact hours).

**HFL 250(3) Course ID:015669**
Planning, Design and Construction II
Examines the management, planning, monitoring, reporting, and closing out of projects. Emphasizes the management of drawing revisions, commissioning, equipment documentation, and hand off training. Details Change Order Request (COR) and Request For Information (RFI), as well as, reviewing the needs and requirements for space planning and allocation. Pre-requisite: HFL 150 Planning, Design and Construction I. Lecture: 3.0 credits (45 contact hours).

**HFL 260(3) Course ID:015670**
Healthcare Facilities Leadership Capstone I
Examines and applies Performance Improvement (PI) activities in healthcare engineering operations, maintenance, and project environment. Develops goals using S.M.A.R.T guidelines (Specific, Measurable, Assignable, Realistic, and Time bound), Develops and manages capital budgets, operating budgets recommendations. Generates financial, productivity and performance dashboards. Develops and implements equipment and systems training programs. Develops and monitors customized measures, indicators, KPIs, depends from computerized maintenance data. Co-requisite: HFL 140 Maintenance and Operations I. Lecture: 3.0 credits (45 contact hours).

**HFL 270(3) Course ID:015671**
Healthcare Facilities Leadership Capstone II
Examines management of related healthcare engineering roles, such as fire safety, environment of care, waste management, emergency management, protection services, and environmental services. Examines management of Human Resource functions (e.g. competencies, disciplinary action, hiring, performance appraisals, terminations, scheduling, staff orientation, and job descriptions). Performs and participates in organizational strategic planning, SWOT (strengths, weaknesses, opportunities, threats).
apply for the FAA Commercial Helicopter Pilot Practical
hour and certification requirements to qualify students to
regulations, flight planning, radio procedures, and human
factors. Prepares student for the helicopter FAA Private Pilot
Airman Knowledge Exam. Lecture: 4.0 credits (60 contact
hours)
Components: Lecture
Attributes: Technical
HFT 110(4) Course ID:017512
Helicopter Instrument Pilot Flight Lab
Introduces student pilots to more advanced helicopter
flight maneuvers and the practical application of in-flight
aviation weather, aircraft performance, navigation, FAA
regulations, flight planning, radio procedures, and human
factors. Complies with Federal Aviation Administration flight
certification requirements to qualify students to apply for the
FAA Commercial Helicopter Pilot Practical Test Standard (PTS)
examination. Pre-requisites: HFT 101, HFT 102, HFT 103, HFT
104, and HFT 105. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical
HFT 108(3) Course ID:004430
World Civilization I
Presents a multicultural survey of world cultures and global
issues from ancient to medieval times. Lecture: 3 credits (45 contact
hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities
HIS 101(3) Course ID:0004675
World Civilization II
Presents a multicultural survey of world cultures and
contemporary global issues from 1600 to the present.
Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities
HIS 104(3) Course ID:008860
A History of Europe Through the Mid-Seventeenth Century
Surveys the development of European politics, society, and
culture from the beginnings of civilization through the Age
of Religious Conflict. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities
HIS 105(3) Course ID:000834
A History of Europe from the Mid-Seventeenth Century to the Present
Surveys the development of European politics, society, and
culture from the Age of Absolutism to the present. Lecture: 3
credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities
HIS 106(3) Course ID:0000532
Western Culture: Science and Technology I
Surveys the interactions of science and technology with
the social and cultural development of Western civilization
since the Industrial Revolution. Emphasizes the values in
scientific inquiry as compared with other kinds of inquiry
and the importance of science and technology in modifying
social organization and human expectations. Lecture: 3
credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities
HIS 107(3) Course ID:0000542
History of the United States Through 1865
Examines key political, economic, and social topics that
have significantly influenced the American experience from
the pre-colonial period through the Civil War era. Lecture: 3
credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, Course Also Offered in
Modules
HIS 109(3) Course ID:000171
History of the United States Since 1865
Examines key political, economic, and social topics that
have influenced significantly the American experience from
Reconstruction through the contemporary era. Lecture: 3
credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, Course Also Offered in
Modules
HIS 120(3) Course ID:000348
The World at War, 1939-45
Covers a global overview of the events of the Second
World War, including consideration of the conflicts military,
diplomatic, political, social, and economic dimensions.
Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities
History of British People to the Restoration
Surveys the major political, social, economic, and cultural developments in British history from the pre-Roman era through the Stuart Dynasty. Includes examination of such topics as the Norman conquest, the Plantagenet Dynasty, the hundred years' War, War of the Roses, the Tudors, Monarchs, the Protestant Reformation, the Stuart Kings, Puritan Revolution, and the Restoration. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities
Course ID: 000828

History of the British People Since the Restoration
Covers the major political, social, economic, and cultural developments in British history from the Stuart period to the present. Includes examination of such topics as the Glorious Revolution, Imperial Wars, American Revolution, Napoleonic Wars, Industrial Revolution, Imperialism, World War I, Great Depression, World War II, Cold War, Decolonization, Post-War Britain, and the European Union. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities
Course ID: 000516

History of Colonial Latin America
Surveys the social, economic, political and cultural development of Latin America from the fifteenth century to 1810 with an emphasis on pre-Columbian societies, the Iberian kingdoms in the Age of Expansion, the conquest and colonization of the indigenous peoples of the New World, the establishment of Spanish and Portuguese institutions, the relations between the Church and the State, the encomienda and the hacienda, slavery and the impact of the Bourbon Reforms on Latin America. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities
Course ID: 002219

History Modern Latin America, 1810 to Present
Covers the history of the Latin American nations focusing on their social, economic, political and cultural development. Emphasizes the history of the independence movements, nation building, the struggle for modernization, dependency and the phenomenon of revolution since 1810. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities
Course ID: 002220

History of Sub-Saharan Africa
Examines the major social, religious, cultural, economic, and political trends in Sub-Saharan African history since the 16th century. Includes the impact of the Atlantic slave trade, European imperialism, and 20th century wars on Sub-Saharan Africa. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities
Course ID: 000670

African American History to 1865
Studies the African American experience through the Civil War. Examines African heritage, slavery, and growth of African American institutions. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities
Course ID: 000680

The History of Women in America
Examines key political, economic, and social topics from the pre-colonial period through settlement and colonization that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture
Attributes: Other
Course ID: 006235

Colombian America
Examines key political, economic, and social topics that significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture
Attributes: Other
Course ID: 006236

The Early Nationalist Period
Examines key political, economic, and social topics from the Revolution through the early national period that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture
Attributes: Other
Course ID: 006237

Growth and Prosperity
Examines key political, economic, and social topics during the Antebellum period that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture
Attributes: Other
Course ID: 006238

Sectionalism and Civil War
Examines key political, economic, and social topics from sectional conflict through the Civil War that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture
Attributes: Other
Course ID: 006239

History of the United States through the Gilded Age
Examines key political, economic, and social topics from Reconstruction through the Gilded Age that have significantly influenced the American experience. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture
Attributes: Other
Course ID: 006240

History of America from 1920
Emphasizes equal rights and the civil rights movements. Includes the rejection of feminism in the 1920s, and 1970s, the changing nature of the family and work, and societal ideas about women. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical
Course ID: 005482

Medieval Europe
Surveys European history from the fourth century through the fifteenth century. Lecture: 3 credits (45 contact hours). Pre-requisite: Sophomore standing.
Components: Lecture
Attributes: AH - Arts and Humanities
Course ID: 000562

East Asia to 1800
Presents a survey of Chinese, Japanese, and Korean history from the earliest times to 1800. Emphasizes political, economic, social, and intellectual developments. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities
Course ID: 000749
HIS 1092(0.75) Course ID:006240
History of the United States from Imperialism through World War I
Examines key political, economic, and social topics from the Progressive Era through World I and the 1920s that have significantly influenced the American experience. Pre-requisite: HIS 1091. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

HIT 1093(0.75) Course ID:006241
History of the United States from the Twenties to the Onset of the Cold War
Examines key political, economic, and social topics from the Depression and New Deal through World II that have significantly influenced the American experience. Pre-requisite: HIS 1092. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

HIT 1094(0.75) Course ID:006242
History of the United States during the Cold War to the Present
Examines key political, economic, and social topics from the Cold War and Civil Rights through the Rise of Conservatism that have significantly influenced the American experience. Pre-requisite: HIS 1093. Lecture: 0.75 credits (11.25 contact hours).
Components: Lecture

HIT 10(3) Course ID:004250
Introduction to Health Information Technology
Includes history, organization, financing and delivery of health care services within a variety of settings. Explores the roles of a health information professional, an introduction to legal aspects of insurance billing and the role of the State Insurance Commission. Covers information on the generic components of the content, structure, collection, maintenance, and dissemination of health care data and how these components relate to record systems and documentation standards. Pre-requisite: Admission to the Health Information Technology Program or Medical Record Coding Specialist Certificate or Release of Information Data Specialist Certificate or by special permission of the Program Coordinator and Computer Literacy. Pre-requisite Or Co-requisite: [(BIO 135 or BIO 137) and (CLA 131 or AHS 115 or MIT 103)], Minimum grade of C. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HIT 105(4) Course ID:007081
Pathophysiology / Pharmacology for Health Information Professionals
Provides an overview of pathophysiology content, review of disease terminology, and clinical presentation with the application of pharmacology to treat human diseases as it relates to the field of health information technology. Pre-requisite Or Co-requisite: [HIT 100 and (BIO 135 or BIO 137) and (CLA 131 or AHS 115 or MIT 103)], Minimum grade of C. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

HIT 109(4) Course ID:007083
Clinical Classification Systems I
Applies current government-mandated diagnosis and procedure coding systems in a health care setting. Pre-requisite: HIT 105, Minimum grade C. Pre-requisite or Co-requisite: BIO 139 (If BIO 137 taken), Minimum grade C. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HIT 110(2) Course ID:004265
Legal & Ethical Issues in Health Information
Includes legal principles and issues that govern health information management and patient medical records. Covers ethical issues as they relate to the security and dissemination of patient health information and corporate compliance programs. Pre-requisite: Admission to the

HIT 112(3) Course ID:004266
Clinical Classification Systems II
Includes Current Procedural Terminology (CPT) coding system and the study of hospital based reimbursement issues. Uses a microcomputer and software to apply medical coding procedures. Pre-requisite: Admission to the Health Information Technology Program or Medical Record Coding Specialist Certificate or by special permission of the Program Coordinator and [HIT 109 and HIT 110 and HIT 112], Minimum grade of C. Pre-requisite Or Co-requisite: [CIT 130 or OAS 240], Minimum grade of C. Lecture: 2.5 credits (37.5 contact hours), Laboratory: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HIT 200(3) Course ID:004268
Information Systems in Health Care
Covers the concepts of computer technology related to the healthcare industry and the tools and techniques for collecting, storing, retrieving, and analyzing health care data. Pre-requisite: Admission to the Health Information Technology Program or Medical Record Coding Specialist Certificate or by special permission of the Program Coordinator and HIT 100 and HIT 110 and HIT 112, Minimum grade of C. Pre-requisite Or Co-requisite: BIO 139 (If BIO 137 was taken), Minimum grade of C. Lecture 2.5 credits (37.5 contact hours), Lab: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HIT 202(3) Course ID:004269
Clinical Classification Systems III
Introduces the advanced application of clinical classification systems in the reimbursement for health care services and specialty systems appropriate to all health care settings including managed care. Includes a history of major U.S. insurance developments. Pre-requisite: Admission to the Health Information Technology Program or Medical Record Coding Certificate or by special permission of the Program Coordinator and Course HIT 100 and HIT 110 and HIT 112, Minimum grade of C. Pre-requisite Or Co-requisite: BIO 139 (If BIO 137 was taken), Minimum grade of C. Lecture 2.0 credits (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HIT 205(3) Course ID:007084
Quality Mgmt & PI - Health Info
Examines principles of performance improvement as it relates to health information technology. Integrates data collection, analyses, evidence-based care, implementation of performance improvement processes, and examines regulatory, accrediting organization, and payor requirements including payment. Pre-requisite or Co-requisite: HIT 109 and HIT 110. Minimum grade of C. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

HIT 207(3) Course ID:007085
Clinical Classification Systems IV
Introduces the advanced application of clinical classification systems in the reimbursement for health care services and specialty systems such as RBRVS, OASIS, RUGs, Cancer Registry, etc. Reviews fraud, abuse, and regulatory agency requirements relating to coding and billing. Pre-requisite: HIT109 and HIT 202, Minimum grade of C. Lecture: 2.0 credits (30 contact hours), Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HIT 211(4) Course ID:007086
Health Care Management and Statistics
Introduces the principles of organization, supervision, leadership, motivation, and team building within the health information environment. Applies concepts of descriptive statistics, data validity, reliability, and the appropriate use and interpretation of applied health care statistics including the use, collection, arrangement, analysis, presentation and verification of health care data. Pre-requisite: HIT 109 and HIT 110. Minimum grade of C. Pre-requisite or Co-requisite: HIT 112. Minimum grade of C. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

HIT 215(4) Course ID:007087
Clinical Practicum I
Introduces the student to the clinical practice of health information review, documentation and supervision within a health information management (HIM) department. Observes and assists personnel in assigned areas of job responsibility within the HIM Department. Provides student with onsite project. Exposes student to HIM roles in other departments (e.g., quality, CDM, Cancer Registry, compliance, risk management). Pre-requisite: (HIT 200 and HIT 202 and HIT 204. Minimum grade of "C") or Consent of Program Coordinator. Practicum: 4.0 credits (180 contact hours).
Components: Practicum
Attributes: Course Also Offered in Modules, Technical

HIT 299(0.5 - 4) Course ID:007090
Selected Topics in Health Information Technology: (Topic)
Addresses various health information technology topics, issues, and trends. Includes topics that may vary from semester to semester at the discretion of the instructors. Course may be repeated with different topics to a maximum of four credit hours. Lecture: 0.5 - 4.0 credits (7.5 - 60.0 contact hours). Lab: 0.5 - 4.0 credit hours (15 - 20 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

HIT 2151(2) Course ID:007088
Clinical Practicum I
Continues the clinical practice of health information review, documentation and supervision within a health information management (HIM) department. Provides observation and assists personnel in assigned areas of job responsibility within the HIM Department. Pre-requisite: (HIT 200 and HIT 202 and HIT 204. Minimum grade of "C") or Consent of Program Coordinator. Practicum: 2.0 credits (90 contact hours).
Components: Practicum

HIT 2152(2) Course ID:007089
Clinical Practicum II
Introduces the student to the clinical practice of health information review, documentation and supervision within a health information management (HIM) department. Provides observation and assists personnel in all assigned areas of job responsibility within the HIM Department. Pre-requisite: (HIT 200 and HIT 202 and HIT 204. Minimum grade of "C") or Consent of Program Coordinator. Practicum: 2.0 credits (90 contact hours).
Components: Practicum

HMS Human Services

HMS 101(3) Course ID:000901
Human Services Survey
Examines community human service agencies regarding their organization, service delivery system, staffing patterns, and funding sources. Explores the origin and development of the social welfare system as well as social
welfare policy. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HMS 102(3) Course ID:000777
Values of Human Services in a Contemporary Society
Examines the values and ethics of human service professions. Encourages a personal philosophy of client intervention, including the development of a professional value base, achieved through the examination of major social problems and issues. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HMS 103(3) Course ID:000202
Theories and Techniques in Human Services
Introduces philosophies, theories for intervention, and the problem-solving process. Emphasizes the development of a skill base used in counseling techniques and client intervention. Enhances interpersonal relationship skills through knowledge of communication techniques. Provides activities in which the student will apply this knowledge and these skills. Pre-requisite: HMS102 with a grade of "C" or better or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HMS 104(3) Course ID:000867
Group Dynamics for Human Services
Covers group techniques in clinical or agency settings based on various theoretical models with emphasis on the leadership role, phases of group development, and interaction within the group. Pre-requisite: HMS103 with a grade of "C" or better or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HMS 200(3) Course ID:000784
Dynamics of Human Behavior
Includes an historic view of theories of personality development, maladaptive behavior, knowledge of treatment, techniques of adjustment and social implications. Pre-requisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HMS 210(3) Course ID:000617
Drugs, Society, & Human Behavior
Covers the nature and progression of chemical abuse and dependency, and effects on the individual, family, and society. Includes strategies for prevention, intervention, and treatment. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HMS 211(3) Course ID:005583
Introduction to Addictions
Provides an overview of approaches to understanding addictions with emphasis on the bio-psycho-social model. Analyzes the etiology, progression, and processes involved in change. Pre-requisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Course Equivalents: SWK 255
Attributes: Technical

HMS 212(3) Course ID:005585
Crisis Intervention
Focuses on crisis intervention theory, suicide prevention, and risk assessment techniques. Covers risk assessment protocols, crisis triage, de-escalation and referral. Introduces clinical, ethical and legal aspects. Pre-requisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Course Equivalents: SWK 260
Attributes: Technical

HMS 220(3) Course ID:005588
Cultural Diversity in Human Services
Examines current and historical cultural diversity in human services provision. Focuses on cultural self-awareness and cultural competence as they pertain to human services professionals. Explores dominant and minority cultural norms, attitudes, and belief systems. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Course Equivalents: SWK 220
Attributes: Technical

HMS 225(3) Course ID:000818
Teaching Persons with Mental Retardation
Introduces mental retardation with emphasis on understanding and teaching the mentally retarded. Pre-requisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HMS 240(3) Course ID:017205
Service Coordination for Human Services Professionals
Provides students with experience utilizing techniques and skills used in human services, as well as the theories behind these techniques and skills. Explores skills related to service delivery, behavior management, and supportive services with different populations, including adults, children, families, individuals with mental impairments, mental illnesses, and/or developmental disabilities. Demonstrates skills and techniques including therapeutic communication, interviewing clients, treatment planning, goal setting, documentation & record keeping, crisis intervention, and addressing ethical dilemmas. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HMS 245(3) Course ID:016148
Psychiatric Mental Health Technician
Prepares students for employment as psychiatric aides or psychiatric technicians. Includes a review of nursing assistant skills, psychopathology, DSM diagnostics, strengths perspective, bio-psycho-social assessments, and psychotropic medications. Explores the responsibilities of mental health technicians who work under the supervision of a psychiatrist, registered nurse, or social worker; as well as participate in the development and implementation of therapeutic treatment plans for persons with mental disorders; particularly those receiving treatment in an inpatient setting. Pre-requisite: NAA 100 or MNA100, PSY110 and HMS103 with a grade of "C" or better or consent of instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HMS 248(3) Course ID:017206
Foundational Skills in Para-Professional Practice
Applies principles of skills previously learned in Human Services courses which are utilized to develop proficiency related to interviewing, data collection, assessment, goal development, contracting, and documentation. Prepares students for work at the Bachelor of Social Work level. Pre-requisite: HMS 104. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HOS 100(3) Course ID:002385
Introduction to Hospitality Management
Introduces an overview of the hospitality industry. Examines the historical perspective and tracks current developments in community-referenced instruction, vocational instruction in community settings, school-to-work transition planning, integrated recreation/leisure opportunities, and personal management/Independent living skills training and supports. Emphasizes development of disabilities and mental retardation. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HOS 299(1 - 3) Course ID:000522
Special Topics in Human Services: (Topic)
Provides an in-depth knowledge of a Human Services topic and allows students' choices with coordinator/instructor's approval on an issue of instruction. Lecture: 1-3 credits (15-45 contact hours). Clinical: 1-3 credits (60-180 contact hours).

Components: Lecture
Attributes: Technical

HNR Honors

HNR 101(3) Course ID:004909
Intro to Contemporary Thought
Introduces the development and impact of contemporary social, scientific, and philosophical thought from an interdisciplinary perspective. Gives attention to various historical and modern figures, relating their ideas and theories to our contemporary understanding of a variety of issues. Pre-requisite: Admission to the Honors program. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: HH - Humans and Humanities

HNR 102(3) Course ID:000766
The Medieval and Renaissance World
From Greek and Roman antiquity to the early Christian centuries: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Pre-requisite: Membership in the Honors Program. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: AA - Arts and Humanities

HNR 103(3) Course ID:000892
The Ancient World
From Greek and Roman antiquity to the early Christian centuries: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Written assignments required. Pre-requisite: Membership in the Honors Program. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: AA - Arts and Humanities

HNR 201(3) Course ID:000889
The Early and Modern World
From the development of the modern scientific method through mid-19th century industrialism: an interdisciplinary course in intellectual history. Readings vary at the discretion of the faculty. Pre-requisite: Membership in the Honors Program. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: AA - Arts and Humanities

HOS Hospitality Management
events. Examines the structure of the industry including chains, franchising, ownership, and management. Explores the inner workings of various components of lodging, foodservice and entertainment organizations. Demonstrates real-world application through industry examples and case studies which are used extensively. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HOS 180(3) Course ID: 002366
Security for the Hospitality Industry
Analyzes modern security concerns for the protections of assets unique to the hospitality industry, including loss prevention techniques and the application of law for lodging, retailing, clubs, restaurants, lounges and hospitality properties. Examines topics such as industrial safety, disaster control techniques, emergency action planning, and crisis communications. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HOS 200(3) Course ID: 002367
Cultural Heritage Tourism
Examines the range of cultural and heritage assets that can become viable tourism attractions and looks at ways of linking quality cultural heritage tourism to community development from effective planning and marketing. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HOS 210(3) Course ID: 002368
Front Office Operations
Identifies principles required to organize and operate hotel and motel front office guest needs, to have effective salesmanship, and to create procedures for different types of front office operations. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

Tourism Marketing
Examines how and why tourists make destination choices, and learns how to develop a strategic marketing system that emphasizes your destination’s distinctive appeal. Answers questions of how to assess visitor markets, gather and analyze data, reduce risk and gain competitive advantages, and turn analysis into sound decisions. Applies knowledge from case studies, and practical tips for stretching marketing dollars through better monitoring, cost controls, and evaluation. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HPH Health Physics

HPH 120(3) Course ID: 000346
Radiation Biology
Examines the cellular response, pathology, and short- and long-term effects of ionizing radiation on living tissue. Pre-requisite: (BIO 112 and BIO 113) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

HPT Historic Preservation Technology

HPT 100(3) Course ID: 005299
Introduction to Historic Preservation
Introduces historic preservation theory, history, and standards of practice through national and local case studies; related national and local agencies, organizations and legislation; and research of early American architecture. Co-requisite: HPT 101. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

HPT 200(2) Course ID: 006564
Masonry Repointing and Repair
Introduces masonry materials and repair techniques for historic structures with an emphasis on brick and stone masonry and hands-on repair/repointing. Pre-requisite: ISX 100 or ISX 101 or Consent of Instructor. Lecture/Lab: 2.0 credits (52.5 contact hours).

Components: Lecture

HRS Honors

HRS 101(3) Course ID: 000895
Instructor Consent Required
An Integrated Survey of Western Civilization I
An honors course designed to provide an opportunity for the interested student to study the development of Western Civilization as reflected in the literary, artistic, musical, philosophical, political, and economic developments and movements of the major western cultures from ancient times through the Roman Empire. Lecture: 3.0 hours. Pre-requisite: Consent of instructor.

Components: Lecture
Attributes: AH - Arts and Humanities

HRS 200(3) Course ID: 000765
Independent/Guided-Study Project
Students wishing to engage in an approved, valid research/ study project may receive academic credit through this course. The project may be scheduled concurrently with the academic semester, or in the case of necessary travel, between semesters or during the summer term. Lecture: Variable; Laboratory: Variable. Pre-requisite: Superior academic ability as demonstrated by tests, classwork, and interviews.

Components: Laboratory, Lecture
Attributes: Other

HRT Horticulture

HRT 150(3) Course ID: 000154
Horticulture Business Management
This course introduces various career opportunities in a garden center and focuses on salesmanship and business practices utilized in this environment. Identification of characteristics, usage and care of woody ornamentals, annual and perennial plants, as well as use and care information needed by the consumer are included. Assisting customers in choosing chemical pesticides and plant related products is discussed. Lecture: 3 credits (45 contact hours).

Components: Lecture

HSE Health Sciences Education

HSE 101(1) Course ID: 000221
Introduction to Health Sciences
Provides students with information and career options about allied health and sciences programs including presentations by allied health practitioners. Students will research selected health profession/careers and allied health and sciences educational programs. Lecture: 1.0 credits (15 contact hours).

Components: Lecture
Attributes: Technical

HSM Homeland Security

HSM 100(3) Course ID: 005518
Introduction to Homeland Security
Introduces the history and organizational development of the US Department of Homeland Security. Examines the roles and functions of the components of Homeland Security and their relationships to state and local agencies. Investigates current trends and career opportunities in homeland security. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

HSM 110(3) Course ID: 005519
Introduction to Emergency Management
Introduces the field of emergency management and the incident command system, including the terminology and definitions used in emergency and disaster management. Examines four phases of emergency management and disaster planning: mitigation, response, recovery, and preparedness. Examines legal requirements, responsibilities, and laws pertaining to emergency management. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Attributes: Course Also Offered in Modules, Technical

HSM 225(2) Course ID: 005780
Ethical and Legal Issues in Homeland Security
Examines the ethical and legal issues in the administration of Homeland Security and its efforts to combat terrorism. Examines the legal powers and ethical standards entrusted in the personnel empowered with the implementation of the issues of Homeland Security. Provides an opportunity to demonstrate knowledge of the ethical and legal complexities and dilemmas involved in the establishment and enactment of policies pertaining to Homeland Security. Lecture: 2.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HST Health Care Foundations

HST 101(3) Course ID: 007362
Health Care Basic Skills I
Introduces student to basic health care skills such as measuring and recording vital signs, assisting licensed personnel, observing and reporting patient conditions, collecting specimens and caring for the hygiene, comfort, and safety of patients in various settings. Prepares the student for entry-level health care positions by incorporating certification for American Heart Association Cardiopulmonary Resuscitation (CPR). Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (45 contact hours).

Components: Laboratory, Lecture

HST 102(3) Course ID: 007363
Health Care Delivery & Management
Introduces delivery and management of health care including professionalism, health care roles, health care delivery models, and types of health care coverage. Explores legal/ethical issues including HIPAA and confidentiality, electronic medical records and patients’ rights as well as analysis of current trends in health care today. (Appropriate for any student considering entering the Allied Health or Nursing field.) Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

HST 103(2) Course ID: 007364
Health Care Communication
Introduces communication and its various forms as it exists in the health care field. Focuses on verbal, nonverbal, written and oral communication between members of the health team, patient, and caregivers through an interdisciplinary approach. Examines each role with discussion from the perspective of the involved parties. Emphasizes diversity, sociocultural influences, and teamwork. Includes discussion of the media’s role in health care, as well as how health promotion campaigns may be implemented and managed. Appropriate for anyone interested in a career in allied health or nursing. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Attributes: Technical

HST 104(3.5) Course ID: 015849
Health Care Basic Skills I with Clinical
Introduces student to basic healthcare skills such as measuring and recording vital signs, assisting licensed personnel, observing and reporting patient conditions, collecting specimens and caring for the hygiene, comfort, and safety of patients in various settings. Prepares the student for entry level healthcare positions by incorporating certification for American Heart Association Cardiopulmonary Resuscitation (CPR). Prepares student for the State Registered Nurse Aide examination. Note: Faculty and clinical sites must comply with applicable Federal and Kentucky laws and regulations including but not limited to 42 USC 1396 and 507 KAR 1450. Lecture: 2.0 credits (30 contact hours). Lab: 1.0 credit (45 contact hours). Clinical: 0.5 credits (23 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

HST 121(2) Course ID: 007365
Pharmacology
Introduces students to the basics of pharmacology/ pharmacokinetics, includes terms used to describe various
effects and reactions from drug usage. Will also introduce metric system and basic dosage calculations common to most fields of study within allied health and nursing. Lecture: 2.0 credits (30 contact hours).

Components: Lecture

Attributes: Technical

HST 122(3) Course ID:007366
Clinical Pathophysiology
Explores an introduction to the nature of disease and its effect(s) on body systems. Provides a study of pathology and general health management of diseases and injuries across the lifespan. Includes topics of etiology, symptoms, physical and psychological reactions to diseases and injuries. Pre-requisite: BIO 137 or BIO 135. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Same As Offering: HST 122
Attributes: Technical

HST 122(3) Course ID:007366
Clinical Pathophysiology
Explores an introduction to the nature of disease and its effect(s) on body systems. Provides a study of pathology and general health management of diseases and injuries across the lifespan. Includes topics of etiology, symptoms, physical and psychological reactions to diseases and injuries. Pre-requisite: BIO 137 or BIO 135. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Same As Offering: HST 122
Attributes: Technical

HUM Humanities

HUM 120(3) Course ID:000350
Introduction to the Humanities
Introduces students to at least five disciplines in the humanities, such as art, literature, dance, drama, cinema, philosophy, music, architecture, religion, and mythology. Explores distinctions and relationships between the disciplines through study of their basic methods, themes, and forms. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: AH - Arts and Humanities

HUM 121(3) Course ID:004906
Peace Studies
This interdisciplinary course is intended as a general introduction to the nature, scope, and methodology of Peace Studies, with a view toward the future. It will explore the history of non-violent movements to effect social change, the role of women in the attainment of peace and protection of life, the role between social justice and the environment, and the resolution of conflict between individuals, groups, societies, and nations. The course includes the study of activists such as Dr. Martin Luther King, Jr., Gandhi, and Dorothy Day. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Culture Studies, AH - Arts and Humanities

HUM 135(3) Course ID:000582
Introduction to Native American Literature
Introduces the study of the oral and written literature of Native American peoples, emphasizing the cultural and historical context in which it was composed. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Culture Studies, AH - Arts and Humanities, SB - Social Behavior Science

HUM 140(3) Course ID:006814
Introduction to Latino Literature
Analyzes literary texts and other artistic expressions to reveal aspects of Latino cultures such as identity, immigration, indigence; relates literary developments and movements to the cultural, political, and religious experiences of Latinos in the U.S.; examines connections between minority writing and mainstream literary works. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Attributes: Cultural Studies, AH - Arts and Humanities

HUM 150(3) Course ID:0005430
Introduction to African Literature
Presents a cross-cultural and historical approach to the oral and written works by major Black writers of Africa. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Cultural Studies, AH - Arts and Humanities

HUM 160(3) Course ID:007110
Introduction to Holocaust Literature and Film
Analyzes literary texts, memoirs, film, and other artistic expressions of the Holocaust to focus on the cultural and political events that caused the Holocaust; examines how subsequent people represent what happened; explores the consequences of the Holocaust in terms of ethical and human rights issues; examines how issues of racism and religious intolerance occurred prior to and since the Holocaust; addresses the Holocaust in a comparative perspective to prior and subsequent acts of genocide in other countries. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Attributes: Cultural Studies, AH - Arts and Humanities

HUM 202(3) Course ID:000841
Survey of Appalachian Studies I
Presents an inter-disciplinary introduction to Appalachian history, economy, geography, politics, and culture, primarily through exploration of texts about the region, including fiction, non-fiction, and poetry. Emphasizes geography, Appalachian identity, works, values, and communication. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Cultural Studies, AH - Arts and Humanities, SB - Social Behavior Science

HUM 203(3) Course ID:000518
Survey of Appalachian Studies II
Presents an inter-disciplinary introduction to Appalachian history, economy, geography, politics, and culture, primarily through exploration of texts about the region, including fiction, non-fiction, and poetry. Emphasizes migrations, economy, belief, expression, politics and government, and environment. May also include exploration of regional music, traditional arts, drama, photography, film, and, where applicable, community-based explorations of the Appalachian experience. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Cultural Studies, AH - Arts and Humanities, SB - Social Behavior Science

HUM 204(3) Course ID:000812
Appalachian Seminar
Examines in detail one or more issues pertinent to the Appalachian region. Topics may include but are not limited to: cultural diversity, religious expression, politics and government, trends in Appalachian literature, or trends in regional sociological scholarship. Topics may vary from semester to semester. This course may be repeated once for credit with a different topic. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Cultural Studies, AH - Arts and Humanities, SB - Social Behavior Science

HUM 207(3) Course ID:007049
American Seminar: Topic
Examines issues pertinent to American culture and identity through an interdisciplinary and multi-cultural approach. Includes topics such as cultural diversity, religious expression, politics and government, trends in art, literature, and/or music, political life, media representation, and historical sections of the course. Sophomore standing or consent of instructor. Pre-requisite: Sophomore Status. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Other

HUM 220(3) Course ID:005532
Historical Perspectives on Peace and War
Provides an introduction to the history of violence and peace movements. Examines the anthropological, political, cultural and technological forces contributing to the frequent occurrence of war throughout history. Explores the history of movements and organizations, both religious and secular, intended to minimize warfare and oppression. Examines literature and visual arts to enhance and elaborate on the themes presented in the anthropological and historical sections of the course. Sophomore standing or consent of instructor. Pre-requisite: Sophomore Status. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: AH - Arts and Humanities

HUM 230(3) Course ID:000374
Contemporary Japanese Literature and Culture in Translation
Presents traditional and contemporary aspects of Japanese culture as reflected in both cultural studies and literature. Examines daily life as revealed in the themes and motifs of Japanese fiction, poetry, drama, and film. Pre-requisite: ENG 102 or ENG 105 or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Cultural Studies, AH - Arts and Humanities

HUM 250(3) Course ID:005923
Appalachian Literature Survey
Surveys significant texts about Appalachia from native populations and early European settlement to the end of the twentieth century. Emphasizes themes by writers living and working in the region, though perspectives from outside of the region may be examined. Focuses on historical, social, political, and cultural contexts, as well as analysis of literary forms and techniques. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Cultural Studies, AH - Arts and Humanities

HUM 251(3) Course ID:005924
Contemporary Appalachian Literature
Examines significant texts by Appalachian writers of the last twenty-five years. Emphasizes the development of contemporary Appalachian literary voice and identity. Examines connections or challenges to "traditional" Appalachian heritage and cultural identity. Pre-requisite: ENG 101. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Cultural Studies, AH - Arts and Humanities

HUM 281(3) Course ID:006540
Introduction to Film
Introduces the study of movies as a narrative art and a cultural document. Requires viewing of films outside of class. Lecture: 3 credits (45 contact hours).

Components: Lecture

Course Equivalents: ENG 281
Attributes: AH - Arts and Humanities

HUM 282(3) Course ID:006541
International Film Studies
Enhances student awareness of how cinema has been used as a multicultural tool for observing/analyzing various aspects of a broad range of societies. Includes critical analysis and interpretation of films from various cultures. Explores the films' countries of origin and the cinematic impacts upon the society and the world. Lecture: 3 credits (45 contact hours).

Components: Lecture

Course Equivalents: ENG 282
Attributes: Cultural Studies, AH - Arts and Humanities

IEC Interdisciplinary Early Childhood

IEC 101(3) Course ID:004130
Orientation to Early Childhood Education
Introduces information related to designing appropriate
environments and curricula for infants, toddlers, and preschoolers. Examines the historical and current influences on early childhood education. Includes twenty (20) hours of required field experience. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 102(3) Course ID:004087

Foundations of Early Childhood Education
Focuses on creating an environment and curricula that support cognitive, physical, creative, language, social, and emotional development of infants, toddlers, and preschoolers. Presents knowledge of appropriate child assessment, ethical decision-making in the early childhood profession and accommodations for children with disabilities. Includes ten (10) hours of required field experiences. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 120(3) Course ID:004131

Health, Safety and Nutrition
Examines the components and skills necessary for maintaining a healthy and safe environment for young children. Lecture: 3 Credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 130(3) Course ID:004132

Early Childhood Development
Addresses the physical, language, cognitive, social and emotional development of children beginning with conception. Includes methods of observation that are practiced during field experiences. This course requires ten (10) hours of field experience. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 170(3) Course ID:005081

Observation and Assessment
Presents the process of observation, documentation, and assessment. Includes assessment skills, identification of appropriate methods and instruments, and linking results to planning, guidance, and instruction. Emphasizes recommended practices, ethical and legal responsibilities for educators, and the role of the family in the process. Includes ten (10) hours of required field experience. Pre-requisite: IEC 101 or IEC 102 or IEC130 or permission of IECE program coordinator. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 180(3) Course ID:004088

Approaches to Early Childhood Education
Curriculum
Introduces theoretical perspectives for curriculum in early childhood programs. Teaches the design of curricula and examines the societal factors that impact programming for children. Includes ten (10) hours of required field experience. Pre-requisite: IEC 101 or IEC 102 or IEC130 or permission of IECE program coordinator. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 200(3) Course ID:004133

Child Guidance
Examines appropriate methods for guiding children and promoting the development of prosocial behaviors. This course requires ten (10) hours of field experience. Pre-requisite: IEC 101 or IEC 130 or permission of the IEC program coordinator. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 210(3) Course ID:005580

Families and Communities in Early Childhood Education
Examines community programs that focus on forming partnerships with families to support child development and family well-being. Builds an awareness of family in context of a diverse society to create respect, build reciprocal relationships, and empower families. Required: 10 hours of field experience. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 216(3) Course ID:004135

Literacy and Language in IEC
Examines appropriate methods for guiding children and practicing literacy and language development. This course requires five (5) hours of required field experience. Pre-requisite: IEC 180 or permission of the IEC program coordinator. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 221(3) Course ID:004136

Creative Expressions in IEC
Examines the role of creativity as it relates to the development of young children. Studies a variety of art music, drama, and movement experiences that encourage creative expression in young children. Includes the implementation of appropriate creative activities in a child-centered environment. This course requires five (5) hours of field experience. Pre-requisite: IEC 180 or permission of the IECE program coordinator. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 223(3) Course ID:004569

Business Administration of ECE Programs
Introduces establishing, operating and/or owning an early childhood program. Includes legal forms for early childhood programs, finance, accounting, insurance, governmental regulations and assistance, economics, marketing and management principles. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 235(3) Course ID:004137

Introduction to Inclusive Education
Examines the components and skills necessary for maintaining a healthy and safe environment for young children. Lecture: 3 Credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 240(3) Course ID:004138

Administration of Early Childhood Education
Focuses on the administrative responsibilities of creating and implementing education programs for children and their families with an emphasis on the administrative, organizational, and legal responsibilities in operating early childhood programs. Includes ten (10) hours of required field experience. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 246(3) Course ID:004139

Sciences and Math in IEC
Examines the concepts and principles of science, social studies, mathematics, and health in learning experiences for young children. Includes five (5) hours of required field. Pre-requisite: IEC180 or permission of IEC program coordinator. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 250(3) Course ID:004089

School Age Child Care
Examines the components and skills necessary for maintaining a healthy and safe environment for young children. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 260(3) Course ID:004140

Infant and Toddler Education and Programming
Examines the developmental and educational needs of children from birth to age three. Provides an opportunity for students to plan, prepare, and implement the care and educational environment for children birth to age three by integrating an understanding of the physical, social, emotional, and cognitive development with developmentally appropriate practices for each stage. Includes ten (10) hours of required field experience, which may be waived by the IECE program coordinator for students concurrently enrolled in IEC 190 or IEC 291. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

IEC 291(3) Course ID:004141

Instructor Consent Required
IEC Practicum/Cooperative Education
Requires participation in supervised teaching experiences in early childhood settings where practical skills are applied. Includes observing, planning, implementing and assessing learning experiences based on developmentally appropriate practices. Required: One Hundred and eighty (180) field hours of experience. Pre-requisite: Program Coordinator's Approval. Practicum: 3.0 credits (180 contact hours/ratio 60:1).

Components: Practicum
Attributes: Technical

IIES International Exchange Student
IIES 235(1 - 3) Course ID:005198

International Student Experience
First-hand exposure to cultures outside the United States. Includes travel and may include study, visits to corporate, government offices, cultural activities and/or work assignments. Pre-requisite: IES 233. Practicum: 1-3 credits (60-180 contact hours).

Components: Practicum
Attributes: Technical

IET Integrated Engineering Technology
IET 102(2) Course ID:007134

Preventive Maintenance
Introduces how routine work is done to keep equipment in good working order and to optimize its efficiency and accuracy. Addresses routine regular cleaning, lubricating, testing, checking for wear and tear and eventually replacing components to avoid breakdown. Introduces students to the various types and styles of predictive and preventive maintenance components, principles, and practices used in industrial applications. Lecture/Lab: 2.0 credits (40.5 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 104(2) Course ID:007136

Blueprint Reading/Schematics
Introduces the fundamental information in drafting necessary to retrieve read, manipulate and understand a mechanical part print. Instructs students to recognize, identify, describe, and relate the components used in schematics, along with their symbols and connectors, to describe electrical, electronics, pneumatics, hydraulics, and piping circuits, as well as welding and joining symbols interpretation. Lecture/Lab: 2.0 credits (37.5 contact hours).

Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IET 107(3) Course ID:007140

Basic Electricity/Electronics
Introduces the various elements of basic electricity including the identification of electrical symbols as well
as interpretation of schematics, cross referencing prints, tracing circuits, interpreting sequential function charts, line drawings and time charts. Introduces the student to electrical measurement instruments, including digital and analog multimeters, clamp-on ammeters, megohmeters, and the oscilloscope. Concentrates on control logic components and circuit function. Introduces the student to solid state devices and applications. Lecture/Lab: 3.0 credits (67.5 contact hours).

Components: Lecturer
Attributes: Course Also Offered in Modules, Technical

IET 108(5) Course ID:007145
Mechanical Drive Systems
Introduces safety, maintenance techniques and procedures used to maintain industrial equipment, including industrial couplings, chains, sprockets, belts, bearings, shafts, brakes, clutches, gears and cams. Addresses the principles of power transmission, calculations of speed and force and how they affect a power transmission system. Lecture/Lab: 5.0 credits (112.5 contact hours).

Components: Lecturer
Attributes: Course Also Offered in Modules, Technical

IET 109(3) Course ID:007152
Safety
Introduces OSHA and the OSHA regulations that apply to the auto manufacturing industry. Introduces safety rules and issues in the use of overhead cranes, hoists, rigging equipment, attachment components, calculating sliging angle stresses, and safe lifting and turning loads. Provides the knowledge and skills necessary to help sustain life and minimize the consequences of injury or sudden illness to meet the various training needs of those in workplace, school or community settings. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecturer
Attributes: Course Also Offered in Modules, Technical

IET 130(5) Course ID:016096
Lean Manufacturing
Instructs the students in the basic concepts of a safety culture and hazard prediction training. Introduces the fundamental SS process, the Toyota Production System for Maintenance, the Toyota Problem Solving method, the Toyota Drive and Dedication model, and the Toyota Maintenance Reliability Process and Reliability Centered Maintenance Analysis. Lecture: 5.0 credits (75 contact hours).

Components: Lecturer
Attributes: Course Also Offered in Modules, Technical

IET 200(1) Course ID:017627
General Tools
Introduces safe and effective use of hand and power tools. Emphasizes the application and maintenance of the most common tools used by multi-skilled industrial maintenance technicians. Integrated Lecture/Lab: 1 credit (16.5 contact hours).

Components: Integrated Laboratory, Integrated Lecture
Attributes: Technical

IET 201(6) Course ID:007180
Electrohydraulics/Pneumatics
Explains the fundamental concepts of fluid power and electro-fluid power systems. Covers the principles of fluid power, calculations of physical properties of fluids and their ability to do work. Introduces the various fluid power components, symbols, circuits. Introduces troubleshooting of fluid power components and systems with an emphasis on safety. Addresses fluids, filters, reservoirs, piping, pumps, actuators, accumulators, control valves, and combination circuits. Lecture/Lab: 6.0 credits (120 contact hours).

Components: Lecturer
Attributes: Course Also Offered in Modules, Technical

IET 203(5) Course ID:007172
Programmable Logic Controllers
Introduces Programmable Logic Controllers (PLC) and elements needed for an automated industrial control system. Introduces memory and project organization within a PLC and provides instruction in basic numbering systems, computer and PLC terminology. Introduces PLC control functions, program structures, language standards, wiring and troubleshooting methods, as well as, real world communications. Requires the student to program a PLC which may include a combination of ladder logic, structured text, sequential function chart and/or function block languages. Includes various protocols of industrial communications used between PLC controlled machines, PLC to PLC, PLC to computer, and computer to computer. Lecture/Lab: 5.0 credits (109.5 contact hours).

Components: Lecturer
Attributes: Course Also Offered in Modules, Technical

IET 205(4) Course ID:007167
Robot Maintenance
Introduces robotics in regard to industrial robotic safety standards, applications, types of classes for industrial robots, basic system components, robotic motion concepts, key programming techniques, definitions and the common terms associated with computer integrated manufacturing (CIM) as it relates to robotic cells. Instructs students on the mastering concepts of preventive maintenance techniques required for a robot and their backup systems in addition to recovery procedures needed to interpret robot error codes and perform a safe recovery start up procedure on robotics equipment, as well as integrating robotic applications in a PLC-controlled, automated system. Lecture/Lab: 4.0 credits (82.5 contact hours).

Components: Lecturer
Attributes: Course Also Offered in Modules, Technical

IET 206(5) Course ID:007161
Controls and Instrumentation
Covers the diversity of control devices including: theory of operation, applications in automation control and troubleshooting and repair. Introduces identification, installation, replacement, and troubleshooting of automation controller circuit boards and modules. Includes the installation, maintenance and troubleshooting of common input devices. Provides for discussion of methods of motor controls including on-off, proportional, integral, and derivative including PID loop tuning and quality. Covers automation output devices including AC, DC, and servo motors, variable speed drives, relays, motor starters and sizing of components for various applications. Lecture/Lab: 5.0 credits (105 contact hours).

Components: Lecturer
Attributes: Course Also Offered in Modules, Technical

IET 207(1.0) Course ID:007135
Basic Preventive Maintenance
Introduces how routine work is done to keep equipment in good working order and to optimize its efficiency and accuracy. Addresses regular routine cleaning, lubricating, testing, checking for wear and tear and eventually replacing components to avoid breakdown. Lecture/Lab: 0.7 credits (15 contact hours).

Components: Lecture

IET 208(1.3) Course ID:007136
Advanced Technologies
Introduces various types and styles of predictive and preventive maintenance components, principles, and practices used in industrial applications. Lecture/Lab: 1.3 credits (25.5 contact hours).

Components: Lecture

IET 1012(3) Course ID:007138
Drifting Fundamentals
Introduces the fundamental information in drafting necessary to retrieve read, manipulate and understand a mechanical part print. Requires student to be able to identify different types of prints as well as being able to analyze them. Lecture/Lab: 0.9 credits (16.5 contact hours).

Components: Lecture

IET 1042(1.1) Course ID:007139
Orthographic Interpretation
Instructs the learner to recognize, identify, describe, and relate the components used in schematics, along with their symbols and connectors, to describe electrical, electronics, pneumatics, hydraulics, and piping circuits, as well as welding and joining symbols interpretation. Lecture/Lab: 1.1 credits (21 contact hours).

Components: Lecture

IET 1071(1) Course ID:007141
Intro to Basic Electricity
Introduces the various elements of basic electricity including the identification of electrical symbols as well as interpretation of schematics, cross referencing prints, tracing circuits, interpreting sequential function charts, line drawings and time charts. Lecture/Lab: 1.0 credit (21 contact hours).

Components: Lecture

IET 1072(0.3) Course ID:007142
Instruments
Introduces electrical measurement instruments, including digital and analog multimeters, clamp-on ammeters, megohmeters, and the oscilloscope. Requires hands-on lab time spent with each device type. Emphasizes safe measuring techniques. Covers additional devices such as pressure gauges, chart recorders, heat sensors and chain stretch monitor. Lecture/Lab: 0.3 credits (7.5 contact hours).

Components: Lecture

IET 1073(1) Course ID:007143
Control Circuits & Components
Concentrates on control logic components and circuit function. Examines combinational and sequential ladder logic designs with great attention to reliability of function. Requires construction of various circuits that demonstrate key component functionality concepts. Requires troubleshooting using analytical techniques, multimeters, chart recorders, and oscilloscopes. Lecture/Lab: 1.0 credit (22.5 contact hours).

Components: Lecture

IET 1074(0.7) Course ID:007144
Solid State Devices
Introduces solid state devices and applications. Covers semiconductor theory and operational characteristics of devices such as the diode, bipolar junction transistor (BJT) and field effect transistor (FET). Examines the basic DC power supply in the lab. Addresses concepts such as polarity, biasing, rectification and amplification. Includes discussion of camera-type vision systems, barcode readers and laser etchers. Lecture/Lab: 0.7 credits (16.5 contact hours).

Components: Lecture

IET 1081(0.5) Course ID:007146
Basic Mechanical Power Systems
Introduces the basic concepts of mechanical power transmission. Addresses the principles of power transmission, calculations of speed and force and how they affect a power transmission systems ability to perform work. Emphasizes the basics of mechanical drawing, safe work practices for working around machinery, common hand tools associated with maintenance work and some of the more common terms and definitions. Lecture: 0.5 credits (7.5 contact hours).

Components: Lecture

IET 1082(0.3) Course ID:007147
Flexible Drives
Introduces various types and styles of flexible belt and chain drives, including V-belts, chains, sprockets, and components. Lecture/Lab: 0.3 credit (7.5 contact hours).

Components: Lecture

IET 1083(2.2) Course ID:007148
Couplings and Alignment
Introduces types and functions of couplings used in industrial power transmissions, including how to install, align, and maintain shaft couplings. Lecture/Lab: 2.2 credits (55.5 contact hours).

Components: Lecture

IET 1084(1.1) Course ID:007149
Bearings, Shafts, and Seals
Introduces basic types and functions of bearings, shafts and seals found on mechanical drive systems commonly used in industry. Lecture/Lab: 1.1 credits (24 contact hours).
Components: Lecture
IET 1085(0.2) Course ID:007150
Brakes and Clutches
Introduces various types and styles of braking systems and clutch components used in industrial applications. Lecture/Lab: 0.2 credits (4.5 contact hours).

Components: Lecture
IET 1086(0.7) Course ID:007151
Gears and Cam
Introduces various types and styles of gears and cam follower components used in industrial applications. Lecture/Lab: 0.7 credits (13.5 contact hours).

Components: Lecture
IET 1091(0.7) Course ID:007153
Basic OSHA Safety
Introduces OSHA and the OSHA regulations that apply to the auto manufacturing industry. Lecture/Lab: 0.7 credits (12 contact hours).

Components: Lecture
IET 1092(0.4) Course ID:007154
Hoists and Cranes
Introduces the basic concepts and safety rules and issues related to the use of overhead cranes and hoists. Lecture/Lab: 0.4 credit (6 contact hours).

Components: Lecture
IET 1093(1.2) Course ID:007155
Rigging Awareness & Fundamentals
Introduces the basic concepts and safety rules and issues related to the use of rigging equipment, attachment components, calculating sling angle stresses, and safe lifting and turning loads. Lecture/Lab: 1.2 credits (25.5 contact hours).

Components: Lecture
IET 1094(0.7) Course ID:007156
First Aid, CPR, & AED
Provides knowledge and skills necessary to help sustain life and minimize the consequences of injury or sudden illness until advanced medical help arrives. Includes first aid, CPR and AED lessons to meet the various training needs of those in workplace, school or community settings. Lecture/Lab: 0.7 credits (16.5 contact hours).

Components: Lecture
IET 1101(0.5) Course ID:007182
Introduction to Arc Welding
Introduces the power sources used in shielded metal arc welding (SMAW) and gas metal arc welding (GMAW), along with equipment and filler metals used to produce a welded joint and welding principles along with the metallurgy of steel and welding. Lecture: 0.5 credits (7.5 contact hours).

Components: Lecture
IET 1102(1.6) Course ID:007183
SMAW/Stick Welding
Introduces shielded metal arc welding (SMAW) safety and shielded metal arc welding (SMAW) processes including flat, horizontal, vertical, and overhead welding techniques. Lecture/Lab: 1.6 credits (45 contact hours).

Components: Lecture
IET 1102(1.9) Course ID:007184
Gas Metal Arc Welding
Provides knowledge of theory, safety practices, equipment and techniques required for gas metal arc welding (GMAW) including different transfer methods and position welding. Lecture/Lab: 0.9 credits (25.5 contact hours).

Components: Lecture
IET 1104(1) Course ID:007185
Welding and Fabrication
Introduces oxy-fuel welding and cutting, including safety, setup and maintenance of oxy-fuel welding and cutting equipment. Includes cutting, brazing, and welding techniques. Lecture/Lab: 1.0 credit (22.5 contact hours).

Components: Lecture
IET 1201(0.1) Course ID:007187
Intro to Machining Operations
Introduces machining operations. Focuses on the safe application of the most common machining procedures and machines used by multi-skilled industrial maintenance technicians. Lecture: 0.1 credits (1.5 contact hours).

Components: Lecture
IET 1202(0.6) Course ID:007188
Turning
Introduces safe operation of lathes, primarily engine and tool room lathes. Addresses various types of lathes used in industry, their component parts, and associated safety precautions. Emphasizes the most common lathe operations required by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.6 credits (16.5 contact hours).

Components: Lecture
IET 1203(0.8) Course ID:007189
Milling
Introduces safe operation of milling machines, primarily vertical milling machines. Addresses the various types of milling machines used in industry, their component parts, and associated safety precautions. Emphasizes the most common drilling operations required by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.8 credits (22.5 contact hours).

Components: Lecture
IET 1204(0.5) Course ID:007190
Drill Press
Introduces safe operation of drill presses, primarily the sensitive drill press. Addresses the various types of drilling machines used in industry, their component parts, and associated safety precautions. Emphasizes the most common drilling operations required by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.5 credits (13.5 contact hours).

Components: Lecture
IET 1205(0.4) Course ID:007191
Saws
Introduces safe operation of saws, primarily the horizontal and contour band saw. Addresses the various types of metal saws used in industry, their component parts, and associated safety precautions. Emphasizes the most common sawing operations required by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.4 credits (10.5 contact hours).

Components: Lecture
IET 1206(0.7) Course ID:007192
Hand and Power Tools
Introduces safe and effective use of hand and power tools. Emphasizes the application of the most common tools used by multi-skilled industrial maintenance technicians. Lecture/Lab: 0.7 credits (16.5 contact hours).

Components: Lecture
IET 1207(0.9) Course ID:007193
Measuring and Layout Tools
Introduces measuring and layout tools commonly found in industrial environments. Emphasizes the safe application of the most common tools used by multi-skilled industrial maintenance technicians. Lecture 0.9 credits (21 contact hours).

Components: Lecture
IET 1301(1) Course ID:016097
Safety Culture
Introduces the importance of cultivating daily safe work habits and the predictable negative results of not being safety conscious in the work place. Instructs the students in basic safety culture and prepares them to participate in, conduct, and lead safety walk-throughs. Introduces the student to Kiken Yoshi Training (KYT) or Hazard Prediction Training. Prepares the student to conduct risk assessment activities, construct safety boards, and formulate individual safety commitments. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
IET 1302(1) Course ID:016098
SS5
Introduces the fundamental SS5 process involving the five step progression described by the Japanese words Seiri, Seiton, Seiso, Seiketsu, and Shitsuke. Instructs the students in the sequence involving classifying and sorting, ordering and aligning, cleaning and sweeping up, standardizing, and developing a process of sustainable practice in the workplace. Fosters the development of a workplace organization in which safety and efficiency are always paramount. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
IET 1303(1) Course ID:016099
Total Production Management
Introduces the student in the concepts of value-added product, maintenance value-added product, value-added work and necessary work. Explains the process of how Toyota earns profit. Demonstrates the Toyota Production System for Maintenance using the House framework. Describes and explains the three Ms and the seven Mudas and their relationship to maintenance and production. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
IET 1304(1) Course ID:016100
Problem Solving
Introduces the Toyota Business Practice model, the 8 step Problem Solving method, and the 10 part Toyota Drive and Dedication model. Instructs the students to clarify the problem, break it down to analyze it, set achievable targets, analyze the root cause, develop countermeasures, evaluate results and the process, standardize the results, and learn from failures. Fosters the development of a customer first philosophy involving all the stakeholders. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
IET 1305(1) Course ID:016101
Maintenance Reliability
Introduces the Toyota Maintenance Reliability training. Describes the difference between corrective maintenance and preventive maintenance. Breaks down proactive maintenance and the underlying tools and constituent processes. Instructs the students in the various individual units in a system and the steps in evaluating failure mode risks and countermeasures. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
IET 1306(1) Course ID:007179
Electrohydraulics/Pneumatics Fundamentals
Explains the fundamental concepts of fluid power. Covers the principles of fluid power, calculations of physical properties of fluids and their ability to do work. Introduces the various fluid power components, symbols, circuits. Introduces troubleshooting of fluid power components and systems with an emphasis on safety. Lecture: 1.0 credit (15 contact hours).

Components: Lecture
IET 1307(2.0) Course ID:007178
Reservoirs, Fluids, Filters
Introduces functions of hydraulic/pneumatic reservoirs and reservoir components. Addresses properties and requirements for fluids, as well as how filters are used to maintain cleanliness in fluid power systems. Lecture/Lab: 0.7 credits (13.5 contact hours).

Components: Lecture
IET 1308(0.4) Course ID:007177
Hose, Piping, and Tubing
Introduces various types of conductors that carry fluid through a system. Focuses on fittings, hose, and steel tubing used in fluid power systems. Lecture/Lab: 0.4 credits (9 contact hours).

Components: Lecture
IET 1309(0.8) Course ID:007176
Pumps, Actuators, Accumulators
Introduces the different types of pumps, actuators and accumulators used in fluid power systems which create flow, change fluid power into mechanical power and devices that store energy in the system. Lecture/Lab: 0.8 credits (16.5 contact hours).

Components: Lecture
IET 1310(1.3) Course ID:007175
Valves
Explains hydraulic and pneumatic directional control, pressure control and flow control valves. Lecture/Lab: 1.3 credits (28.5 contact hours).

Components: Lecture
IET 1311(0.9) Course ID:007174
Electrohydraulics/Pneumatics
Introduces the fundamentals of electro-fluid power,
including basic electrical principles, basic fluid power principles, electro-fluid power limit devices, common electro-fluid power troubleshooting principles and practices. Lecture/Lab: 0.9 credits (16 contact hours).

Components: Lecture

IET 2017(0.9) Systems Troubleshooting Course ID:007173
Introduces troubleshooting of hydraulic and pneumatic systems, including tracing out systems, isolating problems, safety testing and inspecting systems that use combination circuits and combined electro-hydraulic/pneumatic systems. Lecture/Lab: 0.9 credits (19.5 contact hours).

Components: Lecture

IET 2031(0.6) Introduction to PLCs Course ID:007171
Introduces various elements of basic PLCs including the identification of programmable logic control systems as well as an overview of PLC system architectures. Provides instruction in basic numbering systems, computer terminology, PLC functions, program structures, language standards, point addressing basics. Lecture: 0.6 credits (9 contact hours).

Components: Lecture

IET 2032(1.4) Hardware & Software Course ID:007170
Introduces memory and project organization within a PLC processor, the installation, wiring and configuration of I/O modules, as well as how to start a new project. Lecture/Lab: 1.4 credits (31.5 contact hours).

Components: Lecture

IET 2033(1.5) Programming PLCs Course ID:007169
Introduces various elements of programming PLCs. Addresses the basic elements of PLC programming and routines. Requires student to program using ladder logic, structured text, sequential function chart, and function block languages. Lecture/Lab: 1.5 credits (34.5 contact hours).

Components: Lecture

IET 2034(1.5) PLC Communication Course ID:007168
Introduces various elements of industrial communications using PLCs. Addresses common types of control communications in an industrial environment. Includes discussion of PLC addressing used in communications. Lecture/Lab: 1.5 credits (34.5 contact hours).

Components: Lecture

IET 2051(0.6) Introduction to Robotics Course ID:007166
Introduces robotics in regard to industrial robotic safety standards, historic timeline of industrial robots, industrial classification of robots, common industrial applications of robots, basic system components found in industrial robot applications, robotic motion concepts, common terms and definitions used in computer integrated manufacturing (CIM) as it relates to robotics. Lecture/Lab: 0.6 credits (10.5 contact hours).

Components: Lecture

IET 2052(1.5) Programming/Editing Robots Course ID:007165
Introduces robotic systems and programming. Reviews robotic system application, automated system safety, robotic system composition, robotic motion control, fundamental programming commands, and program editing. Emphasizes the fundamentals of robot control. Aids students in electronics, welding, computer technology, and general sciences. Lecture/Lab: 1.5 credits (30 contact hours).

Components: Lecture

IET 2053(0.2) Robot and Preventive Maintenance Course ID:007164
Instructs an operator, technician, engineer, programmer, or student to master the preventive maintenance techniques required for a robot and their backup systems. Lecture/Lab: 0.2 credits (4.5 contact hours).

Components: Lecture

IET 2054(1.1) Error Codes & Troubleshooting Course ID:007163
Instructs operators, technicians, engineers, programmers, or students on the basic recovery procedures needed to interpret robot error codes and perform a safe recovery start up procedure for robotics equipment. Lecture/Lab: 1.1 credits (22.5 contact hours).

Components: Lecture

IET 2055(0.6) Integration of PLCs & Robots Course ID:007162
Introduces concepts associated with integrating robotic applications in a PLC-controlled, automated system. Includes discussion of the standard safety and interface signals associated with integrated systems, as well as various types of robotic applications along with the interface signals typically associated with each application. Stresses the programming concepts that support optimizing cycle time. Lecture/Lab: 0.6 credits (15 contact hours).

Components: Lecture

IET 2061(0.5) Fundamentals Course ID:007160
Introduces identification, installation, replacement, and troubleshooting of automation controller circuit boards and modules. Lecture/Lab: 0.5 credits (10.5 contact hours).

Components: Lecture

IET 2062(0.9) Sensors and Photoeyes Course ID:007159
Introduces installation, maintenance and troubleshooting of common input devices. Lecture/Lab: 0.9 credits (18 contact hours).

Components: Lecture

IET 2063(0.6) Calibration and Loop Training Course ID:007158
Introduces methods of motor control including on-off, proportional, integral, and derivative including PID loop tuning and quality. Lecture/Lab: 0.6 credits (13.5 credits).

Components: Lecture

IET 2064(3) Final Control Elements Course ID:007157
Covers automation output devices including AC, DC, and servo motors, variable speed drives, relays, motor starters and sizing of components for various applications. Lecture/Lab: 3.0 credits (63 contact hours).

Components: Lecture

IMD Information and Management Design
IMD 100(3) Course ID:004764
Digital Information & Communication Technologies
Introduces digital concepts and technologies. Examines hardware, operating systems, networks, applications, telecommunications, digital security, ethics, and social media. Utilizes Windows operating system plus word processing, spreadsheet, database, and presentation applications. Emphasizes social media practices/concepts and trends for practical daily users. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Digital Literacy

IMD 115(3) Course ID:004765
Introduction to Graphic Design
Introduces theory, concepts and techniques required in graphic design. Includes an introduction to layout, color theory and use; design, photo and illustration techniques; and exploration of media in respect to digital design. Integrates concepts regarding the production process including pre-press, printing, other production techniques and distribution. Lecture: 3 credits (45 contact hours).

Components: Lecture

Attributes: Technical

IMD 124(3) Course ID:016264
Introduction to Game Development
Introduces students to the concepts associated with an information-centric world, information systems, and includes the definition of information and how it is communicated. Prepares students to understand how information systems support data-driven decision making strategies, information sharing technologies, data encoding, cooperative skills, knowledge sharing, and organizing of information. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

Attributes: Technical
IMD 126(3) Course ID:004781
Introduction to Desktop Publishing
The use of microcomputers for designing and producing various publications is introduced. Hands-on experience is provided in using desktop publishing software and a laser printer to produce high-resolution publications, such as flyers, brochures, business forms, and newsletters. Students are also introduced to basic design techniques, type and graphics layout, and the related terminology. Pre-requisite: IMD 100 or equivalent skills. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 127(3) Course ID:005044
Vector Design with Adobe Illustrator
In this course, students will be introduced to and develop vector (line-based) graphics using industry-standard application(s). Topics covered will include examining the theory behind vector graphics, investigating the advertising and print industry’s use of this type of graphic, creation of graphics from simple to increasingly complex, as well as development of a portfolio of vector art. Pre-requisite: IMD 115 or concurrent or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 128(3) Course ID:005045
Raster Design with Adobe PhotoShop
Introduces raster (photo or pixel-based) graphics using industry standard application(s). Covers the theory behind raster graphics, investigating the advertising and print industries’ use of this type of graphic, creation and manipulation of raster-based graphics from simple to increasingly complex, the use of Photoshop in web design, video editing and compositing with Photoshop, as well as development of a portfolio of raster art and photo editing and manipulation samples. Pre-requisite: IMD 100 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 133(3) Course ID:005046
Beginning Web Design
Introduces the creation and publication of a web site and covers extensible hypertext markup language (XHTML) and introductory cascading style sheets (CSS). Covers hand-coding for web design, along with the incorporation of graphics into web sites and publishing. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 180(3) Course ID:004786
Intermediate Web Design
Utilizes content management systems (CMS) for web design with an emphasis on customer content development. Instructs students in basic CMS setup, administration, and theme design. Utilizes HTML, CSS, and photo-editing software within a CMS. Identifies fundamentals including website layout, navigation, font usage, color schemes, site architecture, with emphasis on creating websites that effectively communicate the desired content for employers and clients. Pre-requisite: IMD 133 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 210(3) Course ID:004787
Microsoft Office Applications
Presents advanced skills utilizing Microsoft Office applications for the creation, manipulation, and integration of information. Examines applications including word processing, spreadsheet, database management, and presentation. Pre-requisite: IMD 100 OR Digital Literacy Course OR Instructor Consent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 221(3) Course ID:016265
Computer Graphics
Introduces basic computer graphics with an emphasis on graphics for game design. Instructs students in practical aspects of graphics such as color, ray tracing, rasterization, shading, mapping, light, and shadow. Pre-requisite: CIT/IMD 105 OR IMD100 OR Consent of Instructor. Co-requisite: CIT/IMD 124 OR IMD124 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: CIT 221
Attributes: Technical

IMD 222(3) Course ID:016266
3D Modeling for Video Games
Instructs students in the use of industry-standard 3D modeling specific to the video-game industry. Emphasizes both architectural and character modeling. Familiarizes the student with key 3D modeling concepts and methods, workflow, and the creation and preparation of 3D assets for use specifically in a video-game application. Pre-requisite: CIT 221 OR IMD 221 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: CIT 222
Attributes: Technical

IMD 223(3) Course ID:016267
3D Animation for Video Games
Explores students to the specialized process of animating 3D assets for gaming applications. Familiarizes students with animating both organic and inorganic assets, lighting scenes, rendering and producing cut-scenes, and preparing character assets for in-game motion. Allows students to acquire the necessary skills and techniques to integrate audio with their animations using basic sound-engineering software and processes. Pre-requisite: CIT/IMD124 AND CIT/IMD222 OR Consent of Instructor. Co-requisite: CIT/IMD 223 OR Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: CIT 223
Attributes: Technical

IMD 226(3) Course ID:004791
Advanced Desktop Publishing
Requires the demonstration of vital pre-press and print production knowledge necessary for successful output of commercial graphic design projects. Emphasizes raster image creation, editing, and preparation for output, offset printing processes, color separations, spot color usage and preparation, vector graphic usage, font usages and standards, PDF document creation and preparation, and advanced desktop publishing techniques. Pre-requisite: IMD 126 and IMD 127 and IMD 128. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 228(3) Course ID:006833
Advanced Photoshop
Introduces advanced techniques for manipulating and editing raster (photo or pixel-based) graphics using industry-standard application(s). Examines new software features, advanced methods for file optimization and color correction, making complex selections and combining multiple images to create works of art, as well as development of a professional portfolio of raster art and photo editing and manipulation. Pre-requisite: IMD 115 and IMD 128. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 230(3) Course ID:004793
Advanced Web Design
Explores existing and emerging web technologies through the use of web designers. Covers HTML, CSS and content management systems (CMS) for responsive web design. Instructs students in responsive website development using HTML, CSS and photo-editing software. Students will conclude the course via the creation of a comprehensive, dynamic, responsive website utilizing current technologies. Pre-requisite: IMD 180 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 250(3) Course ID:005050
Digital Video Editing I
Covers the essentials of digital video within cinematic arts, including logging, capturing, editing, and basic compositing. Students will capture and edit digital video using industry-standard desktop video software and export to DVD and the Internet for use in entertainment, documentary films, commercials, and newscasts. Students will learn to storyboard, plan, and produce a digital video project from conception to final packaging. Pre-requisite: IMD 100 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 255(3) Course ID:007327
Digital Video Editing II
Covers advanced techniques within cinematic arts and editing such as multi-cam editing, color correction, advanced compositing, basic audio editing and production, alpha channels, and special effects. Building on Digital Video Editing I, students will also focus on creating storyboards, quicker workflows, and trimming editing using an industry-standard software program. Increased levels of pacing, timing, continuity, and visual aesthetics are emphasized. Students will shoot and edit their own video footage in this course.
Cameras will be provided. Pre-requisite: IMD 250 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 258(3) Course ID:007328
Visual Effects for Video
Covers the creation of visual effects in cinematic arts including basic animation with text and 2D objects and 3D object creation and animation using an industry-standard visual effects software program. Students will focus on animating layers and working with masks, distortion, color correction, motion stabilizing, and particle simulation. Projects will be exported and packaged for the web and DVD. Pre-requisite: IMD 250 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IMD 270(3) Course ID:005214
Professional Practices
Designed to assist students develop strategies for entering the Information Management & Design profession by editing and refining portfolios and creating correspondence to meet professional standards, designing resumes and other self-promotional materials, developing a job search strategy, practicing interview techniques, and professional presentations. Pre-requisite: sophomore status & preparing for job search. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical
Advanced Patient Care in Radiography
Course ID: 005609
Provides basic concepts of pharmacology, venipuncture and administration of diagnostic contrast agents. Explains the classification and scheduling of drugs. Emphasizes the appropriate delivery of patient care during radiographic procedures requiring the administration of contrast agents. Provides the knowledge base and practical skills necessary to perform special diagnostic studies. Covers fluoroscopic procedures requiring informed consent, aseptic technique, and the administration of various contrast media. Pre-requisite: IMG 104, IMG 106, IMG 108 and IMG 109. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

Radiographic Procedures II
Course ID: 005610
Provides the knowledge base necessary to perform standard imaging procedures of the spine, cranium, facial bones, parasanal sinuses, upper gastrointestinal, lower gastrointestinal, urinary system, as well as fluoroscopic procedures requiring informed consent, aseptic technique, and the administration of various contrast media. Covers criteria for optimal diagnostic images, including anatomical structures shown, as well as corrective positioning action to be taken for sub-optimal images. Pre-requisite: IMG 104, IMG 106, IMG 108 and IMG 109. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

Clinical Practice II
Course ID: 005611
Continues the IMG 109 clinical experience. Designed to sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Provides structured clinical experience through sequential competency-based assignments that focus on the upper and lower extremities, bony and visceral thorax, abdomen, vertebral column, cranium, facial bones, and contrast studies of the digestive and urinary system. Pre-requisite: IMG 104, IMG 106, IMG 108 and IMG 109. Clinical: 3.0 credits (180 contact hours).
Components: Clinical
Attributes: Technical

Clinical III
Course ID: 004298
Continues IMG 111 by focusing on the application and evaluation of radiography in the clinical setting. Integrates concepts and the knowledge of anatomy, pathology, procedures, patient care, and imaging principles. Emphasizes on radiographic mobile studies and image analysis. Develops technical skills and procedural knowledge through observation and participation in radiographic studies with opportunities for more responsibility and independence with previously learned procedures. Pre-requisite: IMG 111 with a minimum grade of "C". Clinical: 3.0 credits (180 contact hours).
Components: Clinical
Attributes: Technical

Basic Computed Tomography
Course ID: 005612
Continues the IMG 119 clinical experience. Designed to sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Provides structured clinical experience through sequential competency-based assignments that focus on the upper and lower extremities, bony and visceral thorax, abdomen, vertebral column, cranium, facial bones, and contrast studies of the digestive and urinary systems, as well as surgical radiographic procedures. Pre-requisite: IMG 114, IMG 116, IMG 118 and IMG 119. Clinical: 3.0 credits (180 contact hours).
Components: Clinical
Attributes: Technical

Radiography IV
Course ID: 004299
Covers radiographic imaging methods examining the imaging process as a sequence of events of x-ray production through hard copy processing. Discussion of the image equipment in terms of function, influences on the image, and the impact of alterations on image characteristics. Emphasizes on fluoroscopic equipment and QC/QA. Enhances and complements the concurrent clinical experiences of the student. Pre-requisite: IMG 201 with a minimum grade of “C”. Co-requisite: IMG 211. Lecture: 3.0 credit (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

Clinical IV
Course ID: 004300
Continues IMG 201 by focusing on the application and evaluation of radiography in the clinical setting. Integrates concepts and the knowledge of anatomy, pathology, procedures, patient care, and imaging principles. Develops technical skills and procedural knowledge through observation and participation in radiographic studies with opportunities for more responsibility and independence with previously learned procedures. Pre-requisite: IMG 201 with a minimum grade of “C”. Co-requisite: IMG 210. Clinical: 6.0 credits (360 contact hours).
Components: Clinical
Attributes: Technical

Imaging Equipment
Course ID: 005613
Establishes a knowledge base in radiographic, fluoroscopic, and mobile equipment requirements and design. Provides a basic knowledge of quality control. Imparts an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Discusses factors that impact image acquisition, display, archiving and retrieval. Presents the principles of digital system quality assurance and maintenance. Pre-requisite: IMG 209. Lecture: 1.0 credit (15 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

Clinical Practice IV
Course ID: 005614
Continues the IMG 209 clinical experience. Designed to sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Provides structured clinical experience through sequential competency-based assignments that focus on the upper and lower extremities, bony and visceral thorax, abdomen, vertebral column, cranium, facial bones, and contrast studies of the digestive and urinary systems, surgical radiographic procedures and special diagnostic procedures such as myelograms, arthrograms, hepatobiliary studies, and venography. Pre-requisite: IMG 209. Clinical: 6.0 credits (360 contact hours).
Components: Clinical
Attributes: Technical

Radiography V
Course ID: 004301
Re-introduces advanced modalities used to complement diagnosis images. Covers the principles of radiation biology, radiation protection, pathology, pharmacology principles and systemic classification of diseases. Continues the discussion of professional and legal standards needed to practice by reviewing radiographic topics in preparation for a career as an imaging professional. Pre-requisite: IMG 210 with a minimum grade of “C”. Co-requisite: IMG 221. Lecture: 3.0 credits (45 contact hours). Lab: 1.0 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

Radiography Protection & Biology
Course ID: 005615
Provides an overview of the principles of the interaction of radiation with living systems. Radiation effects on molecules, cells, tissues and the body as a whole are presented. Discusses factors affecting biological response, including acute and chronic effects of radiation. Presents an overview of the principles of radiation protection, including the responsibilities of the radiographer for patients, personnel and the public. Incorporates radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations. Pre-requisite: IMG 214 and IMG 216 and IMG 219. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

Radiographic Pathology
Course ID: 005616
Introduces concepts related to disease and etiological considerations with emphasis on radiographic appearance of disease and impact on exposure factor selection. Pre-requisite: IMG 214 and IMG 216 and IMG 219. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

Radiography Seminar
Course ID: 005617
Provides capstone information needed by the entry level radiographer; includes the radiography practitioner’s role in the health care delivery system, continuing education, and professional development, advanced modalities, accreditation organizations, national registration and state licensure, as well as the benefits of membership and activity in professional societies. Examines the principles, practices, and policies of health care organizations, and the delivery of health care in the United States. Pre-requisite: IMG 214, IMG 216 and IMG 219. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

Clinical Practice V
Course ID: 005618
Continues the IMG 219 clinical experience. Designed to sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Provides structured clinical experience through sequential competency-based assignments that focus on the upper and lower extremities, bony and visceral thorax, abdomen, vertebral column, cranium, facial bones, and contrast studies of the digestive and urinary systems, surgical radiographic procedures, and special diagnostic procedures such as myelograms, arthrograms, hepatobiliary studies, and venography. Pre-requisite: IMG 214, IMG 216 and IMG 219. Clinical: 6.0 credits (360 contact hours).
Components: Clinical
Attributes: Technical
IMT 160(2) Course ID:017373
FANUC Robot Operations
Introduces students to basic FANUC robotics programming as well as providing introductory operational skills needed in an industrial environment. Integrated Lecture: 1 credit (15 contact hours). Integrated Lab: 1 credit (30 contact hours).
Components: Integrated Laboratory, Integrated Lecture
Attributes: Technical

IMT 161(2) Course ID:017374
KUKA Robot Level 1 Robot Operation
Introduces students to basic KUKA robotic programming as well as providing introductory operational skills needed in an industrial environment. Integrated Lecture: 1 credit (15 contact hours). Integrated Lab: 1 credit (30 contact hours).
Components: Integrated Laboratory, Integrated Lecture
Attributes: Technical

IMT 162(2) Course ID:017377
YASKAWA/MOTOMAN Robot Operations
Introduces students to basic YASKAWA/MOTOMAN robotic programming as well as providing introductory operational skills needed in an industrial environment. Integrated Lecture: 1.0 credit hour (15 contact hours). Integrated Lab: 1.0 credit hour (30 contact hours).
Components: Integrated Laboratory, Integrated Lecture
Attributes: Technical

IMT 198(1 - 8) Instructor Consent Required
Practicum
Provides supervised on-the-job work experience related to the student's educational objectives. Students participating in the Practicum do not receive compensation. Pre-requisite: Permission of Instructor. Practicum: 1-8 credits (75-600 contact hours).
Components: Practicum
Attributes: Technical

IMT 199(1 - 8) Course ID:001590
Instructor Consent Required
Cooperative Education
Provides supervised on-the-job work experience related to the student's educational objective. Students participating in the Co-op Education program receive compensation for their work. Pre-requisite: Permission of Instructor. Co-op: 1-8 credits (75-600 contact hours).
Components: Co-op
Attributes: Technical

IMT 200(4) Course ID:007372
Industrial Robotics and Robotic Maintenance
Provides the industrial maintenance student an introduction to the theory of robots including applications, basic programming, components, industrial robotic safety standards, industrial robots classifications, key programming techniques, robotic motion concepts, and terminology. Instructs students on the concepts of predictive and preventive maintenance techniques required for a robot and their backup systems and recovery procedures. Provides the opportunity for the industrial maintenance student to develop, set up, and integrate work cells into manufacturing systems at a beginning level. Pre-requisite: IMT 110 and IMT 111 or consent of instructor. Lecture/Lab: 4.0 credits (90 contact hours).
Components: Lecture
Attributes: Technical

IMT 220(3) Course ID:001592
Industrial Maintenance Electrical Motor Controls I
Addresses the common symbols used in motor control circuits, the fundamentals of electrical schematics and wiring diagrams, the principles of relays, motor starters, switches, pilot devices, sensing devices, and indicator lights, and introduces the different types and operations of basic motor control circuits. Pre-requisite: IMT 110, IMT 111. Co-requisite: IMT 221. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IMT 221(2) Course ID:001593
Industrial Maintenance Electrical Motor Controls I Lab
Includes an application of common symbols used in motor control circuits, fundamentals of electrical schematics and wiring diagrams, principles of relays, motor starters, switches, pilot devices, sensing devices, indicator lights, and the different types and operations of basic motor control circuits. Pre-requisite: (IMT 110 and IMT 111) or consent of instructor. Co-requisite: IMT 220. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Course Also Offered in Modules, Technical

IMT 222(2) Course ID:006422
Industrial Maintenance Motor Controls II
Provides advanced study of motor controls in industry. Addresses open and closed loop control systems, servo motors, encoders, AC and DC motors and industry standard color coding. Pre-requisite: (IMT 110 and IMT 111 and IMT 220 and IMT 221) or consent of instructor. Co-requisite: IMT 223. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IMT 223(2) Course ID:006432
Industrial Maintenance Motor Controls II Lab
Provides advanced study of motor controls in industry. Addresses open and closed loop control systems, servo motors, encoders, AC and DC motors and industry standard color coding. Pre-requisite: (IMT 110 and IMT 111 and IMT 220 and IMT 221) or consent of instructor. Co-requisite: IMT 222. Laboratory: 2 credits (60 hours).
Components: Laboratory
Attributes: Course Also Offered in Modules, Technical

IMT 230(5) Course ID:001594
Industrial Maintenance of PLCs
This course includes the theory of programmable logic controllers to include installation, programming, interfacing, and troubleshooting of industrial PLC's. Pre-requisite: IMT 240.
Components: Lecture
Attributes: Technical

IMT 231(2) Course ID:001595
Industrial Maintenance of PLC's Lab
Addresses the diversity of PLC control devices and applications used in industry today. Safety and electrical lockouts are also included. Pre-requisite: [(IMT 110 and IMT 111)] or (IMT 130 and IMT 131) with a grade of C or greater] or Consent of Instructor. Co-requisite: IMT 230 or Consent of Instructor. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

IMT 240(6) Course ID:001596
Industrial Maintenance Motor Control Concepts
Addresses the diversity of control devices and applications used in industry today with safety and electrical lockouts included. The basic theory of programmable logic controllers is also included. Pre-requisite: [(IMT 110 and IMT 111) or (IMT 130 and IMT 131)] with a grade of C or greater] or Consent of Instructor. Co-requisite: IMT 241 or Consent of Instructor. Lecture: 6 credits (90 contact hours).
Components: Lecture
Attributes: Technical

IMT 250(2) Course ID:001598
Maintaining Industrial Equipment II
Integrates the student's accumulative knowledge from the IMT 150 and IMT 151 courses. Emphasizes troubleshooting techniques and applied machine repair situations that require the student to apply learned skills from all areas of the curriculum. Pre-requisite: (IMT 150 and IMT 151) with a grade of C or greater] or consent of instructor. Co-requisite: IMT 251 or consent of instructor. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

IMT 251(3) Course ID:001599
Maintaining Industrial Equipment II Lab
Complements IMT 250 and consists of advanced, specific and assigned machine repair tasks. Pre-requisite: (IMT 150 and IMT 151) with a grade of C or greater] or consent of instructor. Co-requisite: IMT 250 or consent of Instructor. Laboratory: 3.0 credits (90 contact hours), Lab: 3.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

IMT 260(7)
Presswork and Die Maintenance
Includes the fundamental concepts and machining operations needed by the industrial maintenance technician to be proficient in the field of stamping press and die maintenance. Pre-requisite: IMT 100 and IMT 101 and [(IMT 115 & IMT 116) or (MTT 114) or (MTT 110 & MTT 112)] or consent of instructor. Lecture: 2 credits (30 contact hours), Lab: 5 credits (150 contact hours).
Components: Lecture
Attributes: Technical

IMT 280(3) Course ID:001600
Advanced Programmable Logic Controllers
Covers advanced theory programmable logic controllers to include designing applications, programming, interfacing and troubleshooting of industrial PLC's. Pre-requisite: [(IMT 220 and IMT 221) with a grade of C or greater] or [equivalent] or Consent of Instructor. Co-requisite: IMT 281 or Instructor consent. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Technical

IMT 281(2) Course ID:001601
Advanced Programmable Logic Controllers Lab
Provides practical applications of the theory in IMT 280 to include installation, programming, interfacing and troubleshooting of industrial PLCs. Pre-requisite: [(IMT 220 and IMT 221) with a grade of C or greater] or consent of instructor. Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Course Also Offered in Modules, Technical

IMT 282(3) Course ID:017642
PLC Programming Languages
Covers the use of the four main Programmable Logic Controllers (PLC) programming languages specified in the International Electrotechnical Commission (IEC) 61131-3 international standard: Ladder Diagram, Function Block Diagram, Structured Text, and Sequential Function Chart. Discusses a variety of PLC networking protocols such as Ethernet/IP. Pre-requisite: IMT 280 or ELT 250 or EET 276 and EET 277 or Consent of Instructor. Lecture: 2 credits (30 contact hours), Laboratory: 1 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

IMT 288(1) Course ID:007373
Industrial Maintenance Technology Capstone
Serves as the capstone course for the Industrial Maintenance Technology degree program. Integrates prior learning outcomes into a single integrated learning experience. Includes preparation for an exit exam that all program graduates must take. Pre-requisite: BRX 120 or ELT 102 and PXI 101 and PXF 101 and IMT 100 and IMT 101 and IMT 110 and IMT 111 and IMT 150 and 151 and IMT 220 and IMT 221) or consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

IMT 290(1 - 3) Course ID:001602
Instructor Consent Required
Special Projects
Provides an opportunity to develop advanced skills in topics related to industrial maintenance. Pre-requisite: Consent of Instructor. Laboratory: 1-3 credits (30-90 contact hours).
Components: Laboratory
Attributes: Technical
IMT 1001(0.75) Course ID:005915
Welding for Maintenance Safety
Provides basic instruction needed for student to weld using Oxy-Fuel. Co-requisite: IMT 1011 (or consent of instructor). Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 1002(0.75) Course ID:005916
Welding for Maintenance SMAW (Stick Welding)
Provides basic instruction needed for student to weld using Shielded Metal Arc Welding (SMAW). Co-requisite: IMT 1012 (or consent of instructor). Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 1003(0.75) Course ID:005917
Welding for Maintenance GMAW (MIG Welding)
Introduces instruction of setup and use of GMAW (MIG welding) equipment. Co-requisite: IMT 1013 (or consent of instructor). Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 1004(0.75) Course ID:005918
Welding for Maintenance GTAW (TIG Welding)
Provides instruction of setup and use of GTAW (TIG welding) equipment. Co-requisite: IMT 1014 (or consent of instructor). Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 1011(0.5) Course ID:005919
Welding for Maintenance Safety and Cutting Lab
Provides application of welding safety and use of oxy-fuel cutting equipment. Co-requisite: IMT 1001 (or consent of instructor). Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1012(0.5) Course ID:005920
Welding for Maintenance SMAW (Stick Welding) Lab
Provides application of setup and use of SMAW (stick welding) equipment. Co-requisite: IMT 1002 (or consent of instructor). Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1013(0.5) Course ID:005921
Welding for Maintenance GMAW (MIG Welding) Lab
Provides application of setup and use of GMAW (MIG welding) equipment. Co-requisite: IMT 1003 (or consent of instructor). Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1014(0.5) Course ID:005922
Welding for Maintenance GTAW (TIG Welding) Lab
Provides application of setup and use of GTAW (TIG welding) equipment. Co-requisite: IMT 1004 (or consent of instructor). Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1151(0.2) Course ID:006406
General Shop Knowledge
Includes fundamental machining operations necessary for the success of Maintenance Technicians in the field who are required to be proficient in basic machining operations. Co-requisite: IMT 1161 or Consent of Instructor. Lecture: 0.2 credit (3 contact hours).
Components: Lecture

IMT 1152(0.1) Course ID:006407
Vertical and Horizontal Bandsaw Operations
Introduces vertical and horizontal bandsaw operations including the selection of feeds and speeds as well as blade welding. Co-requisite: IMT 1162 or Consent of Instructor. Lecture: 0.1 credit (1.5 contact hours).
Components: Lecture

IMT 1153(0.3) Course ID:006408
Drill Press Operations and Procedures
Introduces drill press operations including the selection of feeds and speeds, layout, drill bit selection and sharpening, and precision drilling operations. Co-requisite: IMT 1163 or Consent of Instructor. Lecture: 0.3 credit (4.5 contact hours).
Components: Lecture

IMT 1154(0.8) Course ID:006409
Lathe Operations and Procedures
Introduces lathe operations including lathe components, grinding tool bits, the selection of feeds and speeds, turning operations, and threading. Co-requisite: IMT 1151 or Consent of Instructor. Co-requisite: IMT 1164 or Consent of Instructor. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

IMT 1155(0.6) Course ID:006410
Milling Machine and Surface Grinder Operations and Procedures
Introduces milling and surface grinding operations including vise alignment, trammng, selection of feeds and speeds, form tools, dressing grinding wheels. Pre-requisite: IMT 1151 or Consent of Instructor. Co-requisite: IMT 1165 or Consent of Instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture

IMT 1161(0.5) Course ID:006411
General Shop Knowledge Lab
Includes the application of fundamental machining operations necessary for the success of Maintenance Technicians in the field who are required to be proficient in basic machining operations. Co-requisite: IMT 1151 or Consent of Instructor. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1162(0.5) Course ID:006412
Vertical and Horizontal Bandsaw Operations Lab
Introduces vertical and horizontal bandsaw operations including the selection of feeds and speeds as well as blade welding. Co-requisite: IMT 1152 or Consent of Instructor. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1163(0.5) Course ID:006413
Drill Press Operations and Procedures Lab
Introduces drill press operations including the selection of feeds and speeds, layout, drill bit selection and sharpening, and precision drilling operations. Co-requisite: IMT 1153 or Consent of Instructor. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 1164(2) Course ID:006414
Lathe Operations and Procedures Lab
Introduces lathe operations including lathe components, grinding tool bits, the selection of feeds and speeds, turning operations, and threading. Co-requisite: IMT 1154 or Consent of Instructor. Laboratory: 2 credits (30 contact hours).
Components: Laboratory

IMT 1165(1.5) Course ID:006415
Milling Machine and Surface Grinder Operations and Procedures Lab
Introduces milling and surface grinding operations including vise alignment, trammng, selection of feeds and speeds, form tools, dressing grinding wheels. Pre-requisite: IMT 1161 or Consent of Instructor. Co-requisite: IMT 1155 or Consent of Instructor. Laboratory: 1.5 credit (45 contact hours).
Components: Laboratory

IMT 2201(1) Course ID:006416
Introduction to Motor Controls
Addresses the importance of electrical safety and the general fundamentals of motor controls. Pre-requisite: (IMT 110 and IMT 111) or Consent of Instructor. Co-requisite: IMT 2211. Lecture: 1 credit (15 contact hours).
Components: Lecture

IMT 2202(1) Course ID:006417
Motor Starters and Pilot Devices
Addresses the diversity of motor starters, control devices, and circuitry. Introduces the different types and operations of basic control circuits while reinforcing the common symbols used in motor control circuits as well as interpreting and drawing electrical schematics and wiring diagrams. Pre-requisite: IMT 2201 or Consent of Instructor. Co-requisite: IMT 2212. Lecture: 1 credit (15 contact hours).
Components: Lecture

IMT 2203(1) Course ID:006418
Motor Control Circuits
Explores aspects of electrical symbols and specialized motor control circuit. Pre-requisite: IMT 2202 or Consent of Instructor. Co-requisite: IMT 2213. Lecture: 1 credit (15 contact hours).
Components: Lecture

IMT 2212(0.5) Course ID:006420
Motor Starters and Pilot Devices Lab
Addresses the diversity of motor starters, control devices, and circuitry. Pre-requisite: IMT 2211 or Consent of Instructor. Co-requisite: IMT 2220. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 2213(1) Course ID:006421
Motor Control Circuits Lab
Explores aspects of electrical symbols and specialized motor control circuits. Pre-requisite: IMT 2212 or Consent of Instructor. Co-requisite: IMT 2203. Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory

IMT 2231(0.5) Course ID:006434
Principles in Process Control and Automation Lab
Provides the lab component for IMT 2221. Covers open and closed loop systems and how they relate to servo and motor encoders. Pre-requisite: (IMT 110 and IMT 111) or Consent of Instructor. Co-requisite: IMT 2221. Lecture: 0.5 credits (15 contact hours).
Components: Laboratory

IMT 2232(0.5) Course ID:006435
Industry Standards for Control Circuit Wiring and Troubleshooting Methods Lab
Provides the lab component for IMT 2222. Covers industry standards related to color coding of industrial wiring control cabinets. Provides for troubleshooting techniques using electrical hand tools and developing and interpreting troubleshooting flow charts to determine phase failure and voltage drops. Pre-requisite: (IMT 110 and IMT 111) or Consent of Instructor. Co-requisite: IMT 2222. Laboratory: 0.5 credits (15 contact hours).
Components: Laboratory

IMT 2233(1) Course ID:006436
Industry Standards for Installing Motors/Electronic Variable Speed Drives II
Provides the lab component for IMT 2223. Covers how to properly evaluate maintenance procedures used for installation of AC and DC motors, proper start up and shut down of electrical systems and fault recovery. Pre-requisite: (IMT 110 and IMT 111) or Consent of Instructor. Co-requisite: IMT 2223. Laboratory: 1 credit (30 contact hours).
Components: Laboratory

IMT 2601(0.5) Course ID:006547
Stamping Press Basics
Addresses press and production safety, various types of presses, and press operations. Pre-requisite: (IMT 115 & IMT 116) or (MII 110 & MII 112)) or Consent of Instructor. Lecture: 0.5. (Contact Hours 7.5).
Components: Lecture

IMT 2602(0.5) Course ID:006548
Stamping Die Basics
Addresses the basics of stamping dies including the production of dies, die safety, rigging and setup of dies, die bolting and clamping, and OSHA die identification. Pre-requisite: IMT 2601 or Consent of Instructor. Lecture: 0.3 credits (4.5 contact hours), Lab: 0.2 credits (6 contact hours).
Components: Lecture

IMT 2603(1.3) Course ID:006550
Stamping Die Processes
Addresses various stamping die processes such as bending, forming, drawing, squeezing, and coining. Pre-requisite: IMT 2602 or Consent of Instructor. Lecture: 1.3 (Contact Hours 36).
Components: Lecture
IMT 2604(0.6) Course ID:006549
Metallurgy of Die Components
Addresses the characteristics of various tool and die steels, the properties of low carbon steels and cast iron, and die surface coatings and treatments. Pre-requisite: IMT 2603 or Consent of Instructor. Lecture: 0.1 credits (1.5 Contact Hours), Lab: 0.5 credits (15 contact hours).
Components: Lecture

IMT 2605(1.2) Course ID:006551
Anatomy of Stamping Dies
Addresses pads and strippers, spring selection, and the characteristics of nitrogen die pressure systems. Pre-requisite: IMT 2605 or Consent of Instructor. Lecture: 1.3 credits (19.5 contact hours).
Components: Lecture

IMT 2606(1.3) Course ID:006552
Repair Decisions
Addresses the process for die repair decisions, basic considerations needed when repairing dies, and the control of bend by adjusting pad pressure. Pre-requisite: IMT 2605 or Consent of Instructor. Lecture: 1.3. (Contact Hours 34.5).
Components: Lecture

Same As Offering: IMT 2806

IMT 2607(1.6) Course ID:006553
Die Repair
Addresses the repair of dies including good grinding practice, repairing worn edges, performing shimming of die components, repairing forming ribs and embossments, performing electrical and welding repairs, performing hand finishing, and explaining the repair of nitrogen pressure systems. Pre-requisite: IMT 2806 or Consent of Instructor. Lecture: 1.5 credits (22.5 contact hours), Lab: 1.5 credits (45 contact hours).
Components: Lecture

IMT 2801(0.75) Course ID:006424
Introduction to Programmable Logic Controllers
Provides an overview of Programmable Controllers, their hardware and functions. Pre-requisite: (IMT 220 and IMT 222 with a grade of “C” or greater) or (equivalent) or Consent of Instructor. Co-requisite: IMT 2811 or Instructor Consent. Lecture: 0.75 credit. (11.25 contact hours).
Components: Lecture

IMT 2802(0.75) Course ID:006425
Programming Instructions in PLCs
Provides an overview in programming Programmable Logic Controller Timers and Counters. Co-requisite: IMT 2812 or Instructor Consent. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 2803(0.75) Course ID:006426
Number Systems and Data Manipulation in PLCs
Includes different numbering systems, their transfer from one location to another, comparing, manipulation and common math instructions used in PLC. Co-requisite: IMT 2813 or Instructor Consent. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 2804(0.75) Course ID:006427
Advanced Instructions and Troubleshooting PLCs
Provides an understanding of control instructions, sequences, shift registers, troubleshooting, and forcing inputs and outputs. Co-requisite: IMT 2814 or Instructor Consent. Lecture: 0.75 credit (11.25 contact hours).
Components: Lecture

IMT 2811(0.5) Course ID:006428
Introduction to Programmable Logic Controllers Lab
Provides hands-on experience in programming and addressing basic instructions, internal relays, and latching relays. Includes changing modes of operation. Pre-requisite: (IMT 220 and IMT 221 with a grade of “C” or greater) or (equivalent) or Consent of Instructor). Co-requisite: IMT 2801 or Instructor Consent. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 2812(0.5) Course ID:006429
Programming Instructions in PLCs Lab
Provides practical experience in programming Programmable Logic Controller Timers and Counters. Co-requisite: IMT 2802 or Instructor Consent. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 2813(0.5) Course ID:006430
Number Systems and Data Manipulation in PLCs Lab
Converts numbers systems, perform data manipulation, transfer, and comparison on the numbers as well as program math instructions. Co-requisite: IMT 2803 or Instructor Consent. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

IMT 2814(0.5) Course ID:006431
Advanced Instructions and Troubleshooting PLCs Lab
Covers program control instructions, sequencers, and shift registers. Includes troubleshooting PLC issues and using the forcing command. Co-requisite: IMT 2804 or Instructor Consent. Laboratory: 0.5 credit (15 contact hours).
Components: Laboratory

INF 120(3) Course ID:007282
Elementary Programming
An elementary introduction to programming for those with no previous programming experience. Emphasis on understanding how to read and write basic procedural programs, and on understanding the concepts of algorithm and execution. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: SN - Science, University Course (Northern Kentucky University)

INF 128(3) Course ID:007283
Principles of Informatics
Multi-disciplinary exploration of the nature of information; how it is represented, processed, shared, preserved, and protected. Topics drawn from the fields of computing, communication, business, the natural and social sciences, and the humanities. Identifies enduring principles; examines impacts on individuals and society; provides practice with a variety of digital technologies. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Northern Kentucky University)

INF 200(3) Course ID:007284
Object Oriented Programming I
Elementary object-oriented programming concepts and practice: types, decisions, loops, methods, arrays, classes; design and problem-solving. An intensive introduction intended for students with programming experience. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Northern Kentucky University)

INF 282(3) Course ID:007286
Introduction to Databases
Core concepts for the design, creation, and manipulation of relational databases. Analysis of data requirements, conceptual modeling, definition of the relational model, relational database design and normalization, and database implementation; manipulation of relational databases using relational algebra with SQL. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Northern Kentucky University)

INF 286(3) Course ID:007287
Introduction to Web Development
An introduction to web design and development for majors in the informatics fields. Web page creation and HTML; site organization and best practices; e-business planning, models and strategies; overview of XML and CSS; introduction to client-side and server-side programming. Lecture 3.0 credits (45 contact hours).
Components: Lecture
Attributes: University Course (Northern Kentucky University)

INF 125(2) Course ID:001607
Introduction to Drywall
This course includes cutting and hanging drywall. The manufacturing processes are covered along with product options for special applications. Installation of metal studs in fabrication of walls is included also. Laboratory: 2 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

INS 181(3) Course ID:006587
Foundations of Insurance Production
Introduces principles of insurance production and agency and sales management. Emphasizes insurance products and insurance markets in the context of personal lines coverages as well as limited commercial lines coverages. Pre-requisite: Reading, English, and Mathematics assessment scores above the KCTCS developmental placement level or successful completion of the prescribed developmental course(s). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

INS 182(3) Course ID:006588
Multiple Lines Insurance Production
Introduces principles of multiple lines insurance production. Emphasizes insurance product and insurance markets in the context of commercial lines coverages. Pre-requisite: INS 181. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

IRW 085(4) Course ID:015875
Integrated Reading and Writing I
Emphasizes proficiency in reading comprehension, vocabulary, and critical thinking skills to prepare students for college reading through individualized and/or group instruction and practice. Applies writing as a process with emphasis on paragraph-length assignments, basic conventions of standard English as they apply to students’ own work, writing in response to reading, and the use of technology to produce and share writing. Pre-requisite: Placement by KCTCS Assessment and Placement Policy. Lecture: 4.0 credits (60 contact hours).
Components: Lecture
Attributes: Developmental/Remedial Learning Skills
ISX 1001(1) Course ID:016784
Safety & Universal Precaution
This course provides practical training in industrial safety. The students are taught to observe general safety rules and regulations, to apply work site and shop safety rules, and to apply OSHA regulations. Lecture : 1.0 credits (15 contact hours)
Components: Lecture

ISX 1002(1) Course ID:016785
Fire Prevention & Hazardous Comm
This course provides practical training in industrial safety. The students are taught to observe general safety rules and regulations, to apply work site and shop safety rules, and to apply OSHA regulations specifically related to fire prevention and hazardous communication procedures. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

ISX 1003(1) Course ID:016786
CPR & First Aid
This course provides practical training in industrial safety. Students are expected to obtain certification in first aid and cardiopulmonary resuscitation. Lecture: 1.0 credits (15 contact hours)
Components: Lecture

ISX 1051(0.67) Course ID:015673
10-hour General Industry
Provides entry level workers with information about their rights and employer responsibilities. Emphasizes hazard identification, avoidance, control and prevention. Lecture: .67 credits (10 contact hours)
Components: Lecture

ISX 1052(1.33) Course ID:015674
General Industry Topics
Introduces the history of the safety movement under the standards of the Occupational Safety and Health Administration (OSHA). Emphasizes hazard identification, avoidance, control and prevention. (Covers selected topics and standards for general industry under OSHA.) OSHA certificate may be available upon successful completion of all required course topics (and must be within six months of completing ISX 1051). Pre-requisite OR Co-requisite: ISX 1051. Lecture: 1.33 credits (20 contact hours). Components: Lecture

JAT 101(3) Course ID:008222
Introduction to Communication Media
Lectures, readings, and other materials provide an introductory survey of the journalism, advertising, and telecommunications professions. This course will foster an understanding of the historical development, theory, effects, regulation, practice, and professional opportunities of these three industries. Students will gain an awareness of the possibilities and limitations of evolving communication technologies, preparing them to become intelligent consumers, producers, and managers of communication media. Lecture: 3 credits (45 contact hours)
Components: Lecture
Attributes: Other

JAT 241(1 - 4) Course ID:002223
Communications Practicum
Supervised laboratory work in the media of mass communications, with meetings for evaluation of work, study of techniques, analyses of problems, and reports. May be repeated to a maximum of four credits. (Offered in Community College System only); Independent Study 1.0 - 4.0 credit (15 contact hours)
Components: Independent Study
Attributes: Other

JUS 101(3) Course ID:017113
Introduction to Criminal Justice
This course provides an overview of the criminal justice system; organization and operation of police, courts, and corrections; race, ethnicity, gender, and criminal justice decision-making, current trends and future prospects. Lecture: 3 credit hours (45 contact hours)
Components: Lecture
Attributes: SB - Social Behavior Science, University Course (Northern Kentucky University)

JUS 231(3) Course ID:017112
Race, Gender, and Crime
Political formulation of race and gender; race and gender issues related to criminality, victimization, prosecution; adjudication, sanctions, and employment within the legal system; antecedents of contemporary practice; prospects for change. Lecture: 3 credit hours (45 contact hours)
Components: Lecture
Attributes: AH - Arts and Humanities, University Course (Northern Kentucky University)
KHP Kinesiology and Health Promotion

KHP 100(1)  Course ID:002299
Walking
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 101(1)  Course ID:002300
Weightlifting
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 104(1)  Course ID:002304
Beginning Swimming
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 106(1)  Course ID:002306
Beginning Bowling
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 107(1)  Course ID:002307
Fitness
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 107(1)  Course ID:017465
Military Conditioning Intermediate I
Instruction in a variety of motor skills activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. (Source: https://www.uky.edu/registrar/content/schedule-classes-fall) UK Fall 2019 Schedule of Classes Searching for Classes. May be repeated to a maximum of six credits under different subtitles. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: University Course (University of Kentucky)

KHP 109(1)  Course ID:002309
Dancing
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 115(1)  Course ID:002315
Martial Arts
Provides students with beginning instruction and experience in self-defense, basic exercise, and disciplines associated with martial arts. Lab: 1 credit (30 contact hours).
Components: Laboratory
Attributes: Other

KHP 116(1)  Course ID:002316
Intermediate Martial Arts
Provides students with intermediate instruction and experience in basic exercise and disciplines associated with martial arts. Pre-requisite: KHP 115. Lab: 1 credit (30 contact hours).
Components: Laboratory
Attributes: Other

KHP 121(1)  Course ID:002321
Aerobics
Includes beginning conditioning activities and/or vigorous nonstop rhythmic movement patterns designed to improve or maintain cardiovascular endurance for students at all levels of fitness. Lab: 1 credit (30 contact hours).
Components: Laboratory
Attributes: Other

KHP 122(1)  Course ID:002322
Low-Impact Aerobics
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 123(1)  Course ID:002323
Basketball
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Laboratory: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 124(1)  Course ID:002324
Conditioning
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 129(1)  Course ID:002329
Beginning Weight Training
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 130(1)  Course ID:002330
Water Aerobics
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 132(1)  Course ID:002332
Nautilus
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 134(1)  Course ID:002334
Cross-training
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 135(1)  Course ID:002335
Swimming for Fitness
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

KHP 136(1)  Course ID:002336
Advanced Walking for Fitness
Instruction in a variety of motor skill activities. Courses are designed for students who already possess intermediate skills in the activity. Instructors will assess skill at start of course. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Assignment of specific title will occur internally in the department. Laboratory: 3 hours. Pre-requisite: Completion of comparable service course or demonstrated competency.
Components: Laboratory
Attributes: Other

KHP 136(1)  Course ID:017466
Military Conditioning Intermediate II
Instruction in a variety of motor skills activities. The courses are designed for students who already possess intermediate skill in the activity. Instructors will assess skill at start of course. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Assignment of specific titles will occur internally in the department. Three lab hours per week. (Source: https://www.uky.edu/registrar/content/schedule-classes-fall) UK Fall 2019 Schedule of Classes Searching for Classes. Pre-requisites: Completion of comparable service course or demonstrated competency. May be repeated to a maximum of six credits under different subtitles. Laboratory: 1 credit (45 contact hours).
Components: Laboratory
Attributes: University Course (University of Kentucky)

KHP 138(1)  Course ID:003855
Beginning Yoga
Provides students with instruction and activities associated with beginning yoga. Lab: 1 credit (30 contact hours).
Components: Laboratory
Attributes: Other

KHP 139(1)  Course ID:003856
Lifetime Sports
Instruction in a variety of motor skill activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Laboratory: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Technical

KHP 140(1)  Course ID:002341
Advanced Weight Training
Instruction in a variety of motor skill activities. Courses are designed for students who already possess intermediate skills in the activity. Instructors will assess skill at start of course. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Assignment of specific title will occur internally in the department. Pre-requisite: Completion of comparable service course or demonstrated competency. Laboratory: 3.0 credit hours.
Components: Laboratory
Attributes: Other

KHP 142(1)  Course ID:002342
Advanced Aerobics
Instruction in a variety of motor skills activities. Courses are designed for students who already possess intermediate skills in the activity. Instructors will assess skill at start of course. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Assignment of specific title will occur internally in the department. Pre-requisite: Completion of comparable service course or demonstrated competency. Laboratory: 3.0 credit hours.
Components: Laboratory
Attributes: Other

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course ID</th>
<th>Attributes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KHP 143(1)</td>
<td>002343</td>
<td>Other</td>
<td>Intramurals: Instruction in a variety of motor skills activities. Courses are for students who already possess intermediate skills in the activity. Instructors will assess skill at start of course. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit. Assignment of specific title will occur internally in the department. Pre-requisite: Completion of comparable service course or demonstrated competency. Laboratory: 3.0 contact hours. Components: Laboratory</td>
</tr>
<tr>
<td>KHP 145(3)</td>
<td>003870</td>
<td>Other</td>
<td>Concepts of Health and Fitness: Current concepts of health and fitness covering such topics as the benefits of physical fitness, principles of fitness training, prevention of cardiovascular disease, and basic concepts of nutrition and weight management. Emphasis will be on the promotion of health lifestyles. Lecture: 3 credits (45 contact hours)</td>
</tr>
<tr>
<td>KHP 146(1)</td>
<td>016371</td>
<td>Technical</td>
<td>Intermediate Yoga: Provides students with intermediate instruction and activities associated with yoga. Laboratory: 1 credit (30 contact hours). Components: Laboratory</td>
</tr>
<tr>
<td>KHP 149(1)</td>
<td>016372</td>
<td>Other</td>
<td>Advanced Yoga: Provides students with advanced instruction and activities associated with yoga. Laboratory: 1 credit (30 contact hours). Pre-requisite or Co-requisite: KHP 146. Components: Laboratory</td>
</tr>
<tr>
<td>KHP 150(3)</td>
<td>006816</td>
<td>Other</td>
<td>Personal Health Behavior: Prepares students to make informed choices about health issues and behaviors and to take responsibility for their health and well-being. Lecture: 3.0 credits (45 contact hours).</td>
</tr>
<tr>
<td>KHP 160(3)</td>
<td>006817</td>
<td>Technical</td>
<td>Personal Nutrition and Fitness: Introduces the importance of daily diet and nutrition. Addresses the role of the personal trainer in helping clients to recognize and decrease risks for chronic diseases. Lecture: 3.0 credits (45 contact hours). Components: Lecture</td>
</tr>
<tr>
<td>KHP 190(2)</td>
<td>000029</td>
<td>Technical</td>
<td>First Aid and Emergency Care: A study of first aid subject matter and orientation in the various first aid teaching methods. Lectures and demonstrations on first aid measures with skill training. American Red Cross Certificate made available. Lecture: 1.0 credit hour; Laboratory: 2.0 credit hours. Components: Laboratory, Lecture</td>
</tr>
<tr>
<td>KHP 225(3)</td>
<td>006818</td>
<td>Other</td>
<td>Exercise Techniques and Physical Training: Focuses on the core components of personal training. Provides information and resources necessary to pass personal fitness trainer certification. Pre-requisite: BIO 135 or MSG 100 (or consent of instructor). Co-requisite: KHP 235. Lecture: 3 credits (45 contact hours). Components: Lecture</td>
</tr>
<tr>
<td>KHP 230(3)</td>
<td>000379</td>
<td>Other</td>
<td>Human Health and Wellness: The study of health promotion, wellness, and disease prevention concepts as applied to individual, familial, and community health. Lecture: 3 credits (45 contact hours). Components: Lecture</td>
</tr>
<tr>
<td>KHP 235(2)</td>
<td>000620</td>
<td>Other</td>
<td>Personal Trainer Practicum: Students will apply personal training principles and techniques and demonstrate skills with clients in various settings under instructor and preceptor supervision. Pre-requisite: BIO 135 or MSG 100. Co-requisite: KHP 225. Practicum: 2.0 credits (60 contact hours). Components: Practicum</td>
</tr>
<tr>
<td>KHP 240(3)</td>
<td>002226</td>
<td>Other</td>
<td>Nutrition and Physical Fitness: Focuses on the inter-relationship between nutrition and physical fitness. Provides the student with the information necessary to formulate an individualized plan for achievement and maintenance of adequate nutrition and physical fitness while addressing weight control. Lecture: 3 credits (45 contact hours). Components: Laboratory, Lecture</td>
</tr>
<tr>
<td>KMA 100(5)</td>
<td>0001629</td>
<td>Technical</td>
<td>Kentucky Medication Aide: Prepares a Kentucky Medicaid Nurse Aide to administer specific medications in a long term care facility as delegated and supervised by a licensed nurse. Pre-requisite: [MMNA 100 or NAA 100 or NAA 125] and six months of work experience as a Kentucky Medicaid Nurse Aide] or Consent. Lecture/Lab: 5.0 credits (105 contact hours) Components: Lecture</td>
</tr>
<tr>
<td>LAS 201(3)</td>
<td>0115525</td>
<td>Other</td>
<td>Introduction to Latin America: An interdisciplinary approach to the people, culture, and development of the Latin American republics. Attention will be concentrated on significant aspects of the indigenous peoples, geography, economic processes, gender roles, social structures and politics of Latin America, with special attention paid to value structures and value conflicts. Musical, literary and artistic expression in Latin America will also be introduced. Lecture: 3.0 credits (45 contact hours) Components: Lecture</td>
</tr>
<tr>
<td>LIN 175(3)</td>
<td>0115987</td>
<td>Technical</td>
<td>Information Literacy: A foundational course that introduces students to the cross-disciplinary skills needed to assess information needs, and access and evaluate information sources. Lecture: 3.0 credits (45 contact hours). Components: Lecture</td>
</tr>
<tr>
<td>LIT 115(3)</td>
<td>004801</td>
<td>Technical</td>
<td>Introduction to Reference Services: Introduces library reference sources and services. Includes reference interview techniques, print and digital information sources, bibliographic and full-text databases, and digital access and retrieval skills. Lecture: 3.0 credits (45 contact hours). Components: Lecture</td>
</tr>
<tr>
<td>LIT 120(3)</td>
<td>007416</td>
<td>Technical</td>
<td>Readers’ Advisory Services: Examines library readers’ advisory services. Includes readers’ advisory resources, library programming, book discussion groups, collection development, formats for books, ebooks and audio books, online applications, and marketing. Lecture: 3.0 credits (45 contact hours). Components: Lecture</td>
</tr>
<tr>
<td>LIT 243(3)</td>
<td>004807</td>
<td>Technical</td>
<td>Library Services for Children: Introduces library services for children grades K - 6 and their caregivers. Includes surveys of child development, library programming, children’s literature, collection development, and legal issues. Lecture: 3.0 credits (45 contact hours). Components: Lecture</td>
</tr>
<tr>
<td>LIT 245(3)</td>
<td>005083</td>
<td>Technical</td>
<td>Library Services for Young Adults: Introduces library services for young adults from 6th to 12th grades. Includes programming, collection development, young adult literature, the use of the Internet, and ethical and legal issues. Emphasizes the development and promotion of young adult library services. Lecture: 3.0 credits (45 contact hours). Components: Lecture</td>
</tr>
<tr>
<td>LIT 247(3)</td>
<td>004800</td>
<td>Technical</td>
<td>Library Services for Adults: Introduces library services for adults. Includes adult literature, collection development, programming, circulation services, reference services, and customer relations. Lecture: 3.0 credits (45 contact hours). Components: Lecture</td>
</tr>
</tbody>
</table>
change control, and project management software
Introduces practical approach to managing essential project management processes, defining requirements, schedules, risk management assessment, change control, and project management software applications. Provides students with a practical approach to developing projects with opportunities to apply skills and elements by completing activities based upon real-time projects and case studies. Pre-requisite: Digital literacy or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 280(3) Course ID:004810
Genealogy Services in Libraries
Introduces genealogy services in libraries. Surveys genealogy data sources, research methods, collection development, patron referrals, legal and ethical issues, library programming, and marketing. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 285(3) Course ID:005051
History of Libraries
Examines the development of libraries from ancient times to the present, with emphasis on academic and public libraries in the United States. Includes the interaction of libraries with economic, social, and political trends in the larger society. Lecture: 3 credit (45 contact hours).
Components: Lecture
Attributes: Technical

LIT 299(1 - 3) Course ID:004811
Selected Topics in Library Information Technology
Expands library course offerings as new technologies develop and/or as new issues evolve. Lecture: 1.0 - 3.0 credits (15-45 contact hours).
Components: Lecture
Attributes: Technical

LOM 100(3) Course ID:006627
Introduction to Logistics Management
Presents an overview of general logistics concepts and organizational issues; inventory management and customer service in logistics; and transportation and third party logistics. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LOM 101(3) Course ID:006628
Transportation Management
Presents an overview of the role of transportation and pricing issues; transportation modes and terminals; and transportation management and global management issues. Pre-requisite: LOM 100. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LOM 102(3) Course ID:006629
Supply Chain Management
Presents an overview of supply chain management and financial analysis; inventory management skills and techniques; and supply chain design and sustainability solutions. Pre-requisite: LOM 100. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

LOM 180(3) Course ID:004629
Project Management
Introduces practical approach to managing essential resources, people, and deadlines, and real-world challenges required to bring any project in on time, on target, and on budget. Covers skills and concepts of essential project management processes, defining requirements, schedules, risk management assessment, change control, and project management software applications. Provides students with a practical approach to developing projects with opportunities to apply skills and elements by completing activities based upon real-time projects and case studies. Pre-requisite: Digital literacy or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MA 113(4) Course ID:006625
Calculus I
A course in one-variable calculus, including topics from analytic geometry, Derivatives and integrals of elementary functions (including the trigonometric functions) with applications. Lecture, three hours; recitation, two hours per week. Pre-requisites: Math ACT of 27 or above, or math SAT of 620 or above, or a grade of C or better in MA 109 (UK) and MA 112 (UK), or a grade of C or better in MA 110 (UK), or consent of the department. Students who enroll in MA 113 based on their test scores should have completed a year of pre-calculus study in high school that includes the study of the trigonometric functions. Note: Math placement test recommended. Lecture: 3.0 credits (45 contact hours). Discussion: 1.0 credit (30 contact hours).
Components: Discussion, Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 114(4) Course ID:006626
Calculus II
A continuation of MA 113, primarily stressing techniques of integration. Lecture, 3 hours; recitation, 2 hours per week. Pre-requisites: High school trigonometry or MA 112 (UK), and a grade of C or better in MA 113 (UK), MA 137 or MA 132 (UK). Lecture: 3.0 credit hours (45 contact hours). Discussion: 1.0 credit (30 contact hours).
Components: Discussion, Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 162(3) Course ID:006628
Finite Mathematics and Its Applications
Finite mathematics with applications to business, biology, and the social sciences. Linear functions and inequalities, matrix algebra, linear programming, probability. Emphasis on setting up mathematical models from stated problems. Pre-requisites: MA 109 (UK) or equivalent. Lecture 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 193(1) Course ID:006629
Supplementary Mathematics Workshop I
Laboratory offered (only) as an adjunct to certain mathematics lecture courses. Offered only on a pass/fail basis. Co-requisites: Set by instructor. Lab 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: University Course (University of Kentucky)

MA 194(1) Course ID:006630
Supplementary Mathematics Workshop II
Laboratory offered (only) as an adjunct to certain mathematics lecture courses. Offered only on a pass/fail basis. Co-requisites: Set by instructor. Lab 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: University Course (University of Kentucky)

MA 201(3) Course ID:006631
Mathematics for Elementary Teachers
Sets, numbers and operations, problem solving and number theory. Recommended only for majors in elementary and middle school education. Pre-requisites: MA 109 (UK) or MA 111 (UK). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

MA 202(3) Course ID:006632
Mathematics for Elementary Teachers
Algebraic reasoning, introduction to statistics and probability, geometry, and measurement. Pre-requisites: A grade of "C" or better in MA 201 (UK). Also recommended: a course in logic (e.g. PHI 120) or a course in calculus (e.g. MA 123 (UK)). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)
MAI 105(3) Course ID:004342
Introduction to Medical Assisting
Introduces rights, roles, responsibilities and functions of the medical assistant including personal and professional awareness, communication, interpersonal relationships, psychosocial concepts, ethics and legalities. Pre-requisite: Acceptance into the Medical Assisting program or Consent of Medical Assisting Coordinator/Director. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

MAI 120(3) Course ID:004090
Medical Assisting Laboratory Techniques I
Introduces theory and practical application in the physician’s office laboratory including anatomy and physiology, patient preparation, specimen collection and transport, processing and testing, blood collection and prevention of disease transmission. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours). Pre-requisite: Acceptance into the Medical Assisting Program or consent of Medical Assisting Coordinator/Director.

Components: Laboratory, Lecture
Attributes: Technical

MAI 140(4) Course ID:004091
Medical Assisting Clinical Procedures I
Introduces clinical skills and techniques used in the physician’s office for patient examination, diagnosis and treatment. Introduces concepts related to electronic health records (EHR). Presents principles and practical applications related to medical asepsis, infection control, vital signs, routine and specialty patient examinations, diagnostic testing, and treatments with an emphasis on OSHA regulations. Pre-requisite: Acceptance into the Medical Assisting Program or Consent of Medical Assisting Coordinator/Director. Lecture Lab: 4.0 credits (90 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

MAI 150(3) Course ID:004092
Medical Assisting Administrative Procedures I
Provides knowledge of the duties required in an office with emphasis placed on a medical office environment. Course content includes communication with patients and coworkers, completion of medical office forms, telephone techniques, filing office correspondence, appointment scheduling, processing medical records, and an introduction to medical office computer software. Pre-requisite: Acceptance into the Medical Assisting Program or Consent of Medical Assisting Coordinator/Director. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

MAI 170(2) Course ID:004093
Department Consent Required
Dosage Calculations
Provides a review of basic mathematics skills related to dosage calculations, a thorough knowledge of the systems of measurement and conversion, and application skills to perform dosage calculations. Pre-requisite: Acceptance into the Medical Assisting Program or Consent of Medical Assisting Coordinator/Director. Lecture: 2 credits (30 contact hours).

Components: Lecture
Attributes: Technical

MAI 200(3) Course ID:004094
Pathophysiology for the Medical Assistant
Provides instruction related to common acquired diseases, congenital conditions, injuries, illnesses, and trauma situations related to the major body systems. Pre-requisite: (BIO 135 or BIO 137 and BIO 139) and (CLA 131 or AHS 115 or AHS 120 or MIT 103) or Consent of Medical Assisting Coordinator/Director. All Pre-requisites must be achieved with a grade of “C” or greater. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

MAI 220(3) Course ID:004095
Medical Assisting Laboratory Techniques II
Relates to laboratory procedures waived complexity testing performed in the physician’s office laboratory. Stresses CLIA and OSHA regulations. Pre-requisite: MAI 120 with a grade of “C” or greater or Consent of Medical Assisting Coordinator/Director. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

MAI 230(3) Course ID:004096
Department Consent Required
Medical Insurance
Introduces fundamentals of insurance processing and coding for the medical office, with focus on proper procedures for accurate coding systems using the ICD, CPT and HCPCS coding system. Pre-requisite: Acceptance into the Medical Assisting Program or Consent of Medical Assisting Coordinator/Director. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

MAI 240(4) Course ID:004097
Medical Assisting Clinical Procedures II
Continues instruction and application techniques for specialty examinations, diagnostic testing and treatment modalities. Emphasizes fundamentals and practical applications of minor office surgical procedures. Pre-requisite: MAI 140 with a grade of “C” or greater or Consent of Program Coordinator. Lecture: 3 credits (45 contact hours); Lab: 1 credit (45 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

MAI 250(3) Course ID:004098
Medical Assisting Administrative Procedures II
Focuses on compiling and completing financial and insurance claim forms. Includes banking concepts, accounting systems frequently used in the medical office, payment procedures, insurance plans and claims, paper and electronic billing methods, and professional fees. Pre-requisite: MAI 150 with a grade of “C” or greater OR Consent of Program Coordinator. Lecture/Lab: 3.0 credits (45 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

MAT 270(3)
Pharmacology for the Medical Assistant
Examines pharmacology with concentration on prescriptions, drug nomenclature, classification of drugs, patient education, medication preparation and administration. Pre-requisite: (MAI 170 and (BIO 135 or BIO 137 and BIO 139) and (AHS 115 or AHS 120 or CLA 131 or MIT 103) with a grade of “C” or better) or Consent of Medical Assisting Program Coordinator/Director. Lecture: 2.0 credits (30 contact hours); Lab: 1.0 credit (45 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

MAT 281(1) Course ID:004101
Medical Assisting Practicum
Provides introductory practical experience (unpaid) through observation and work assignments in a healthcare setting. Clinical: 1 credit (60 contact hours). Pre-requisite: Consent of Medical Assisting Program Coordinator/Director.

Components: Clinical
Attributes: Technical

MAT 284(2 - 3) Course ID:015672
Medical Assisting Externship
Allows the student to apply knowledge, perform administrative and clinical procedures, and develop professional attitudes for interacting with other professionals and consumers in the health care field by means of externship assignments (unpaid). Pre-requisite: MAI 281 and Consent of Medical Assisting Program Coordinator/Director. Practicum: 2.0 - 3.0 credits (120-180 contact hours).

Components: Practicum
Attributes: Technical

MAT 289(1 - 2) Course ID:016764
Medical Assisting Assessment Preparation
Prepares student to assume the role of the Medical Assistant by preparing them for successful credentialing while providing the opportunity to apply critical thinking, cognitive skills and performance competencies. Pre-requisite: Consent of Program Coordinator. Laboratory: 1.0-2.0 credit hours (30-60 contact hours).

Components: Laboratory
Attributes: Technical

MAT 298(1 - 4) Course ID:004341
Instructor Consent Required
Selected Topics: Medical Assisting (Topic)
Various medical assisting topics, issues and trends will be addressed. Topics may vary from semester to semester at the discretion of the instructors; course may be repeated with different topics to a maximum of six credit hours. Lecture varies; Laboratory: varies. Pre-requisite: Consent of instructor.

Components: Laboratory, Lecture
Attributes: Technical

MAT 011(3)
Course ID:015623
Transitional Algebra
Provides individualized, accelerated, mastery-level progression through entry-level college mathematics Pre-requisite competencies as defined by KY Council of Postsecondary Education. Note: A passing grade in this course does not necessarily indicate that all prerequisites for all entry-level college mathematics courses have been met. Pre-requisite: KCTCS Placement Exam. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics
MAT 050(1 - 2) Course ID:004565
Developmental Mathematics Workshop
Provides supplemental academic support such as extra class sessions, tutoring, and/or increased monitoring to promote student success. May be associated with any developmental math course offered through KCTCS and may be repeated for each math course. Credit cannot be received by special exam. Co-requisite: Set by instructor. Laboratory: 1-2 credits (30-60 contact hours).

Components: Laboratory
Attributes: Remedial - Mathematics

MAT 055(3) Course ID:004555
Pre-Algebra
Includes operations on integers, decimals and fractions. Introduces exponents, square roots, percents, ratios, proportions, prime factorization, basic geometry, algebraic expressions, basic linear equations, and applications. Pre-requisite: KCTCS placement examination. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 055A(1.6) Course ID:007338
Integers, Fractions and Decimals
Covers the properties of real numbers, prime factorization of whole numbers, rounding of whole numbers, and decimals to an indicated place value. Includes basic operations, order of operations, and absolute value on integers, fractions and decimals. Permits the conversion among fractions, decimals, and percents; evaluation of whole number powers of integers, fractions, and decimals; and the evaluation of square roots of perfect squares of integers, fractions, and decimals. Pre-requisite: KCTCS Placement examination. Lecture: 1.6 credits (24 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 055B(0.7) Course ID:007339
Algebraic Expressions
Includes the evaluation of algebraic expressions, simplifying algebraic expressions, solving problems involving ratio and proportion, and solving problems involving percent. Pre-requisite: MAT 055A. Lecture: 0.7 credits (10.5 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 055C(0.7) Course ID:007340
Beginning Linear Equations
Uses both the addition and multiplication properties to solve a linear equation. Includes how to determine the length of the unknown side of a right triangle using the Pythagorean Theorem and to determine the perimeter, circumference, area, surface area, and volume of basic plane figures and solids. Covers how to solve applied problems using these competencies with real world applications. Pre-requisite: MAT 055B. Lecture: 0.7 credits (10.5 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 055D(0.7) Course ID:007341
Integers, Fractions and Decimals
Covers the properties of real numbers, prime factorization of whole numbers, rounding of whole numbers, and decimals to an indicated place value. Includes basic operations, order of operations, and absolute value on integers, fractions and decimals. Permits the conversion among fractions, decimals, and percents; evaluation of whole number powers of integers, fractions, and decimals; and the evaluation of square roots of perfect squares of integers, fractions, and decimals. Pre-requisite: KCTCS Placement examination. Lecture: 1.6 credits (24 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 055E(0.8) Course ID:007342
Linear Equations and Inequalities
Includes solving linear equations in one variable, literal equations for a specified variable, and linear inequalities. Covers writing sets using interval and set-builder notations and translating verbal statements into algebraic expressions. Pre-requisite: MAT 055 or KCTCS Placement examination. Lecture: 0.8 credits (12 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 055F(0.8) Course ID:007343
Polynomials
Includes the application of rules of integer exponents; addition, subtraction, and multiplication of polynomials of one or more variables; and division of polynomials of one variable. Pre-requisite: MAT 055A. Lecture: 0.8 credits (12 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 061(4) Course ID:017297
Foundations of College Algebra
Prepares students to take College Algebra with College Algebra Workshop. Introduces operations on integers, decimals, and fractions; ratios, proportions, and percents; simplifying radicals and algebraic expressions; solving linear and quadratic equations; linear inequalities; solving formulas; factoring; slope and graphing lines. Pre-requisite: KCTCS Placement Policy. Lecture: 4 credits (60 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 062(3) Course ID:007375
Intro to Workplace Mathematics
Prepares students for Business Mathematics, Applied Mathematics, and Technical Mathematics. Includes properties of algebra, using formulas, solving linear equations, percentages, ratios, proportions, plotting points, graphing lines, exponents, and measurement. Encourages applications of algebra and effective use of technology. Pre-requisite: MAT 055 or equivalent as determined by KCTCS placement examination. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 065A(0.8) Course ID:007344
Beginning Linear Equations
Uses both the addition and multiplication properties to solve a linear equation. Includes how to determine the length of the unknown side of a right triangle using the Pythagorean Theorem and to determine the perimeter, circumference, area, surface area, and volume of basic plane figures and solids. Covers how to solve applied problems using these competencies with real world applications. Pre-requisite: MAT 055B. Lecture: 0.7 credits (10.5 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 065B(0.5) Course ID:007345
Systems of Linear Equations
Includes solving systems of linear equations in two variables using multiple methods; determining the slope of a line given the two points, a graph, or an equation; determining the intercepts of a line; and determining if two lines are parallel, perpendicular, or neither based on slope. Pre-requisite: MAT 065B. Lecture: 0.8 credits (12 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 065C(0.8) Course ID:007346
Factoring
Includes the factoring of polynomials by finding the greatest common factor, by grouping, and by using special products. Covers factoring general trinomials and solving polynomial equations by factoring. Pre-requisite: MAT 065C. Lecture: 0.5 credits (7.5 contact hours).

Components: Laboratory
Attributes: Remedial - Mathematics

MAT 065D(0.4) Course ID:007347
Beginning Linear Equations
Uses both the addition and multiplication properties to solve a linear equation. Includes how to determine the length of the unknown side of a right triangle using the Pythagorean Theorem and to determine the perimeter, circumference, area, surface area, and volume of basic plane figures and solids. Covers how to solve applied problems using these competencies with real world applications. Pre-requisite: MAT 065C. Lecture: 0.4 credits (6.0 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 071(3) Course ID:017181
Foundations of Precalculus
Includes linear and absolute value equations and inequalities, linear equations in two variables, polynomials and factoring, exponential and radical expressions, quadratic equations, and systems of two linear equations. Pre-requisite: KCTCS placement examination. Lecture: 3 credit hours (45 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 075(4) Course ID:015659
Mathematical Literacy
Develops the mathematical thinking skills and understanding needed for non-math and non-science majors, in a one-semester course integrating numeracy, proportional reasoning, algebraic reasoning, and functions. Provides an alternate path to college-level math courses other than college algebra. Pre-requisite: MAT 055 or equivalent as determined by KCTCS placement examination. Lecture: 4.0 credits (60 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 085(3) Course ID:007045
Intermediate Algebra
Includes rational expressions, radical expressions, rational exponents, graphs of parabolas, inequalities, equations of lines, functions and applications, with emphasis on solving quadratic, rational, and radical equations. Pre-requisite: MAT 065 or MAT 075 or KCTCS placement examination. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Remedial - Mathematics

MAT 096(1 - 2) Course ID:015815
Supplemental Mathematics
Provides academic support for students scoring below the system-wide standard into a quantitative-reasoning course. Serves as supplemental co-requisite for students with borderline test scores, as defined in the KCTCS course placement policy. If students withdraw from MAT 096, they must also withdraw from the co-requisite course.

Components: Lecture
Attributes: Remedial - Mathematics, Course Also Offered

MAT 100(2) Course ID:002374
College Algebra Workshop
Provides supplemental review of algebra skills needed for success in college algebra for students with a Math ACT of 19-21. (Credit not available by special exam; withdrawal from MAT 100 requires withdrawal from MAT 150; can be offered pass/fail or letter grade basis.) Lecture: 2.0 credits (30 contact hours). Pre-requisite: Concurrent enrollment in MAT 150. NOTE: Effective Fall 2010 ACT 19.

Components: Lecture
Attributes: Other, Course Also Offered in Modules, Remedial - Mathematics

MAT 105(3) Course ID:004557
Business Mathematics
Covers basic mathematical concepts as applied to finance. Includes percentages, simple and compound interest, annuities, sinking funds, depreciation, and consumer debt, including installment buying, credit cards, and mortgages. Pre-requisite: 1. MAT 061, MAT 062, MAT 065, MAT 071, MAT 075, or MAT 085, OR 2. Completion of MAT 055 and concurrent enrollment in MAT 105S, OR 3. KCTCS placement policy. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Quantitative Reasoning AAS

MAT 105S(1 - 2) Course ID:017289
Corequisite Remediation for Business Mathematics

Components: Lecture
Attributes: Other

MAT 110(3) Course ID:004558
Applied Mathematics
Includes the concepts of ratio and proportion, units and conversions, linear equations in two variables, inequalities, graphing and writing equation of a line, percents, interest, description, statistics, and logical symbolism. Emphasizes applications in the various technologies. Pre-requisite: 1. MAT 061, MAT 062, MAT 065, MAT 071, OR 085, OR 2. Completion of MAT 055 and concurrent enrollment in MAT 110S, OR 3. KCTCS placement policy. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Quantitative Reasoning AAS, Course Also Offered in Modules
MAT 110S(1 - 2) Course ID:017291
Corequisite Remediation for Applied Mathematics

Components: Lecture
Attributes: Other

Component Remediation
MAT 116(3) Course ID:004559
Technical Mathematics
Includes some mathematical concepts from algebra, geometry, and trigonometry and applications relevant to these topics. Includes unit conversions, variation, measurement of geometric figures, vectors, and solving right and oblique triangles using trigonometry. Emphasizes applications in the various technologies. Pre-requisite: 1. MAT 061 OR MAT 062, MAT 065, MAT 071, MAT 075, or MAT 085, OR 2. Completion of MAT 055 and concurrent enrollment in MAT 116S, OR 3. KCTCS placement policy. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Quantitative Reasoning AAS, Course Also Offered in Modules

MAT 116S(1 - 2) Course ID:017293
Corequisite Remediation for Technical Mathematics

Components: Lecture
Attributes: Other

MAT 126(3) Course ID:004562
Technical Algebra and Trigonometry
Examines mathematical concepts from algebra and trigonometry. Includes vectors, phasor algebra, variation, trigonometric functions, coordinate systems, system of linear equations, quadratic, rational, exponential and logarithmic equations. Pre-requisite: 1. MAT 061, MAT 065, MAT 071, MAT 075, or MAT 085, OR Completion of MAT 055 and concurrent enrollment in MAT 126S, OR KCTCS placement policy. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Quantitative Reasoning AAS

MAT 126S(1 - 2) Course ID:017294
Corequisite Remediation for Technical Algebra and Trigonometry

Components: Lecture
Attributes: Other

MAT 141(3) Course ID:017208
Liberal Arts Mathematics
Serves as a course in quantitative reasoning and problem solving intended for liberal arts majors. Includes voting methods, apportionment, interest and investments, probability, statistics, and geometry. (Students may not receive credit for both this course and MAT 146.) Pre-requisite or Co-requisite: College Readiness or concurrent enrollment in MAT 141-S or MAT 061 or MAT 065 or MAT 071 or MAT 075. Lecture: 3 credit hours (45 contact hours).

Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 141S(1) Course ID:017209
Corequisite Remediation for Liberal Arts Mathematics
Provides supplementary instruction for students who do not meet college readiness standards for MAT 141. Covers content necessary for success in MAT 141. Co-requisite: MAT 141. Lecture: 1 credit hour (15 contact hours).

Components: Lecture
Attributes: Other

MAT 146(2) Course ID:002375
Contemporary College Mathematics
Serves as a course in quantitative reasoning and problem solving intended for non-science majors. Includes voting methods, finance, population growth, and at least two additional topics chosen from: apportionment, geometry, logic, probability and statistics, graph theory, number theory, game theory, and set theory. Pre-requisite: 1. Math ACT score of 19 or above, OR 2. Successful completion of MAT 061, MAT 065, MAT 071, MAT 075, MAT 085, MAT 126, or equivalent, OR 3. KCTCS placement policy including concurrent enrollment in MAT 146S as appropriate. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: QR - Quantitative Reasoning, Course Also Offered in Modules

MAT 146S(1 - 2) Course ID:017295
Corequisite Remediation for Contemporary College Mathematics
Provides supplementary instruction for students who do not meet college readiness standards for MAT 146. Covers content necessary for success in MAT 146. Co-requisite: MAT 146. Lecture: 1-2 credit hours (15-30 contact hours).

Components: Lecture
Attributes: Other

MAT 150(3) Course ID:002376
College Algebra
Includes selected topics in algebra and analytic geometry. Develops manipulative skills and concepts required for further study in mathematics. Includes linear, quadratic, polynomial, rational, exponential, logarithmic and piecewise functions; systems of equations; and an introduction to analytic geometry. (Students may not receive credit for both MAT150 and any other College Algebra or Precalculus course. Credit not available on the basis of special exam.) Pre-requisite: 1. Math ACT score of 22 or above; 2. Math ACT score of 19-21 with concurrent MAT 100 workshop; 3. Successful completion of MAT 061, MAT 065, or MAT 075 with concurrent MAT 100 workshop; 4. Successful completion of MAT 071, MAT 085, MAT 126, or equivalent; or 5. KCTCS placement exam recommendation. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: QR - Quantitative Reasoning, Course Also Offered in Modules

MAT 150S(3) Course ID:017087
Introduction to Applied Statistics
Serves as an entry-level introduction to applied statistics useful for a variety of fields. Covers statistical terminology and the appropriate use of software for the calculation of descriptive statistics, basic probability, correlation and linear regression. Emphasizes understanding the uses and misuses of statistics in the real world. (Same as STA 151.) (Students may not receive credit for both this course and any of the following: STA 151, STA 200, STA 210, STA 215.) Pre-requisite: College Readiness in Mathematics. Lecture: 3 credit hours (45 contact hours).

Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 151S(1) Course ID:017074
Corequisite Remediation for Introduction to Applied Statistics
Provides supplementary instruction for students who do not meet college readiness standards for STA 151 or MAT 151. Covers content necessary for success in STA 151 or MAT 151 as needed. Lecture: 1 credit (15 contact hours).

Components: Lecture
Attributes: Other, Supplemental Mathematics

MAT 154(2) Course ID:000552
Trigonometry
Includes trigonometric functions, identities, multiple analytic formulas, laws of sines and cosines, graphs of trigonometric functions, and inverse trigonometric functions. Pre-requisite: Completion of MAT 071 or MAT 150 or a college intermediate algebra course or two years of high school algebra. Lecture: 2.0 credits (30 contact hours).

Components: Lecture
Course Equivalents: MAT 155
Attributes: QR - Quantitative Reasoning

MAT 155S(3) Course ID:004563
Trigonometry
Includes the trigonometric functions, identities, multiple analytic formulas, laws of sines and cosines, graphs of trigonometric functions in rectangular and polar coordinates, and solving trigonometric equations. Emphasizes applications in each topic. (Students may not receive credit for both MAT155 and any other trigonometry or pre-calculus course.) Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 159(4) Course ID:000543
Analytic Geometry and Trigonometry
Includes trigonometric functions, trigonometric identities, graphs of trigonometric functions, and inverse trigonometric functions, polynomial and rational functions, the Algebra of functions, exponential and logarithmic functions, and systems of equations. The course is not available for credit by special examination. The course is not available for credit to persons who have received credit for college algebra or trigonometry course. Pre-requisite: Two years of high school algebra and a Math ACT score of 19 or above, or MAT 108R (UK) or math placement test. Lecture: 4.0 credits (60 contact hours).

Components: Lecture
Course Equivalents: MAT 160
Attributes: QR - Quantitative Reasoning

MAT 160(5) Course ID:005312
Precalculus
Prepares students to enroll in a calculus sequence. Includes trigonometric functions, exponentials and logarithms, graphs, polars coordinates, conic sections, and systems of nonlinear equations. Students may not receive credit for both MAT 160 and either College Algebra or Trigonometry. Credit is not available by special examination. Lecture: 5 credits (75 contact hours).

Components: Lecture
Course Equivalents: MAT 159
Attributes: QR - Quantitative Reasoning

MAT 161(5) Course ID:017175
Statistics and Algebra
Serves as the entry-level mathematics class for students in business and related fields. Provides a survey of algebra and statistics topics necessary to prepare students for Brief Calculus and Applied Statistics. Develops fluency in the manipulation of polynomial, rational, radical, exponential, and logarithmic functions in order to solve equations, inequalities, and application problems. Familiarizes students with the graphs of the aforementioned functions. Includes nonlinear systems of equations. Covers statistical terminology and the appropriate use of software for the calculation of descriptive statistics, basic probability, correlation and linear regression. (Students may not receive credit for both this course and any of the following: STA 151, MAT 151, MAT 150.) Pre-requisite: 1. ACT Math of 22 or MAT 071 or MAT 085 or 2. KCTCS placement policy and concurrent enrollment in MAT 161-S or 3. Completion of MAT 061 and concurrent enrollment in MAT 161-S.

Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 161S(2) Course ID:017174
Corequisite remediation for Statistics and Algebra
Provides supplementary instruction for students who do not meet college readiness standards for MAT 161. Covers content necessary for success in MAT 161 as needed. Co-requisite: MAT 161. Lecture: 2 credit hours (30 contact hours).

Components: Lecture
Attributes: Other
MAT 170(3)  Course ID:005314
Brief Calculus with Applications
Provides an introduction to differential and integral calculus with applications in biological sciences, social sciences, physical sciences, or business with an analysis of algebraic, exponential, and logarithmic functions. (Students may not receive credit for both MAT 170 and MAT 175.) Lecture: 3 credits (45 contact hours). Pre-requisite: Successful completion of MAT 150 or Math ACT 27 or above.
Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 174(4)  Course ID:000553
Calculus I
Introduces topics from analytic geometry, derivatives and integrals of elementary functions, trigonometric functions, exponential functions, and logarithmic functions, and their applications. A course in one variable calculus. Pre-requisite: Math ACT score of 27 or above, or MAT 150 and MAT 159, or consent of instructor. Lecture/Lab: 4.0 credits (75 contact hours).
Components: Lecture
Course Equivalents: MAT 175
Attributes: QR - Quantitative Reasoning

MAT 175(5)  Course ID:005315
Calculus I
Examines one-variable calculus including limits, differentiation and integration of algebraic, trigonometric, exponential, logarithmic, hyperbolic, and inverse trigonometric functions with applications. Lecture: 5 credits (75 contact hours). Pre-requisite: 1. College Algebra and Trigonometry, or equivalent, with grades of C or higher. 2. Math ACT 27 or above. 3. Placement exam recommendation, or 4. Consent of instructor.
Components: Lecture
Course Equivalents: MAT 174
Attributes: QR - Quantitative Reasoning

MAT 184(4)  Course ID:000557
Calculus II
Stresses techniques of integration and infinite series. Includes transcendental functions and polar coordinates. A continuation of MAT 174. Pre-requisite: MAT 174 with a grade of C or above. Lecture/Lab: 4.0 credits (75 contact hours).
Components: Lecture
Course Equivalents: MAT 185
Attributes: QR - Quantitative Reasoning

MAT 195(5)  Course ID:005316
Calculus II
Includes applications of integration, advanced integration techniques, sequences and infinite series, and parametric and polar equations. Pre-requisite: Calculus I, or equivalent, with grade of C or higher, or consent of the instructor. Lecture: 5.0 credits (75 contact hours).
Components: Lecture
Course Equivalents: MAT 184
Attributes: QR - Quantitative Reasoning

MAT 205(3)  Course ID:005622
Mathematics For Elementary and Middle School Teachers I
Introduces problem solving, number and numeral systems, whole numbers, integers, rational and irrational numbers, and elementary number theory. Requires demonstration of basic skills in mathematics to receive credit in this course. Pre-requisite: MAT 141 or MAT 146 or MAT 150 or equivalent, with a minimum grade of "C". Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

MAT 214(3)  Course ID:005694
Calculus III with Linear Algebra
Examines multivariate calculus. Includes partial differentiation, multiple integration, vector calculus, and selected topics from linear algebra including matrices, linear independence of vectors, linear transformations, characteristic values and vectors. Offered primarily for STEM majors. Pre-requisite: Successful completion of Calculus II. Lecture/Lab: 4.0 credits (75 contact hours).
Components: Integrated Laboratory, Integrated Lecture
Attributes: Other

MAT 218(3)  Course ID:005319
Differential Equations
Examines ordinary differential equations emphasizing first and second order equations and applications. Includes series solutions of second order equations and Laplace transform methods. Pre-requisite: MAT 275 or Consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 220(3)  Course ID:005623
Mathematics For Elementary and Middle School Teachers II
Introduces probability and statistics; geometric concepts including congruence and similarity; and measurement. Required demonstration of basic skills in mathematics to receive credit in this course. Pre-requisite: MAT 141 or MAT 146 or MAT 150 or equivalent, with a minimum grade of "C". Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

MAT 226(3)  Course ID:005694
Calculus III with Linear Algebra
Examines multivariate calculus. Includes partial differentiation, multiple integration, vector calculus, and selected topics from linear algebra including matrices, linear independence of vectors, linear transformations, characteristic values and vectors. Offered primarily for STEM majors. Pre-requisite: Successful completion of Calculus III with Linear Algebra. Lecture: 3.0 credits (75 contact hours).
Components: Lecture
Attributes: Other

MAT 231(4)  Course ID:006894
Calculus IV
Focuses primarily on first and second order equations. Includes matrix solutions of systems of linear differential equations, both homogeneous and nonhomogeneous. Also includes series solutions, Bessel equations, Laplace transforms, and operator methods. Primarily for STEM majors. Pre-requisite: Successful completion of Calculus III with Linear Algebra. Lecture: 3.0 credits (75 contact hours).
Components: Lecture

MAT 261(3)  Course ID:003966
Introduction to Number Theory
Investigates topics from classical number theory, including discussions of mathematical induction, prime numbers, division algorithms, congruences, and quadratic reciprocity. Pre-requisite: Consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 275(4)  Course ID:005318
Calculus III
Examines multivariate calculus including parametric equations; rectangular, cylindrical, and spherical coordinate systems; vectors and vector-valued functions; limits and derivatives of functions of several variables; multiple integration; and line and surface integrals. Pre-requisite: MAT 185 or equivalent, or Consent of instructor. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 285(3)  Course ID:005319
Differential Equations
Examines ordinary differential equations emphasizing first and second order equations and applications. Includes series solutions of second order equations and Laplace transform methods. Pre-requisite: MAT 275 or Consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning

MAT 0315(0.3)  Course ID:007329
Equations of Lines
Covers the writing equations of lines from given data, verbal descriptions, and graphs; and writing the equation of a line parallel or perpendicular to a given line. Pre-requisite: MAT 065 or MAT 075 or KCTCS placement examination. Lecture: 0.3 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 0852(0.6)  Course ID:007330
Absolute Value and Inequalities
Includes solving absolute value equations, compound inequalities, solving and graphing absolute value inequalities; and graphing linear inequalities in two variables. Pre-requisite: MAT 0851. Lecture: 0.6 credits (90 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 0853(0.4)  Course ID:007331
Rational Expressions
Includes the simplification of rational expressions, performing basic operations with rational expressions, and solving equations with rational expressions. Pre-requisite: MAT 0852. Lecture: 0.4 credits (60 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 0854(0.8)  Course ID:007332
Radicals
Covers the conversion between radical and rational exponent form, simplification of radicals, performance of operations with radicals, and the solution of equations involving radicals. Pre-requisite: MAT 0853. Lecture: 0.6 credits (90 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 0855(0.3)  Course ID:007333
Quadratics
Includes solving quadratic equations with complex solutions using completing the square and the quadratic formula. Covers graphing parabolas by finding the vertex, finding the axis of symmetry, and plotting points. Pre-requisite: MAT 0854. Lecture: 0.3 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 0856(0.8)  Course ID:007334
Functions
Includes the evaluation of a function using function notation, determination of whether a given correspondence or graph represents a function, determination of the domain of a function, and identification of the range of a function. Includes modeling and solving applications based on linear, quadratic, and exponential functions. Pre-requisite: MAT 0855. Lecture: 0.8 credits (12 contact hours).
Components: Lecture
Attributes: Remedial - Mathematics

MAT 1101(0.7)  Course ID:006142
Logic and Reasoning
Investigates concepts of logical symbolism, valid and invalid arguments. Uses applications throughout. Pre-requisite: MAT 065 or equivalent as determined by KCTCS placement examination. Lecture: 0.7 credit (10.5 contact hours).
Components: Lecture
**MAT 1102 (0.8) Course ID: 006143**

Statistics
Develops concepts of descriptive statistics. Emphasizes applications throughout. Pre-requisite: MAT 065 or equivalent as determined by KCTCS placement examination. Lecture: 0.8 credit (12 contact hours).

**Components: Lecture**

**MAT 1103 (0.7) Course ID: 006144**

Algebra and Graphing
Develops concepts of ratio and proportion, linear equations in two variables, inequalities, graphing and writing the equation of a line. Emphasizes applications throughout. Pre-requisite: MAT 065 or equivalent as determined by KCTCS placement examination. Lecture: 0.8 credit (12 contact hours).

**Components: Lecture**

**MAT 1104 (0.8) Course ID: 006145**

Consumer Math, Geometry and Measurement
Develops concepts of ratio and proportion, measurement, units and conversions, percents and interest. Emphasizes applications throughout. Pre-requisite: MAT 065 or equivalent as determined by KCTCS placement examination. Lecture: 0.8 credit (12 contact hours).

**Components: Lecture**

**MAT 1461 (0.6) Course ID: 006555**

Integration
Discuss the fundamental theorem of calculus. Find the average value of a function. Find indefinite and definite integrals of a function using integration rules for algebraic functions. Find definite and indefinite integrals using substitution. Pre-requisite: MAT 1702. Lecture: 0.6 credits. (9 contact hours).

**Components: Lecture**

**MAT 1703 (0.6) Course ID: 006159**

Differential Applications
Determine critical points; determine intervals on which a function is increasing or decreasing; identify relative extrema; identify inflection points and intervals on which a function is concave up or concave down. Solve application problems involving relative rates and optimization for biological, social, or physical sciences and business. Determine whether a function is differentiable at a point. Find the derivative of functions including polynomial, rational, root, exponential, and logarithmic functions. Pre-requisites: MAT 1702. Lecture: 0.6 credits. (9 contact hours).

**Components: Lecture**

**MAT 1704 (0.5) Course ID: 006160**

Applications of Integration
Use definite integrals of find the area under a curve and between two curves. Find the integral of functions using polynomial, rational, root, exponential, and logarithmic functions. Solve application problems involving integrals for biological, social, and physical sciences or business. Pre-requisite: MAT 1704. Lecture: 0.5 credits (7.5 contact hours).

**Components: Lecture**

**MAT 1705 (0.5) Course ID: 006161**

Vector Calculus
Develops concepts of vector calculus. Analyzes concepts and performs calculations in at least two of the special topics in contemporary college mathematics: Apportionment, probability and statistics, geometry, logic, graph, theory, number theory, game theory and set theory. Pre-requisite: MAT 1701. Lecture: 0.5 credits (7.5 contact hours).

**Components: Lecture**

**MBS 110 (0.6) Course ID: 006176**

Medical Insurance and Claims Processing
Provides an in-depth knowledge of the various insurance programs, including rules, regulations and guidelines, and follow-up for Medicare, Medicaid, Commercial Insurance, and managed care (HMO), and complete insurance forms manually for reimbursement. Lecture: 0.6 credits (9 contact hours). Co-requisite: (AHS 109 or BIO 130 or 135 or (BIO 137 and BIO 139) and (AHS 115 or CLA 131 or OST 103) and Computer Literacy and MBS 100 with a grade of C or better) or consent. Co-requisite: MBS 120.

**Components: Lecture**

**MBS 120 (0.8) Course ID: 006178**

Coding for Reimbursement
Prepares the student to code for optimum reimbursement using the ICD, CPT, and HCPCS codes for patient diagnoses and procedures. Pre-requisite: (AHS 109 or BIO 130 or 135 or (BIO 137 and BIO 139) and (AHS 115 or CLA 131 or OST 103) and Computer Literacy and MBS 100 or MBS 110 or MBS 120). Lecture: 0.8 credits (12 contact hours).

**Components: Lecture**

**ME 135 (0.6) Course ID: 006671**

Fundamentals of Mechatronics
Introduces the student to the basics of Mechatronic systems and the operation of electrical, mechanical, pneumatic/hydraulic, and Programmable Logic Control components in an advanced manufacturing system. Combines basic operational and analytical skills with critical thinking and applied troubleshooting. Teaches the students to troubleshoot a multitude of problems involved in typical electrical, mechanical, and hydraulic/ pneumatic systems. (Credit may not be earned for this course if the student has earned credit for MFG 125 or MFG 130.) Pre-requisite: ENG 110 and at least five other hours of approved technical electives (see Manufacturing Engineering Technology technical elective list) or consent of instructor. Lecture/Lab: 6.0 credit hours (120 contact hours).

**Components: Lecture**

**MFG 175 (2) Course ID: 006672**

Lean Operations
Introduces students to the principles and practices of lean operations. Emphasizes a lean simulation and examples from Toyota and other lean practitioners into introduce students to lean practices. Discusses Total Productive Maintenance. Lecture/Lab: 2.0 credit hours (30 contact hours).

**Components: Lecture**

**MGT 101 (3) Course ID: 004892**

Quality Management Principles
Students are introduced to fundamental concepts, principles, and practices used to improve quality in organizations. The need for organizational change is reviewed and paradigms of quality are introduced. An overview of areas of change, methods of quality planning and methods for implementing quality policies are provided. Lecture: 3.0 credit hours (45 contact hours).

**Components: Lecture**

**MGT 125 (3) Course ID: 006674**

Lean Principles
Introduces students to lean principles and concepts using examples from Toyota and other lean practitioner. Lecture: 1.0 credit hour (15 contact hours).

**Components: Lecture**

**MGT 175 (3) Course ID: 006675**

Total Productive Maintenance
Introduces Total Productive Maintenance concepts and practices using industry examples. Lecture: 0.5 credits (7.5 contact hours).

**Components: Lecture**

**ME 220 (3) Course ID: 006837**

Engineering Thermodynamics I
Fundamental principles of thermodynamics. Pre-requisite: PHY 231. Pre-requisite or concurrent: MA 214. Lecture: 3 credits (45 contact hours).

**Components: Lecture**

**ME 263 (4) Course ID: 006713**

Mechatronic Systems
Introduces students to the basics of Mechatronics systems and the operation of electrical, mechanical, pneumatic/hydraulic, and Programmable Logic Control components in an advanced manufacturing system. Combines basic operational and analytical skills with critical thinking and applied troubleshooting. Teaches the students to troubleshoot a multitude of problems involved in typical electrical, mechanical, and hydraulic/ pneumatic systems. (Credit may not be earned for this course if the student has earned credit for MFG 125 or MFG 130.) Pre-requisite: ENG 110 and at least five other hours of approved technical electives (see Manufacturing Engineering Technology technical elective list) or consent of instructor. Lecture/Lab: 6.0 credit hours (120 contact hours).

**Components: Lecture**

**MGT 501 (3) Course ID: 000497**

Personal Finance
Information needed to make intelligent choices and take effective action in the management of personal resources is provided. Topics include financial planning, buying, borrowing, saving, budgeting, investing, insurance, and taxes. Lecture: 3 credits (45 contact hours).

**Components: Lecture**
MGT 160(3) Course ID:004899
Introduction to Business
Business careers, terminology, and the interrelationships and complexities of business are introduced and examined in this survey course. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 200(3) Course ID:004900
Small Business Management
Students are introduced to the many facets of establishing, operating and/or owning a small business. Topics include legal forms of business organization, finance, accounting, insurance, governmental regulations and assistance, economics, marketing, and management principles. Pre-requisite: BAS 160 or MGT 160 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Course Equivalents: BAS 200
Attributes: Technical

MGT 210(3) Course ID:017114
Managing Quality
Introduces students to fundamental concepts, principles and practices used to manage and improve quality in organizations. Explores basic quality concepts including continuous improvement, customer focus, value-added concept, quality tools, statistical techniques, quality awards, quality standards, scientific management using data, designing products and services for quality, and the historic influences of leaders in quality management. Pre-requisite: BAS 160. Lecture: 3 credit hours (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 240(3) Course ID:005460
Business Ethics and Self Management
Emphasizes the need for managers to be self-directed to make ethical decisions. Explores moral principles, community standards and the ethics of decision making at personal and professional levels. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 256(3) Course ID:004901
Operations Management
Concepts and methods for economical planning and control of activities required for transforming a set of inputs into specified goods or services are introduced. Emphasis is given to forecasting, decision analysis, cost analysis, design of production systems, production/marketing relationships, operations planning and control, and the importance of global competitiveness. Pre-requisite: BAS 160. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 258(3) Course ID:006642
Project Management
Provides tools used in project management to accomplish the goals of society’s varied organizations. Provides insight into human behavior, knowledge of organizational issues, and skill with quantitative methods to allow successful project management. Pre-requisite: BAS 160. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 276(3) Course ID:004913
Introduction to Business Law
The student is introduced to the state and federal court systems, tort and criminal law, law of contracts, partnerships, sales of goods, government regulations, bailments and negotiable instruments. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 274(3) Course ID:004914
Human Resource Management
The student is introduced to the basic methods of recruiting, selecting, training, compensating, and maintaining a productive workforce. Concepts of effective employee relations including collective bargaining, contract administration, and safety and health programs are introduced. Techniques for systematic human resource planning and development of policies consistent with governmental regulations are emphasized. Pre-requisite: MGT 283 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 283(3) Course ID:004916
Principles of Management
Provides students with an overview of management beginning with the key functions of planning and decision making, organizing, leading and controlling. Explores the many aspects of management including human behavior, motivation, leadership, change and teams. Pre-requisite: BAS 160 or MGT 160 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 284(3) Course ID:004917
Applied Management Skills
A capstone course in which management theories and techniques are applied with emphasis on the action-skills that managers need for success. Course topics include delegating, motivating employees, team-building, conflict management, coaching and managing change. Pre-requisite: BAS 283/MGT 283 or prior supervisory experience. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 287(3) Course ID:005217
Supervisory Management
Students study the roles and responsibilities of the supervisor, emphasizing human relations skills while recognizing the behavioral factors of individuals and groups in the work environment. Conceptual knowledge base and skills to support the supervisor’s role and responsibilities are identified and developed. Pre-requisite: MGT 283 or consent of the instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MGT 288(3) Course ID:004918
Self-Management
The need for managers to be self-directed before they can manage successfully the work of others is emphasized. Contemporary approaches to developing the behavioral skills needed to improve personal effectiveness are explored. Topics include personal planning and goal setting, time management, stress management, interpersonal and human relations skills. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIL 101(2) Course ID:015681
Military Mountaineering and Leadership
This course is designed to be an introductory course to military science with emphasis on the following: Goal-setting, Physical Fitness Planning, Stress and Time Management, Mountaineering (which includes terminology, tools, and skills, rope management, knots, and rappelling/belaying techniques), and Basic Marksmanship. Additionally, cadets will receive an overview of Army Officership and the leadership skills necessary to succeed in any chosen career. Special attention will be given to the opportunities afforded an Army officer. Satisfactory completion of this course may be used to fulfill a General Education Category F requirement at Western Kentucky University (WKU). Lecture: 2.0 credits (2 contact hours).
Components: Lecture
Attributes: University Course (Western Kentucky University)

MIL 104(3) Course ID:004103
Medical Insurance
Introduces students to the basics of medical insurance including: insurance terminology, various coding systems, government programs, and general insurance procedures. Pre-requisite Or Co-requisite: MIL 103 or AHS 115 or CLA 131. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIL 106(3) Course ID:004104
Introduction to Medical Transcription
Provides experience in transcription of basic medical dictation: incorporating English usage, transcription skills, medical knowledge, and proofreading and editing skills while meeting progressively demanding accuracy and productivity standards. Pre-requisite: Computer Literacy course and CST 110 and (ENG 101 or OST 108) and (AHS 115 or CLA 131 or MIL 103). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIL 204(3) Course ID:004105
Medical Coding
Develops medical coding skills using government mandated coding systems as applied. Includes other reimbursement methods and medical insurance concepts. Pre-requisite Or Co-requisite: MIL 104, BIO 135 or Equivalent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIL 205(3) Course ID:004509
Advanced Medical Coding
Applies advanced coding rules for various coding systems and applies the rules to code patient services for a variety of payment systems emphasizing payment fraud and abuse. Pre-requisite: MIL 204 or MBS 120. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

MIL 206(3) Course ID:004106
Medical Transcription
Applies advanced concepts of medical transcription and provides advanced practice. Pre-requisite: MIL 106 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical
MIT 208(3) Course ID:004507
Instructor Consent Required
Inpatient Coding
Designed for students who have completed an entry-level coding course and are ready to move into more advanced hospital coding. Emphasizes inpatient coding using current government mandated coding systems. Pre-requisite: MIT 204. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MIT 212(1) Course ID:004506
Medications
Introduces the student to Pharmacology: the most commonly used drugs, their names, and classification; and drug reference books while stressing spelling. Pre-requisite: (MIT 103 or AHS 115 or CLA 131) or Consent of Instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture Attributes: Technical

MIT 217(3) Course ID:004107
Medical Office Procedures
Provides a working knowledge of the duties required in a medical office. Includes professional and career responsibilities, interpersonal communication, administrative responsibilities, and financial administration. Pre-requisite Or Co-requisite: OST 110 OR CIT 105 or OST 105 or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MIT 219(3) Course ID:006970
Coding Exam Preparation
Designed to prepare medical coding students to take a certifying exam to become a professional outpatient coder. Includes outpatient coding cases and review of medical terminology, basic anatomy, basic pathophysiology, reimbursement issues, and advanced coding guidelines for government mandated coding systems. Pre-requisite: (MIT 204 and MIT 206) or MBS 120. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MIT 222(3) Course ID:006340
Electronic Medical Records
Provides a working knowledge of computerized medical records software used in a variety of healthcare facilities. Pre-requisite: MIT 217. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MIT 223(3) Course ID:006571
Medical Information Technology Capstone
Enhances the student's transition from class to work by providing unpaid learning activities related to the MIT field. Integrates work experience with academic instruction. Includes an internship, field experiences, and/or simulated work experiences in which the student applies previously or concurrently learned concepts to practical work situations with the MIT field. Pre-requisite: Consent of Program Coordinator. Lecture: 1.0 credit (15 contact hours). Practicum: 2.0 credits (120 credit hours).
Components: Lecture, Practicum Attributes: Technical

MIT 224(3) Course ID:016402
Medical Practice Management
Introduces students to medical practice management from roles of staff members in healthcare to skills and responsibilities of the manager in relation to compliance and regulatory agencies. It identifies the requirements of managing the revenue cycle, compliance regulations, human resources, health information, and the general business processes. Pre-requisite Or Co-requisite: MIT 230, MIT 217, MIT 104. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MIT 227(3) Course ID:004108
Medical Office Software
Provides a working knowledge of computer medical practice management software in a simulated medical office setting. Prepares medical practice and office professionals to efficiently use practice management software in managing the operational, patient and financial data in medical offices and hospital environment utilizing hands on computer applications. Covers medical practice software skills including appointment scheduling, patient registration, procedure posting, electronic payment posting, patient billing and collections, report generation and file maintenance. Enables students to process insurance claim forms and complete electronic billing cycle using current medical billing software. Focus on accuracy is emphasized. Pre-requisite: MIT 104 & MIT 217. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MIT 228(3) Course ID:006341
Intro to Medical Forms
Introduces the basics of medical insurance including: insurance terminology and government programs, Pre-requisite OR Co-requisite: MIT 103 or MIT 103 at AHS 115 or CLA 131. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 230(3) Course ID:004109
Medical Information Management
Components: Lecture Attributes: Technical

MIT 240(3) Course ID:017450
Medical Interpreter-Lecture
Prepares students who are bilingual to develop awareness, knowledge, and skills necessary for effective language interpretation in health care settings. Emphasizes the roles and responsibilities of a health care interpreter; application of knowledge of common medical conditions, treatments, and procedures in communication through verbal and written methods; insight in language and cultural nuances for specific communities; development of skills to work with the patient and the health care team. Pre-requisite or Co-requisite: (ENG 101 AND MIT 103 AND BIO 135 OR BIO 137 AND BIO 139)) Or Instructor Consent. Lecture: 3 credits (45 contact hours)
Components: Lecture Attributes: Technical

MIT 241(1) Course ID:017449
Medical Interpreter-Laboratory
Provides practical supervised medical interpreting experience in a clinical or similar setting. Applies strategies and skills to facilitate the success of patient-healthcare provider interaction. Reviews and evaluates patient-healthcare provider interactions for clarity, efficacy, and adherence to a code of ethics reflecting national standards. Pre-requisite or Co-requisite: MIT 240 OR Instructor Consent. Laboratory: 1 credit (30 contact hours).
Components: Laboratory Attributes: Technical

MIT 250(3) Course ID:017641
Legal Issues in Medical Information Management
Includes concepts and principles of law, legal principles, ethics, and issues that govern medical information management and patient health records & information. Covers legal and ethical issues as related to legal documents, health data, legal concepts, security, privacy, and current trends in health legislation. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical

MIT 259(3) Course ID:006571
Medical Information Technology Internship
Enhances transition from school to work by providing non-paid work experience which provides the opportunity to apply acquired occupational skills in a realistic setting. Requires approval of the MIT Program Coordinator. Pre-requisite: Consent of Instructor. Pre-requisite: Consent of Program Coordinator. Practicum: 1.0 - 3.0 credits (45-135 contact hours).
Components: Practicum Attributes: Technical

MIT 263(1 - 3) Course ID:007326
Medical Information Technology Internship
Enhances transition from school to work by providing non-paid work experience which provides the opportunity to apply acquired occupational skills in a realistic setting. Requires approval of the MIT Program Coordinator. Pre-requisite: Consent of Instructor. Pre-requisite: Consent of Program Coordinator. Practicum: 1.0 - 3.0 credits (45-135 contact hours).
Components: Practicum Attributes: Technical

MIT 273(1) Course ID:016393
Intro to Med Terms & Systems
Introduces medical terminology including root words, prefixes and suffixes as well as general medical terms. Introduces medical terms related to the skeletal, muscular, blood, lymph, cardiovascular and respiratory systems. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 283(1) Course ID:016394
Intermediate Body Systems
Introduces medical terms related to the blood, lymph, cardiovascular, respiratory and urinary systems as well as skin. Pre-requisite: MIT 1031. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

MIT 295(3) Course ID:006971
Medical Information Technology Internship
Enhances transition from school to work by providing non-paid work experience which provides the opportunity to apply acquired occupational skills in a realistic setting. Requires approval of the MIT Program Coordinator. Pre-requisite: Consent of Instructor. Pre-requisite: Consent of Program Coordinator. Practicum: 1.0 - 3.0 credits (45-135 contact hours).
Components: Practicum Attributes: Technical
MIT 2191(1)  Course ID:017218  Medical Support Information  Designed to prepare medical coding students to take a certifying exam to become a professional outpatient (physician-based) coder as offered by AAPC or PHIA. Includes outpatient coding cases and review of medical terminology, basic anatomy, basic pathophysiology, reimbursement issues, and advanced coding guidelines for CPT, ICD-10-CM, and HCPCS coding systems. Pre-requisite: MIT 204 and MIT 205 or MBS 120. Lecture: 1 credit hour (15 contact hours).  Components: Lecture

MIT 2192(1)  Course ID:017219  Procedural and supply coding & Reimbursement issues  Designed to prepare medical coding students to take a certifying exam to become a professional outpatient (physician-based) coder as offered by AAPC or PHIA. Includes outpatient coding cases and review of medical terminology, basic anatomy, basic pathophysiology, reimbursement issues, and advanced coding guidelines for CPT, ICD-10-CM, and HCPCS coding systems. Pre-requisite: MIT 2191. Lecture: 1 credit hour (15 contact hours).  Components: Lecture

MIT 2241(1)  Course ID:016875  Managing the Medical Office  Emphasizes the healthcare setting, medical office communications, and human resource management. Pre-requisite OR Co-requisite: MIT 230, MIT 217, MIT 104. Lecture: 1 credit hours (15 contact hours).  Components: Lecture

MIT 2242(1)  Course ID:016876  Managing the Medical Record  Focuses on the correct use, care, regulations and rules concerning medical records. Pre-requisite OR Co-requisite: MIT 2241, MIT 230, MIT 217, MIT 104. Lecture: 1 credit hours (15 contact hours).  Components: Lecture

MIT 2243(1)  Course ID:016877  Medical Office Revenue Cycle  Emphasizes accounting and payroll as well as marketing of the medical office. Pre-requisite OR Co-requisite: MIT 2242, MIT 230, MIT 217, MIT 104. Lecture: 1 credit hours (15 contact hours).  Components: Lecture

MIT 2281(1)  Course ID:016403  Intro to E-Health Records  Provides an introduction to electronic health records and gives students a working knowledge of industry-standard electronic medical records software program emphasizing ethical and regulatory issues and methods. Pre-requisite: MIT 227 or consent of instructor. Lecture: 1 credit (15 contact hours).  Components: Lecture

MIT 2282(1)  Course ID:016404  Clinical Office Administration  Provides a working knowledge of computerized medical records software to simulate tasks including to create/ maintain patient records and maintain office scheduling. Pre-requisite: 2281 or consent of instructor. Lecture: 1 credit (15 contact hours).  Components: Lecture

MIT 2283(1)  Course ID:016405  Clinical Tools and Procedures  Provides a working knowledge of computerized medical records software to complete scenario based projects to use templates and create/analyze reports. Emphasizes test and diagnosis codes. Pre-requisite: 2282 or consent of instructor. Lecture: 1 credit (15 contact hours).  Components: Lecture

MIT 2301(1)  Course ID:016406  Intro to Medical Info Mgmt  Identify rules and regulations of medical filing systems and procedures. Pre-requisite: Digital Literacy. Lecture: 1.0 credit (15 contact hours).  Components: Lecture

MIT 2302(1)  Course ID:016407  Applied Medical Info Mgmt  Apply rules and regulations of medical filing systems and procedures. Emphasizes management of both hard copy and magnetic media using alphabetic, numeric, chronological, and color-coding filing systems. Pre-requisite: MIT 2301. Lecture: 1.0 credit (15 contact hours).  Components: Lecture


MIT 2951(1)  Course ID:016840  Office Skills Development  Introduce a simulated office setting. Acquire knowledge, skills and abilities involved with managing work flow processes and procedures, the work environment. Apply decision making and working autonomously. Pre-requisite: Consent of Program Coordinator. Lecture: 1.0 credit (15 contact hours).  Components: Lecture

MIT 2952(1.5)  Course ID:016841  Simulations/Work-based Learning  Complete a diverse set of learning activities and assigned tasks utilizing medical office simulation software or participate in a work-based learning experience such as internship/apprenticeship. Analyze and evaluate documents for data entry, storage, and data retrieval. Pre-requisite: MIT 2951 or Consent of Program Coordinator. Practicum: 1.5 credits (90 contact hours).  Components: Practicum

MIT 2953(0.5)  Course ID:016842  Program Pathway Assessment  Demonstrate proficiency using medical office simulated software, office system procedures, and the utilization of workplace principles through end of program assessment. Pre-requisite: MIT 2952 or Consent of Program Coordinator. Practicum: 0.5 credits (30 contact hours).  Components: Practicum

MKT 100(3)  Course ID:001173  Introduction to Marketing  This course introduces the essentials of marketing for small and large organizations and develops concepts such as publicity, promotion, and market research, while emphasizing the importance of communication, interpersonal and professional skills. (Keyboarding recommended). Lecture: 3 credits (45 contact hours).  Components: Lecture  Attributes: Technical

MKT 155(3)  Course ID:004989  Personal Selling  The professional selling process which involves a series of interrelated activities is introduced. Emphasis is placed on planning and delivery of sales presentations. The six selling steps are examined - prospecting, qualifying, presentng, answering objections, closing, and the after-sale service. Students demonstrate effective sales techniques through simulation and role playing. Lecture: 3 credits (45 contact hours).  Components: Lecture  Attributes: Technical

MLT 101(3)  Course ID:004073  Introduction to the Clinical Laboratory  Includes an orientation to the laboratory and management structure, professional organizations, professional ethics, communication, and record keeping. Covers medical terminology and abbreviations, quality assurance procedures, laboratory safety rules and regulations, specimen processing, laboratory automation, and basic immunology. Introduces the student to the various laboratory departments. Pre-requisite: Admission into the MLT program or permission of the MLT Program Director or MLT Clinical Coordinator. Lecture/Lab: 3.0 credits (75 contact hours)  Components: Laboratory, Lecture  Attributes: Technical
MLT 112(2) Course ID:004177
Urology
Focuses on methodology and clinical significance of urinary system. Pre-requisite: Admission into the MLT program or permission of the MLT Program Director/coordinator. Pre-requisite Or Co-requisite: MLT 101 OR PHB 170. If taken as a pre-requisite, a minimum grade of “C”. Lecture/Lab: 2.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

MLT 115(2) Course ID:004178
Serology
Introduces basic immunological principles. Includes applications of serological testing for the diagnosis and monitoring of diseases and other antigenic responses. Pre-requisite: Admission into MLT program or permission of MLT program director/coordinator. Lecture/Lab: 2.0 credits (37.50 contact hours).

Components: Lecture
Attributes: Technical

MLT 119(3) Course ID:004179
Applied Laboratory
Prepares the MLT student for clinical rotation into the major areas of the laboratory. Includes practical application in Hematology, Clinical Microbiology, Immunohematology, Urinalysis, Serology, and Clinical Chemistry. Pre-requisite: Admission into the MLT program or permission of the MLT program director/coordinator. Pre-requisite Or Co-requisite: MLT 101. If taken as a pre-requisite, a minimum grade of “C”. Lecture/Lab: 3.0 credits (105 contact hours).

Components: Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

MLT 205(3) Course ID:004181
Clinical Microbiology I
Introduces the application of microbiological principles to clinical laboratory practice. Includes safety and use of standard precautions, sterilization, selection and use of media, specimen processing, cultivation and identification of bacteria, and antimicrobial susceptibility testing. Pre-requisite: [(MLT 101 and MLT 119) OR BIO 225 with a grade of “C” or greater]; admission into the MLT program; permission by MLT program director/coordinator. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (45 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

MLT 206(2) Course ID:004182
Clinical Microbiology II
Continues with the application of microbiological principles to clinical laboratory practice. Includes mycology, parasitology, virology, and mycobacteriology. Pre-requisite: Admitted into the MLT program; permission of the MLT program director/coordinator. Lecture: 1.0 credit (15 contact hours). Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

MLT 207(2) Course ID:000282
Introduction to Clinical Diagnostic Microbiology
Reviews the basic concepts of bacterial cell structure, physiology, nomenclature and classification. Emphasizes safety in the microbiology department of the laboratory. Introduces specimen processing as it relates to the microbiology department in the clinical laboratory. Covers the practical importance of identifying microorganisms through morphology on culture media, appearance on gram stain, and biochemical reactions. Pre-requisite: Admission into the MLT program OR permission of the MLT Program Director/MLT Clinical Coordinator. Lecture/Lab: 2.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

MLT 208(3) Course ID:006399
Clinical Diagnostic Microbiology I
Discusses theoretical concepts, disease processes, identification schemas, diagnostic characteristics, biochemical reactions, susceptibility testing, and isolation techniques of gram positive and gram negative microorganisms associated with infections diagnosed in the clinical laboratory microbiology department. Pre-requisite: MLT 207 with a grade of “C” or better OR permission of the MLT Program Director/MLT Clinical Coordinator. Lecture/Lab: 3.0 credits (75 contact hours).

Components: Lecture
Attributes: Technical

MLT 209(2) Course ID:006400
Clinical Diagnostic Microbiology II
Exposes the student to a study of anaerobes, spore forming gram positive bacilli, virology, mycobacterium, mycoplasma, spirochetes, mycology and parasitology with focus on the clinical diseases and diagnostic procedures in the microbiology department of the clinical laboratory. Pre-requisite: MLT 208 with a grade of “C” or better OR permission of the MLT Program Director/MLT Clinical Coordinator Lecture/Lab: 2.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

MLT 215(4) Course ID:004183
Hematology I
Covers hemopoiesis and classic methodologies of standard hematologic procedures. Includes the principles of various automated hematology analyzers, histograms and scattergrams. Provides students with the opportunity to perform basic hematology and coagulation procedures, correlate laboratory data to aid in diagnosis, and describe methodology of procedures and their clinical significance. Includes mechanisms of coagulation, routine coagulation testing; disease states associated with coagulation abnormalities, platelet evaluation, fibrinolysis and anticoagulant therapy. Pre-requisite: MLT 101 with a grade of “C” or greater OR admission into the MLT program OR permission of the MLT Program Director/MLT Clinical Coordinator. Lecture/Lab: 4.0 credits (105 contact hours).

Components: Lecture
Attributes: Technical

MLT 216(3) Course ID:004184
Hematology II
Continues the study of hematology. Includes a study of anemias, leukemias, lymphomas, miscellaneous abnormal white blood cell disorders to assess hematologic changes and correlate laboratory data to diagnosis. Covers body fluids and other special hematologic procedures. Pre-requisite: MLT 215 with a grade of “C” or greater; permission by MLT program director/coordinator. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

MLT 217(3) Course ID:006401
Fundamentals of Hematology
Presents classic methodologies related to standard hematology procedures. Includes collection and processing of proper specimens, performance of quality control, and analysis of fundamental hematological parameters to aid in diagnosis. Pre-requisite: Admission into the MLT program OR permission of the MLT Program Director/MLT Clinical Coordinator. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical

MLT 218(4) Course ID:004602
Clinical Hematology
Continues the study of hematology. Includes hemostasis, anemias, leukemias, lymphomas, miscellaneous abnormal white blood cell disorders, body fluid analysis and other special hematological procedures. Pre-requisite: A grade of C or better in MLT 217 OR permission of the MLT Program Director/MLT Clinical Coordinator. Lecture/Lab: 4.0 credits (75 contact hours).

Components: Lecture
Attributes: Technical

MLT 225(2) Course ID:004185
Immunohematology I
Includes the principles of immunology in relation to blood banking, blood group systems, donor processing and screening, antibody screening, and blood components. Pre-requisite: MLT 101 with a grade of “C” or greater; admission into the MLT program; permission by MLT program director/coordinator. Lecture: 1.0 credit (15 contact hours). Laboratory: 1.0 credit (45 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

MLT 226(2) Course ID:004186
Immunohematology II
Includes antibody screening and panel interpretation, compatibility testing, viral markers and related disease states, hemolytic disease, and HLA markers. Pre-requisite: MLT 225 or Permission by MLT Program Director/Coordinator Lecture/Lab: 2.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

MLT 227(4) Course ID:004570
Immunohematology
Covers principles and practices in blood banking, including topics such as blood group systems, blood components, antibody identification and compatibility testing. Pre-requisite Or Co-requisite: MLT 115 with a grade of C or greater and admission into the MLT program OR permission of the MLT Program Director/MLT Clinical Coordinator. Lecture/Lab: 4 credits (105 contact hours).

Components: Lecture
Attributes: Technical

MLT 233(3) Course ID:004187
Clinical Chemistry I
Provides a review of basic inorganic chemistry and organic chemistry principles and types of instrumentation commonly used in a medical laboratory. Covers carbohydrates, non-protein nitrogen compounds, proteins, lipids and enzymes as related to clinical diagnosis. Introduces quality control procedures, including statistical calculations for graph preparation and interpretation of gathered data. Pre-requisite: (MLT 101 with a grade of “C” or greater and admission into the MLT program) or MLT Program Coordinator/Director. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

MLT 234(2) Course ID:004188
Clinical Chemistry II
Presents the physiology and testing of liver function, hormones, electrolytes and acid-base metabolism. Includes toxicology and therapeutic drug monitoring, tumor markers, and special chemistries. Pre-requisite: MLT 101 with a grade of “C” or greater; permission by MLT program director/coordinator. Pre-requisite Or Co-requisite: MLT 233. If taken as a Pre-requisite, a minimum grade of C. Lecture: 1.0 credit (15 contact hours). Laboratory: 1.0 credit (30 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

MLT 247(3) Course ID:006403
Introduction to Clinical Chemistry
Introduces the student to a variety of automated instrumentation and methodologies of selected chemistry test procedures. Exposes student to the basic principles as well as the techniques used in clinical chemistry to assess carbohydrates, non-protein nitrogen compounds, amino acids and proteins, lipids and lipoproteins, and enzymes as related to clinical diagnosis. Acquaints the student with basic laboratory mathematics and quality assurance procedures utilized in the clinical laboratory department. Pre-requisite: Admission into MLT program OR permission of the MLT Clinical Coordinator/MLT Program Director. Lecture/Lab: 3.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical
MLT 248(3) Course ID:006404 Advanced Clinical Chemistry Continues the study of clinical chemistry. Presents a study of lipids and lipoproteins, acid/base balance, electrolytes, endocrine system, liver, gastrointestinal and pancreatic function, the use of drug monitoring, and toxicology. Pre-requisite: MLT 247 with a grade of “C” or greater. Lecture/ Lab: 3.0 credits (60 contact hours).

Components: Lecture Attributes: Technical

MLT 275(1) Course ID:006831 Clinical Experience Familiarizes the student with the clinical laboratory environment as it relates to phlebotomy and front office responsibilities. Includes blood collection procedures, handling and answering internal phone calls, communication with and registration of patients, insurance filing and data entry. Pre-requisite: Admission into the MLT program or permission of the MLT program director or coordinator. Clinical: 1.0 credit (30 contact hours).

Components: Clinical

MLT 278(4 - 5) Practicum I Develops performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments of the laboratory for each individual student by the MLT Program Doctor. This practicum is designed to develop skills with strong supervisory instruction in all assigned departments. Pre-requisite: (MLT 101 with a grade of “C” or better) OR Admission into MLT program; OR by MLT program director/coordinator. Pre-requisite: MLT 101 with a grade of “C” or better OR Admission into MLT program OR permission by MLT Program Director/Coordinator. Practicum: 2 - 2.5 credits (120-150 contact hours).

Components: Practicum Attributes: Course Also Offered in Modules, Technical

MLT 279(4 - 5) Practicum II Develops performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments of the laboratory for each individual student by the MLT Program Doctor. This practicum is designed to develop skills with strong supervisory instruction in all assigned departments. Pre-requisite: MLT 101 with a grade of “C” or better OR Admission into MLT program; OR by MLT program director/coordinator. Pre-requisite: MLT 101 with a grade of “C” or better OR Admission into MLT program OR permission by MLT Program Director/Coordinator. Practicum: 2 - 2.5 credits (120-150 contact hours).

Components: Practicum Attributes: Course Also Offered in Modules, Technical

MLT 1191(1.5) Course ID:005338 Applied Laboratory Part 1 Prepares the MLT student for clinical rotation into the major areas of the laboratory. Includes practical application in Hematology, Clinical Microbiology, and Urinalysis. Pre-requisite: MLT 101 with a grade of “C” or greater and admission into the program. Lecture: 0.5 credit (7.5 contact hours). Laboratory: 1.0 credit (45 contact hours).

Components: Laboratory, Lecture

MLT 1192(1.5) Course ID:005339 Applied Laboratory Part 2 Prepares an MLT student for clinical rotation into the major areas of the laboratory. Includes practical application in Clinical Microbiology, Immunohematology, Serology, and Clinical Chemistry. Pre-requisite: MLT 1191 with a grade of “C” or greater. Lecture: 0.5 credit (7.5 contact hours). Lab: 1.0 credit (45 contact hours).

Components: Laboratory, Lecture

MLT 2781(2 - 2.5) Practicum I Part 1 Develops performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Utilizes and depends upon external institutions to insure adequate clinical education and training. Each clinical laboratory affiliate has designated personnel to assist the student in all assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments of the laboratory for each individual student by the MLT program director. This practicum is designed to develop skills with strong supervisory instruction in all assigned departments. Pre-requisite: MLT 101 with a grade of “C” or greater or admission into the program. Practicum: 2 - 2.5 credits (120-150 contact hours).

Components: Practicum

MLT 2782(2 - 2.5) Practicum I Part 2 Develops performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Utilizes and depends upon external institutions to insure adequate clinical education and training. Each clinical laboratory affiliate has designated personnel to assist the student in all assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments of the laboratory for each individual student by the MLT program director. This practicum is designed to develop skills with strong supervisory instruction in all assigned departments. Pre-requisite: MLT 2781 with a grade of “C” or greater. Practicum: 2 - 2.5 credits (120-150 contact hours).

Components: Practicum

MLT 2791(2 - 2.5) Practicum II Part 1 Develops career entry level performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Provides an opportunity for more responsibility and independence with previously learned procedures. Enhances the student’s transition to the world of work by providing work experiences in a clinical setting. Utilizes and depends upon external institutions to insure adequate clinical education and training. Each clinical laboratory affiliate has designated personnel to assist the student in assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments of the laboratory for each individual student by the CLT program director. Pre-requisite: MLT 101 with a grade of “C” or greater. OR Admission to the MLT program. Practicum: 2 - 2.5 credits (120-150 contact hours).

Components: Practicum

MLT 2792(2 - 2.5) Practicum II Part 2 Develops career entry level performance skills and professional attitude in the student in assigned areas of the clinical laboratory. Provides an opportunity for more responsibility and independence with previously learned procedures. Enhances the student’s transition to the world of work by providing work experiences in a clinical setting. Utilizes and depends upon external institutions to insure adequate clinical education and training. Each clinical laboratory affiliate has designated personnel to assist the student in assigned areas of the clinical laboratory. Provides a prescribed schedule of rotations in various departments of the laboratory for each individual student by the CLT program director. Pre-requisite: MLT 2791 with a grade of “C” or greater. Practicum: 2 - 2.5 credits (120-150 contact hours).

Components: Practicum

MLNG 102(3) Course ID:007356 Introduction to Mine Engineering and Mining Technology Provides orientation to the mining engineering and mining technology professions. Includes introduction to key mining engineering activities and functions, mining methods and equipment, and health and safety subsystems. Lecture: 3.0 credits (45 contact hours).

Components: Lecture Attributes: Technical

MLNG 123(4) Mining Electricity I Qualifies students to take the Mine Electrical Certification Exam administered by Kentucky Office of Mine Safety and Licensing. Includes topics of basic electricity, direct current circuits, impedance, reactance, power, electrical energy, permittibility, underground and surface law, solid-state, and national instruments and applications. Co-requisite: MLNG 125. Lecture: 4.0 credits (60 contact hours).

Components: Lecture Attributes: Technical

MLNG 125(1) Mining Electricity I Lab Encompasses an elementary lab for mining technology students. Includes construction of circuits using electrical-measuring instruments in the analysis of the circuits with focus on electrical safety. Emphasizes mining electrical equipment circuits, permittibility and maintenance. Co-requisite: MLNG 123. Laboratory: 1.0 credits (30 contact hours).

Components: Laboratory Attributes: Technical

MLNG 150(3) Mining Laws Provides the theory, intent, construction and application of state and federal regulations pertaining to underground and surface coal mining. Lecture: 3.0 credits (45 contact hours).

Components: Lecture Attributes: Technical

MLNG 160(3) Elements of Underground Mining Introduces underground mining methods, operations, and procedures. Includes topics of miners’ rights, work environments, health and safety standards, roof control, mine ventilation, transportation, communication, compressed gas cylinders, explosives, mine gases and instruments, electrical hazards, accident prevention, and emergency procedures. Lecture: 3.0 credits (45 contact hours).

Components: Lecture Attributes: Technical

MLNG 170(2) Elements of Surface Mining Introduces study of surface mining methods, operations, and procedures. Includes topics of miners’ rights, work environments, ground control, health and safety standards, transportation, communication, compressed gas cylinders, explosives, mine gases and instruments, electrical hazards, accident prevention, and emergency procedures. Lecture: 2.0 credits (30 contact hours).

Components: Lecture Attributes: Technical
MRN 180(3) Course ID:006789
Environmental Issues in Mining
Introduces topic of how underground and surface mining operations impact the environment in a multitude of ways. Includes basic information related to geological formations in mining and structure of coal material. Relates methods to mitigate negative effects of mining. Discusses methods to repair damage to environment. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MRN 190(3) Course ID:005206
Mine Emergency Technician
Applies principles and procedures to identify and treat life threatening conditions. Offers safety training needed to receive a Mine Emergency Technician certificate from Kentucky Department of Mines and Minerals after successful completion of the optional test. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MRN 265(3) Course ID:015854
Mining Methods
Introduces underground and surface mining methods and practices in coal and hard rock mines. Includes topics in method classification; support, safety and equipment requirements; general mine planning; sequence of development, cycle of operations and method application and variation. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MRN 274(3) Course ID:000722
Mine Safety
Introduces mine safety, program organization, safety training, mine rescue operations, and the role of state and federal governments in mine safety. Includes field trips as an integral part of the course. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MRN 286(3) Course ID:000738
Roof Control and Ventilation
Involves an in-depth study of roof and rib control, and coal mine ventilation. Includes methods of inspecting and reporting potential safety hazards, reading roof control plans, processes and procedures involving mine resistance, law, and minimum standards. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MRN 299(1 - 4) Course ID:006790
Selected Topics in Mining Technology: (Topic)
Addresses various mining technology topics, issues and trends. Includes topics that may vary from semester to semester at the discretion of the instructors; course may be repeated with different topics to a maximum of four credit hours. Lecture/Lab: 1.0 - 4.0 credits (contact hours 15 - 120).
Components: Lecture Attributes: Technical

MRN 101(3) Course ID:006706
Anatomy of a Towboat
Introduces components found on modern towboats with emphasis on an overview of all areas of the vessel from the wheelhouse to the engine room to the external components. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Course Also Offered in Modules, Technical

MRN 102(3) Course ID:006707
Basic Marine Safety
Provides an overview of risk-based decision making skills for assessing and managing marine hazards to prevent marine accidents or casualty. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Course Also Offered in Modules, Technical

MRN 103(3) Course ID:007412
Applied Marine Weather
Covers fundamental maritime weather concepts to plan safe and efficient voyages. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Course Also Offered in Modules, Technical

MRN 104(3) Course ID:007413
Marine Crew Wellness
Examines how nutrition, exercise, and disease affect the crewmembers’ ability to maintain a U.S. Coast Guard license. Focuses on nutrition and exercise programs while working, and prevention of disease. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Course Also Offered in Modules, Technical

MRN 105(3) Course ID:006708
Marine Co-Op Experience I
Gives students experience in a higher level position in the marine industry. Provides compensated on-the-job work experience under the supervision of a qualified affiliate of the industry. Pre-requisite: 360 hours of river industry experience. Co-op: 6 credits (450 contact hours).
Components: Co-op Attributes: Technical

MRN 106(5) Course ID:006709
Shipboard Deck Operations
Provides specifics of responsibilities, policies, training, safety and rigging procedures for towboat personnel. Pre-requisite: MRN 100. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical

MRN 200(3) Course ID:006710
Rules of the Road
Provides an in-depth analysis of the United States Coast Guard (USCG) Navigation Rules with an emphasis on the history and interpretation of the rules. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical

MRN 201(3) Course ID:006711
Inland River Systems
Introduces the components and characteristics of the U.S. inland waterway system and its tributaries. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MRN 202(3) Course ID:006712
Environmental Protection Rules
Provides analysis of environmental regulations governing the marine industry. Explores the environmental practices of vessels on the inland waterway systems and the governing agencies which establish industry regulations. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical

MRN 203(5) Course ID:006713
Marine Electrical Systems
Explores the theory of electricity with an emphasis on power systems, circuits, safety procedures, and maintenance measures needed to maintain electrical systems aboard towing vessels. Lecture/Lab: 5.0 credits (105 contact hours).
Components: Lecture Attributes: Technical

MRN 204(5) Course ID:006714
Marine Electrical Systems II
Explores the maintenance measures needed to maintain electrical systems aboard towing vessels on the inland river system. Pre-requisite: MRN 204. Lecture/Lab 3 credits (60 contact hours).
Components: Lecture Attributes: Technical

MRN 205(5) Course ID:006715
Marine Diesel
Introduces the operation and components of a marine diesel engine with emphasis on diesel engine theory, safety precautions, internal and external components, and contributing operation systems. Lecture/Lab: 5.0 credits (105 contact hours).
Components: Lecture Attributes: Technical

MRN 206(5) Course ID:006716
Marine Diesel II
Identifies the various systems involved in the operation of a marine diesel engine, including the application of the knowledge of diesel operation to maintenance and troubleshooting exercises. Pre-requisite: MRN 206. Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture Attributes: Technical

MRN 207(2) Course ID:006717
Inland River Systems
Explores the U.S. inland waterway system and its tributaries as they relate to the inland marine industry and the movement of cargos. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MRN 208(3) Course ID:006718
Inland River Systems
Explores the U.S. inland waterway system and its tributaries as they relate to the inland marine industry and the movement of cargos. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

MRN 212(3) Course ID:007414
Environmental Protection Rules
Provides analysis of environmental regulations governing the marine industry. Explores the environmental practices of vessels on the inland waterway systems and the governing agencies which establish industry regulations. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical

MRN 215(5) Course ID:007415
Marine Fluid Systems
Incorporates practical experience in fluid power theory. Component identification and application, schematic reading, and basic calculations related to marine fluid systems. Lecture/Lab: 5.0 credits (105 contact hours).
Components: Lecture Attributes: Technical

MRN 216(5) Course ID:007416
Marine Fluid Systems
Incorporates practical experience in fluid power theory. Component identification and application, schematic reading, and basic calculations related to marine fluid systems. Lecture/Lab: 5.0 credits (105 contact hours).
Components: Lecture Attributes: Technical
Musculoskeletal Anatomy & Physiology I
Provides extensive knowledge of the skeletal system and major joint articulations and an introduction to the muscular system of the human body from beginning terminology through the study of muscle tissue and neuromuscular fundamentals. Pre-requisite Or Co-requisite: (CLA131 or OST103 or AHS115). Co-requisite: MSG 125. Lecture: 4 credits (60 contact hours).

Advanced Clinical Massage II
Prepares students to integrate their massage practice into a clinical setting, including the rehabilitation of orthopedic conditions and injuries. Expands the students' involvement in patient assessment, advanced orthopedics, and the use of rehabilitative and preventative massage techniques. Pre-requisite or Co-requisite: MSG 232. Lecture/Lab: 3 credits (105 contact hours).

Components: Lecture
Attributes: Technical

Massage Therapy Practicum and Special Topics:
This course addresses various massage therapy topics, issues, and trends. It also allows students to practice techniques already acquired, and to demonstrate mastery of new ones covered in the topics portion. Topics may vary from semester to semester at the discretion of the instructors: course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Massage Therapy Certificate. Practicum: 1-6 credits (60-360 contact hours).

Components: Practicum
Attributes: Technical

MST Manufacturing Systems Technology

Advanced Hydraulic Systems
The advanced hydraulic systems class will cover design, repair, and troubleshooting of hydraulic systems. Pre-requisite: FPX 100, FPX 101. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

Advanced Hydraulic Systems Lab
The advanced hydraulic systems lab will cover design, repair, and troubleshooting of hydraulic systems. Pre-requisite: FPX 100, FPX 101. Laboratory: 2 credits (90 contact hours).

Components: Laboratory
Attributes: Technical

Advanced Pneumatic Systems
Design, repair, and troubleshooting of pneumatic systems will be covered in this course. Pre-requisite: FPX 100, FPX 101. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical
MSY Masonry

MSY 105(3) Course ID:001655
Introductory Masonry
Introduces various types of mortar and cement along with the use of basic masonry tools. Emphasizes different methods of spacing materials on a construction site, the 6-8-10 method, and use of the transit level, brick spacing and modular rule focusing on laying straight and plumb brick to the line, brick gables and building columns. Covers application techniques for setting up different types of masonry materials, marking off layout lines and erecting batter boards along with techniques employed in different types of weather and climates. Laboratory: 3 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 113(3) Course ID:001656
Intermediate Masonry
Builds on proficiency in competencies learned in MSY 105. Focuses on laying straight and plumb brick to the line with emphasis on brick spacing and building columns. Pre-requisite: MSY 105 with a grade of C or higher or Consent of Instructor. Lab: 3 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 198(3) Course ID:001657
Instructor Consent Required Practicum I
Provides supervised on-the-job work experience related to the students educational objectives. Students participating in the Practicum do not receive compensation. Pre-requisite: Consent of Instructor. Practicum: 3 credits (90 contact hours).
Components: Practicum
Attributes: Technical

MSY 205(3) Course ID:001660
Advanced Masonry
Provides experience in laying quoin corners, bricking in around electrical and plumbing units, and laying door and window brick sills. Provides opportunity for students to construct expansion joints, piers, pilasters and retaining and spiltface block walls. Pre-requisite: [MSY 105 and MSY 115 with a grade of "C" or higher] or Consent of Instructor. Laboratory: 3 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 215(3) Course ID:001661
Masonry Lab
Provides for practice and application of principles, theories and skills taught in MSY 105, MSY 115, MSY 205. Pre-requisite: [MSY 105 and MSY 115 and MSY 205] with a grade of "C" or higher] or Consent of Instructor. Laboratory: 3 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 225(3) Course ID:001662
Brick Construction
Covers the application of laying brick to a line overhand, laying a rowlock course, and making weep holes. Emphasizes tying intersecting walls with masonry ties and construction cavity walls and planters. Pre-requisite: MSY 205 with a grade of "C" or higher or Consent of Instructor. Laboratory: 3 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 235(3) Course ID:001663
Special Techniques in Brick Construction
Provides practice in constructing a variety of walls including arches. Pre-requisite: MSY 205 with a grade of "C" or higher or Consent of Instructor. Laboratory: 3 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 245(3) Course ID:001664
Anchors and Reinforcement
Presents different types of reinforcement used in masonry units such as installing wall ties and reinforcing wire, tying intersecting walls with metal ties, installing masonry anchor bolts, setting and anchoring door and window frames, and setting steel lintels and bearing plates. Covers the installation of dovetail ties to concrete, setting preformed masonry lintels, and laying of paving brick in a herringbone pattern. Pre-requisite: MSY 105 with a grade of "C" or higher or Consent of Instructor. Laboratory: 3 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 251(3) Course ID:001665
Concrete Finishing
Focuses on theory and techniques inherent in the art of concrete finishing. Laboratory: 3 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 253(3) Course ID:001666
Masonry Floors and Steps
Provides students with the opportunity to lay paving brick, steps, and flagstone floors including laying different types of patterns. Laboratory: 3 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 257(3) Course ID:001668
Stone
Includes identifying the types of stone and the different types of bonds used in stone masonry. Pre-requisite: MSY 105 with a grade of "C" or higher or Consent of Instructor. Laboratory: 3 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 275(3) Course ID:001669
Fireplace Construction
Presents different types and styles of indoor and outdoor fireplaces, and the principles of layout, drafting and drawing a fireplace. Includes finishing dimensions of fireplace opening, firebox layout, setting the flue lining, and applying a chimney cap. Pre-requisite: MSY 205 with a grade of C or higher or Consent of Instructor. Laboratory: 3 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

MSY 281(1 - 3) Course ID:001670
Masonry Applications
Provides students with additional opportunity to refine skills. Lab: 1.0 - 3 credits (45-135 contact hours).
Components: Laboratory
Attributes: Technical

MSY 289(3) Course ID:001671
Instructor Consent Required Practicum II
Provides additional supervised on-the-job work experience related to the student's educational objectives. Students participating in the Practicum do not receive compensation. Pre-requisite: Consent of Instructor. Practicum: 3 credits (90 contact hours).
Components: Practicum
Attributes: Technical

MUS Music

MUS 100(3) Course ID:000883
Introduction to Music
Introduces the elements of music as they apply to the listening experience. Emphasizes the development of an awareness and understanding of musical styles from the Middle Ages to the present. Designed for the non-music major with no prior knowledge of music and is not intended to fulfill a program course requirement for music majors. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, Course Also Offered
in Modules

MUS 104(3) Course ID:004548
Introduction to Jazz History
A survey of the many facets of jazz music. Designed to follow stylistic trends as developed from 19th century African and European influences to the modern forms of today. The study of significant composers, performers, and terminology associated with this uniquely American art form through listening assignments, reading and discussion activities. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

MUS 106(3) Course ID:006188
Music in Film
A survey of the history of film from the silent era to the present. Develops critical listening, viewing, and analytical skills in relation to the function of music in film. Explores various cultural, artistic traditions which inform the musical styles in film. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities, University Course (Morehead State University)

MUS 120(3) Course ID:004609
Music Technology I
Introduces the use of technology as a tool for music creativity and productivity. Includes knowledge of how to create various styles of contemporary music utilizing loop and sampling based technology, creation of wav files, MP3 files, CD layout, and class projects. Pre-requisite: MUS 174 or Consent of Instructor. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Other

MUS 150(1) Course ID:002231
Class Instruction in Piano I
Introduces the fundamentals of piano playing to beginners. Lab: 1.0 credit (30 contact hours)
Components: Laboratory
Attributes: Other

MUS 151(1) Course ID:002232
Class Instruction in Piano II
Develops the fundamentals of piano playing on a second level, with advanced beginner music and technique. Pre-requisite: MUS150. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Other

MUS 152(1) Course ID:002233
Class Instruction in Piano III
Develops the fundamentals of piano playing on an early intermediate level, with an emphasis on expanded repertoire. Pre-requisite: MUS 151. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Other

MUS 153(1) Course ID:002234
Class Instruction in Piano IV
Develops the technique and musical content of piano playing on an upper intermediate level, with an emphasis on upper intermediate repertoire. Pre-requisite: MUS152. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Other

MUS 155(1) Course ID:002235
Instructor Consent Required Voice Class for Non-Music Majors
Includes applied voice group instruction for non-music majors with emphasis on basic breathing and vocal technique, elements of music notation, and diction. May be repeated for a maximum of 2 credits. Pre-requisite: Consent of instructor. Lab: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

MUS 172(3) Course ID:016799
Theory I for Bluegrass Music Majors
Introduces the basic materials of musical organization, focusing on music reading, rudiments of notation, pitch, scale, tonal, and rhythmic organization, melodic construction, simple harmonic vocabulary, and beginning aural training. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

MUS 173(3) Course ID:016800
Music Theory II for Bluegrass Music Majors
Continues the study of the basic materials of musical organization, focusing on more advanced music reading and music notation. Introduces modal scales, the Nashville Number System, and bluegrass song structures. Pre-requisite: MUS 172. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

MUS 174(3) Course ID:002249
Theory for Nonmusic Majors
Introduces basic materials of musical organization, focusing on music reading, rudiments of notation, pitch, scale, tonal, and rhythmic organization, melodic construction, simple harmonic vocabulary, and beginning aural training. Uses individual composition and improvisation exercises to approach much of this material. Ability to read music is not a pre-requisite. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

MUS 175(1) Course ID:006791
Instructor Consent Required Jazz Ensemble
Introduces the study of jazz through performance and may be repeated to a maximum of four credits. Pre-requisite: Consent of Instructor. Lab: 1.0 credit (45 contact hours).
Components: Laboratory
Attributes: Other

MUS 187(1) Course ID:002239
Instructor Consent Required Concert Band
Continues instrumental music experience through participation in a large concert band. May be repeated to a maximum of four credits. Pre-requisite: Ability to read music and play a band instrument. Laboratory: 1 credit (15 contact hours).
Components: Laboratory
Attributes: Other

MUS 192(1) Course ID:002237
Instructor Consent Required University Chorus
Includes choral literature and performance requiring attendance at up to five hours of rehearsals per week. May be repeated up to 3 times for a total of 4 credits. May require audition and/or consent of instructor. Pre-requisite: Audition and consent of instructor. Lab: 1 credit (15-45 contact hours).
Components: Laboratory
Attributes: Other

MUS 206(3) Course ID:000857
American Music History
Includes a history of music in America from c. 1620 to the present. Requires listening to recordings, reading the primary text and suggested readings in books, periodicals, and documents. Focuses on important names, places, events, and styles in music, as well as important historical and sociological trends and movements. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

MUS 207(3) Course ID:004774
African American Music History
A history of African American music from pre-colonial West African diasporas through American colonial times to the present. Requires listening to recordings, reading the primary text and suggested readings in books and periodicals. Important names, places, events, and styles in music, as well as important historical and sociological trends will be presented within the context of the African American experience. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

MUS 208(3) Course ID:004775
World Music
A geographic survey of selected music cultures throughout the world with hands-on experience playing the music of diverse cultures, audio/video examples of music-cultures in performances, reading and writing assignments, and attendance and reporting at live music events. Includes informational presentations by students, group discussion, and simple musical instrument construction, and small group projects. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH – Arts and Humanities

MUS 222(3) Course ID:002253
History and Sociology of Rock Music
Provides a listening survey course, with a chronological approach, covering the years 1950- present. Emphasizes both the music and the sociological climate reflected and advocated by the music. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

MUS 260(2) Course ID:000692
Teaching Music in the Elementary Grades I
Develops musicianship, skills, and techniques teachers need to direct musical activities effectively in the elementary classroom. Introduces music fundamentals and teaching materials through active participation in musical activities, focusing on music education appropriate for elementary grades. Should be taken by classroom teachers and non-music majors and followed by MUS 261. Lecture/Lab: 2 credits (45 contact hours).
Components: Lecture
Attributes: Other

MUS 261(2) Course ID:000699
Teaching Music in the Elementary Grades II
Builds on the musicianship skills and techniques learned in MUS 260. Develops the process of selecting and teaching musical materials appropriate for elementary-aged children. Introduces methods of integrating music across the elementary curriculum. Should be taken immediately following completion of MUS 260. Pre-requisite: MUS 260. Lecture/Lab: 2 credits (45 contact hours).
Components: Lecture
Attributes: Other

MUS 299(1 - 3) Course ID:006343
Special Topics in Music
Examines selected topics in music and/or their impact on culture. May include but is not limited to individual composers, music genres, defined eras, and applied skills. Topics may vary from semester to semester at the discretion of the instructor. Pre-requisite: MUS 100 or consent of the instructor. Lecture: 1-3 credits (15-45 contact hours).
Components: Lecture
Attributes: Other

MVC Metroversity

MVC 299(1 - 8) Course ID:005317
Metroversity Topics
Includes Special Topics for the Metroversity Consortium (Jefferson Community & Technical College, Bellarmine University, Indiana University Southeast, IVY Tech Community College, Louisville Presbyterian Theological Seminary, Southern Baptist Theological Seminary, Spalding University, and University of Louisville). Specific course descriptions, outlines, and competencies will be on file at the credit-bearing institution. GPA 2.0 and completion of 12 credit hours in KCTCS required. Lecture/ Lab: 1-8 credit hours.
Components: Laboratory, Lecture
Attributes: Other
MVC 299(1 - 8)  
Course ID:017044  
Metroversity Topics  
Includes Special Topics for the Metroversity Consortium  
(Jefferson Community & Technical College, Bellarmine  
University, Indiana University Southeast, IVY Tech  
Community College, Louisville Presbyterian Theological  
Seminary, Southern Baptist Theological Seminary,  
Spalding University, and University of Louisville). Specific  
course descriptions, outlines, and competencies will  
be on file at the credit-bearing institution. GPA 2.0 and  
completion of 12 credit hours in KCTCS required. Lecture/  
Lab: 1-8 credit hours.

Components: Laboratory

NAA Nursing Assistant

NAA 100(3)  
Course ID:004611  
Nursing Assistant Skills I  
Provides knowledge and skills for nurse aides to assume  
the role and responsibility required in a long term care  
setting. The focus is communication, infection control,  
safety, resident/patient rights, and basic nursing skills.  
Note: Faculty and clinical sites must comply with applicable  
Federal and Kentucky laws and regulations including but  
not limited to 42 USC 1396r and 907 KAR 1:450. Lecture:  
3 credits (75 contact hours).

Components: Lecture  
Course Equivalents: MNA 100  
Attributes: Course Also Offered in Modules, Technical

NAA 102(3)  
Course ID:006887  
Basic Health Unit Coordinating  
Presents the duties and responsibilities of the health unit  
coordinator with an emphasis on communication skills,  
confidentiality, legal and ethical issues, and order entry.  
Lecture 3.0 credits (45 contact hours).

Components: Lecture  
Attributes: Technical

NAA 115(3)  
Course ID:004612  
Nursing Assistant II  
Provides knowledge and skills for nurse aides to assume  
the role and responsibility required in a variety of health  
care settings. Builds upon MNA 100/NAA 100 and prepares  
the student to perform advanced nursing assistant skills.  
Pre-requisite: (MNA 100 or NAA 100) with a grade of "C"  
or above within one year) or Active Status on the Kentucky  
Nurse Aide Registry (in good standing)) or consent of  
instructor. Lecture: 2.0 credits (30 contact hours) Lab: 1.0  
credit (45 contact hours).

Components: Laboratory, Lecture  
Attributes: Technical

NFS Nutrition and Food Science

NFS 101(3)  
Course ID:000898  
Human Nutrition and Wellness  
Food composition, digestion, absorption, and metabolism  
as related to selection of nutrients essential for human  
life, growth, reproduction, lactation, wellness, and physical  
activity. Not open to NFA majors except hospitality  
management students. Lecture: 3 credits (45 contact hours).

Components: Lecture  
Attributes: Other

NGT Natural Gas Technology

NGT 1001(0.25)  
Course ID:006446  
Basic Procedures/Processes  
Presents the major components of a natural gas system  
from well head to burner. Presents actions that each  
component has on the gas stream in the context of the  
total system. Reviews key terms and definitions applied  
to conditions common to the utilization of natural gas.  
Lecture: 0.25 credits (3.75 contact hours).

Components: Lecture

NGT 1002(0.25)  
Course ID:006447  
Basic Properties of Fuel Gases  
Presents advanced procedures for extracting natural gas  
from the earth and for transporting and regulating natural  
gas with an emphasis on the physical and chemical  
properties of natural fuel gases. Lecture: 0.25 credits (3.75  
contact hours).

Components: Lecture

NGT 1003(0.75)  
Course ID:006448  
Adjusting Gas Burners  
Presents the science of gas burner design, factors  
affecting the proper combustion of fuel gas, and techniques  
used to measure gas input rates, gas flow, and pressure.  
Lecture: 0.25 credits (3.75 contact hours); Lab: 0.50 credits  
(15 contact hours).

Components: Laboratory, Lecture

NGT 1004(0.75)  
Course ID:006449  
Regulating Natural Gas  
Presents factors related to measurement of natural gas  
in a distribution system, pressure regulation, accurate  
measurement of natural gas, and irregularities in meter  
installations. Lecture: 0.25 credits (3.75 contact hours); Lab:  
0.50 credits (15 contact hours).

Components: Laboratory, Lecture

NGT 1005(0.5)  
Course ID:006450  
Gas Distribution Calculations  
Presents methods for calculating area and volume  
measurements, gas flow rate measurements and heating  
values, venting and ventilation requirements for proper  
burning of natural gas, and comparing fuel costs. Lecture:  
0.5 credits (7.5 contact hours).

Components: Lecture

NGT 1006(0.5)  
Course ID:006451  
Records & Compliance Reports  
Focuses on U.S. Department of Transportation reporting  
requirements, reading maps of natural gas systems, and  
preparing field sketches. Lecture: 0.5 credits (7.5 contact  
hours).

Components: Lecture

NGT 1101(1.25)  
Course ID:006452  
Controlling/Preventing Fires  
Introduces factors related to the fire extinguishing process,  
ways to prevent gas fires, and ways to extinguish natural  
gas fires. Lecture: 0.25 credits (3.75 contact hours); Lab:  
1.0 credits (30 Contact hours).

Components: Laboratory, Lecture

NFS Nutrition and Food Science

NFS 1023(1)  
Course ID:016421  
Transcription of Orders  
Presents order entry duties and responsibilities of the  
health unit coordinator. Pre-requisites: NAA 1022. Lecture:  
1 credit (15 contact hours).

Components: Lecture

NGT 1102(0.75)  
Course ID:006461  
Safe Working Environment  
Emphasizes work safety practices, proper use of  
equipment, hazards of escaping gas, and drug testing  
and rehabilitation programs. Lecture: 0.25 credits (3.75  
contact hours); Laboratory: 0.5 credits (15 contact hours).

Components: Laboratory, Lecture

NGT 1103(0.5)  
Course ID:006462  
Preventing Accidental Ignition  
Identifies conditions, causes, and hazards related to  
gas leakage; emphasizes safety practices and procedures  
to prevent accidental ignition of natural gas. Lecture: 0.25  
credits (3.75 contact hours); Lab: 0.25 credits (7.5 contact  
hours).

Components: Laboratory, Lecture

NGT 1204(0.5 - 500)  
Course ID:006463  
Traffic Control Guidelines  
Present the basic standard for traffic control as described  
in the annual on Uniform Traffic Control Devices, Part  
VI According to the U.S. Department of Transportation.  
Lecture/Laboratory: varies.

Components: Laboratory, Lecture

NGT 1401(0.5)  
Course ID:006465  
Excavating  
Focuses on the Occupational Safety and Health  
Administration (OSHA) requirements for earth excavation,  
protection systems, and tables and specifications for  
designing protective systems. Lecture: 0.25 credits (3.75  
contact hours); Lab: 0.25 credits (7.5 contact hours).

Components: Laboratory, Lecture

NGT 1402(1.25)  
Course ID:006466  
Operating Equipment Safety  
Presents techniques of tractor/loader/backhoe operation  
while emphasizing safety precautions, maintenance and  
inspection, and proper control. Lecture: 0.25 credits (3.75  
contact hours); Lab: 1 credit hour (30 contact hours).

Components: Laboratory, Lecture

NGT 1403(0.75)  
Course ID:006467  
Safety in Confined Spaces  
Introduces confined spaces with emphasis on identifying  
hazards, monitoring of the atmosphere, entry procedures,  
and controlling hazardous energy. Lecture: 0.25 credits (3.75  
contact hours); Lab: 0.5 credits (15 contact hours).

Components: Laboratory, Lecture

NGT 1404(0.5)  
Course ID:006468  
Communicating Potential Hazard  
Examines health related chemical and explosive hazards  
while emphasizing identification of hazard information  
from labels and material safety data sheets and methods  
used to work safely with toxic chemicals and hazardous  
materials. Lecture: 0.25 credits (3.75 contact hours); Lab:  
0.25 credits (7.5 contact hours).

Components: Laboratory, Lecture

NGT 1501(0.5)  
Course ID:006453  
Gas-in-Air Mixture  
Focuses on detecting the presence of and measuring the  
percent of gas in a gas-in-air mixture. Lecture: 0.5 credits  
(7.50 contact hours).

Components: Lecture

NGT 1502(0.5)  
Course ID:006454  
Gas Leaks/Odors  
Presents basic facts about natural gas and natural gas  
leaks with emphasis on responding to gas leak and odor  
calls. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.25  
credits (7.5 contact hours).

Components: Laboratory, Lecture

NGT 1503(0.5)  
Course ID:006455  
Underground Facilities  
Presents techniques and procedures basic to locating  
and marking underground pipeline facilities. Lecture: 0.25  
credits (3.75 contact hours); Lab: 0.25 credits (7.5 contact  
hours).

Components: Laboratory, Lecture
NGT 1504(0.5) Course ID:006456
Underground Leaks
Presents the theory and practice for investigating and pinpointing underground natural gas leaks. Lecture: 0.25 credits (3.75 contact hours); Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1505(0.75) Course ID:006464
Patrol/Leakage Surveys
Presents factors basic to patrol of pipeline facilities to include the practice of patrol and leakage surveys. Lecture: 0.5 credits (7.5 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1506(0.25) Course ID:006618
Detecting Carbon Monoxide
Presents the characteristics of carbon monoxide and the guidelines for investigation of carbon monoxide. Lecture: 0.25 credits (3.75 contact hours).
Components: Lecture

NGT 1601(0.75) Course ID:006469
Establishing a Gas Service
Presents the theory used when establishing a gas service with emphasis piping from the main to customer’s piping, piping inside buildings, and gas-operated equipment in service. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1602(0.75) Course ID:006470
Odorant Levels
Presents federal and Kentucky standards for proper odorant levels with emphasis on monitoring odorant levels. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1603(0.75) Course ID:006471
Installing Domestic Service
Presents US Department of Transportation and industry-recognized procedures for installing domestic gas service. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1604(0.75) Course ID:006472
Purging Techniques
Presents the theory and techniques common to purging natural gas lines, including safe practices and isolation of equipment during purging. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1701(0.5) Course ID:006473
Gas-Operated Appliances
Presents procedures for checking natural gas appliance systems to ensure proper installation and safe operation. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1702(0.5) Course ID:006474
Servicing Gas Equipment
Presents factors related to the ventilation process, standards to ensure proper combustion and ventilation for gas-operated equipment, and ventilation inspection of gas-operated equipment. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1703(0.75) Course ID:006475
Venting Gas Equipment
Presents venting requirements for Categories I-IV gas-operated appliances; identifies features and benefits of high efficiency equipment with practice in sizing of vents and inspecting venting systems. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 1704(1.25) Course ID:006476
Electrical Concepts
Presents the basis for troubleshooting electrical control circuits in gas-operated appliances with emphasis on reading electrical circuit diagrams and their physical arrangement in the appliance. Lecture: 0.25 credits (3.75 contact hours), Lab: 1 credit (30 contact hours).
Components: Laboratory, Lecture

NGT 1800(0.5) Course ID:006477
Installing Mains & Lines
Presents practices basic to installing gas mains and service lines with emphasis on safety, standards, and line-marking. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1802(0.5) Course ID:006478
Pipeline Installation
Examines the preparation of the pipeline right-of-way and the completion of the construction operation; presents the major phases of the inspection process. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 1803(0.5) Course ID:006479
Joining Plastic Pipe
Presents the material specifications and installation practices for polyethylene pipe, joining plastic pipe with mechanical fittings, and identification of methods to control static electricity. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1804(0.75) Course ID:006480
Plastic Pipe & Heat Fusion
Presents the theory of heat fusing polyethylene pipe and the specification and conditions required to produce an acceptable joint. Lecture: 0.5 credits (7.5 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1805(0.5) Course ID:006481
Permanent Field Repairs
Presents common methods and installation practices used to make field repairs on gas piping facilities and natural gas pipelines. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1806(0.25) Course ID:006482
Joining Copper Pipe
Presents materials and techniques for joining copper pipe/tubing. Lecture: 0.25 credits (3.75 contact hours).
Components: Lecture

NGT 1901(0.5) Course ID:006483
Maintaining Line Valves
Presents basic design characteristics and maintenance procedures for pipeline valves. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 1902(0.5) Course ID:006484
Pressure Relief Valves
Presents components and operating characteristics of typical pressure relief valve installations, emphasizes spring-operated and pilot-operated pressure relief valves; focuses on factors to consider when installing pressure relief valves. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 1903(0.5) Course ID:006485
Abandon/Deactivate Facilities
Presents processes and procedures for deactivating/abandoning gas facilities; identifies spring-operated and pilot-operated pressure relief valves; focuses on factors to consider when installing pressure relief valves. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1904(0.5) Course ID:006486
Cast Iron Pipe
Presents materials and procedures for repairing cast iron pipe; emphasizes protection of cast iron pipe while excavating. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 1905(1) Course ID:006487
Inspecting Pipe Welds
Presents duties and responsibilities basic to the practice of inspecting pipe welds; emphasizes the identification and evaluation of weld defects. Lecture: 0.5 credits (7.5 contact hours), Lab: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2001(0.75) Course ID:006488
Tapping/Stopping Pipelines
Presents techniques used to safely tap and stop pipelines under pressure. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2002(0.75) Course ID:006489
Pipeline Pigging
Presents techniques basic to pigging pipelines. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2003(0.75) Course ID:006490
Purging Techniques
Presents factors affecting the mechanical nature of displacing one gas with another gas by purging. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2004(0.75) Course ID:006491
Tie-In/Bypass Operations
Presents procedures for performing tie-in/bypass operations. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2051(0.5) Course ID:006492
Corrosion Control
Presents the characteristics of corrosion, conditions causing corrosion in buried metal piping, and processes and procedures basic to corrosion control. Lecture: 0.25 credits (3.75 contact hours), Lab: .25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2052(0.5) Course ID:006493
Installing Cathodic Systems
Presents procedures for installing cathodic protection systems. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2053(0.5) Course ID:006494
Testing Corrosion Systems
Presents methods for monitoring and testing corrosion control systems. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2054(0.5) Course ID:006495
Monitoring Corrosion Control
Presents information and techniques for monitoring corrosion control methods on buried metal pipelines. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits(7.5 contact hours).
Components: Laboratory, Lecture

NGT 2101(1) Course ID:006496
Principles of Electricity
Presents the basics of both D.C. and A.C. electrical theory with an emphasis on current flow designs. Lecture: 1 credit (15 contact hours).
Components: Lecture

NGT 2102(1) Course ID:006497
Rectifier Components
Presents the theory and practice of identifying and testing typical rectifier components with emphasis on the identification of rectifying circuits, rectifier selection methods, and specialized types of rectifiers. Lecture : 0.50 credits (7.5 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture
NGT 2103(0.5) Course ID: 006498
Rectifiers
Presents information and techniques for putting cathodic protection rectifier systems into service. Lecture: 0.5 credits (7.5 contact hours) Lab: 0.5 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2201(0.5) Course ID: 006499
Gas Measurement
Presents concepts and principles basic to gas measurement; demonstrates the effects of gas pressure and temperature on gas measurement using mathematical calculations. Reviews the operating principles of diaphragm, rotary and turbine meters used to measure gas. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2202(1) Course ID: 006500
Maintaining Line Valves
Presents the basic operating principles and maintenance schedules of flow control valves; demonstrates proper use and care of high-pressure grease guns. Lecture: 0.5 credits (7.5 contact hours), Lab: 0.50 credits (15 contact hours).
Components: Laboratory, Lecture

NGT 2203(0.5) Course ID: 006501
Pipe Line Heaters
Presents the operation procedures and maintenance of catalytic and water bath indirect pipeline heaters. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2204(0.5) Course ID: 006502
Proper Odorant Levels
Presents the industry standards and devices used to introduce odorants into a natural gas system; emphasizes testing for odorant levels and the proper handling of odorants. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2205(0.5) Course ID: 006503
Dew Point of a Gas
Covers theory and practice used to test the dew point of a gas; explains methods used to test moisture in gas. Lecture: 0.25 credits (7.5 contact hours), Lab: 0.26 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2301(0.5) Course ID: 006504
Orifice Meters
Presents operating principles of orifice meters; emphasizes the identification of the meter components and their functions in the measurement process. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2302(0.5) Course ID: 006505
Turbine Meters
Presents operating principles of turbine type meters; emphasizes the identification of the meter components and their functions in the measurement process. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2303(0.5) Course ID: 006506
Diaphragm Meters
Presents operating principles of diaphragm-type meters; emphasizes the identification of the meter components and their functions in the measurement process. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2304(0.5) Course ID: 006507
Rotary Meters
Presents operating principles of rotary meters; emphasizes the identification of the meter components and their functions in the measurement process. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2305(0.5) Course ID: 006508
Pressure Relief Valves
Presents purpose and operating characteristics of pressure relief valves; emphasizes inspecting, testing and maintenance of relief valves. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2306(0.5) Course ID: 006509
Recording Charts
Presents basic technology used to transfer information to a recording chart; emphasizes how to change, interpret, and send charts. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2401(0.5) Course ID: 006510
Self-Operating Regulators
Presents information and procedures basic to performing maintenance operations on self-operating pressure regulators. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2402(0.5) Course ID: 006511
Pilot Loaded Regulators
Presents concepts and principles basic to the selection and use of pressure regulators and the control of gas pressure. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2403(0.5) Course ID: 006512
Test Pressure Limits
Presents the concepts and principles basic to test relief valves and pressure limiting and regulating stations. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NGT 2404(0.5) Course ID: 006513
Differential Pressure Recorder
Presents information and procedures for maintaining and calibrating differential pressure recorders. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2405(0.5) Course ID: 006514
Mercury Instruments
Presents the fundamental operating and maintenance procedures for Mercury instruments, gauges and indexes. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture

NGT 2406(0.5) Course ID: 006515
Multiple Range Pressure Chart
Presents concepts and principles basic to reading multiple range pressure recording charts. Lecture: 0.25 credits (3.75 contact hours), Lab: 0.25 credits (7.5 contact hours).
Components: Laboratory, Lecture

NIP 103(0.5) Course ID: 017117
Nursing Care Across the Lifespan
Focuses on care of clients across the lifespan with stressors to normal lines of defense in hematology, immune, integumentary, fluid and electrolyte/acid-base imbalance, respiratory, muscular-skeletal, cardiovascular, gastrointestinal/hepato-biliary, renal/urinary, neurological/sensory and endocrine and reproductive health. Included is nursing care throughout normal pregnancy and the postpartum period, as well as nursing care of the normal newborn and the childbearing family. Integrates the concepts of nursing practice: context and environment, knowledge and science, personal/professional development, quality and safety, relationship-centered care, and teamwork. Uses the Neuman’s Systems Model to provide care for clients incorporating the core values of caring, diversity, excellence, integrity, ethics, holism, and client-centeredness. Examines the client’s needs, health promotion, various treatment modalities, and nursing interventions, through clinical experience and theory application. Pre-requisite: Completion with a grade of “C” or better in NIP 103, NIP 116, BIO 139; Student must have Basic Life support certification, Current Liability insurance coverage and current immunizations for the duration of the course. Pre-requisite or Co-requisite: AHS 100. Lecture: 7 credit hours (105 contact hours). Laboratory: 3 credit hours (135 contact hours). Components: Laboratory, Lecture Attributes: Digital Literacy, Technical

NIP 129(11) Course ID: 015950
Nursing Care Across the Life Span
Focuses on care of patients across the lifespan with stressors to normal lines of defense in hematology, immune, integumentary, fluid and electrolyte/acid-base imbalance, respiratory, muscular-skeletal, cardiovascular, gastrointestinal/hepato-biliary, renal/urinary, neurological/sensory and endocrine and reproductive health. Included is nursing care throughout pregnancy and the postpartum period, as well as nursing care of the newborn and the childbearing family. Integrates the concepts of nursing practice: context and environment, knowledge and science, personal/professional development, quality and safety, relationship-centered care, and teamwork. Uses the Neuman’s Systems Model to provide care for patients by incorporating the core values of caring, diversity, excellence, integrity, ethics, holism, and patient-centeredness. Examines the patient’s needs, health promotion, various treatment modalities, and nursing interventions, through clinical experience and theory application. Pre-requisite: Completion with a grade of “C” or better in NIP 103, NIP 116; Student must have Basic Life support certification, current liability insurance coverage and current immunizations for the duration of the course. Pre-requisite or Co-requisite: AHS 100. Lecture: 7.5 credits (112.5 contact hours). Laboratory: 3.5 credits (157.5 contact hours). Components: Clinical, Laboratory, Lecture Attributes: Technical

NIP 116(10) Course ID: 006838
Nursing Integrated Program
Focuses on care of clients across the lifespan with stressors to normal lines of defense in hematology, immune, integumentary, fluid and electrolyte/acid-base imbalance, respiratory, muscular-skeletal, cardiovascular, gastrointestinal/hepato-biliary, renal/urinary, neurological/sensory and endocrine and reproductive health. Included is nursing care throughout normal pregnancy and the postpartum period, as well as nursing care of the newborn and the childbearing family. Integrates the concepts of nursing practice: context and environment, knowledge and science, personal/professional development, quality and safety, relationship-centered care, and teamwork. Uses the Neuman’s Systems Model to provide care for patients by incorporating the core values of caring, diversity, excellence, integrity, ethics, holism, and patient-centeredness. Examines the patient’s needs, health promotion, various treatment modalities, and nursing interventions, through clinical experience and theory application. Pre-requisite: Completion with a grade of “C” or better in NIP 103, NIP 116; Student must have Basic Life support certification, current liability insurance coverage and current immunizations for the duration of the course. Pre-requisite or Co-requisite: AHS 100. Lecture: 7 credits (105 contact hours). Laboratory: 3 credit hours (135 contact hours).
Components: Laboratory, Lecture Attributes: Digital Literacy, Technical

Fundamentals of Nursing
Focuses on basic nursing concepts that the beginning nurse will need to provide care to diverse clients utilizing the six integrated concepts of nursing practice: context and environment, knowledge and science, personal/professional development, quality and safety, relationship-centered care, and teamwork. Uses the Neuman’s Systems Model to provide care for patients by incorporating the core values of caring, diversity, excellence, integrity, ethics, holism, and patient-centeredness. Examines the client’s needs, health promotion, various treatment modalities, and nursing interventions, through clinical experience and theory application. Pre-requisite: Completion with a grade of “C” or better in NIP 103, NIP 116; Student must have Basic Life support certification, current liability insurance coverage and current immunizations for the duration of the course. Pre-requisite or Co-requisite: AHS 100. Lecture: 7.5 credits (112.5 contact hours). Laboratory: 3.5 credits (157.5 contact hours).
Components: Clinical, Laboratory, Lecture Attributes: Technical
NIP 140(6) Course ID:005435
Practical Nursing Role Transition
Prepares students to assume the role of graduate practical nurse. Promotes clinical judgment, delegation and collaboration in the provision of safe, ethical, holistic patient centered care. Explores healthcare management systems and employment seeking skills as students begin to develop a professional identity. Includes a clinical practicum in a health care facility utilizing the nursing process and evidence-based information in delivering clinically competent care. Pre-requisite: Completion with a grade of “C” or better in NIP126. Students must have Basic Life Support certification, current liability insurance coverage and current immunizations for the duration of the course. Lecture: 2.0 credits (30 contact hours). Clinical: 4.0 credits (180 contact hours). Components: Clinical, Lecture Attributes: Digital Literacy, Course Also Offered in Modules, Technical

NIP 212(10) Course ID:016117
Advanced Medical Surgical Nursing
Focuses on advanced assessment of diverse individuals throughout the lifespan by incorporating the integrating concepts of nursing practice: context and environment, knowledge and science, personal/ professional development, quality and safety, relationship-centered care, and teamwork. Utilizes the nursing process in care and management of complex health care needs and disorders of self-defense/protection: skin, hair and nails, cancer, immune system, hematological system, cardiovascular system, respiratory system, endocrine system, gastrointestinal system, reproductive system, renal system, nervous system, and musculoskeletal system across the lifespan. Pre-requisite: Completion with grade of “C” or better in NIP 126 or successful completion of a Practical Nursing program curriculum and proof of active unencumbered Kentucky or Compact State Practical Nurse license. Students must have Basic Life Support certification, current liability insurance coverage and current immunizations for the duration of the course. Pre-requisite or Co-requisite: Quantitative Reasoning to meet the AA or AS requirement. Lecture: 7 credit hours (105 contact hours). Clinical: 3 credit hours (135 contact hours). Components: Clinical, Lecture Attributes: Digital Literacy, Technical

NIP 216(9) Course ID:017604
Leadership and Transition to Practice
Prepares the student in the Associate Degree Nursing Program to assume the role of a graduate nurse in the synthesis of clinical and classroom learning during daily living across the life span. Provides a historical overview of health care system and roles and responsibilities of members of the health care team. Emphasizes practical nursing and the nursing process in the context of Gordon’s Functional Health Patterns and Maslow’s hierarchy of needs as related to clients’ health as the life span. Covers fundamental nursing skills including therapeutic communication techniques; concepts of health, health assessment, self care and basic needs related to activities of daily living across the lifespan. Pre-requisite: Completion with a grade of “C” or better in or OST 103 and (AHS 100 or PSY 223) with a minimum “C” grade.

NPN 100(2) Course ID:004021
Nursing Fundamentals
Provides a historical overview of health care system and roles and responsibilities of members of the health care team. Emphasizes practical nursing and the nursing process in the context of Gordon’s Functional Health Patterns and Maslow’s hierarchy of needs as related to clients’ health as the life span. Covers fundamental nursing skills including therapeutic communication techniques; concepts of health, health assessment, self care and basic needs related to activities of daily living across the lifespan. Pre-requisite: Completion with a grade of “C” or better in NIP 126 or successful completion of a Practical Nursing program curriculum and proof of active unencumbered Kentucky or Compact State Practical Nurse license. Students must have Basic Life Support certification, current liability insurance coverage and current immunizations for the duration of the course. Pre-requisite or Co-requisite: Quantitative Reasoning to meet the AA or AS requirement. Lecture: 7 credit hours (105 contact hours). Clinical: 3 credit hours (135 contact hours). Components: Clinical, Lecture Attributes: Digital Literacy, Technical

Pharmacology I
Introduces techniques used to administer medications. Includes dosages, diagnostic studies, related medical therapies, and legal responsibilities. Pre-requisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [NAA 100 or equivalent] within the past three years OR active status on the Medicaid Nurse Aide Registry) AND Digital Literacy as defined by KCTCS. [ENG 101 and MAT 110 and AHS 115 or CLA 131 with a minimum “C” grade]. Pre-requisite or Co-requisite: BIO 139, if prerequisite, a grade of “C” or greater must be achieved. Lecture: 2 credit hours (30 contact hours). Laboratory: 1.0 credit (45 contact hours). Components: Laboratory, Lecture Attributes: Digital Literacy, Course Also Offered in Modules, Technical

NPN 105(6) Course ID:004022
Development of Care Giver Role
Introduces nursing and the nursing process as related to client activities of daily living across the life span. Provides an opportunity to develop and practice psychomotor skills related to health assessment, promotion, maintenance, and illness prevention. Pre-requisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [NAA 100 or equivalent] within the past three years OR active status on the Medicaid Nurse Aide Registry) AND Digital Literacy as defined by KCTCS. [ENG 101 and MT 110 and AHS 115 or CLA 131 with a minimum “C” grade]. Pre-requisite or Co-requisite: BIO 139, if prerequisite, a grade of “C” or greater must be achieved. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (45 contact hours). Components: Laboratory, Lecture Attributes: Digital Literacy, Technical

NPN 106(6) Course ID:005627
Nursing Fundamentals
Provides an overview of human growth and development across the lifespan. Explores healthcare management systems and employment seeking skills as students begin to develop a professional identity. Includes a clinical practicum in a health care facility utilizing the nursing process and evidence-based information in delivering clinically competent care. Pre-requisite: Completion with a grade of “C” or better in NIP 216 and MAT 150. Students must have Basic Life Support certification. Co-requisite: NIP 215. Lecture: 0.5 credits (7.5 contact hours). Lab: 1.5 credits (67.5 contact hours). Components: Laboratory, Lecture Attributes: Technical

NPN 108(3) Course ID:005628
Fundamentals of Nursing Care
Provides a historical overview of health care system and roles and responsibilities of members of the health care team. Emphasizes practical nursing and the nursing process in the context of Gordon’s Functional Health Patterns and Maslow’s hierarchy of needs as related to client activities of daily living across the life span. Covers fundamental nursing skills including therapeutic communication techniques; nursing assessment; nursing process and care planning; charting; legal and ethical parameters of health care; rest and sleep; body mechanics and introductory content on the surgical experience. Pre-requisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [NAA 100 or equivalent] within the past three years OR active status on the Medicaid Nurse Aide Registry) AND Digital Literacy as defined by KCTCS. [ENG 101 and MAT 110 and AHS 115 or CLA 131 with a minimum “C” grade]. Pre-requisite or Co-requisite: BIO 139, if prerequisite, a grade of “C” or greater must be achieved. Lecture: 4 credit hours (60 contact hours). Laboratory: 2 credit hours (90 contact hours). Components: Clinical, Laboratory, Lecture Attributes: Digital Literacy, Course Also Offered in Modules, Technical

NPN 110(2) Course ID:004023
Pharmacology I
Introduces techniques used to administer medications. Includes dosages, diagnostic studies, related medical therapies, and legal responsibilities. Pre-requisite: Admission to Practical Nursing program AND CPR for Health Care Providers certification to be maintained throughout enrollment in the program AND [NAA 100 or equivalent] within the past three years OR active status on the Medicaid Nurse Aide Registry) AND Digital Literacy as defined by KCTCS. [ENG 101 and MT 110 and AHS 115 or CLA 131 with a minimum “C” grade]. Pre-requisite or Co-requisite: BIO 139, if prerequisite, a grade of “C” or greater must be achieved. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credit (45 contact hours). Components: Laboratory, Lecture Attributes: Technical

NPN 220(2) Course ID:016095
Advanced Cardiac & Emergent Care
Focuses on administration of care for acute cardiovascular emergencies including cardiac arrest, acute myocardial infarction, and stroke. Prepares students to participate in emergency treatment of patients highlighting the importance of team dynamics and communication, systems of care, and immediate post-cardiac-arrest care. Educates students on airway management and related pharmacology. Students demonstrating essential knowledge and skills, obtaining 95% or greater on the written exam, and successfully completing the megacode will receive an American Heart Association ACLS provider card. Pre-requisite: Completion with grade of “C” or better in NIP 211 and MAT 150. Students must have Basic Life Support certification. Co-requisite: NIP 215. Lecture: 0.5 credits (7.5 contact hours). Lab: 1.5 credits (67.5 contact hours). Components: Clinical, Lecture
NRS 102(10) Course ID:004333
Nursing Care II
Includes the application of problem-solving and critical thinking skills in the care of patients across the life span and of diverse cultures with actual or potential alterations in health due to common acute and chronic health problems. Provides care of patients during the childbearing cycle focusing on common health alterations in the reproductive process. Strengthens the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN) while higher level skills are introduced. Includes an integrated clinical practicum of direct patient care in a health care facility or health care organization to facilitate the transition from student role to LPN practice. Pre-requisite: NRS 101 with letter grade of “C” or better. Pre-requisite Or Co-requisite: ENG 101. Lecture: 5 credit hours (75 contact hours). Clinical: 5 credit hours (225 contact hours).
Components: Clinical, Lecture
Attributes: Technical

NRS 200(3) Course ID:004334
LPN-ADN Transition
Facilitates the transition of licensed practical nurses into the nursing mobility program by building upon previous knowledge, attitudes, and cognitive and psychomotor skills using strategies of adult learning. Strengthens the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN). Orient the student to the philosophy and organizing framework of the ADN Program and assist the practical nurse to make the role transition to registered nursing. Essential concepts and beginning problem-solving skills required for registered nursing practice are emphasized. Nineteen credit hours in nursing will be awarded upon successful completion of the course. Pre-requisite: Admission to nursing program; BIO 137, BIO 139, and Quantitative Reasoning Course at AA/AS Level with a grade of “C” or better; ENG 101, PSY 110. Lecture: 3 credit hours (45 contact hours).
Components: Lecture
Attributes: Technical

NRS 203(9) Course ID:004335
Nursing Care III
Applies problem-solving and critical thinking skills in the care of diverse patients/families across the life span with actual or potential alterations in health due to complex acute and chronic health problems. Emphasizes leadership, management concepts, clinical decision-making, knowledge, judgment, skills and professional values within a legal/ethical framework. Introduces the RN responsibilities in relation to the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN). Pre-requisite: NRS 102 with a grade of “C” or better. Pre-requisite Or Co-requisite: BIO 225 with a grade of “C” or better. Lecture: 5 credit hours (75 contact hours). Clinical: 4 credit hours (180 contact hours).
Components: Clinical, Lecture
Attributes: Technical

NRS 204(10) Course ID:004336
Nursing Care IV
Integrates previous knowledge and skills into the development of the associate degree nurse. Focuses on the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN) with an emphasis on leadership, management, clinical decision-making, collaboration, knowledge, judgment, skills and professional values within a legal/ethical framework. Applies problem-solving and critical thinking skills in the care of diverse patients/families across the lifespan with actual or potential alterations in health due to complex acute and chronic health problems. Includes an integrated clinical practicum of direct patient care in a health care facility or health care organization to facilitate the transition from student role to RN practice.

Pre-requisite: NRS 203 and BIO 225 with a grade of “C” or better. Pre-requisite Or Co-requisite: Heritage/Anthropology Course. Lecture: 6 credit hours (90 contact hours) Clinical: 4 credit hours (180 contact hours).
Components: Clinical, Lecture
Attributes: Technical

NSG 100(3) Course ID:005269
Preparation for Nursing
Explores careers in the nursing profession. Includes career options and educational pathways, goal setting and self-awareness, tools/strategies for success in nursing programs, and trends impacting nursing’s future. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

NSG 101(9) Course ID:000568
Nursing Practice
Focuses on nursing practice within the context of the contemporary health care delivery system by introducing the nursing process and basic nursing concepts as a framework for organizing care delivery. Focuses on foundational knowledge of nursing practice, skills acquisition, and the basic care of diverse patient populations. Introduces the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN). Pre-requisite: Admission to the Associate Degree Nursing Program. (BIO 137 and Quantitative Reasoning Course at AA/AS Level) with a grade of “C” or better, PSY 110, and 75 hour nursing assistant course or its equivalent. Pre-requisite or Co-requisite: BIO 139 with a grade of “C” or better. Lecture: 5 credits (75 contact hours). Clinical: 4 credits (180 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 106(9) Course ID:006179
Nursing One
Focuses on nursing practice within the context of the contemporary health care delivery system by introducing the nursing process and basic nursing concepts as a framework for organizing care delivery. Emphasizes foundational knowledge of nursing practice, skills acquisition, and the basic care of diverse patient populations with risk for or actual chronic health pattern dysfunctions. Introduces the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry. Pre-requisite: Admission to the Associate Degree Nursing Program. (BIO 137 and Quantitative Reasoning Course at AA/AS Level) with a grade of “C” or better, PSY 110, 75 hour nursing assistant course or equivalent. Pre-requisite or Co-requisite: BIO 139 with a grade of “C” or better (within 10 years) and ENG 101. Lecture: 5 credits (75 contact hours). Clinical: 4 credits (180 contact hours).
Components: Clinical, Lecture
Attributes: Technical

NSG 195(4) Course ID:011739
Transition to ADN
Builds upon the basic nursing skills and concepts learned in the LVN/LPN experience. Assists the Practical Nurse to make the beginning transition to the RN role. Strengthens the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN). Emphasizes the concepts of nutrition, metabolism, endocrine, elimination, and integumentary. Sixteen credit hours in nursing will be awarded upon successful completion of the course. Pre-requisite: Admission to the Associate Degree Nursing Program and (BIO 137, BIO 139, and Quantitative Reasoning Course at AA/AS Level) with a grade of “C” or better, PSY 110, and ENG 101. Co-requisite: NSG 212 with a grade of “C” or better. Lecture: 3.5 credits (52.5 contact hours). Clinical: 0.5 credit (22.5 contact hours).
Components: Clinical, Lecture
Attributes: Technical

NSG 196(5) Course ID:006180
Nursing LPN Bridge Course
Builds upon the LVN/LPN experiences in application of core components of nursing. Focuses on nursing care for patients with mental health dysfunctions and patients experiencing acute and/or chronic health dysfunctions. Builds upon the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry. Covers selected content and skills from Nursing One and Nursing Two. Includes the role of the Associate Degree Nurse and application of the core components of nursing practice to patients experience. Pre-requisite: Licensed practical nurse with the board of nursing, BIO 137, BIO 139, Quantitative Reasoning at an AA/AS level or higher (all of these must be a “C” or better and within the last 10 years), PSY 110, ENG 101. Pre-requisite or Co-requisite: HST 121. Lecture: 4 credits (60 contact hours). Clinical: 1 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NSG 199(2) Course ID:005905
Accelerated Transition: PN-A.D.N Bridge
Provides an accelerated course designed for the LPN/LVN who demonstrates through competency assessment the ability to build upon previous learning and experience. Focuses on the beginning transition to the RN role, the acquisition of essential skills and the development of critical thinking, emphasizing the concepts of nutrition, metabolism, endocrine, elimination, and integumentary. Strengthens the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN). Sixteen credit hours in nursing will be awarded upon successful completion of the course. Pre-requisite: Admission to the Associate Degree Nursing Program and BIO 137, BIO 139, and Quantitative Reasoning Course at AA/AS Level with a grade of “C” or better, PSY 110, ENG 101, and a passing score on a national normed PN to RN mobility examination. Co-requisite: NSG 212 with a grade of “C” or better. Lecture: 1.5 credits (22.5 contact hours). Clinical: 0.5 credit (22.5 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 206(9) Course ID:006181
Nursing Two
Includes the application of the core components of nursing to patients experiencing alterations in health. Focuses on nursing care for patients with mental health dysfunctions and patients experiencing acute and/or chronic health dysfunctions. Buildings upon the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry. Pre-requisite: NSG 106 with a grade of “C” or better. Pre-requisite or Co-requisite: HST 121. Lecture: 5 credits (75 contact hours). Clinical: 4 credits (180 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 211(3) Course ID:005908
Maternal Newborn Nursing
Focuses on the application of the core components of nursing practice to the care of childbearing families. Illustrates the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN). Pre-requisite: (NSG 219 and NSG 212) with a grade of “C” or higher, and ENG 101. Pre-requisite or Co-requisite: NSG 229 and BIO 225 with a grade of “C” or higher. Lecture: 2 credits (30 contact hours). Clinical: 1 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 229(2) Course ID:017319
Transition to ADN
Builds upon the basic nursing skills and concepts learned in the LVN/LPN experience. Assists the Practical Nurse to make the beginning transition to the RN role. Strengthens the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN). Emphasizes the concepts of nutrition, metabolism, endocrine, elimination, and integumentary. Sixteen credit hours in nursing will be awarded upon successful completion of the course. Pre-requisite: Admission to the Associate Degree Nursing Program and (BIO 137, BIO 139, and Quantitative Reasoning Course at AA/AS Level) with a grade of “C” or better, PSY 110, and ENG 101. Co-requisite: NSG 212 with a grade of “C” or better. Lecture: 3.5 credits (52.5 contact hours). Clinical: 0.5 credit (22.5 contact hours).
Components: Clinical, Lecture
Attributes: Technical
NSG 212(3) Course ID:005909
Behavioral Health Nursing
Focuses on the application of the core components of nursing practice to adult patients experiencing actual or potential alterations in mental health. Strengthens the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN). Pre-requisite: NSG 101 and BIO 139 with a grade of "C" or higher. Pre-requisite or Co-requisite: NSG 210 with a grade of "C" or higher, and ENG 101. Lecture: 2 credits (30 contact hours), Clinical: 1 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 213(3) Course ID:005910
Pediatric Nursing
Focuses on the application of the core components of nursing practice to the care of the child and family. Validates the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN). (Unsuccessful completion of NSG 213 will require mandatory withdrawal from NSG 239, 201 KAR 20:320). Pre-requisite: NSG 229 and NSG 211 and BIO 225 with a grade of "C" or better. Co-requisite: NSG 229 and NSG 211 and BIO 225 with a grade of "C" or better. Pre-requisite or Co-requisite: Heritage/Humanities. Lecture: 2 credits (30 contact hours). Clinical: 1 credit (45 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 217(9) Course ID:087320
Medical Surgical Nursing I
Focuses on the application of the core components of nursing practice to adult patients experiencing actual or potential alterations in health. Strengthens the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN). Emphasizes the concepts of nutrition, metabolism, endocrine, elimination, and integumentary. Pre-requisite: NSG 101 and BIO 139 with a grade of "C" or better. Pre-requisite or Co-requisite: NSG 212 with a grade of "C" or better and ENG 101. Lecture: 4 credits (60 contact hours). Clinical: 3 credits (135 contact hours).
Components: Clinical, Lecture
Attributes: Technical

NSG 225(1) Course ID:005913
Pharmacology II
Focuses on common drugs, their classification and effects on functional and dysfunctional health patterns (activity/exercise, coping/stress/tolerance, role/relationship, altered self-perception/self-concept, and cognitive perceptual). Emphasizes nursing responsibility, accountability and application of the nursing process regarding drug therapy. (Unsuccessful completion of NSG 225 will require mandatory withdrawal from NSG 230, 201 KAR 20:320). Pre-requisite: NSG 220 and NSG 211 and BIO 225 with a grade of "C" or better. Co-requisite: NSG 230 or Consent of Instructor. Pre-requisite or Co-requisite: NSG 213 and Heritage/Humanities. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Technical

NSG 229(7) Course ID:017321
Medical Surgical Nursing II
Focuses on the application of the core components of nursing practice to adult patients experiencing actual or the potential for alterations in health. Illustrates the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN). Emphasizes the concepts of oxygenation, circulation, perfusion, and activity/exercise. Pre-requisite: NSG 219 and NSG 212 with a grade of "C" or higher and ENG 101. Pre-requisite or Co-requisite: NSG 211 and BIO 225 with a grade of "C" or higher. Lecture: 4 credits (60 contact hours). Clinical: 3 credits (135 contact hours).
Components: Clinical, Lecture
Attributes: Technical

NSG 236(9) Course ID:006184
Nursing Three
Includes application of the core components of nursing to the care of childbearing and child-rearing families experiencing functional and dysfunctional alterations in health. Applies the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry. Pre-requisite: NSG 206 OR NSG 196 with a grade of "C" or better. Pre-requisite or Co-requisite: BIO 225 (within 10 years) with a grade of "C" or better. Lecture: 5 credits (75 contact hours). Clinical: 4 credits (180 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NSG 239(6) Course ID:005914
Medical/Surgical Nursing III
Focuses on the application of the core components of nursing practice to adult patients experiencing actual or the potential for alterations in health. Validates the four competencies of nursing practice including human flourishing, nursing judgment, professional identity, and spirit of inquiry and Quality and Safety Education for Nurses (QSEN). Emphasizes the concepts of: neurologic, eyes/ears, immune/cancer, multiple systems organ failure, and disaster planning. Role transition is addressed and emphasizes leadership, management of care, skill development and professionalism. NSG 239 is the capstone course and must be successfully completed in the final semester of the associate degree nursing program enrollment. (201 KAR 20:320). Pre-requisite: NSG 229 and NSG 211 and BIO 225 with a grade of "C" or better. Pre-requisite or Co-requisite: NSG 213 with a grade of "C" or better and Heritage/Humanities. Lecture: 3 credits (45 contact hours). Clinical: 3 credits (135 contact hours).
Components: Clinical, Laboratory, Lecture
Attributes: Technical

NSG 246(9) Course ID:006185
Nursing Four
Emphasizes the development of the nurse as a provider of care, manager of care, and member of the nursing profession. Provides for the application of critical thinking skills in the care of diverse patients/families across the lifespan with actual or potential alteration in health due to complex acute and chronic health problems. Includes an integrated practicum with an emphasis on leadership, management, clinical judgment, collaboration, knowledge, skills, and professional values within the legal/ethical framework to facilitate the transition of the student to Registered Nurse practice. Pre-requisite: NSG 236 with a grade of "C" or better. Pre-requisite or Co-requisite: Heritage/Humanities/Foreign Language. Lecture: 5.0 credits (75 contact hours), Laboratory: Clinical: 4.0 credits (180 contact hours, 45:1 ratio).
Components: Clinical, Laboratory, Lecture
Attributes: Course Also Offered in Modules, Technical

NSG 298(1 - 4) Course ID:000531
Instructor Consent Required
Selected Topics in Nursing. (Topic)
Various nursing topics, issues, and trends will be addressed. Topics may vary from semester to semester at the discretion of the instructors; courses may be repeated with different topics to a maximum of six credit hours.
Lecture: Varies by topic; Laboratory: Varies by topic; Pre-requisite: Consent of Instructor.
Components: Laboratory, Lecture
Attributes: Technical

ORP 100(2) Course ID:007590
Introduction to Orthotics and Prosthetics
Introduces students to the professions of orthotics and prosthetics. Emphasizes professional practice, the role of the technician and career opportunities. Introduces students to basic mechanical skills and knowledge via laboratory project to determine if orthotics and prosthetics is a career path they would like to follow. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

ORP 101(3) Course ID:017591
Lower Extremity Orthotics I
Provides the knowledge and skills necessary to fabricate foot orthosis inserts, perform orthopedic shoe modification, and fabricate foot orthoses/prostheses below or at the ankle joint. Integrates study of foot and ankle skeletal structures and biomechanical principles of foot orthoses and partial foot prostheses. Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Technician program. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ORP 102(3) Course ID:017592
Spinal Orthotics
Provides students with the knowledge and skills necessary to fabricate plastic and metal ankle-foot orthoses. Introduces topics such as spinal skeletal structure, biomechanical principles of spinal orthoses, interpretation and application of spinal orthotomy, variations of spinal orthoses and fitting of off-the-shelf spinal orthoses for the filter level practitioner. Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Technician program. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ORP 103(4) Course ID:017593
Lower Extremity Orthotics II
Provides the knowledge and skills necessary to fabricate plastic and metal ankle-foot orthoses. Examines foot and ankle skeletal structures and biomechanical principles of ankle foot orthoses. Interprets and applies ankle-foot orthotomy, reviews variation of ankle-foot orthoses and examines fitting of off the shell lower limb orthoses. Pre-requisite: ORP 100, ORP 101, and admission to the Orthotics and Prosthetics Program. Lecture : 2 credits (30 contact hours). Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ORP 104(3) Course ID:017594
Lower Extremity Orthotics III
Provides the knowledge and skills necessary to fabricate plastic and metal knee-ankle-foot orthoses. Integrates study of foot, ankle and knee skeletal structures and biomechanical principles of knee-ankle-foot orthoses. Interprets and applies knee-ankle-foot orthotomy, reviews variations of knee-ankle-foot orthoses and examines fitting of off -the-shell knee orthoses. Pre-requisite: ORP 100, ORP 103, and admission to the Orthotics and Prosthetics Program. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

ORP 105(3) Course ID:017595
Upper Extremity Orthotics
Provides the knowledge and skills necessary to fabricate plastic and metal upper extremity orthoses. Integrates study of upper extremities skeletal structures and biomechanical principles of upper extremity orthoses, interprets and upper extremity orthotomy, reviews variation of upper extremity orthoses and fracture orthoses, and examines fitting of off-the-shelf upper extremity orthoses. Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours).
Components: Laboratory
Attributes: Technical
ORP 106(3)  Course ID: 017596  Orthotic and Prosthetic Skill Development  Provides the necessary skills to perform basic technological processes within the profession of orthotics and prosthetics. Emphasizes basic skills such as plaster work, plastic fabrication including thermosetting and thermoformed, introduces concepts of metal contouring, leather working including sewing concepts, and finishing skills. Reviews vertical fixture, shoe machines, routers and various other machines and tools specific to orthotic and prosthetic production. Reviews laboratory safety and material safety. Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours). Components: Laboratory, Lecture Attributes: Technical

ORP 107(2)  Course ID: 017597  Orthotic Prosthetic Biomaterials  Provides the necessary knowledge of materials utilized in prosthetic and orthotic fabrication. Emphasizes characteristics of materials and their application in fabrication techniques utilized in the orthotic prosthetic laboratory. Introduces use of sheet plastics and thermosetting plastics for various layups and fibers. Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours). Components: Laboratory, Lecture Attributes: Technical

ORP 108(2)  Course ID: 017598  Introduction to Orthotics and Prosthetics  Provides the student with the knowledge and skills to design a safe and efficient prosthetic orthotic laboratory. Reviews the process of managing the areas of orthotic and prosthetic practice including administrative documentation. Introduces additional work experience with the fabrication of orthoses and/or prostheses as students are mentored by practitioners in the field to perform required tasks as described in the clinical affiliation agreement. Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours). Components: Laboratory, Lecture Attributes: Technical

ORP 195(4)  Course ID: 017599  Clinical Experience I  Familiarizes students with the profession of orthotics and prosthetics by applying knowledge and skills in the work setting. Emphasizes work experience with the fabrication of orthoses and/or prostheses while practitioners in the field mentor students as they perform required tasks described in the clinical affiliation agreement. Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program. Clinical: 4 credits (120 contact hours). Components: Clinical Attributes: Technical

ORP 200(4)  Course ID: 017600  Transstibial Prosthetics  Provides the student with the knowledge and skills necessary to fabricate transtibial prostheses. Introduces impression procedures, interface materials, foot and ankle mechanisms, alignment and transtibial design variations. Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program. Lecture: 2 credits (60 contact hours). Components: Laboratory, Lecture Attributes: Technical

ORP 201(4)  Course ID: 017601  Transfemoral Prosthetics  Provides students with the knowledge and skills necessary to fabricate transfemoral prostheses. Introduces impression procedures, interface materials, foot and ankle mechanisms, alignment and transfemoral design variations. Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program. Lecture: 2 credits (60 contact hours). Components: Laboratory, Lecture Attributes: Technical

ORP 202(4)  Course ID: 017602  Transradial and Transhumeral Prosthetics  Provides students with the knowledge and skills necessary to fabricate transradial and transhumeral prostheses. Introduces impression procedures, interface materials, cabling systems, alignment and variations of transradial and transhumeral prostheses. Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program. Lecture: 2 credits (30 contact hours). Laboratory: 2 credits (60 contact hours). Components: Laboratory, Lecture Attributes: Technical

ORP 203(3)  Course ID: 017603  Advanced Techniques  Familiarizes students with current technology developments in the field of orthotics and prosthetics. Reviews computer-aided design and manufacturing, advanced component and material design, pathologic gait deviations and technology solutions as well as patient outcome measurement tests. Pre-requisite: ORP 100 and admission to the Orthotics and Prosthetics Program. Lecture: 1 credit (15 contact hours). Laboratory: 2 credits (60 contact hours). Components: Laboratory, Lecture Attributes: Technical

ORP 295(4)  Course ID: 017605  Clinical Experience II  Reinforces student familiarity with the profession of orthotics and prosthetics by applying knowledge and skills in the work setting. Develops additional work experience with the fabrication of orthoses and/or prostheses as students are mentored by practitioners in the field to perform required tasks as described in the clinical affiliation agreement. Pre-requisite: ORP 100, ORP 195, and in good standing in the Orthotics and Prosthetics Program. Clinical: 4 credits (120 contact hours). Components: Clinical Attributes: Technical

OST 100(1)  Course ID: 003768  Keyboarding  Develops skill operating a keyboard by touch. Lab: 1.0 credit (45 contact hours). Components: Laboratory Attributes: Technical

OST 101(3)  Course ID: 004926  Keyboarding & Intro to Document Formatting  Develops skill in operating a keyboard by touch and to develop an introductory level of skill producing standard business documents using a word processing program with speed and accuracy. Lecture: 3.0 credits (45 contact hours). Components: Lecture Attributes: Technical

OST 105(3)  Course ID: 003769  Introduction to Information Systems  Introduces students to computer concepts and terminology related to operating system, file management and cloud computing. Teaches basic competencies in searching, locating, and evaluating information on the Internet, using email and other online tools, and demonstrating responsible and ethical online and offline behavior. Teaches beginning skills in word processing electronic spreadsheets, presentations, databases and integration as well as how to keep up with emerging technologies and use computer skills to enhance quality of life and employability. Pre-requisite: RDG 020 or consent of Instructor. Lecture: 3.0 credits (45 contact hours). Components: Lecture Attributes: Technical

OST 106(3)  Course ID: 003770  Advanced Word Processing Applications  Uses advanced features of a current word processing software to format and produce documents utilized in an office. Pre-requisite: OST 110. Lecture: 3.0 credits (45 contact hours). Components: Lecture Attributes: Technical

OST 110(3)  Course ID: 003771  Office Procedures  Studies the practices and procedures of current office concepts with emphasis given to the electronic office including: job application procedures, human relations in the office, business ethics, decision-making skills, travel and meeting arrangements, time and stress management, incoming/outgoing mail processes, and telephone procedures. Pre-requisite Or Co-requisite: OST 110. Lecture: 3.0 credits (45 contact hours). Components: Lecture Attributes: Technical
OST 220(3)  Course ID:003775
Administrative Office Simulations
Applies administrative procedures office simulations to include organizing, communicating, scheduling, and analyzing. Emphasizes productivity, efficiency, accuracy, and problem solving. Uses technology to research information on the Internet and send and receive e-mail. Continues to develop speed and accuracy. Pre-requisite: OST 210, OST 215, and OST 240, or consent of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical
OST 225(3)  Course ID:003776
Introduction to Desktop Publishing
Uses desktop publishing software to design and produce high resolution publications such as flyers, brochures, business forms, and newsletters. Introduces basic design techniques, type and graphics layout, and related terminology. Pre-requisite: (OST 105 and OST 110) or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
OST 235(3)  Course ID:003777
Business Communications Technology
Presents aspects of communications technology used in the global business environment, including presentations software; a basic understanding of voice recognition software; planning and composition of written, oral, and electronic communications; grammar, punctuation, and spelling; and principles of typesetting, both manual and electronic. Pre-requisite: (ENG 101 or OST 108). Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical
OST 240(3)  Course ID:003778
Advanced Microsoft Applications
Expands computer skills through the use of spreadsheet, database management, word processing, and presentation software for the integration of information. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical
OST 250(3)  Course ID:004514
Advanced Desktop Publishing
Provides advanced techniques in electronic publishing design, layout, composition and paste-up. Pre-requisite: OST 225 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical
OST 255(2)  Course ID:004425
Introduction to Business Graphics
Provides instruction in the process of image-editing including how to create original artwork, manipulate color, enhance artwork, graphics and retouch photographs and clipart used in desktop publishing programs. Pre-requisite: OST 105 or OST 225 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical
OST 272(3)  Course ID:004511
Presentation Graphics
Uses industry standard software to create business presentations, business graphics, transparencies, and slides. Applies editing, formatting, page layout and design, and paste-up techniques for clarity and impact. Pre-requisite: OST 105. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
 Attributes: Technical
OST 275(3)  Course ID:003779
Office Management
Management principles and techniques and their applications to the modern business office are included. Emphasis is on information systems and the role of managerial personnel. Lecture: 3 credits. Laboratory: 0 credits.
Components: Lecture
Attributes: Course Also Offered in Modules, Technical
OTA 116(2) Course ID:006882
**Media Principles and Procedures I**
Develops skills in planning, implementing and evaluating occupational therapy for individuals experiencing deficits in occupational performance through the analysis of human occupation and subsequent methods of remediating, compensating, grading, and/or modifying activities and environments for optimal occupational performance. Develops communication skills necessary for documentation and patient interaction. Focuses on appropriate treatment and need for awareness of cultural, ethnic, and socio-economic factors that impact individuals. Provides opportunities for students to develop skills in activity analysis, functional mobility, therapeutic crafts, and modalities. Pre-requisite: Admission to OTA program and permission of instructor. Lecture: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

OTA 216(2) Course ID:006884
**Media Principles and Procedures II**
Provides students the opportunity to apply skills in evaluating and planning occupational therapy for individuals experiencing deficits in occupational performance in a safe and efficient manner. Develops assessment skills in order to plan appropriate treatments applicable to deficits in occupational performance, including fabrication of orthotics and adaptive equipment and techniques. Develops communication skills necessary for documentation and patient interaction. Provides opportunities for students to develop skills in assessment, adaptations, orthotics and appropriate treatment with awareness of ethical, cultural, and socio-economic factors that impact individuals. Pre-requisite: Admission to OTA program and permission of instructor. Lab: 2.0 credits (90 contact hours).
Components: Laboratory
Attributes: Technical

OTA 225(2) Course ID:006885
**Skills and Interventions II**
Incorporates analysis, instruction and implementation of occupational therapy treatment techniques. Provides opportunities to apply theoretical concepts in practice situations, involving higher-level activities of daily living, comprehensive analysis, purposeful activity, modalities and neurological re-education. Applies implementation skills necessary for level II fieldwork and to work as entry-level occupational therapy assistant. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

OTA 226(1) Course ID:006870
**Level IA Fieldwork**
Provides the opportunity to observe and participate in various settings appropriate to occupational therapy service but not necessarily within a therapy department or under an occupational therapy professional. Provides opportunities to develop entry-level skills in the occupational therapy process with hands-on interaction as appropriate. Encourages development of professional behaviors and effective communication skills. Pre-requisite: Admission to OTA program and permission of instructor. Clinical: 1.0 credit (60 contact hours).
Components: Clinical
Attributes: Technical

OTA 125(2) Course ID:006883
**Assistive Technology and Documentation**
Presents various methods of documentation used in occupational therapy settings for evaluation, intervention, justification of payment for equipment, discharge, and other client records, and requirements of third party payers. Explores assistive technology to facilitate knowledge in a broad range of devices, services, strategies, and practices conceived to help people decrease the problems faced by individuals. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

OTA 126(1) Course ID:006871
**Physical Dysfunction**
Includes study of physical conditions commonly seen by Occupational Therapy, including diagnoses, instruction on treatment and modalities. Introduces practice models to guide treatment applications, including procedures for multiple conditions in physical dysfunction. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 4.0 credits (120 contact hours).
Components: Lecture
Attributes: Technical

OTA 146(3) Course ID:006872
**Occupational Therapy in Mental Health**
Presents typical and dysfunctional behavior using the occupational therapy process as it pertains to mental health practice settings. Explores alternative methods and settings for mental health practice. Covers training and practice in interpersonal skills necessary for effective communication with clients, families, significant others, other health care professionals, and the public. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 3.0 credits (75 contact hours).
Components: Lecture
Attributes: Technical

OTA 206(2) Course ID:006873
**Community Practice**
Explores the current and emerging practice areas of occupational therapy in the immediate and future needs. Focuses on occupation-based practice, holism, wellness, and prevention models applied throughout the lifespan. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

OTA 256(2) Course ID:006877
**Elder Issues in Occupational Therapy**
Explores the concerns for occupational therapy in the aging population. Examines how physical, emotional and cognitive processes change through adulthood. Discusses the concepts of occupational therapy throughout the life span employing a holistic approach to intervention. Pre-requisite: Admission to OTA program and permission of instructor. Lecture/Lab: 2.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

OTA 267(5) Course ID:007410
**Level IIA Fieldwork**
Provides opportunity to function in various clinical settings under supervision of experienced occupational therapy practitioner. Promotes collaboration with the Occupational Therapist in planning/implementation of treatment programs with clients with a variety of diagnoses and ages. Cultivates skills necessary to function at entry-level of practice through the first of two successive fieldwork rotations in unique healthcare settings/institutions. Pre-requisite: Admission to the Occupational Therapy Assistant Program or permission of instructor. Practicum: 5.0 credits (300 contact hours).
Components: Practicum
Attributes: Technical

OTA 277(5) Course ID:007411
**Level IIB Fieldwork**
Provides opportunity to function in various clinical settings under supervision of experienced occupational therapy practitioner. Promotes collaboration with the Occupational Therapist in planning/implementation of treatment programs with clients with a variety of diagnoses and ages. Strengthens complex skills, including critical thinking, required for entry-level of practice through the final of two successive fieldwork rotations in unique healthcare settings/institutions. Pre-requisite: Admission to OTA program and permission of instructor. Co-requisite: OTA 267 OR OTA 277. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

OTA 286(2) Course ID:006860
**Clinical Seminar**
Provides students an opportunity to share information from their clinical site with both the academic instructor and their classmates. Emphasizes application of information learned to other situations. Prepares students for National Board for Certification in Occupational Therapy (NBCOT) certification examination. Pre-requisite: Admission to OTA program and permission of instructor. Co-requisite: OTA 267 OR OTA 277. Lecture: 2.0 credits (30 contact hours).
Components: Lecture
Attributes: Technical

PGL Paralegal Technology

PGL 111(3) Course ID:007051
**Legal Systems and Terminology**
Provides an overview of major principles and functions of the state and federal legal systems, introduces various legal fields for professional opportunities, presents legal vocabulary, gives an overview of different areas of law, and presents ethics. Pre-requisite: ACT, COMPASS, or ASSET scores for college level reading and writing OR completion of Transitional reading and writing courses. Co-requisite: PGL 112. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PGL 112(3) Course ID:007052
**Legal Research**
Introduces the basic sources of law and methods of legal research, including ethics. Pre-requisite: ACT, COMPASS, or ASSET scores for college level reading and writing OR completion of Transitional reading and writing courses. Co-requisite: PGL 111. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical
PGL 113(3) Course ID:007053  
Law Office Management  
Provides practical application of daily legal office skills needed in the legal field, professional enrichment presentations, history of the profession, professional ethics through fact analysis, and an overview of law office management. Pre-requisite: ACT, COMPASS, or ASSET scores for college level reading and writing OR completion of Transitional reading and writing courses. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PGL 211(3) Course ID:007054  
Family Law  
Examines the areas of law pertaining to domestic relations, emphasizing ethics. Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PGL 212(3) Course ID:007055  
Legal Writing  
Includes composition of legal communications, briefs, memoranda, and other legal documents, with an emphasis on ethical considerations. Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PGL 213(3) Course ID:007056  
Civil Litigation I  
Presents the litigation process and emphasizes the structure of the court systems. Includes gathering information and evidence, summarizing and arranging materials, maintaining docket and file control, developing a litigation case, and interviewing clients and witnesses, using ethical standards. Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PGL 214(3) Course ID:007057  
Real Property I  
Introduces real property law including ownership, transfer of property, liens and encumbrances, and the various types of deeds. Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PGL 221(3) Course ID:007058  
Wills and Estates  
Introduces the laws of inheritance and estates, basic concepts of estates and wills, probate procedures, and preparation of documents while emphasizing ethics. Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PGL 223(3) Course ID:007059  
Civil Litigation II  
Continues the study of the litigation process from discovery through appeal. Emphasizes collecting and organizing discovery materials and demonstrating knowledge of the limits placed on discovery by the federal and state rules of civil procedure. Includes the trial and appeal phases of litigation, with emphasis on trial preparation and appellate procedure. Pre-requisite: PGL 213. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PGL 224(3) Course ID:007060  
Real Property II  
Examines legal documents related to real property as recorded in the clerk’s office, the tax assessor’s office, and the circuit clerk’s office. Includes compiling a title abstract and completing an assignment to prepare a real estate file from transaction through closing and post-closing, implementing ethics. Pre-requisite: PGL 214. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PGL 231(3) Course ID:007061  
Torts  
Provides instruction in the area of law that deals with civil wrongs and injuries, including intentional wrongs, negligence, and strict liability. Concentrates on the elements of a tort, type of tort, damages, ethics, and remedies. Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PGL 233(3) Course ID:007062  
Ethics  
Provides an overview of the various sources of ethics law and rules, along with the essentials of how and why a legal professional must report misconduct. Explores the types of discipline an ethical lapse may trigger, such as sanctions, disqualification, civil and criminal liability, and what it means to be engaged in the “unauthorized practice of law.” Pre-requisite: PGL 111 and PGL 112. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PGL 250(3) Course ID:007063  
Criminal Law  
Examines legal documents related to real property as recorded in the clerk’s office, the tax assessor’s office, and the circuit clerk’s office. Includes compiling a title abstract and completing an assignment to prepare a real estate file from transaction through closing and post-closing, implementing ethics. Pre-requisite: PGL 214. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PGL 260(3) Course ID:008046  
Elementary Physiology  
An introductory survey course in basic human physiology. Pre-requisite: One semester of college biology. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: University

PHA 110(6) Course ID:004159  
Pharmacy Procedures and Skills  
Introduces the field of pharmacy technology in various pharmacy settings. Includes content on legal requirements and responsibilities of pharmacy technician as they assist the pharmacist. Topics discussed will include professional communication and customer service, Patient Care Process, safety issues, and the basic skills of a pharmacy technician. Students will use a variety of interpersonal skills and self-management skills to produce a final product from a medication order, or prescription, following safe handling and preparation guidelines as set forth by governmental agencies. Pre-requisite or Co-requisite: Instructor Consent. Lecture: 4 credits (60 contact hours). Lab: 2 credits (90 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

PHA 136(3) Course ID:001930  
Pharmacology I  
Introduces the study of drugs and their effect on the human body. Demonstrate basic knowledge of anatomy, physiology, pharmacology, and medical terminology relevant to the pharmacy technician’s role. Explain the use and side effects of prescription and non-prescription medications and alternative therapies. Pre-requisite or Co-require: Instructor Consent. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PHA 146(3) Course ID:017643  
Pharmaceutical Calculations  
Provides review of basic math and introduction of knowledge to perform mathematical calculations essential in the pharmacy setting to enhance skills required to reach occupational goals for the pharmacy technician. Pre-requisite: Math ACT 16 or equivalent and instructor consent. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PHA 200(3) Course ID:001931  
Admixtures for IV Therapy  
Introduces the field of pharmacy technology in various pharmacy settings. Includes content on legal requirements and responsibilities of pharmacy technician as they assist the pharmacist. Topics discussed will include professional communication and customer service, Patient Care Process, safety issues, and the basic skills of a pharmacy technician. Students will use a variety of interpersonal skills and self-management skills to produce a final product from a medication order, or prescription, following safe handling and preparation guidelines as set forth by governmental agencies. Pre-requisite: PHA 110, PHA 146, PHA 136. Co-requisite: PHA 205, PHA 240. Pre-requisite or Co-requisite: PHA 250. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PHA 205(1) Course ID:001932  
Admixtures Preparations  
Provides simulation in aseptic technique and sterile compounding, including the use of equipment, application of laws and standards relating to sterile compounding, and preparation of sterile products such as IVs, chemotherapy, immunizations, and parenteral nutrition. Pre-requisite: PHA 110, PHA 136, PHA 146. Co-requisite: PHA 200, PHA 236, PHA 240. Pre-requisite or Co-requisite: PHA 150, Lab: 1 credit (45 contact hours).

Components: Laboratory
Attributes: Technical

PHA 236(3) Course ID:017308  
Pharmacology 2  
Expands upon knowledge introduced in PHA 136. Introduces hospital-specific medications, their dosage forms, adverse effects and preparation instructions. Examines the process of clinical trials and investigational drugs. Enhances knowledge of drug safety, including pediatric and geriatric populations. Pre-requisite: PHA 110, PHA 136, PHA 146. Co-requisite: PHA 200, PHA 236, PHA 240. Pre-requisite or Co-requisite: PHA 150. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PHA 240(3) Course ID:017309  
Pharmacy Technician Career Planning  
Prepares pharmacy technician students to take the Pharmacy Technician Certification Board exam. Review will focus on individual knowledge deficits. Preparation for interviews and career planning. Pre-requisite: PHA 110, PHA 136, PHA 146. Co-requisite: PHA 200, PHA 205, PHA 240. Pre-requisite or Co-requisite: PHA 150, Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

PHA 251(3) Course ID:017644  
Pharmacy Experience I  
Provides entry-level work experience in the pharmacy setting to enhance skills required to reach occupational goals for the advanced-level pharmacy technician. Pre-requisite: PHA 110, PHA 136, PHA 146, PHA 150 or Instructor Consent. Pre-requisite or Co-requisite: PHA 200, PHA 205, PHA 236, PHA 240. Clinical: 3 credits (180 contact hours).

Components: Clinical
Attributes: Technical
PHB 100(6)  Course ID:001938
Phlebotomy
Prepares the student as an integral member of the health-care team to collect blood from patients/donors in hospitals, blood banks or clinics for analysis or other medical purposes. Includes standard precautions, record keeping, and therapeutic communication skills. Lecture/ Lab: 6.0 credits (90 contact hours).
Components: Lecture 
Attributes: Technical

PHB 120(6)  Course ID:003809
Fundamentals of Clinical Laboratory Phlebotomy
Fundamental techniques of areas of the clinical laboratory appropriate to the phlebotomist are introduced. Included is a study of medical ethics, medical terminology, anatomy and physiology of the circulatory system, professional organizations, communication, record keeping, specimen collection, chain of custody, laboratory safety, and quality control. Pre-requisite: CPR Certification, Malpractice insurance, Hepatitis, Varicella, PPD, Rubella, and Rubella blood work results. Lecture: 3 hours; Laboratory: 9 hrs.
Components: Laboratory, Lecture 
Attributes: Technical

PHB 151(1)  Course ID:004072
Instructor Consent Required
Phlebotomy for the Health Care Worker
Covers fundamental techniques in proper venipuncture and capillary collection. Includes a study of medical ethics, laboratory terminology, anatomy and physiology of the circulatory system, communication and record keeping, specimen processing, laboratory safety, isolation procedures and special collection. Lecture/Lab: 1.0 credits (30 contact hours).
Components: Lecture 
Attributes: Technical

PHB 152(1)  Course ID:004175
Phlebotomy: Clinical Experience
Introduces the student to clinical practice in the phlebotomy department of a laboratory. The student will begin to develop performance skills in routine venipuncture and capillary collection procedures emphasizing performance skills in routine venipuncture and capillary collection procedures. Pre-requisite Or Co-requisite: PHB 151, PHB 170 or MAI 120. Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory 
Attributes: Technical

PHB 155(2 - 3)  Course ID:001939
Phlebotomy Clinical
This course is designed to build on the knowledge acquired in phlebotomy lecture and lab. In this course the student will use external institutions for clinical experience to become more proficient in the performance of routine venipuncture and dermal collections. The student will gain the experience needed to handle routine venipuncture complications and the skills necessary to adequately perform the duties of a phlebotomist. Pre-requisite: PHB 151 Phlebotomy for the Healthcare Professional with a grade of C or better OR (PHB 100 Phlebotomy with a grade of C or better OR (PHB 170 Applied Phlebotomy with a grade of C or better.) Lecture/Lab: 2.0 - 3.0 credits (120 - 180 contact hours).
Components: Lecture 
Attributes: Technical

PHB 170(3)  Course ID:006441
Applied Phlebotomy
Teaches proper techniques in venipuncture and capillary collection. Includes a study of medical ethics, laboratory terminology, anatomy and physiology of the circulatory system, communication and record keeping, specimen processing, laboratory safety, isolation procedures, special collection procedures, specimen processing for the various laboratory departments, venipuncture complications, and quality assurance. Pre-requisite: Permission of the MLT Program Director/MLT Clinical Coordinator. Co-requisite: PHB 152, Lecture/Lab: 3.0 credits (60 contact hours).
Components: Lecture 
Attributes: Technical

PHI 100(3)  Course ID:000894
Introduction to Philosophy: Knowledge and Reality
Introduces students to philosophical studies with emphasis on issues of knowing, reality, and meaning related to human existence. Lecture: 3 credits (45 contact hours).
Components: Lecture 
Attributes: AH - Arts and Humanities

PHI 110(3)  Course ID:002202
Medical Ethics
Introduces examination and application of major ethical theories to specific moral questions related to health care. Lecture: 3 credits (45 contact hours).
Components: Lecture 
Attributes: AH - Arts and Humanities

PHI 120(3)  Course ID:000356
Introductory Logic
Covers argumentation, syllogistic and sentential logic. Focuses on the use of formal methods in the construction and criticism of actual arguments, the aim being to inculcate standards of good reasoning, e.g., clarity, consistency, and validity. Lecture: 3.0 credits (45 contact hours).
Components: Lecture 
Attributes: AH - Arts and Humanities

PHI 130(3)  Course ID:000354
Ethics
Introduces students to a critical examination of philosophical principles related to moral action and political values. Lecture: 3 credits (45 contact hours).
Components: Lecture 
Attributes: AH - Arts and Humanities

PHI 140(3)  Course ID:005139
The Ethics of War and Peace
Ethical reasoning and application of ethical theories to moral issues connected to war and peace. Lecture: 3 credits (45 contact hours).
Components: Lecture 
Attributes: AH - Arts and Humanities

PHI 150(3)  Course ID:000359
Business Ethics
Presents ethical theories and techniques of moral reasoning used to analyze moral issues in business. Applies ethics and reasoning to current issues of management, employees, government, public safety, and the environment. Lecture: 3 credits (45 contact hours).
Components: Lecture 
Attributes: AH - Arts and Humanities

PHI 160(3)  Course ID:015595
Philosophy Through Pop Culture
Surveys major philosophical themes, such as value, morality, evil, friendship, beauty, God, reality, and the meaning of life, and applies these themes to an examination of how they are represented in several sources of popular culture, including literature, film, art, music, media, and stage. Pre-requisite: ENG 101. Lecture: 3.0 credits (45 contact hours).
Components: Lecture 
Attributes: AH - Arts and Humanities

PHI 170(3)  Course ID:016632
Philosophy of Religion
Introduces students to issues in philosophy of religion including defining the concept of God, arguments for and against the existence of God, the relation between faith and reason, the nature of religious experience, the problem of evil, and immortality. Pre-requisite: ENG 101. Lecture: 3.0 credits (45 contact hours).
Components: Lecture 
Attributes: REL 170 
Course Equivalents: REL 170 
Attributes: AH - Arts and Humanities, Other

PHI 180(3)  Course ID:016765
Animal and Environmental Ethics
Examines special topics in philosophy. Includes, but not limited to, individual philosophers, movements, writings, traditions, and selected eras. Lecture: 3.0 credits (45 contact hours).
Components: Lecture 
Attributes: Other
<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>000290</td>
<td>PHY 231(4)</td>
<td>General University Physics I Focuses on the mechanics of matter as governed by Newton's Laws and by the conservation laws of energy, linear momentum, and angular momentum using calculus and trigonometry. Companion lecture to PHY 241 laboratory. Pre-requisite Or Co-requisite: MAT185 or MA 114 or equivalent. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours). Components: Discussion, Lecture Attributes: SN - Science</td>
</tr>
<tr>
<td>000625</td>
<td>PHY 232(4)</td>
<td>General University Physics II Focuses on electromagnetic phenomena, circuits, and optics using vector calculus. Companion lecture to PHY 242 laboratory. Pre-requisite: PHY 231, Pre-requisite Or Co-requisite: PHY 231. Laboratory: 1 credit hour (30 contact hours). Components: Laboratory Attributes: SL - Science Laboratory</td>
</tr>
<tr>
<td>000638</td>
<td>PHY 241(1)</td>
<td>General University Physics I Laboratory Enhances concepts introduced in PHY 231 through a complement of experiments relating to motion, Newton's laws, rotation, and energy conservation principles. Pre-requisite Or Co-requisite: PHY 231. Laboratory: 1 credit hour (30 contact hours). Components: Laboratory Attributes: SL - Science Laboratory</td>
</tr>
<tr>
<td>000642</td>
<td>PHY 242(1)</td>
<td>General University Physics II Laboratory Enhances concepts introduced in PHY 232 through a complement of experiments probing electromagnetic phenomena, circuits, and optics. Pre-requisite Or Co-requisite: PHY 232. Laboratory: 1 credit hour (30 contact hours). Components: Laboratory Attributes: SL - Science Laboratory</td>
</tr>
<tr>
<td>000610</td>
<td>PHY 1711(0.5) Motion &amp; Newton's Laws Surveys selected topics in velocity, acceleration, and force. Pre-requisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/ Lab: 0.5 credit (9.37 contact hours). Components: Lecture</td>
<td></td>
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<tr>
<td>0006110</td>
<td>PHY 1712(0.5) Work, Energy, Power, and Momentum Surveys selected topics in work, energy, power, and momentum. Pre-requisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.39 contact hours). Components: Lecture</td>
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</tr>
<tr>
<td>0006111</td>
<td>PHY 1713(0.5) Fluid Dynamics Surveys selected topics in fluid dynamics. Pre-requisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.38 contact hours). Components: Lecture</td>
<td></td>
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<tr>
<td>0006112</td>
<td>PHY 1714(0.5) Thermodynamics Surveys selected topics in thermodynamics. Pre-requisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/Lab: 0.5 credit (9.38 contact hours). Components: Lecture</td>
<td></td>
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<tr>
<td>0006113</td>
<td>PHY 1715(0.5) Electricity and Magnetism Surveys selected topics in electricity and magnetism. Pre-requisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture/ Lab: 0.5 credit (9.37 contact hours). Components: Lecture</td>
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<tr>
<td>0000911</td>
<td>PHY 201(4)</td>
<td>College Physics I Focuses on the mechanics of matter as governed by Newton's Laws; by the conservation laws of energy, momentum, and angular momentum; and thermal processes using algebra and basic trigonometry. Companion lecture to PHY 202 laboratory. Credit is not given to students who have already completed PHY 231. Pre-requisite: (MAT 150 or higher) or MA109 or an ACT math score of 25 or higher. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours). Components: Discussion, Lecture Attributes: SN - Science</td>
</tr>
<tr>
<td>0000627</td>
<td>PHY 202(1)</td>
<td>College Physics I Laboratory Enhances concepts introduced in PHY 201 through experiments in classical mechanics and thermal physics. Pre-requisite Or Co-requisite: PHY201 or equivalent. Laboratory: 1 credit hour (30 contact hours). Components: Laboratory Attributes: SL - Science Laboratory</td>
</tr>
<tr>
<td>0000524</td>
<td>PHY 203(4)</td>
<td>College Physics II Focuses on electromagnetic phenomena, circuits, optics and an introduction to modern physics using algebra and basic trigonometry. Companion lecture to PHY 204 laboratory. Credit is not given to students who have already completed PHY 232. Pre-requisite: PHY 201 or equivalent. Lecture: 3 credit hours (45 contact hours). Discussion: 1 credit hour (15 contact hours). Components: Discussion, Lecture Attributes: SN - Science</td>
</tr>
<tr>
<td>0000192</td>
<td>PHY 204(1)</td>
<td>College Physics II Laboratory Enhances concepts introduced in PHY 203 through experiments in electricity, magnetism, and optics. Pre-requisite Or Co-requisite: PHY203 or equivalent. Lab: 1.0 credit hour (30 contact hours). Components: Laboratory Attributes: SL - Science Laboratory</td>
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</table>
PLB 1716(0.5) Course ID:006114
Wave Motion, Sound, and Light
Includes selected topics in wave mechanics, sound, and optics. Pre-requisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture: 0.5 credit (9.38 contact hours).
Components: Lecture

PLB 1717(0.5) Course ID:006115
Modern and Nuclear Physics
Surveys selected topics in atomic, nuclear, and modern physics. Pre-requisite: (MA 108 or (MT 115 or greater) or Equivalent math placement score) or consent of instructor. Lecture: 0.5 credit (9.37 contact hours).
Components: Lecture

PLB 1718(0.5) Course ID:006116
Integrated Physics Concepts
Surveys selected topics in applied physics. Pre-requisite: PHY 1711 and PHY 1712 and PHY 1713 and PHY 1714 and PHY 1715 and PHY 1716, and PHY 1717 or Consent of instructor. Lecture/Lab: 0.5 credit (9.36 contact hours).
Components: Lecture

PLB 250(3) Course ID:001950
Plumbing Appliances & Fixtures
Pre-requisite: PLB 150. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

PLB 251(2) Course ID:001951
Pumps and Water Heaters
Develops skills in the installation of plumbing appliances (water heater), and appurtenances. Pre-requisite: PLB 150. Co-requisite: PLB 250. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

PLB 260(2) Course ID:001953
Service
This course presents the study of methods, procedures, and skills involved in planning and estimating residential and commercial plumbing fixtures and systems. Pre-requisite: PLB 150 or equivalent. Lecture: 2 credits (30 contact hours).
Components: Laboratory

PLB 261(2) Course ID:001954
Advanced Plumbing Lab
This course will teach the student to plan and apply local code requirements for residential plumbing systems, and estimate supplies and cost of same. Pre-requisite: PLB 150 or equivalent. Laboratory: 2 credits (90 contact hours).
Components: Laboratory

PLB 262(3) Course ID:001955
Backflow Prevention
This course teaches the student how to protect portable water systems from the hazards of backflow. Pre-requisite: Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture

PLB 270(3) Course ID:001956
License Preparation for Journeyman Exam
Provides a study of Kentucky Code in preparation for the Journeyman Exam. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture

PLB 298(4) Course ID:004251
Instructor Consent Required
Practicum/Repairs & Maintenance
Designed to provide the student with experience in the plumbing industry. This will be a non-paid evaluation of a student's developed skills. Pre-requisite: Consent of instructor. Practicum: 4 credits (180 contact hours).
Components: Practicum

PLB 299(4) Course ID:001958
Instructor Consent Required
Cooperative Education
Provides students with experience in the plumbing industry. This will be a paid evaluation of a student's developed skills. Pre-requisite: Consent of Instructor. Co-op: 4 credits (300 contact hours).
Components: Co-Op

PLS 190(3) Course ID:0016575
Introduction to Paralegal Studies
Introduces state and federal judicial systems and paralegal roles and careers. Emphasizes rules of professional conduct, legal ethics and unauthorized practice of law by non-lawyers. Lecture: 3 credits (45 contact hours).
Components: Lecture

PLS 200(3) Course ID:016948
Legal Ethics
Study, analysis and application of codes of professional responsibility and standards of conduct governing the practice of law in state and federal courts. Semester Hours: 3.0 Lecture: 3.0 credits (45 contact hours).
Components: Lecture

PLW 100(4) Course ID:006695
Introduction to Engineering Design
Provides an introduction to the engineering profession, engineering disciplines, and technology. Emphasizes a “problem-solving” approach, engineering design process, and team projects. Lecture/Lab: 4.0 credits (150 contact hours).
Components: Lecture

PLW 125(4) Course ID:006696
Principles of Engineering
Students will be introduced to various types of engineering, engineering communications, various design processes, types of engineering systems, statics, materials, and strength of materials, engineering for reliability, and kinematics. Pre-requisite: PLW 100. Lecture/Lab: 4.0 credits (150 contact hours).
Components: Lecture

PLW 130(4) Course ID:007197
Principles of Biomedical Sciences
Engages students in the study of human medicine, research processes and an introduction to bioinformatics. Exposes students to investigations of human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. Includes analysis of key biological concepts including: homeostasis, metabolism, inheritance of traits, feedback systems, the relationship of structure to function and defense against disease. Outlines all the courses in the Biomedical Sciences program and to lay the scientific foundation necessary for student success in the subsequent courses. Pre-requisite: Reading, English, and Mathematics assessment exam scores above the KCTCS transitional placement level or successful completion of the prescribed transitional course(s). Lecture/Lab: 4.0 credits (150 contact hours).
Components: Lecture

PLW 135(4) Course ID:007281
Principles of Human Body Systems
Emphasizes the study of human body systems investigating identity, communication, power, movement, protection, and homeostasis. Uses experiments that investigate the structures and functions of the human body and uses data acquisition software to monitor body functions. Explores science in action as students build organs and tissues on a skeletal model, work through real-world cases, and role-play biomedical professionals to solve medical mysteries. Pre-requisite: PLW 130. Lecture/Lab: 4.0 credits (150 contact hours).
Components: Lecture

PLW 140(4) Course ID:015805
Medical Interventions
Focuses on exploring a variety of interventions involved in the prevention, diagnosis and treatment of disease. Uses a How-To manual to introduce prevention of and fighting of infection; how to screen and evaluate the code in human DNA; how to prevent, diagnose and treat cancer; and how to prevail when the organs of the body begin to fail. Examines lifestyle choices and preventive measures that influence health and highlights the important roles scientific thinking and engineering design play in the development of interventions of the future are examined. Pre-requisite: PLW 135. Lecture: 4.0 credits (150 contact hours).
Components: Lecture

PLS 200(3) Course ID:016948
Legal Ethics
Study, analysis and application of codes of professional responsibility and standards of conduct governing the practice of law in state and federal courts. Semester Hours: 3.0 Lecture: 3.0 credits (45 contact hours).
Components: Lecture

Attributes: University Course (Western Kentucky University)
PLW 145(4) Course ID: 016454
Biomedical Innovation
Leads students to apply their knowledge and skills to answer questions or solve problems related to the biomedical sciences in a capstone course. Facilitates student design of innovative solutions for the health challenges of the 21st century in areas such as clinical medicine, physiology, biomedical engineering, and public health. Provides the opportunity to work on an independent project with a mentor, or advisor from a university, hospital, physician’s office, or health industry provider. Students present their work to an adult audience including representatives from the local business and healthcare community. Pre-requisite: PLW 140. Lecture/Lab: 4 credits (150 contact hours).
Components: Lecture Attributes: Technical

PLW 150(4) Course ID: 006697
Digital Electronics
This course uses computer simulations and hands on laboratory to teach students about the logic of electronics as they design, test, and construct electronic circuits and devices. Lecture: 1 credit (15 contact hours), Lab: 3 credits (45 contact hours).
Components: Laboratory, Lecture Attributes: Technical

PLW 200(4) Course ID: 006698
Aerospace Engineering
The major focus of the Aerospace Engineering(TM) (AE) course is to expose students to the world of aeronautics, flight, and engineering. They will employ engineering and scientific concepts in the solution of aerospace problems. Pre-requisite: PLW-100, PLW-125, and PLW-150. Lecture/ Lab: 4.0 credits (150 contact hours).
Components: Lecture Attributes: Technical

PLW 225(4) Course ID: 006699
Civil Engineering and Architecture
The major focus of the Civil Engineering and Architecture(TM) (CEA) course is a long-term project that involves the development of a local property site. As students learn about various aspects of civil engineering and architecture, they apply what they learn to the design and development of this property. Pre-requisite: PLW-100, PLW-125, and PLW-150. Lecture/Lab: 4.0 credits (150 contact hours).
Components: Lecture Attributes: Technical

PLW 250(4) Course ID: 006700
Computer Integrated Manufacturing
The purpose of the Computer Integrated Manufacturing course is to expose students to the fundamentals of computerized manufacturing technology. The course includes: Computer Modeling; CNC Equipment; CAM Software; Robotics; and Flexible Manufacturing Systems. Pre-requisite: PLW-100, PLW-125, and PLW-150. Lecture/ Lab: 4.0 credits (150 contact hours).
Components: Lecture

PLW 295(4) Course ID: 006701
Engineering Design and Development
Engineering student teams research, design, and construct a solution to an open-ended engineering problem using product development lifecycle and the design process; presentation to defend solutions to a panel of outside reviewers. Pre-requisite: PLW 150 AND one of the following: PLW 200, OR PLW 225, OR PLW 250, OR Consent of the APC and/or Instructor. Lecture/Lab: 4.0 credits (150 contact hours).
Components: Lecture

PMX Power Mechanics/Measurement

PMX 100(3) Course ID: 001962
Precision Measurement
This class introduces the student to the basic fundamentals of precision measurement and its application in the industrial setting. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Technical

POL Political Science

POL 101(3) Course ID: 000912
American Government
Examines national government and the political process in the United States, with emphasis on the Constitution, the President, Congress, and the judicial system. Focuses on the nature of American democracy, political challenges, and opportunities. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: SB - Social Behavior Science

POL 210(2) Course ID: 000630
Introduction to European Politics: East and West
Compares the political institutions, policy-making processes, citizen participation and political outcomes in Eastern and Western European states. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: SB - Social Behavior Science

POL 212(3) Course ID: 002254
Culture and Politics in Developing Nations
Examines and compares the politics of selected states in Asia, Africa, and Latin America analyzing such issues as culture, ethnicity, language, social class, and ideology. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Cultural Studies, SB - Social Behavior Science

POL 235(3) Course ID: 000438
World Politics
Examines the most significant problems of world politics, including the fundamental factors governing international relations, the techniques and instruments of power politics, and the conflicting interest in organizing world peace. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Cultural Studies, SB - Social Behavior Science

POL 255(3) Course ID: 000066
State Government
Examines the institutions, political processes, and policies of state governments, and the relationships of state governments with other levels of government in the United States. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: SB - Social Behavior Science

POL 271(3) Course ID: 000724
Introduction to Political Behavior
The study of behavior in a political context; the analysis of basic behavioral concepts used in political science such as political roles, group behavior, belief systems, personality, power, and decision-making. Lecture: 3 credits (45 contact hours).
Components: Lecture Attributes: Other

POL 280(3) Course ID: 005213
Issues in Public Policy
Examines selected major public issues, focusing on their nature, political ramifications, and alternate methods of managing conflict. Includes discussion of varying policies such as poverty, health care, energy, education, race and ethnic relations, and the environment. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Other

POL 299(1 - 3) Course ID: 0004276
Special Topics in Political Science
Addresses various topics, issues, and trends in political science. Includes topics that may vary from semester to semester at the discretion of the instructors. Lecture: 1.0 - 3.0 credits (15 contact hours).
Components: Lecture

PSJ Professional Artist/Jewelry

PSJ 210(3) Course ID: 005071
Jewelry/Metals III
Provides an in-depth investigation into tools, techniques, and materials of the professional jeweler/metalsmith including the application of coloring through enameling and alternative means. Pre-requisite: (PSJ 115 and PSJ 117) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSJ 211(3) Course ID: 005072
Holloware and Metal Forming
Covers design and technical processes creating functional holloware. Emphasizes dimensional forming of sheet metal through raising, sinking, planishing and anticlastic forming. Pre-requisite: PSJ 115 or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSJ 212(2) Course ID: 005073
Metallurgy of Precious Metals
Covers properties and characteristics of precious metals and their alloys. Emphasizes the science of metallurgy and its practical application for the professional jeweler/metalsmith. Pre-requisite: (PSJ 210 and PSJ 212) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSJ 215(3) Course ID: 005074
Jewelry/Metals IV
Includes an in-depth investigation on production methods and techniques of the professional jeweler/metalsmith. Pre-requisite: (PSJ 210 and PSJ 212) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSJ 216(3) Course ID: 005075
Stone Setting
Covers advanced stone setting methods and techniques for the professional jeweler/metalsmith. Pre-requisite: (PSJ 210 and PSJ 212) or Consent of Instructor. Laboratory: 3.0 credits (90 contact hours).
Components: Laboratory

PSJ 220(2) Course ID: 005076
Jewelry/Metals Product Development
Explores product development and the business concerns of the professional jeweler/metalsmith. Pre-requisite: (PSJ 210 and PSJ 212) or Consent of Instructor. Pre-requisite Or Consent of Instructor: PSJ 215. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory

PSJ 230(6) Course ID: 005077
Jewelry/Metals V
Provides a capstone course that focuses on creating a body of work for exhibition and developing a professional portfolio. Pre-requisite: (PSJ 210 and PSJ 212) or Consent of Instructor. Laboratory: 6.0 credits (180 contact hours).
Components: Laboratory

PSM Professional Studio Artist Music

PSM 101(3) Course ID: 000552
Recording I
Introduces recording and sound reproduction history, terminology, equipment, and practical session experience. Lab: 1.0 credit (30 contact hours).
Components: Laboratory Attributes: Technical

PSM 105(1) Course ID: 000553
Jewelry and Metals I
Covers an overview of metals and their alloys, including the science of metals and the technical processes of the professional jeweler/metalsmith. Lecture: .5 credits (15 contact hours).
Components: Laboratory Attributes: Technical

PSS Political Science

PSM 101(3) Course ID: 000552
Bluegrass & Traditional Music History I: Geographic Influence & Instrumental Origin
Provides an overview of traditional instruments and their geographic and cultural origins as they relate to the foundation of bluegrass and traditional music genres. Lecture: 3.0 credits (45 contact hours).
Components: Lecture Attributes: Technical

PSM 105(1) Course ID: 000553
Recording I
Introduces recording and sound reproduction history, terminology, equipment, and practical session experience. Lab: 1.0 credit (30 contact hours).
Components: Laboratory Attributes: Technical
PSM 107(1) Course ID: 007257
Songwriting I
Introduces the process of creating original melodies and lyrics under the direction of a professional songwriter. Lab: 1.0 credit (30 contact hours).
Components: Laboratory

PSM 112(1) Course ID: 007258
Individual Stringed Instrument Instruction
Provides an individual stringed instrument study course under the guidance of an experienced professional instructor. Designed to teach performance techniques in a flexible structure. May be repeated with different sub-title for a maximum of 8 credits.
Pre-requisite: Audition. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

PSM 113(1) Course ID: 007259
Guitar I
Teaches basic fundamentals of bluegrass and traditional chords, rhythm and simple flat-picking lead along with standard tuning and set-up tips. Pre-requisite: MUS 174 or Consent of Instructor. Lab: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

PSM 114(2) Course ID: 007260
Bluegrass & Traditional Band/Ensemble
Pairs two or more instrumentalists in a group/ensemble setting, in order to explore the components and structure of a band under the guidance of a professional band leader. May be repeated with different sub-title for a maximum of 8 credits.
Lab: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

PSM 117(1) Course ID: 007261
Songwriting II
Provides guidance through the process of creating and refining original melodies and lyrics under the direction of a professional songwriter, emphasizing different techniques while overcoming barriers. Pre-requisite: PSM 107 or Consent of Instructor. Lab: 1.0 credit (30 contact hours).
Components: Laboratory

PSM 118(2) Course ID: 007262
Bluegrass & Traditional Harmony/Part Singing
Introduces basic bluegrass and traditional harmony/part singing and theory using ear training, number notation and basic chords. Pre-requisite: MUS 174 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSM 121(3) Course ID: 005557
Bluegrass & Traditional Music History II: Evolution of Old Time, Folk and Early Bluegrass
Provides an in-depth study of old time, folk and early bluegrass music genres and their components, exploring connections between radio, labor conflict, war and early professional musicians. Pre-requisite: PSM 101 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

PSM 125(1) Course ID: 005558
Recording II
Provides practical studio and set-up training for recording sessions utilizing software and computers. Pre-requisite: PSM 105 or Consent of Instructor. Laboratory: 1.0 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

PSM 128(1) Course ID: 005559
Songwriting II
Provides guidance through the process of creating and refining original melodies and lyrics under the direction of a professional songwriter, emphasizing different techniques while overcoming barriers. Pre-requisite: PSM 108 or Consent of Instructor. Lab: 1.0 credit (30 contact hours).
Components: Laboratory

PSM 217(2) Course ID: 007263
Songwriting III
Provides guidance through the process of creating and refining original melodies, lyrics and music under the direction of a professional songwriter, emphasizing writing for specific media and multi-writer collaboration. Pre-requisite: PSM 117 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSM 227(2) Course ID: 007264
Songwriting IV
Provides guidance through the process of creating an effective demo and marketing original songs under the direction of a professional songwriter, emphasizing the completed demo project. Pre-requisite: PSM 217 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSM 231(3) Course ID: 005560
Bluegrass & Traditional Music History III: Early Stringband & Country Music Provides an in-depth study of early stringband, country music and promotion pioneers, focusing on the role of early radio and barn dances. Pre-requisite: PSM 121 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

PSM 235(2) Course ID: 005561
Recording III
Provides an in-depth study of computer and Pro Tools software, recording techniques and applications. Pre-requisite: PSM 125 or Consent of Instructor. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory
Attributes: Technical

PSM 238(2) Course ID: 005562
Songwriting III
Provides guidance through the process of creating and refining original melodies, lyrics and music under the direction of a professional songwriter, emphasizing writing for specific media and multi-writer collaboration. Pre-requisite: PSM 128 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSM 241(3) Course ID: 005563
Bluegrass & Traditional Music History IV: The Masters & Their Music Provides a comprehensive study of the music and careers of the iconic figures in bluegrass & traditional music from 1936 to present. Requires listening to recordings, reading the primary text, and reading suggested articles from industry periodicals. Pre-requisite: PSM 231. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

PSM 245(2) Course ID: 005564
Recording IV
Provides an advanced and complex study of recording, mixing and editing software session data to finished products. Pre-requisite: PSM 235 or Consent of Instructor. Laboratory: 2.0 credits (60 contact hours).
Components: Laboratory

PSM 248(2) Course ID: 005565
Songwriting IV
Provides guidance through the process of creating an effective demo and marketing original songs under the direction of a professional songwriter, emphasizing the completed demo project. Pre-requisite: PSM 238 or Consent of Instructor. Lab: 2.0 credits (60 contact hours).
Components: Laboratory

PSM 250(3) Course ID: 005566
Instructor Consent Required Field Experience/Production/Business Designed to give a wide variety of practical, hands-on work experience in the bluegrass and traditional music field. (Companion course to PSA 240). Pre-requisite: Consent of Instructor. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (60 contact hours).
Components: Laboratory, Lecture

PSM 211(3) Course ID: 005061
Wood Bending and Veneering
Covers construction and design possibilities through techniques of strip laminating and steam bending to create curved shaped parts in furniture. Includes veneering design and applications. Pre-requisite: (PSW 115 and PSM 116) or Consent of Instructor. Lab: 3.0 credits (90 contact hours).
Components: Laboratory

PSY 180(3) Course ID: 000151
Human Relations
Explores the sociological and psychological forces that affect interpersonal relationships as individuals work and live together. Pre-requisite: ACT, COMPASS, or ASSET scores for college level reading OR completion of Transitional Reading course(s). Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science, Course Also Offered in Modules

PSY 185(3) Course ID: 000602
Human Potential
Introduces the principles of relating to self and others and focuses upon self-growth. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

PSY 188(1) Course ID: 000604
Directed Undergraduate Reading in Psychology
Explores in-depth a specific topic related to the student's personal or career interests in psychology under the direction of a faculty member. Reading proposal must be approved by instructor. Pre-requisite: PSY 110 and consent of instructor. Lecture: 1.0 credit (15 contact hours).
Components: Lecture
Attributes: Other

PSY 189(1 - 2) Course ID: 000606
Directed Undergraduate Research in Psychology
Requires students to design and conduct an elementary research project relevant to the student's personal or career interests in psychology under the direction of a faculty member. Requires development of a psychology literature review. Research proposal must be approved by instructor. Pre-requisite: PSY 213 and consent of instructor (if PSY 215 is changed to PSY 212). Laboratory: 1.0 - 2.0 credits (30-60 contact hours).
Components: Laboratory
Attributes: Other

PSY 212(4) Course ID: 002256
Applications of Statistics in Psychology
Introduces students to descriptive and inferential statistics in design, analysis, and interpretation of psychological research. Pre-requisite: ACT, COMPASS, or ASSET score for college level mathematics or completion of Transitional Math course(s); PSY 110. Lecture/Lab: 4.0 credits (75 contact hours).
Components: Integrated Laboratory, Integrated Lecture
Attributes: Other
PSY 213(4) Research Methods
Course ID: 002255
Research Methods
Applies scientific methods to psychological research. Provides practical experience in designing and executing a research project using observational, survey, and/or true experimental design methodologies. Requires application of descriptive and inferential statistics and written report of research project results. Pre-requisite: PSY 110. Lecture/ Lab: 4.0 credits (75 contact hours).

Components: Lecture
Attributes: Other

PSY 223(3) Developmental Psychology
Course ID: 000488
Introduces the principles of developmental psychology with emphasis on theory and data relating to the physical, cognitive, and psycho-social developmental aspects. Explores prenatal development through the birth process. Pre-requisite: PSY 110. Lecture: 0.6 credit (9 contact hours).

Components: Lecture
Attributes: Other

PSY 2232(0.6) Infancy through Early Childhood
Course ID: 0006380
Infancy through Early Childhood
Emphasizes theory and data relating to the physical, cognitive, and psycho-social developmental aspects of infancy, toddlerhood, and early childhood. Pre-requisite: PSY 2231. Lecture: 0.6 credit (9 contact hours).

Components: Lecture

PSY 2233(0.6) Middle Childhood & Adolescence
Course ID: 0006381
Middle Childhood & Adolescence
Emphasizes theory and data relating to the physical, cognitive, and psycho-social developmental aspects of middle childhood and adolescence. Pre-requisite: PSY 2232. Lecture: 0.6 credit (9 contact hours).

Components: Lecture

PSY 2234(0.6) Emerging and Middle Adulthood
Course ID: 0006382
Emerging and Middle Adulthood
Emphasizes theory and data relating to the physical, cognitive, and psycho-social developmental aspects of emerging and middle adulthood. Pre-requisite: PSY 2233. Lecture: 0.6 credit (9 contact hours).

Components: Lecture

PSY 2235(0.6) Late Adulthood; Death & Dying
Course ID: 0006383
Late Adulthood; Death & Dying
Emphasizes theory and data relating to the physical, cognitive, and psycho-social developmental aspects of late adulthood. Explores issues related to death and bereavement. Pre-requisite: PSY 2234. Lecture: 0.6 credit (9 contact hours).

Components: Lecture

PSY 223(3) Psychosocial Aspects of Death and Dying
Course ID: 000387
Examines the biopsychological, psychological, sociological, and cultural aspects of death and dying in the evolving global world. Explores variations in the behaviors and attitudes associated with death, dying, and bereavement, with particular attention to the contexts (e.g., cultural, familial, historical, life span developmental) in which these variations occur. Pre-requisite: PSY 110 or SOC 101, or consent of instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

PSY 297(3) Psychology of Aging
Course ID: 004818
Psychology of Aging
Provides an overview of the demographics of aging, theories of aging and research methods used to study adult development. Examines the biological, psychological and social impact of aging, longevity work, retirement, death and bereavement. Pre-requisite: PSY 110 or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SB - Social Behavior Science

PSY 298(3) Essentials of Abnormal Psychology
Course ID: 004819
Essentials of Abnormal Psychology
Provides an overview of the theories, diagnoses, and treatments of psychological disorders. Covers the biological, psychological, and social factors that influence the etiology, understanding, and management of psychopathology within society. Pre-requisite: PSY 110 or Consent of Instructor. Lecture: 3.0 credits (45 contact hours).

Components: Lecture
Attributes: SB - Social Behavior Science

PSY 299(1 - 3) Special Introductory Topics in Psychology
Course ID: 000534
Special Introductory Topics in Psychology
Introduces specialized topics in the field of psychology to meet current trends and investigations of contemporary issues in the discipline. May be repeated to a maximum of six credits under different subtitles. Pre-requisite: PSY 110 or consent of instructor. Lecture: 1.0 - 3.0 credits (15 - 45 contact hours).

Components: Lecture
Attributes: Other

PTA 101(5) Orientation to Physical Therapy Practice
Course ID: 016102
Orientation to Physical Therapy Practice
Includes orientation to the profession of physical therapy, legal aspects of physical therapy practice, interdisciplinary team, cultural diversity, medical terminology, research and evidence-based practice, and introductory patient-care skills such as communication, aseptic techniques, body mechanics, safety procedures, wheelchair management, patient transfers, patient positioning and draping, and vital signs, identification and fitting of ambulation aids, basic gait training, patient and consumer education. Pre-requisite: Admission to the PTA Program and completion of BIO 137 with a grade of "C" or better. Co-requisite: PTA 125. Lecture: 2 credits (30 contact hours). Lab: 3 credits (90 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

PTA 120(2) Basic Skills for the PTA
Course ID: 006723
Basic Skills for the PTA
Introduces basic concepts of health and disease and introductory patient care skills. Includes orientation to the profession of physical therapy, legal aspects of physical therapy practice, and introductory patient-care skills such as aseptic technique, body mechanics, safety procedures, wheelchair management, patient transfers, positioning and draping, gait training, passive, active, and active-assisted exercise and stretching. Pre-requisite: Admission to the PTA Program; Completion of BIO 137 & BIO 139 with a C or better. Co-requisite: PTA 1501, PTA 1502, PTA 121, PTA 170. Lecture: 2 credits (30 contact hours).

Components: Lecture

PTA 121(2) Basic Skills for the PTA Lab
Course ID: 006724
Basic Skills for the PTA Lab
Develops introductory patient-care skills such as communication, safety procedures, aseptic technique; body mechanics; wheelchair management; patient transfers; positioning and draping; gait training; pain assessment; passive, active, and active-assisted exercise; stretching; and documentation. Lab experiences will reflect concepts taught in the paired lecture course. Pre-requisite: Admission to the PTA Program; Completion of BIO 137 & BIO 139 with a C or better. Co-requisite: PTA 1501 and PTA 1502 and PTA 120 and PTA 170. Lab: 2 credits (60 contact hours).

Components: Laboratory
PTA 202(2) Course ID:006725
Therapeutic Modalities in Physical Therapy
Includes the basic physical science, data collection, and principles of selected physical therapy interventions including, massage, superficial heat and cold, sound agents, electromagnetics, orthotics, prosthesis, biofeedback, traction, and compression therapy. Pre-requisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, PTA 121, PTA 170 with a C or better. Co-requisite: PTA 222, PTA 223, PTA 234, PTA 235, PTA 232, PTA 240. Students cannot progress to PTA 240 without a grade of C or better in all other co-requisite courses. Lecture: 2.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical

PTA 203(2) Course ID:006726
Therapeutic Modalities in Physical Therapy Lab
Develops skills in data collection, documentation, and the application of selected physical therapy interventions including, massage, superficial heat and cold, sound agents, electromagnetics, orthotics, prosthesis, biofeedback, traction, and compression therapy. Lab experiences will reflect concepts taught in the paired lecture course. Pre-requisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, PTA 121, PTA 170 with a C or better. Co-requisite: PTA 222, PTA 223, PTA 234, PTA 235, PTA 232, PTA 202, PTA 240. Students cannot progress to PTA 240 without a grade of C or better in all other co-requisite courses. Lab: 2.0 credits (60 contact hours).

Components: Laboratory
Attributes: Technical

PTA 220(5) Course ID:004016
Physical Therapy Principles & Procedures
Emphasizes selected physical therapy interventions, documentation, and data collection for management of patients with the following problems: musculoskeletal conditions, pulmonary diseases, pathological gait, balance problems, thermal injuries, arthritis, amputations and cardiac diseases. Includes therapeutic exercise, orthotics, prosthesis, rehabilitation, and women's health issues. Pre-requisite: Admission to the PTA Program and completion of: PTA 150 and 160 with a grade of "C" or better; PTA 170 with a grade of "P"; all general education courses required for completion of the Physical Therapist Assistant program with a grade of "C" or better. Co-requisite: PTA 200 and PTA 240. Lecture: 2 credits (30 contact hours). Laboratory: 3 credits (90 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

PTA 222(2) Course ID:006727
Pathology & Rehabilitation of Orthopedic Conditions
Emphasizes the etiology, pathology, documentation, data collection, and selected physical therapy interventions for management of patients with the following problems: musculoskeletal conditions, pathological gait, arthritis, and amputations. Includes the study of wellness and women's issues, therapeutic exercise, orthotics, and prosthesis. Pre-requisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, and PTA 121 with a C or better. Completion of PTA 170 with a grade of "C" or better. Co-requisite: PTA 200 and PTA 240. Lecture: 2 credits (60 contact hours).

Components: Lecture
Attributes: Technical

PTA 223(2) Course ID:006728
Pathology & Rehabilitation of Orthopedic Conditions Lab
Develops skills in selected physical therapy interventions and data collection for management of patients with the following problems: musculoskeletal conditions, pathological gait, arthritis, and amputations. Includes therapeutic exercise, orthotics, prosthesis, and supportive devices. Pre-requisite: Completion of PTA 1501, PTA 1502, PTA 120, and PTA 121 with a C or better. Completion of PTA 170 with a grade of P. Co-requisite: PTA 222, PTA 223, PTA 234, PTA 232, PTA 202, PTA 240. Students cannot progress to PTA 240 without a grade of C or better in all other co-requisite courses.

Components: Lecture
Attributes: Technical

PTA 224(2) Course ID:004018
Clinical Practicum II
Includes clinic observation and practice of selected physical therapy interventions and data collection with the application of knowledge from previous/concurrent PTA courses and general education coursework. This course will entail four consecutive weeks of full-time clinical experience. In order to participate in this clinical experience, the student must be earning a grade of C or better in all other co-requisite courses. Pre-requisite: [Pathway 1: Admission to the PTA Program and completion of: PTA 150 and 160 with a grade of "C" or better and PTA 40 with a grade of "P".] OR [Pathway 2: PTA 202, PTA 223, PTA 222, PTA 234, and PTA 232 with a grade of "C" or better; Completion of PTA 240 with a grade of "P"]. Co-requisite: [Pathway 1: PTA 250] OR [Pathway 2: PTA 256, PTA 255, and PTA 280]. Students cannot progress to PTA 280 without a grade of "C" or better in all other co-requisite courses. Lecture: 2.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical

PTA 250(5) Course ID:004019
Neurological Rehabilitation in Physical Therapy
Focuses on rehabilitation procedures, including assistive devices, for patients of all age groups with disabilities resulting from brain injury, spinal cord injury, genetic/developmental disorders, and other neurodegenerative disorders. Includes normal growth and development and the rationale and techniques of neuromuscular re-education. Pre-requisite: Admission to the PTA Program and completion of PTA 222, PTA 234, PTA 223, PTA 232, and PTA 202 with a grade of C or better and PTA 240 with a grade of P. Co-requisite: PTA 260. Pre-requisite Or Co-requisite: PTA 280; if taken as a Pre-requisite to PTA 280, must earn a grade of C or better for PTA 250. Lecture: 3 credits (45 contact hours). Laboratory: 2 credits (60 contact hours).

Components: Laboratory, Lecture
Attributes: Technical

PTA 255(1) Course ID:006732
Pathology & Rehabilitation of Special Populations & Conditions Lab
Develops skills in the application of selected physical therapy interventions for patients with the following conditions: respiratory system, cardiovascular system, metabolic, and rheumatologic pathologies; psychiatric disorders; infectious diseases; oncology; thermal injuries; intemmary disorders; and wounds. Includes therapeutic exercise and wound care. Pre-requisite: PTA 222, PTA 223, PTA 234, PTA 232, PTA 202, and PTA 203 with a C or better. Completion of PTA 240 with a grade of P. Co-requisite: PTA 256, PTA 260, and PTA 280. Students cannot progress to PTA 280 without a grade of C or better in all other co-requisite courses. Lab: 1 credit (30 contact hours).

Components: Laboratory
Attributes: Technical

PTA 260(2) Course ID:016884
Pathology & Rehabilitation of Special Populations and Conditions
Focuses on the etiology, pathology, progression, prevention, and selection of physical therapy interventions for management of patients of all age groups with disabilities resulting from the following: brain injury, spinal cord injury, and genetic/developmental disorders. Includes balance disorders, normal growth and development, and the rationale and techniques of neuromuscular re-education. Pre-requisite: Admission to the PTA Program; Completion of PTA 1501, PTA 1502, PTA 120, and PTA 121 with a C or better. Completion of PTA 170 with a grade of P. Co-requisite: PTA 222, PTA 223, PTA 234, PTA 202, and PTA 203 with a grade of "C" or better. Completion of PTA 240 with a grade of P. Co-requisite: PTA 256, PTA 260, and PTA 280. Students cannot progress to PTA 280 without a grade of C or better in all other co-requisite courses. Lecture: 2.0 credits (30 contact hours).

Components: Lecture

PTA 260(2) Course ID:004172
Seminar in Physical Therapy
Prepares students to assist the student in the transition to physical therapist assistant including trends, specialized practice, patient services, and the employment process. Utilizes case studies to assist students to integrate theory and practice. Pre-requisite: [Pathway 1: Admission to the PTA Program and completion of: PTA 200 and 220 with a grade of "C" or better and PTA 240 with a grade of "P." ] OR [Pathway 2: PTA 202, PTA 223, PTA 222, PTA 234, and PTA 232 with a grade of "C" or better; Completion of PTA 240 with a grade of "P." ] Co-requisite: [Pathway 1: PTA 250] OR [Pathway 2: PTA 256, PTA 255, and PTA 280]. Students cannot progress to PTA 280 without a grade of "C" or better in all other co-requisite courses. Lecture: 2.0 credits (60 contact hours).

Components: Lecture
Attributes: Technical
Clinical Practicum III
Includes clinical observation and practice of physical therapy interventions and data collection with the application of knowledge from previous and concurrent PTA courses and general education coursework. By the end of the clinical experience the student will demonstrate an entry level of practice. Pre-requisite: [Pathway 1: Admission to the PTA Program and completion of: PTA 200 and PTA 201 with a grade of C or better and PTA 240 with a grade of P] OR [Pathway 2: PTA 202, PTA 203 PTA 222, PTA 223, PTA 232, and PTA 233 with a grade of C or better. Completion of PTA 240 with a grade of P] Co-requisite: [Pathway 2: PTA 254, PTA 255, and PTA 260. Students cannot progress to PTA 280 without a grade of C or better in all Co-requisite courses.] Pre-requisite Or Co-requisite: [Pathway 1: PTA 250, PTA 260; if taken as Pre-requisites to PTA 280, must earn a C or better for PTA 250 & PTA 260.] Practicum: 5 credits
Components: Practicum
Attributes: Technical
PTA 1501(3) Course ID:006721
Functional Anatomy and Kinesiology Lab
Develops selected data collection techniques in physical therapy, including: goniometry, manual muscle testing, flexibility, sensory integrity, reflex testing, and postural assessment. Lab experiences will reflect concepts taught in paired lecture course. Pre-requisite: [Pathway 1: Admission to the PTA Program and completion of BIO 137, BIO 139, PTA 101 and PTA 125 with a grade of C or better] OR [Pathway 2: Admission to the PTA Program; Completion of BIO 137 & BIO 139 with a C or better.] Co-requisite: [Pathway 1: PTA 160, PTA 170 & PTA 1502] OR [Pathway 2: PTA 120, PTA 121, PTA 1502 and PTA 170]. Lab: 3 credits (90 contact hours).
Components: Laboratory
PTA 1502(3) Course ID:006722
Functional Anatomy and Kinesiology Lecture
Provides knowledge related to the structure and function of the musculoskeletal system, the relationship with biomechanical principles, basic physical principles, and the mechanical aspects of human motion. Includes principles of muscle testing, flexibility testing, goniometry, and aspects of normal gait and posture. Pre-requisite: [Pathway 1: Admission to the PTA Program and completion of BIO 137, BIO 139, PTA 101 & PTA 125 with a grade of C or better.] OR [Pathway 2: Admission to the PTA Program and completion of BIO 137 & BIO 139 with a C or better.] Co-requisite: [Pathway 1: PTA 160, PTA 170 & PTA 1501] OR [Pathway 2: PTA 120, PTA 121, PTA 1501 and PTA 170]. Lecture: 3 credits (45 contact hours).
Components: Lecture
QMS 210(3) Course ID:004283
Lean Processes
Introduces the concepts and skills of lean processing for manufacturing and service settings. Covers organizational readiness, SS, value stream mapping, kaizen, and visual workplace. Examines the implementation of processes. Pre-requisite: QMS 101 or Consent of Instructor and MA 109 or MT 150. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical
QMS 212(3) Course ID:004284
Project Management
Provides insight into concepts and skills required to design the infrastructure for the successful planning, scheduling, and launching of a project. Promotes skills necessary to improve coordination of organizational resources, create effective teams, operate efficiently in a rapidly changing world, and minimize internal problems of system start ups. Teaches techniques to gain organizational acceptance for projects. Pre-requisite: QMS 101 or consent of instructor. Lecture: 3 Credits (45 contact hours).
Components: Lecture
Attributes: Technical
QMS 240(3) Course ID:004467
Statistics for Quality I
Introduces methods of organizing information about processes. Examines presentation, description, and analysis of data. Emphasizes handling and interpreting numerical information, including histograms and control charts. Presents and applies concepts of probability to control charts to promote process understanding to improve quality of products and service. Investigates sampling principles. Uses computer generated analyses. Pre-requisite: MA 109 or MT 150. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical
QMS 262(4) Course ID:000694
Design of Experiments
Basic statistical methods are reviewed. Statistical techniques which parallel methods of SPC are introduced. Analysis of means, analysis of variance, and contrast comparisons are studied to facilitate the understanding of the different experimental design methods. Examples from manufacturing illustrate how to reduce product variability and optimum process factor settings. Computer software is utilized throughout the course. Lecture: 3 credits (45 contact hours); Laboratory: 1 credit (15 contact hours).
Components: Lecture
QMS 1011(0.6) Course ID:005165
Understanding a Quality Focused Organization
Past quality initiatives and progressive quality trends. Application of knowledge from previous and concurrent PTA courses and general education coursework. By the end of the clinical experience the student will demonstrate an entry level of practice. Pre-requisite: QMS 101 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture
QMS 1012(1) Course ID:006200
Maximizing the capabilities of people by creating a fun and positive work environment. Pre-requisite: QMS 1014 or consent of instructor. Lecture: 0.6 credit (9 contact hours).
Components: Lecture
QMS 2012(1) Course ID:006201
Understanding the Customer
Includes techniques for assessing internal and external customer needs and developing plans for delivery of quality customer service. Includes customer’s point of view, benchmarking quality customer service processes, and developing partnerships with customers. Pre-requisite: QMS 2011 or consent of instructor. Lecture: 1 credit (15 contact hours).
Components: Lecture
QMS 2021(0.6) Course ID:005170
Introduction to Performance Management
Emphasis on performance management and the ABC model of behavior change. Lecture: 0.6 credits (9 contact hours).
Components: Lecture
QMS 2022(0.6) Course ID:005171
ABC Analysis of Delivering Reinforcers
Principles of ABC analysis with emphasis on reinforcers and techniques in delivering reinforcers. Pre-requisite: QMS 2021 or consent or instructor. Lecture : 0.6 credits (9 Contact Hours).
Components: Lecture
QMS 2023(0.6) Course ID:005172
Reinforcement Schedules and Unwanted Behavior
A variety of reinforcement schedules will be introduced and a number of procedures will be analyzed in dealing with unwanted behavior. Pre-requisite: QMS 2022 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture
QMS 2024(0.6) Course ID:005173
Pinpoints and Measurement
Fundamentals of pinpointing, identifying a job’s mission, and understanding effective measurement. Pre-requisite: QMS 2023 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture
QMS 2025(0.6) Course ID:005174
Feedback, Goals, and Applying Performance Management
The value and variety of feedback and its relationship to goal setting as the foundation of performance management. Pre-requisite: QMS 2024 or consent of instructor. Lecture: 0.6 credits (9 contact hours).
Components: Lecture
RAE Russian and Eastern Studies

RAE 120(3) Course ID:005363 Introduction to Chinese Culture Examines economic, political, cultural, and social realities that offer more opportunities and engagement at every level for non-native Chinese people. Includes some basic vocabulary. Lecture: 3 credits (45 contact hours). Components: Lecture Attributes: Cultural Studies, SB - Social Behavior Science

RAE 150(4) Course ID:004857 Elementary Chinese I Introduces basic modes of communication in Chinese. Stressing speaking, listening, reading and writing as target skills. Emphasizes everyday language which the students will learn by applying essential grammatical structures to vocabulary. Presents an overview of the cultures of China. Lecture: 4.0 credits (60 contact hours). Components: Lecture Attributes: Foreign Language, Cultural Studies

RAE 151(4) Course ID:004858 Elementary Chinese II Continues the study of basic Chinese through grammar, reading, and oral practice. Stressing speaking and listening as the target skills; reading and writing remain centered on intensive and repetitive practice with the pinyin character system. Emphasizes everyday language. Presents an overview of the cultures of China. Pre-requisite: RAE 150 or consent of instructor. Lecture: 4 credits (60 contact hours).

RCP Respiratory Care Practitioner

RCP 110(3) Course ID:003786 Cardiopulmonary Anatomy and Physiology Provides an in-depth analysis of the respiratory and circulatory systems with emphasis on the interaction of systems in gas exchange and acid-base balance as well as the structure and function of the chest cage, mechanics of breathing and control of respiration. Pre-requisite: Completion of MAT 110 OR MAT 146 OR MAT 150 with a grade of C or better. Completion of BIO 137 and ENG 101 with a grade of C or better. Lecture: 3 credits (45 contact hours).

RCP 120(4) Course ID:003787 Theory and Principles of Respiratory Care Presents the principles and techniques of therapeutic procedures used in respiratory care, including an emphasis on medical asepsis, safe handling and administration of medical gases, uses of humidity, aerosol therapy, lung inflation techniques, bronchial hygiene therapy and airway care. Pre-requisite: Completion of MAT 110 OR MAT 146 OR MAT 150 with a grade of C or better. Completion of BIO 137 and ENG 101 with a grade of C or better. Lecture: 3 credits (45 contact hours), Laboratory: 1 credit (60 contact hours).

RCP 121(1) Course ID:004832 Respiratory Care Practice I Emphasizes the health care team and the practice and or performance of techniques of basic respiratory care including airway management and bronchial hygiene. Pre-requisite or Co-requisite: RCP 122 with a grade of C or better; Valid Health Care Provider CPR card. Clinical: 1 credit (60 contact hours).

RCP 122(4) Course ID:004831 Fundamentals of Respiratory Care Introduces the field of respiratory care including chest physical assessment, medical gas therapy, humidity and aerosol therapy, bronchial hygiene, airway management, medical asepsis and development of the respiratory care plan. Pre-requisite: [(MAT 110 or MAT 146 or MAT 150) BIO 137 and BIO 139] with a grade of C or better or consent of instructor. Lecture: 3 credits (45 contact hours). Laboratory: 1 credit (60 contact hours).

RCP 125(4) Course ID:003788 Cardiopulmonary Evaluation Examines cardiopulmonary assessment with in-depth coverage of invasive and non-invasive arterial blood gas interpretation, electrocardiography and assessment of chest and neck imaging. Pre-requisite: [RCP 110 and BIO 137 and (MT 110 or MT 145 or MT 150) or equivalent] with a grade of C or better. Pre-requisite or Co-requisite: RCP 110. Lecture: 3 credits (45 contact hours), Laboratory: 1 credit (60 contact hours).

RCP 130(3) Course ID:003789 Pharmacology Provides an in-depth study of pharmacological agents, their use in the practice of respiratory care for patients with cardiovascular or pulmonary impairment as well as accuracy in drug calculations and delivery. Lecture: 3 credits (45 contact hours). Pre-requisite: (RCP 110 and MT 110 or MT 145 or MT 150) with a grade of C or better. Co-requisite: RCP 110 and (MT 110 or MT 145 or MT 150).

RCP 135(1) Course ID:017210 Respiratory Pharmacology Provides an overview of respiratory pharmacological agents and their use in the clinical practice of a respiratory therapist. Pre-requisite: Admission to the Respiratory Care Program. Lecture: 1 credit hour (15 contact hours).

RCP 140(2) Course ID:004835 Cardiopulmonary Assessment Emphasizes blood gas analysis; pulmonary function studies, electrocardiography and chest radiography. Pre-requisite: [(RCP 110 and RCP 122 and RCP 130) or equivalent] with a grade of C or better or consent of instructor. Lecture: 1.5 credits (22.5 contact hours), Laboratory: 0.5 credit (15 contact hours).

RCP 150(2) Course ID:003790 Clinical Practice I Provides an opportunity for observation and/or performance of techniques for chest physical assessment, medical gas administration, humidity and aerosol therapy and bronchial hygiene in the assigned clinical setting. Pre-requisite or Co-requisite: RCP 120 with a grade of C or better; Valid Health Care Provider CPR card. Clinical: 2 credits (120 contact hours).

RCP 175(3) Course ID:003791 Clinical Practice II Provides an opportunity to participate in the health care team while practicing techniques of respiratory care including airway management and bronchial hygiene in the assigned setting. Pre-requisite: RCP 150 with a grade of C or better; Clinical: 3 credits (180 contact hours).

RCP 176(2) Course ID:004834 Respiratory Care Practice II Emphasizes participation in the health care team while practicing techniques of basic respiratory care including airway management and bronchial hygiene. Pre-requisite: RCP 110 and RCP 122 and RCP 135 with a grade of C or better or consent of instructor. Pre-requisite: RCP 140 (If taken as a pre-requisite, a grade of C or better is required.). Clinical: 2 credits (120 contact hours).

RCP 180(3) Course ID:003792 Ventilatory Support Covers the technological and physiological aspects of mechanical ventilation including the theory of operation, classification, and management of the patient ventilator system. Pre-requisite: RCP 120 and RCP 130 with a grade of C or better. Lecture: 2 credits (30 contact hours), Laboratory: 1 credit (60 contact hours).

RCP 185(2) Course ID:004837 Introduction to Mechanical Ventilation Introduces the technological aspects of mechanical ventilation including the theory of operation, classification and patient-ventilator system checks. Pre-requisite: [(RCP 140 and RCP 176)] or equivalent with a grade of C or better or consent of instructor. Lecture: 1.5 credits (22.5 contact hours), Laboratory: 0.5 credit (15 contact hours).

RCP 190(2) Course ID:003793 Advanced Ventilatory Support Addresses advanced concepts in ventilatory support, including physiologic effects, indications, monitoring and management of the patient-ventilator system. Pre-requisite: RCP 180 with a grade of C or better. Lecture: 1.5 credits (22.5 contact hours), Laboratory: 0.5 credits (30 contact hours).

RCP 195(4) Course ID:004838 Patient-Ventilator System Management Addresses advanced concepts in ventilatory support including monitoring and management of the patient-ventilator system. Pre-requisite: [(RCP 185 and RCP 201)] or equivalent with a grade of C or better or consent of instructor. Lecture: 3 credits (45 contact hours), Laboratory: 1 credit (60 contact hours).

RCP 200(3) Course ID:003794 Clinical Practice III Provides practice in adult mechanical ventilation procedures and airway management in the critical care setting and performance of other respiratory care skills. Pre-requisite: RCP 175 with a grade of C or better. Clinical: 3 credits (180 contact hours).

RCP 201(2) Course ID:004836 Respiratory Care Practice III Provides practice in adult mechanical ventilation procedures and airway management in the critical care setting in addition to continued performance of the basic respiratory care skills. Pre-requisite: [(RCP 140 and RCP 176)] or equivalent with a grade of C or better or Consent of Instructor. Clinical: 2 credits (120 contact hours).

RCP 204(3) Course ID:003795 Emergency & Special Procedures Prepares students to participate in advanced emergency life support and special procedures. Pre-requisite or Co-requisite: RCP 135 and BIO 139 with a grade of C or better. Lecture: 2.5 credits (37.5 contact hours), Laboratory: 0.5 credit (30 contact hours).

RCP 210(3) Course ID:003796 Cardiopulmonary Pathophysiology Addresses the etiology, diagnosis, clinical manifestations and management of cardiopulmonary disorders as related to respiratory care including the fundamental microbiologic principles and their relation to health and disease. Pre-requisite: [(RCP 110 or RCP 201 and RCP 185)] or equivalent with a grade of C or better or consent of instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture Attributes: Technical
RCP 212(3) Course ID:003797
Neonatal/Pediatric Respiratory Care
Provides a study of the special needs of the neonatal and pediatric patient with focus on fetal cardiopulmonary development, evaluation, assessment and treatment of cardiopulmonary conditions and diseases of the neonatal and pediatric patient, as well as equipment unique to this population. Pre-requisite: (RCP 185 and RCP 201) with a grade of C or better] or Consent of Instructor. Pre-requisite or Co-requisite: RCP 190 with a grade of C or better or Consent of Instructor. Lecture: 2.5 credits (37.5 contact hours). Laboratory: 0.5 credits (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 214(3) Course ID:003798
Advanced Diagnostic Procedures
Prepares students to assist physician in advanced diagnostic, and therapeutic procedures. Pre-requisite: BIO 139 with a grade of C or better. Lecture: 2.5 credits (37.5 contact hours). Laboratory: 0.5 credits (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 225(3) Course ID:003799
Clinical Practice IV
Provides observation and practice of advanced cardiopulmonary evaluation and critical care techniques while improving efficiency in the ventilatory management of patients. Pre-requisite: RCP 200 with a grade of C or better. Clinical: 3 credits (180 contact hours).
Components: Clinical
Attributes: Technical

RCP 226(4) Course ID:004841
Respiratory Care Practice IV
Provides observation and practice in advanced cardiopulmonary evaluation and critical care techniques while improving efficiency in the ventilatory management of adult patients. Pre-requisite: [RCP 176 and RCP 185] with a grade of C or better] or Consent of Instructor. Clinical: 4 credits (240 contact hours).
Components: Clinical
Attributes: Technical

RCP 228(2) Course ID:003800
Preventive and Long-Term Respiratory Care
Covers prevention of cardiopulmonary disorders and care of individuals with long term cardiopulmonary disability. Addresses psychosocial and physical needs of clients with emphasis on improving the quality of life and cardiopulmonary reserve. Pre-requisite: [RCP 110 or (RCP 195 and RCP 210 and RCP 212 and RCP 226)] with a grade of C or better] or Consent of Instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture
Attributes: Technical

RCP 240(3) Course ID:004844
Advanced Cardiopulmonary Evaluation
Addresses cardiopulmonary assessment including hemodynamic monitoring, pulmonary and cardiac exercise/stress testing, advanced cardiac procedures, blood chemistry and fluid and electrolyte balance. Pre-requisite: [RCP 195 and RCP 210 and RCP 212 and RCP 226] with a grade of C or better] or consent of instructor. Lecture: 2.15 credits (41.25 contact hours). Laboratory: .25 credit (15 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 245(2) Course ID:004845
Advanced Cardiac Life Support
Focuses on managing acute cardiovascular emergencies including cardiac arrest, acute myocardial infarction and stroke. Students demonstrating essential knowledge and skills and obtaining 85% or greater on the written exam will receive an American Heart Association ACLS provider card. Lecture: 1.5 credits (22.50 contact hours). Laboratory: 0.5 credit (30 contact hours).
Components: Laboratory, Lecture
Attributes: Technical

RCP 250(3) Course ID:003801
Clinical Practice V
Prepares students to participate in effective and efficient planning, managing and delivering respiratory care to diverse client populations in various settings. Pre-requisite: RCP 226 with a grade of C or better. Clinical: 3 credits (180 contact hours).
Components: Clinical
Attributes: Technical

RCP 251(4) Course ID:004843
Respiratory Care Practice V
Prepares students to plan, manage, and deliver respiratory care to diverse client populations in various settings. Enables students to practice mechanical ventilation techniques and observe/practice techniques of advanced life support. Pre-requisite: [([RCP 195 and RCP 210 and RCP 212 and RCP 226] with a grade of C or better] or Consent of Instructor. Clinical: 4 credits (240 contact hours).
Components: Clinical
Attributes: Technical

RDG 020(3) Course ID:002286
Improved College Reading
Improves proficiency in reading comprehension, vocabulary, and critical thinking skills, and prepares students for college and career reading through individualized and/or group instruction practice. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - Reading, Course Also Offered in Modules

RDG 030(3) Course ID:002287
Reading for the College Classroom
Improves critical reading skills by developing vocabulary techniques, active reading strategies, comprehension accuracy, and interpretation of visual elements in text. Applies theories and strategies taught in the course to college and career reading materials. Pre-requisite: As determined by KCTCS Placement Policy, or successful completion of RDG 020. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Remedial - Reading, Course Also Offered in Modules

RDG 041(1) Course ID:006805
Reading Laboratory
Designed to improve reading comprehension, vocabulary, and critical thinking skills. Strategies taught in this course will be applied to college level materials. Pre-requisite: Compass score 81-83. Lab: 1.0 credit (15 contact hours).
Components: Laboratory
Attributes: Remedial - Reading

RDG 066(4) Course ID:016767
Introduction to College Reading
Improves proficiency in reading comprehension, critical thinking skills, and critical reading skills by developing vocabulary techniques, active reading strategies, comprehension accuracy, and interpretation of visual elements in text. Prepares students for college and career reading through individualized and/or group instruction and practice. Applies theories and strategies taught in the course to college and career reading materials. Pre-requisite: Current KCTCS placement policy. Lecture: 4.5 credits (60 contact hours)
Components: Lecture
Attributes: Supplemental Reading

RDG 100(1 - 3) Course ID:015658
Reading Workshop
Improves reading comprehension and vocabulary of expository materials by improving student’s comprehension processes and reading-related study skills. Applies strategies and skills taught in the course are applied to college level materials. Pre-requisite: KCTCS Placement Policy. Lecture: 1.0-3.0 credits (15-45 contact hours).
Components: Lecture
Attributes: Other, Supplemental Reading

RDG 183(5) Course ID:000301
College Reading
Designed to improve critical reading, thinking, and writing at the college level by identifying the components of expository, persuasive, argumentative, and research text, including the author’s use of tone, purpose, biased language and writing patterns. Applies strategies to college level text. Pre-requisite: KCTCS Placement Policy. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Also Offered in Modules, Supplemental Reading

RDG 201(0.5) Course ID:006737
Active Reading
Applies active reading, metacognitive, self-evaluation, and reading rate strategies for proficiency in reading comprehension. Includes topics such as the reading process, self-monitoring and self-correcting comprehension, and adjusting reading strategies for various comprehension purposes. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: 0.5 credits (7.5 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 202(0.75) Course ID:006738
Transitions, Thought Patterns
Construct meaning from texts through analyzing transitions and patterns of organization to improve comprehension and critical thinking skills. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: .75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 203(1) Course ID:006739
Basics of Argument
Recognize basic argument components, analyze contradictions to prior learning, and draw valid conclusions about claims and supports for claims to improve critical reading and thinking skills. Use main ideas to accurately summarize texts. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 204(0.75) Course ID:006740
Words and Visual Elements
Expands vocabulary through examining word parts and context clues, and infers tone and purpose through word combinations. Constructs meaning from visual elements to improve comprehension of text. Pre-requisite: As determined by KCTCS Placement Policy. Lecture: .75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 030(1.75) Course ID:006741
Critical Reading
Uses active learning, prior knowledge, and metacognitive strategies to quickly enhance comprehension. Uses active learning, prior knowledge, and self-assessment strategies to quickly enhance comprehension of text. Pre-requisite: As determined by KCTCS Placement Policy, or successful completion of RDG 020. Lecture: .75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - Reading
RDG 0302(0.75) Course ID: 006742
Text Structures and Supports
Analyzes text structures, paragraphs, longer passages, and arguments for central ideas, supporting examples, reasons, and evidence to construct meaning from texts. Pre-requisite: As determined by KCTCS Placement Policy, or completion of RDG 020. Lecture: 75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 0035 (0.75) Course ID: 006743
Logic and Evidence
Analyzes text for logical reasoning and valid supports to quickly detect key information in texts. Pre-requisite: As determined by KCTCS Placement Policy, or completion of RDG 020. Lecture: 75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - Reading

RDG 0304 (0.75) Course ID: 006744
Words and Visual Elements
Construct meaning from word parts, context clues, connotation, and denotation for accurate comprehension of text. Evaluate word combinations to determine the author’s view, tone, and purpose for writing the texts. Infer meaning from visual elements such as diagrams, charts, and photos. Pre-requisite: As determined by KCTCS Placement Policy, or completion of RDG 020. Lecture: 75 credits (11.25 contact hours).
Components: Lecture
Attributes: Remedial - Reading

REA 102(3) Course ID: 000365
Real Estate Marketing
Includes marketing and selling of real estate properties. Emphasizes qualifying prospects, preparing for property showings, negotiating the sale, developing a five-year goal plan, and managing time. Utilizes computer applications. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

REA 121(3) Course ID: 000778
Appraising
Addresses appraising residential real estate for loans, estates, condemnations, and listings, and the factors that contribute to the value of real estate. Includes methods of estimating value with emphasis given to the market data approach. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 200(3) Course ID: 000805
Real Estate Principles II
Continues Real Estate Principles I with emphasis on license law, finance, property management, marketing, land planning and development, brokerage management, fair housing, and appraising. Pre-requisite: REA 100. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

REA 201(3) Course ID: 000915
Property Management
Examines the basics of managing income-producing real property. Includes management plans, tenant selection, marketing and advertising, accounting methods, net operating income statements, maintenance, and the Landlord Tenant Act. Pre-requisite: REA 100. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 202(3) Course ID: 000875
Real Estate Investments I
Introduces various types of real estate investments. Includes a comparison of investments in real estate with other types of investments. Covers basic fundamentals of investment analysis and terminology. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 203(3) Course ID: 000527
Commercial and Industrial Property
Covers classifications of commercial and industrial properties. Includes investment, environment, financing, taxes, depreciation, ownership, cash flow projection, and discount analysis. Integrates computer applications. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 204(3) Course ID: 000825
Land Planning and Development
Includes the specialized field of land planning and development with emphasis on new home construction. Includes market research, site selection and analysis, regulations, financing, earthwork, streets, and landscaping. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 205(3) Course ID: 000620
Farm Brokerage
Includes farm brokerage and specific subjects relating to the sale of farm property. Covers listing, prospecting, showing, financing, negotiating and closing the farm sale as well as the duties of the farm manager. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 210(3) Course ID: 000194
Real Estate Investments II
Includes an analysis of operations and cash flow with detailed instruction on the use and calculation of internal rate of return, financial management rate of return, operational and feasibility analysis, and model investment projections. Pre-requisite: REA 202. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

REA 220(1) Course ID: 004773
Uniform Standards of Professional Appraisal
Provides an understanding and appreciation of the Uniform Standards of Professional Appraisal Practice (USAP) and how these standards set the minimum foundation on which both the development of an appraisal and the reporting of that appraisal must adhere and develop. Meets the pre-licensing and continuing education requirements of the Kentucky Real Estate Appraisers Board and the Appraisal Institute. Pre-requisite: REA 210 or Appraiser’s license. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

REA 225(3) Course ID: 000432
Real Estate Finance
Examines all aspects of real estate finance including financial instruments, financial institutions, buyer qualifications, and mortgage markets. Includes governmental influence, risk analysis, and financing of income-producing properties. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

REA 230(3) Course ID: 000391
Real Estate Law
Examines the laws and regulations pertaining to real estate and related environmental issues. Includes ownership rights, title examination, planning and zoning, contracts of sale, Fair Housing regulations, agency issues, court systems and recent court decisions. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

REA 291(1-3) Course ID: 000541
Selected Topics in Real Estate: (Topic)
Includes topics to expand course offerings as new technology and information are developed, as well as to address local real estate needs. Covers various topics from semester to semester at the discretion of the instructor. Lecture: 1-3 credits (15 contact hours).
Components: Lecture

REL 101(3) Course ID: 000916
Introduction to Religious Studies
Introduces students to the study of religion, emphasizing the varieties, differences, and similarities of religious experience and expression. Examines the interaction between religious experience and expression and social and cultural contexts through study of selected examples. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities, SB - Social Behavior Science

REL 120(3) Course ID: 005282
Introduction to the Old Testament
Introduces books of the Hebrew Bible (Old Testament) using knowledge of literary forms as well as historical and cultural backgrounds to aid in the interpretation of the religious and philosophical meanings of the text. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

REL 121(3) Course ID: 005283
Introduction to the New Testament
Introduces New Testament using knowledge of literary forms as well as historical and cultural backgrounds to aid in the interpretation of the religious and philosophical meanings of the text. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: AH - Arts and Humanities

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REL 150(3) Course ID:007409
Comparative Ethics of Major World Religions
Examines central theological teachings, modes of ethical reasoning, key ethical virtues and norms of major religious traditions from both Eastern and Western Religions. Considers the lives, sacred stories, dogma and texts of central religious figures as part of the context for moral thinking in a global setting. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

REL 160(3) Course ID:017028
Religious Expressions of Forgiveness and Justice
Introduces students to a comparative analysis of world religions, emphasizing the nature of forgiveness and justice and how it is conceptualized and understood in sacred texts, beliefs, rituals, artistic expressions, and cultural and social organizations. Includes both Eastern and Western religions. 3 credits (45 contact hours).

Components: Lecture
Attributes: Cultural Studies, AH - Arts and Humanities

REL 170(3) Course ID:005523
Philosophy of Religion
Introduces students to issues in philosophy of religion including defining the concept of God, arguments for and against the existence of God, the relation between faith and reason, the nature of religious experience, the problem of evil, and immortality. Lecture: 3 credits (45 contact hours).

Components: Lecture
Course Equivalents: PHI 170
Attributes: AH - Arts and Humanities, Other

REL 240(3) Course ID:006945
Life and Teaching of Jesus
Investigates the life and teachings of Jesus of Nazareth through a critical analysis of the ancient sources and modern scholarly reconstructions. Lecture: 3.0 credits (45 contact hours)

Components: Lecture
Attributes: Other

REL 241(3) Course ID:006946
Life and Letters of Paul
Presents the person and thought of the Apostle Paul in social, cultural, political, philosophical, and theological context. Investigates Paul's ethics and his views as preserved in the Christian New Testament. Lecture: 3.0 credits (45 contact hours)

Components: Lecture

REL 299(3) Course ID:006968
Special Topics in Religion: Topic
Examines special topics in Religion. Includes but not limited to individual religious figures, movements, sacred writings, religious traditions and selected eras. Lecture: 3.0 credits (45 contact hours)

Components: Lecture
Attributes: Other
SMT 280(4)  Introduction to GIS and GPS

Course ID: 004436

This course provides an overview of the principles and practices of Geographic Information Systems (GIS) and Global Positioning Systems (GPS). The GIS portion of the course will deal with issues of spatial data models, database design, introductory and intermediate GIS operations, and case studies of real world GIS applications. The GPS portion of the course focuses on GPS technology, software applications. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

SMT 290(3)  Boundary Law

Course ID: 004435

This course is the survey of property law, explaining the creation, description, and maintenance of property boundaries, easements and right-of-ways. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

SMT 292(1 - 6)  Instructor Consent Required

Course ID: 004471

Special Topics

Various topics will be addressed. Laboratory: 1 - 6 credits (45 - 270 contact hours). Pre-requisite: Permission of Instructor.

Components: Laboratory
Attributes: Technical

SOF 101(3)  Introduction to Sociology

Course ID: 000920

SOF 101(3)  Introduction to Sociology

Focuses on the dynamics of symbolic exchange, the social psychological processes underlying human interaction. Explores the fundamental sociological and social psychological processes underlying human interaction. Explores the professional and ethical conduct of the Land Surveyor in areas of building a business, managing employees, communications, project management, and self-management. Pre-requisite: SMT 230, or Instructor Consent. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

SOF 230(3)  Land Boundary Location

Course ID: 006735

Land Boundary Location

Explores the role of the surveyor in retracing land boundaries, methods of boundary establishment, classification and analysis of boundary evidence, preparing deed descriptions and survey plats, preservation of survey evidence, surveyor as expert witness, liability, and professionalism in surveying. Pre-requisite: SMT 110. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

SDC 161(1)  Life Coach Practicum

Provides applied experience in life coaching, in a college/university, school, community agency, or other relevant setting, or in self-employment as a sole practitioner, applying knowledge and skills gained from SDC 160. Students will conduct coaching that meets the current experience requirements of the International Coach Federation (ICF) for the Associate Certified Coach (ACC) credential, and maintain a log of these contacts using the ICF Coaching Log: a minimum of 100 hours of coaching experience with at least eight clients following the start of SDC 160. Two observed coaching sessions with instructor feedback (including at least one written feedback report) are also a part of the course, to ensure continued development of coaching skills. Course includes seven group mentoring hours and three individual mentoring hours focused on the ICF Core Competencies. Pre-Requisite: SDC 160 with a C or higher. Lecture 1 credit (90 contact hours).

Components: Lecture
Attributes: Technical

SED 101(3)  Special Education

Course ID: 000923

SED 101(3)  Special Education

Includes a functional-notational approach to a beginning competency in Sign Language. Incorporates syntax, grammar, non-manual markers (behaviors) of sign language, and cultural information. (After an initial orientation period, no verbal communication will be used in the classroom.), Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Foreign Language, Cultural Studies

SED 102(3)  Sign Language II

Course ID: 000804

SED 102(3)  Sign Language II

Includes a functional-notational approach designed to follow SED 101 that will enhance student’s knowledge of Sign Language and expand their understanding and appreciation of the people who use it. Pre-requisite: SED 101. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Foreign Language, Cultural Studies

SED 203(3)  Sign Language III

Course ID: 000530

SED 203(3)  Sign Language III

Emphasizes the practical application of signing, skills, development of cross-cultural communication abilities and vocabulary expansion. Reviews linguistic information and introduces additional linguistic materials. Pre-requisite: SED 102. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Foreign Language, Cultural Studies

SED 204(3)  Sign Language IV

Course ID: 000833

SED 204(3)  Sign Language IV

Continues the expansion of sign vocabulary, sharpening of conversational skills including fingerspelling and numbers, semantics, morphology, syntax and other sign language features applied to conversational settings. Pre-requisite: SED 203. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Foreign Language, Cultural Studies

SET 298(2)  Small Engine Repair Practicum

Course ID: 002032

Practicum provides supervised on-the-job work experience related to the student’s education objectives. Students participating in practicum do not receive compensation. Pre-requisite: Permission of Instructor. Practicum: 2 credits (150 contact hours).

Components: Practicum

SFC 100(1)  Safety and First Aid

Course ID: 002034

SFC 100(1)  Safety and First Aid

Safety and First Aid is a course designed to teach current strategies related to designated emergency situations as put forth by the National Safety Council or American Red Cross. The National Safety Council or American Red Cross standardized course qualifies a student for certification in safety and first aid. Lecture: 1 credit (15 contact hours).

Components: Lecture
Attributes: Technical

SFA 101(3)  OSHA, Health, & Environmental Safety

Course ID: 004735

SFA 101(3)  OSHA, Health, & Environmental Safety

The basics of OSHA compliance in addition to covering the principles of industrial health and safety, environmental regulations, and industrial requirements with a focus on personal safety and health. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

SMT 110(3)  Principles of Surveying

Course ID: 002035

SMT 110(3)  Principles of Surveying

Provides a study of field and office procedures for measuring distances, elevations, and horizontal and vertical angles. Covers Polaris and solar observations, state plane coordinates, control surveys, and public land surveys. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

SMT 130(3)  Land Surveying Graphics

Course ID: 006733

SMT 130(3)  Land Surveying Graphics

Covers graphical communication in surveying and mapping, fundamentals of projection, map projection theory, 3-D viewing, spatial relationships and viewpoints, profiles, cross-sections, sketches for field notes and presentations in technical reports, map accuracy standards, plotting data from field notes and data collection, contour theory, and computations related to survey drafting. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

SMT 160(3)  Construction Surveying

Course ID: 002038

SMT 160(3)  Construction Surveying

Provides a study of field and office procedures for the layout of construction sites. Includes theory of construction surveys for route locations, plant sites, earthwork calculations, circular curves, lines, and grades. Pre-requisite: SMT 110, or Instructor Consent. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

SMT 210(3)  Advanced Surveying Measurement

Course ID: 006734

SMT 210(3)  Advanced Surveying Measurement

Examines the nature of measurements, statistical analysis of random errors in measurements, propagation of errors, survey standards and design specifications, development of coordinate geometry and trigonometric solutions of plane surveying problems, analysis of errors and mistakes in indirect measurement. Pre-requisite: SMT 110. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

SMT 220(3)  Surveying Lab

Course ID: 004438

SMT 220(3)  Surveying Lab

Investigates field procedures for measuring distances, elevations, horizontal and vertical angles, state plane coordinates and control surveys as they pertain to boundary location, route location, construction and mine surveys. Co-requisite: SMT 160. Laboratory: 3 credits (90 contact hours).

Components: Laboratory
Attributes: Technical

SOC 101(3)  Professional Ethics & Conduct for Land Surveyors

Course ID: 000920

SOC 101(3)  Professional Ethics & Conduct for Land Surveyors

Explores the professional and ethical conduct of the Land Surveyor in areas of building a business, managing employees, communications, project management, and self-management. Pre-requisite: SMT 230, or Instructor Consent. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

SOC 290(3)  Boundary Law

Course ID: 004435

SOC 290(3)  Boundary Law

This course is the survey of property law, explaining the creation, description, and maintenance of property boundaries, easements and right-of-ways. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: Technical

SOC 292(1 - 6)  Instructor Consent Required

Course ID: 004471

Special Topics

Various topics will be addressed. Laboratory: 1 - 6 credits (45 - 270 contact hours). Pre-requisite: Permission of Instructor.

Components: Laboratory
Attributes: Technical

SOC 101(3)  Introduction to Sociology

Course ID: 000920

SOC 101(3)  Introduction to Sociology

Introduces concepts and methods of sociology including investigation of socialization, group processes, social inequality, social institutions, and social change. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SB - Social Behavior Science

SOC 151(3)  Social Interaction

Course ID: 000844

SOC 151(3)  Social Interaction

Explores the fundamental sociological and social psychological processes underlying human interaction. Focuses on the dynamics of symbolic exchange, the social context and processes shaping it, and examines its effects on the formation and maintenance of social and personality systems. Pre-requisite: SOC 101 or PSY 110 or Consent of Instructor. Lecture: 3 credits (45 contact hours).

Components: Lecture
Attributes: SB - Social Behavior Science
SOC 152(3) Course ID:000404
Modern Social Problems
Examines selected social problems of the day from a sociological perspective. Topics may include family, poverty, education, crime, race, housing, population, health care, industrial development, and power. Pre-requisite: SOC 101 or SOC 151, or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

SOC 220(3) Course ID:000890
The Community
Examines social organization and process in modern communities, both rural and urban; social techniques of community improvement. Pre-requisite: Three hours of sociology or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

SOC 230(3) Course ID:017182
Deviant Behavior
Continues the nature of societal rules, rule enforcers, and rule breakers. Investigates social issues and research in crime, delinquency, drug addiction, alcoholism, mental illness, pornography, sexuality and other forms of deviance with an emphasis on theoretical explanations and social consequences. Pre-requisite: SOC 101. Lecture: 3 credit hours (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

SOC 235(3) Course ID:002258
Inequality in Society
Analyzes the nature, development, and persistence of inequality in various societies. Diverse dimensions of inequality are viewed as the basis for a number of specific social problems in Western and non-Western societies. Social origins of inequality are emphasized. Policy implications are addressed. Pre-requisite: Three hours of sociology or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

SOC 249(3) Course ID:002259
Media, Society, and Culture
Introduces the relationship between media, culture, and society. Pre-requisite: SOC 101 or permission of instructor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Course Equivalents: COM 249
Attributes: SB - Social Behavior Science

SOC 250(3) Course ID:017305
Sociology of Popular Culture
Examines the development and social significance of various non-elite cultural forms in the U.S., such as music, comic books, movies, and novels. Examines the development of the distinction between "highbrow" and "lowbrow" culture in race, ethnic and other subcultures, deviance, the role of gender differences in popular culture, and recent theories and debates about the relation of culture, society and their impact on social institutions. Pre-requisite: SOC 101. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

SOC 260(3) Course ID:000712
Population, Resources and Change
Examines the relationship between human social and cultural systems and their environment. Perception, definition and policy responses to environmental, resource and population issues are explored. Pre-requisite: SOC 101 or Consent of Instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: SB - Social Behavior Science

SOC 299(3) Course ID:002260
Special Introductory Topics in Sociology
An introductory study of a selected topic in sociology. Topics may include, but are not limited to, industrial sociology, sociology of aging, gender issues, criminology, social inequalities, sociology of families, and rural sociology. Pre-requisite: SOC 101 or RSO 102. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Other

SPA Spanish Language and Literature

SPA 101(4) Course ID:000922
Elementary Spanish I (spoken approach)
Introduces basic modes of communication in Spanish. Stresses speaking, listening, reading and writing as target skills. Emphasizes everyday language which the students will learn by applying essential grammatical structures to vocabulary. Provides instructional assignments and self-correctional exercises that will be practiced in the classroom. Presents an overview of the culture of various Spanish-speaking countries. Lecture : 4 credits (60 contact hours).
Components: Lecture
Attributes: Foreign Language, Cultural Studies

SPA 102(4) Course ID:000799
Elementary Spanish II (spoken approach)
Continues to highlight the basic modes of communication in Spanish, to include present and past tense. Stresses speaking, listening, reading and writing as target skills. Emphasizes everyday language which the students will learn by applying essential grammatical structures to vocabulary. Presents an overview of the culture of various Spanish-speaking countries. Pre-requisite: SPA 101, or consent of the department and placement test. Lecture: 4 credits (60 contact hours).
Components: Lecture
Attributes: Foreign Language, Cultural Studies

SPA 103(3) Course ID:017334
Spanish for High Beginners
This course is designed to review and expand the students' existing knowledge of Spanish at the introductory level in order to prepare them for the intermediate courses. In this course students will build upon their existing skills to further develop abilities in the four basic language and communication skills: listening, speaking, reading, and writing. Pre-requisite: Placement test or permission of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)

SPA 110(3) Course ID:003884
Basic Conversational Spanish
Introduces pronunciation, practical structures, and basic vocabulary designed to enable students to communicate using simple Spanish in everyday situations in Spanish-speaking countries and areas of the United States. Cannot be used for major or minor. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Other

SPA 115(3) Course ID:002261
Hispanic Culture: (Country or Region)
Introduces the basic cultural patterns of a Spanish-speaking country or region through in-class experience and/or travel. May be taken up to two times with focus on different country or region. Lecture: 3.0 credits (45 contact hours).
Components: Lecture
Attributes: Cultural Studies, SB - Social Behavior Science

SPA 151(3) Course ID:005762
Spanish for Health Professionals
The course will teach Spanish terminology and basic grammar related to medical patients, including vocabulary for diagnosis and treatment. Pre-requisite: Prior college or high school Spanish or other experience with the Spanish language roughly equivalent to one semester of college study. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)
SPA 211(3) Course ID:004678
Spanish Conversation
Sections limited to no more than 15 students each. Oral-aural practice in spoken language. Special emphasis placed on the acquisition of idioms and functional conversational vocabulary. Pre-requisite: SPA 202 or equivalent or consent from the department. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Technical

SPA 215(3) Course ID:017338
Written Spanish for Bilingual Students
This course builds upon the pedagogical basis of SPA 205. It is exclusively designed for bilingual speakers and its purpose is to further refine reading, lexical, and grammatical skills through intensive writing practice in contexts that are meaningful to these speakers. This course will be taught entirely in Spanish. SPA 215 is equivalent to 210 and 211 and fulfills the pre-major course requirements. Students taking 203 should refrain from taking this course. Pre-requisite: SPA 205 with "B" grade or higher, placement test, oral interview or permission of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: University Course (University of Kentucky)

SPA 1011(0.8) Course ID:006222
SpanishGreetings & Farewells
Highlights greetings and farewells in simple conversations; introduces the present tense of the verb ser (to be); explores the geography, culture, history and political issues of Spanish speaking countries with focus on Hispanics in the United States. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

SPA 1012(0.8) Course ID:006223
Spanish for School Life
Introduces basic modes of communication to discuss school life and everyday activities; focuses on asking questions and describing people and things; introduces the present tense of estar (to be) and -ar; explores the geography, culture, history and political issues of Spanish speaking countries with focus on Spain. Pre-requisite: SPA 1011. Lecture: 0.8 credits (12 contact hours).
Components: Lecture

SPA 1013(0.8) Course ID:006224
Spanish for Family and Friends
Features descriptions of family and friends; focuses on using possessive and descriptive adjectives; introduces the present tense of -er and -ir verbs, uses the verbs tener and venir to express needs and state of mind; explores the geography, culture, history and political issues of Spanish speaking countries with focus on Ecuador. Pre-requisites: SPA 1013. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

SPA 1014(0.8) Course ID:006225
Spanish for Pastime Activities
Presents conversations regarding Pastimes and activities; focuses on the present tense of the verbs ir, select stem-changing and verbs with irregular yo forms, in the context of making plans and describing events; explores the geography, culture, history and political issues of Spanish speaking countries with focus on Mexico. Pre-requisite: SPA 1013. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

SPA 1015(0.8) Course ID:006226
Spanish for Travel
Presents conversations to discuss and plan a vacation; expands communication to talk about feelings; introduces the present progressive tense and compares the verbs "ser" and "estar" to express descriptions, conditions and emotions; explores the geography, culture, history, and political issues of Spanish speaking countries. Pre-requisite: SPA1014. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

SPA 1020(1.0) Course ID:006227
Spanish for Shopping
Highlights conversations and vocabulary in the shopping setting; introduces verbs for to know and practice answering questions of to whom or for whom an action is done; presents present to express past tense; explores the geography, culture, history, and political issues of Spanish speaking countries with focus on Cuba. Pre-requisite: SPA 101. Lecture: 0.8 credit (12 contact hours).
Components: Lecture
SPA 1022(0.8) Course ID:006228
Spanish for Daily Routines
Presents descriptions of the daily routine; introduces reflexive verbs and the irregular preterit of ser (to be) and ir (to go); highlights the verb gustar and verbs like gustar; presents negative statements; explores the geography, culture, history, and political issues of Spanish speaking countries with focus on Peru. Pre-requisite: SPA 1021. Lecture: 0.8 credit (12 contact hours).
Components: Lecture
SPA 1023(0.8) Course ID:006229
Spanish for Restaurant Settings
Features dialog to talk about a restaurant and describing food, for explaining where you are and for talking about familiar people and places; introduces the preterit of stem-changing verbs, comparatives and superlatives and indirect object pronouns and direct object pronouns; explores the geography, culture, history, and political issues of Spanish speaking countries with focus on Ecuador. Pre-requisite: SPA 1022. Lecture: 0.8 credit (12 contact hours).
Components: Lecture
SPA 1024(0.8) Course ID:006230
Spanish for Celebrations
Highlights conversations of congratulations and gratitude and discussing different stages of life; presents irregular preterits; discusses pronouns as prepositions; explores the geography, culture, history and political issue of Spanish speaking countries with focus on Chile. Pre-requisite: SPA 1023. Lecture: 0.8 credits (12 contact hours).
Components: Lecture
SPA 1025(0.8) Course ID:006231
Spanish for Health Care
Presents dialog to talk about medical conditions; contrasts the imperfect and preterit past tense; illustrates impersonal constructions with se; explores the geography, culture, history, and political issues of Spanish speaking countries with focus on Costa Rica. Pre-requisite: SPA 1024. Lecture: 0.8 credit (12 contact hours).
Components: Lecture

STATA Statistics
STATA 111(3) Course ID:007218
Sport Statistics
Introduces students to concepts within the sports world where math and statistics skills are applied. Includes analysis of sports formulas, processes, and calculations. Applies mathematical models and ranking methods to the sports world. Assumes students will have a general knowledge and interest in sports. Pre-requisite or Co-requisite: MAT 065. Lecture: 3 credits (45 contact hours).
Components: Lecture

STATA 151(3) Course ID:017089
Introduction to Applied Statistics
Serves as an entry-level introduction to applied statistics useful for a variety of fields. Covers statistical terminology and the appropriate use of software for the calculation of descriptive statistics, basic probability, correlation and linear regression. Emphasizes understanding the uses and misuses of statistics in the real world. (Same as MAT 151.) (Students may not receive credit for both this course and any of the following: MAT 151, STA 200, STA 210, STA 215.) Pre-requisite: College Readiness in Mathematics. Lecture: 3 credit hours (45 contact hours).
Components: Lecture
Attributes: QR - Quantitative Reasoning

STATA 210(3) Course ID:005196
Statistics: A Force in Human Judgement
Examines the interaction of the science and art of statistics in everyday life emphasizing examples from the social and behavioral sciences including the nature, scope, limitations, and interpretation of statistics. Pre-requisite: MAT 146 or MAT 150 or equivalent. Lecture: 3 credits (45 contact hours).
Components: Lecture

Attributes: QR - Quantitative Reasoning

STA 220(3) Course ID:005197
Statistics
Examines statistical description of sample data including frequency distributions, measures of central tendency, and measures of dispersion. Includes theoretical distributions, statistical estimation, and hypothesis testing. Introduces simple linear regression and correlation. Pre-requisite: MAT 150 or equivalent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

Attributes: QR - Quantitative Reasoning, Course Also Offered in Modules

STA 251(3) Course ID:017124
Applied Statistics
Serves as the completion course in the statistics pathway. Covers principles of probability, discrete and continuous probability distributions, statistical estimation, hypothesis testing, linear regression, comparisons of populations, goodness of fit, and analysis of variance. Software will be used to aid in statistical computations. (Students may not receive credit for both this course and any of the following: STA 200, STA 210, STA 215, STA 220, STA 291.) Pre-requisite: MAT 151 or STA 151 or MAT 161. Lecture: 3 credits (45 contact hours).
Components: Lecture

Attributes: QR - Quantitative Reasoning

STA 296(3) Course ID:016128
Statistical Methods and Motivations
Introduction to principles of statistics with emphasis on conceptual understanding. Students will articulate results of statistical description of sample data (including bivariate), application of probability distributions, confidence interval estimation and hypothesis testing to demonstrate properly contextualized analysis of real-world data. Pre-requisite: MA 113, MA 123, MA 137, or equivalent. Lecture: 3.0 credits (45 contact hours).
Components: Lecture

Attributes: QR - Quantitative Reasoning, University Course (University of Kentucky)

STA 2201(1) Course ID:007406
Descriptive Statistics
Examines statistical description of sample data including frequency distributions, measures of central tendency, and measures of dispersion. Pre-requisite: MAT 150 or equivalent. Lecture: 1.0 credits (15 contact hours).
Components: Lecture

STA 2202(1) Course ID:007407
Probability Distributions
Examines theoretical distributions and statistical estimation. Pre-requisite: STA 2201. Lecture: 1.0 credit (15 contact hours).
Components: Lecture

STA 2203(1) Course ID:007408
Statistical Inference
Examines hypothesis testing and introduces simple linear regression and correlation. Pre-requisite: STA 2202. Lecture: 1.0 credit (15 contact hours).
Components: Laboratory
SUR 100(12) Course ID:002046
Surgical Technology Fundamentals Theory
Provides an overview of the history of surgery and the role of the surgical technologists, including professional responsibilities, developing a professional resume, legal and ethical considerations, interpersonal relationships and communication skills. Incorporates safety, hazards preparation, aseptic technique and duties of the scrubbed and circulating surgical technologist during a surgical procedure. Provides information for the performance and completion of surgical procedures including general surgery, obstetrics with attendant specialty equipment, abdominal incisions, wound closures, and standard precaution skills. Pre-requisite: Minimum "C" grade in [BIO 135 or (BIO 137 and BIO 139)] and (AHS 115 or CLA 131 or MIT 103) and (BIO 225 or BIO 226 or BIO 227 or BIO 118). Co-requisite: SUR 102 and SUR 125. Pre-requisite OR Co-requisite: SUR 130, CPR (for Healthcare Providers) must be completed prior to the first surgical technology skills practicum course and must remain current throughout the Surgical Technology Program.

Components: Lecture Attributes: Technical

SUR 101(1) Course ID:002047
Surgical Technology Fundamentals Lab
Provides opportunity for demonstration of skills required to prepare the patient, operating room, basic equipment, and supplies; and to function as a member of an operating room team. Incorporates OSHA safety standards, aseptic technique, and duties of both the scrubbed and circulating technologist during a surgical procedure. If prerequisite, the student must achieve a grade of "C" or greater. Pre-requisite: Minimum "C" grade in [BIO 135 or (BIO 137 and BIO 139)] and (AHS 115 or CLA 131 or MIT 103) and (BIO 225 or BIO 226 or BIO 227 or BIO 118). Pre-requisite OR Co-requisite: SUR 130, SUR 100 or (SUR 109 and SUR 110). Co-requisite OR Co-requisite CPR (for Healthcare Providers) must be completed prior to the first surgical technology skill practicum course and must remain current throughout the Surgical Technology Program. Laboratoty: 1 credit (90 contact hours).

Components: Laboratory Attributes: Technical

SUR 102(3) Course ID:002047
Surgical Technology Fundamentals Lab
Provides opportunity for demonstration of skills required to prepare the patient, operating room, basic equipment, and supplies; and to function as a member of an operating room team. Incorporates OSHA safety standards, aseptic technique, and duties of both the scrubbed and circulating technologist during a surgical procedure. Pre-requisite: Minimum C grade in [BIO 135 or (BIO 137 and BIO 139)] and (AHS 115 or CLA 131 or MIT 103) and (BIO 225 or BIO 226 or BIO 227). Pre-requisite OR Co-requisite: SUR 100 or (SUR 109 and SUR 110). CPR (for Healthcare Providers) must be completed prior to the first surgical technology skill practicum course and must remain current throughout the Surgical Technology Program. Laboratory: 3 credits (135 contact hours).

Components: Laboratory Attributes: Technical

SUR 103(1) Course ID:002048
Surgical Technology Supplemental Lab
Provides opportunity for supplemental practice of skills required to prepare the patient, operating room, basic equipment, and supplies; and to function as a member of an operating room team. Incorporates OSHA safety standards, aseptic technique, and duties of both the scrubbed and circulating technologist during a surgical procedure. All prerequisites must be achieved with a grade of "C" or greater. Pre-requisite: [BIO 130 or BIO 135 or (BIO 137 and BIO 139)] and (AHS 115 or CLA 131 or OST 103) and (BIO 225 or BIO 226 or BIO 227 or BIO 118). Pre-requisite OR Co-requisite: SUR 130, SUR 101. CPR (for Healthcare Providers) must be completed prior to the first surgical technology skills practicum course and must remain current throughout the Surgical Technology Program. Lab: 1 credit (45 contact hours).

Components: Laboratory Attributes: Technical

SUR 109(3) Course ID:000537
Introduction to Surgical Technology
Provides a brief overview of the history of surgery and an in-depth introduction of the role and responsibilities of the surgical technologists, an integral health care professional in the delivery of preoperative patient care and surgical services; including professional responsibilities, developing a professional resume, legal and ethical considerations, interpersonal relationships and communication skills. Introduces the basics of biomedical science and identifying information resources/ prepares for the surgical technologist, basic principles of aseptic technique, sterilization, surgical scrub, gown and gloving and basic instruments used in surgery along with correlating the impact of microbiology in relationship to the practice of sterile technique and infection control in the operative setting. Lecture: 3.0 credits (45 contact hours).

Components: Lecture

SUR 110(9) Course ID:0005470
Surgical Technology Fundamentals
Incorporates safety, aseptic technique and duties of the scrubbed and the circulating surgical technologist during a surgical procedure; Provides in depth information for the successful preparation, performance, and completion of basic surgical procedures; Addresses specialty areas of general surgery, obstetric with attendant specialty equipment, indications for surgery, ob/gyn with attendant specialty equipment, and completion of surgical procedures including general surgery, ob/gyn with attendant specialty equipment, and surgical technologist related to drugs, a review of basic mathematical skills, a thorough knowledge of the systems of measurement, and conversion and application of skills to perform dosage calculations. Presents information related to the impact of microbiology on the surgical setting; Contains pharmacology section designed to promote understanding of general principles/techniques and drugs used by anesthetists and effects on the patient; Introduces the student to the following: diagnostic testing such as radiology, laboratory, cardiographics, wound healing, nutrition peripherally, fluid and electrolyte balance, and techniques in maintaining homeostasis. Pre-requisite: Minimum grade of "C" in [SUR 100 or (SUR 109 and 110)] and SUR 125 and SUR 130. Co-requisite: SUR 202. Clinical: 6.0 - 7.0 credits (360-420 contact hours).

Components: Clinical Attributes: Course Also Offered in Modules, Technical

SUR 202(11) Course ID:0017648
Surgical Technology Advanced Theory
Focuses on the relevant anatomy, indications for surgery, patient preparation, special equipment and supplies, purpose, expected outcomes, and possible complications of specialty areas following OSHA standards. Introduces the fundamental principles of the clinical use of drugs. Emphasizes the role and responsibility of the surgical technologist related to drugs, a review of basic mathematical skills, a thorough knowledge of the systems of measurement, and conversion and application of skills to perform dosage calculations. Presents information related to the impact of microbiology on the surgical setting; Contains pharmacology section designed to promote understanding of general principles/techniques and drugs used by anesthetists and effects on the patient; Introduces the student to the following: diagnostic testing such as radiology, laboratory, cardiographics, wound healing, nutrition peripherally, fluid and electrolyte balance, and techniques in maintaining homeostasis. Pre-requisite: Minimum grade of "C" in [SUR 100 or (SUR 109 and 110)] and SUR 125 and SUR 130. Co-requisite: SUR 201. Lecture: 11 credits (165 contact hours).

Components: Lecture Attributes: Technical

SUR 275(2) Course ID:002053
Surgical Technology Advanced Practicum
Provides an advanced experience in a healthcare setting performing the duties of a scrubbed and/or circulating technologist during an assigned surgical procedure with limited supervision. Pre-requisite OR Co-requisite: Minimum grade of "C" in SUR 202 and SUR 201. Practicum: 2.0 credits (120 contact hours).

Components: Practicum Attributes: Technical

SUR 280(5) Course ID:002446
Department Consent Required
Surgical Anatomy
Provides accurate information about the structure and function of the human body. Intended for students who are pursuing a career as a Surgical First Assistant. Pre-requisite: Surgical Technologist or CNOR. Co-requisite: SUR 284 & SUR 295. Lecture: 5.0 credits (75 contact hours).

Components: Lecture Attributes: Technical

SUR 282(3) Course ID:002447
Perioperative Bioscience
Promotes an understanding of microbial physiology which precedes the understanding of disease transmission and/or prevention; Emphasizes standard precautions and infection control; Contains pharmacology section designed to promote understanding of effects of pre, post and operative drugs; Includes anesthesia section designed to promote understanding of general principles/techniques and drugs used by anesthesia and effects on the patient; Introduces the student to the following: diagnostic testing such as radiology, laboratory, cardiographics, wound healing, nutrition peripherally, fluid and electrolyte balance, and techniques in maintaining homeostasis. Pre-requisite: Program admission and student must be a certified Surgical Technologist or an RN with operating room experience. Student must present documentation of certification. Pre-requisite: SUR 280 & SUR 284 & SUR 295. Co-requisite: SUR 296. Lecture: 3 credits (45 contact hours).

Components: Lecture Attributes: Technical
SUR 284(3) Course ID:004248  
Principles of Surgical Assisting
Introduces the student to the theory involved in surgical assisting; incorporates anatomy, surgical techniques, aseptic techniques, draping, positioning, suturing, safety, and duties of the surgical team. Pre-requisite: Program admission. Student must be a certified Surgical Technologist or an RN with operating room experience OR consent. Co-requisite: SUR 280 & SUR 295. Lecture: 2 credits (30 contact hours). Laboratory: 1 credit (45 contact hours).
Components: Laboratory, Lecture  
Attributes: Technical

SUR 295(1) Course ID:004250  
Surgical First Assistant Clinical
Includes the performance of entry level duties of a surgical assistant in a clinical setting under the supervision of a qualified preceptor. Follows the Commission on Accreditation of Allied Health programs Surgical Assistant Core Curriculum related to the nature of the cases and the duties involved. Pre-requisite: Program admission. Co-requisite: SUR 280 and SUR 284. Clinical: 1 credit hour (45 contact hours).
Components: Clinical  
Attributes: Technical

SUR 296(3) Course ID:006666  
Surgical First Assistant Practicum
Involves advanced training in the preoperative, operative, and postoperative phases of surgery. Exposes student to wide variety of surgical procedures. Emphasizes surgical anatomy, along with critical thinking skills, in every surgical procedure under the supervision of a surgeon who is responsible for overseeing the clinical educational experience of the student. Pre-requisite: SUR 280, SUR 284 and SUR 295. Co-requisite: SUR 292. Practicum: 3.0 credits (270 contact hours).
Components: Practicum  
Attributes: Technical

SUR 297(1) Course ID:016240  
Surgical First Assistant Practicum II
Involves advanced training in the preoperative, operative, and postoperative phases of surgery. Exposes student to wide variety of surgical procedures. Emphasizes on advanced anatomical knowledge that is applied towards the surgical diagnosis, along with critical thinking skills, in every surgical procedure under the supervision of a surgeon who is responsible for overseeing the clinical educational experience of the student. Pre-requisite: SUR 280, SUR 284, SUR 295, SUR 296, SUR 297. Practicum: 1 credit hour (90 contact hours).
Components: Practicum  
Attributes: Technical

SUR 2011(2) Course ID:016845  
Surgical Skills I
Provides opportunity for application of techniques in a healthcare setting performing the duties of a scrubbed and/or circulating technologist during an assigned surgical procedure with an emphasis on OSHA standards. Includes orthotolaryngologic, plastic and reconstructive, and oral and maxillofacial procedures. Practicum: 2.0 credits (120 contact hours).
Components: Practicum

SUR 2012(4 - 5) Course ID:016846  
Surgical Skills II
Provides opportunity for application of techniques in a healthcare setting performing the duties of a scrubbed and/or circulating technologist during an assigned surgical procedure with an emphasis on OSHA standards. Includes genitourinary, orthopedic, neurosurgery, cardiovascular, peripheral vascular, and ophthalmic surgical procedures. Pre-requisite: SUR 2011. Co-requisite: SUR 200. Practicum: 4.0-5.0 credits (240-300 contact hours)
Components: Practicum

SUR 101(3) Course ID:016179  
Introduction to Sustainability
Introduces the concept of sustainability and its varied interpretations; the core concepts in the study of sustainability. Provides an overview and perspective of issues in sustainability from multiple disciplines and viewpoints. Pre-requisite: Current KCTCS placement scores for College level reading and writing. Lecture: 3 credits (45 contact hours).
Components: Lecture  
Attributes: SB - Social Behavior Science, Other

SUR 102(3) Course ID:016180  
Sustainable Built Environment
Introduces the ideas of sustainability in the built environment, our history of construction and expansion, and buildings and how they interact with the natural environment. Explores issues from the perspective of sustainable planning, design, and construction issues across disciplines. Pre-requisite: Current KCTCS placement scores for College level reading and writing. Lecture: 3 credits (45 contact hours).
Components: Lecture  
Attributes: SB - Social Behavior Science, Other

SUR 201(3) Course ID:016181  
Sustainable Societies
Examines sustainability concepts, values, and institutional contexts as they are manifested in societal frameworks in the U.S. and globally. Includes topics such as urban agriculture, individual or community based environmental conservation efforts, corporate sustainability programs, as well as cultural and societal implications of resource allocations as they pertain to equity and social justice. Pre-requisite: Current KCTCS placement scores for College level reading and writing. Lecture: 3 credits (45 contact hours).
Components: Lecture  
Attributes: SB - Social Behavior Science, Other

SUR 202(3) Course ID:016182  
Sustainable Urban Systems
Investigates the physical and visual urban infrastructure networks as they relate to sustainability. Examines the institutions, as well as the formal and informal rules, that use, manage, or govern urban physical and social infrastructures. Considers the role of private groups, non-profits, and other organizations and the networks and systems of support that exists for environmental and sustainable-oriented activity. Pre-requisite: SUS101 Intro. To Sustainability & SUS201 Sustainable Societies. Lecture: 3 credits (45 contact hours).
Components: Lecture  
Attributes: SB - Social Behavior Science, Other

SWK 124(3) Course ID:000584  
Introduction to Social Services
Introduces social welfare concepts and philosophies. Examines the profession of social work and its philosophy and value commitments within social welfare. Covers public and private service delivery systems. (Required of social work majors and recommended it be taken the first year.) Lecture: 2.0 credits; Lab: 2.0 credits.
Components: Laboratory, Lecture  
Attributes: Technical

SWK 180(3) Course ID:000154  
Introduction to Gerontology
The major biological, psychological, and sociological issues facing America's aging population are examined. Attention is also focused on the resources available to meet needs of older Americans. Lecture: 3 credits (45 contact hours).
Components: Lecture  
Attributes: Technical

SWK 200(3) Course ID:000587  
Cultural Diversity in Human Services
Explores current and historical cultural diversity in human services as it applies to clients from various cultural groups. Focusses on cultural self awareness and cultural competence as it pertains to human services professionals and client relationships. Draws attention to dominant and minority cultural norms, attitudes and belief systems including the culture of poverty. Lecture: 3 credits (45 contact hours).
Components: Lecture  
Course Equivalents: HMS 220  
Attributes: Technical

SWK 222(3) Course ID:000464  
Development of Social Welfare
Includes cultural traditions, value orientations, and political and economic forces which have contributed to the emergence of present social welfare policies and systems in the United States. (Required of social work majors and open to all others.) Lecture: 3.0 credits (45 contact hours).
Components: Lecture  
Attributes: Technical

SWK 255(3) Course ID:005584  
Introduction to Addictions
Provides an overview of approaches to understanding addictions with emphasis on the bio-psycho-social model. Analyzes the etiology, progression, and processes involved in change. Pre-requisite: PSY 100 or PY 110 or consent of instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture  
Course Equivalents: HMS 211  
Attributes: Technical

SWK 268(0) Course ID:000566  
Crisis Intervention
Focuses on crisis intervention theory, suicide prevention, and risk assessment techniques. Covers risk assessment protocols, crisis triage, de-escalation and referral. Introduces clinical, ethical and legal aspects. Pre-requisite: PSY 100 or PY 110 or permission from instructor. Lecture: 3 credits (45 contact hours).
Components: Lecture  
Course Equivalents: HMS 212  
Attributes: Technical

SWK 269(3) Course ID:000304  
Juvenile Delinquency
Covers the nature and structure of family systems and examination of major family issues. Includes discussion in patterns of family interaction with attention paid to resources designed to meet family needs. Lecture: 3 credits (45 contact hours).
Components: Lecture  
Attributes: Technical

SWK 275(3) Course ID:000736  
The Family
Covers the nature and structure of family systems and examination of major family issues. Includes discussion in patterns of family interaction with attention paid to resources designed to meet family needs. Lecture: 3 credits (45 contact hours).
Components: Lecture  
Attributes: SB - Social Behavior Science

SWK 276(3) Course ID:000748  
Criminology
The history, nature, and extent of crime are studied, including trends and theories of crime, philosophies and forms of punishment, as well as methods of treatment. Lecture: 3 credits (45 contact hours).
Components: Lecture

SWK 281(3) Course ID:000734  
Psychology of Aging
A study of the aging process with emphasis on the needs, roles, and attitudes of seniors in our society. Lecture: 3 credits (45 contact hours).
Components: Lecture  
Attributes: Technical
<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Attributes</th>
<th>Components</th>
<th>Pre-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>TES 100/3</td>
<td>Technical Communications</td>
<td></td>
<td>Lecture</td>
<td>TES 100(3) Components: Lecture, Laboratory, Lecture. 3 credits (45 contact hours).</td>
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<tr>
<td>TES 103/3</td>
<td>Second Language Teaching w/Lab</td>
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<td>Lecture</td>
<td>TES 103/3 Components: Lecture, Laboratory. 3 credits (45 contact hours).</td>
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<tr>
<td>THA 101/3</td>
<td>Introduction to Theatre: Principles and Practice</td>
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<td>Lecture</td>
<td>THA 101/3 Components: Lecture, Laboratory, Lecture. 3 credits (45 contact hours).</td>
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<tr>
<td>THA 126/3</td>
<td>Acting I: Fundamentals of Acting</td>
<td></td>
<td>Lecture</td>
<td>THA 126/3 Components: Laboratory, Lecture. 2 credits (30 contact hours).</td>
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<tr>
<td>THA 127/3</td>
<td>Acting Techniques</td>
<td></td>
<td>Lecture</td>
<td>THA 127/3 Components: Laboratory, Lecture. 2 credits (90 contact hours).</td>
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<tr>
<td>Course</td>
<td>Title</td>
<td>Description</td>
<td>Pre-requisites</td>
<td>Credit Hours</td>
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<tr>
<td>THA 226(3)</td>
<td>Course ID:000791</td>
<td>Acting II: Scene Study (Realism)</td>
<td>Concentrates on several components of the acting process: preliminary study in modern acting theories, Stanislavski to the present; textual analysis, character study and scene work; studio exercises aimed at refining rehearsal skills for the actor. Pre-requisite: THA 126 or Consent of Instructor. Lecture: 2.0 credit hours (30 contact hours). Laboratory: 1.0 credit hour (15 contact hours).</td>
<td>3.0 credits (45 contact hours)</td>
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<tr>
<td>THA 227(3)</td>
<td>Course ID:002267</td>
<td>Acting III: Scene Study (Styles)</td>
<td>Introduces the actor to a performance style other than realism while continuing to develop the actor's skills in analysis and rehearsal. Pre-requisite: THA 226 or Consent of Instructor. Lecture: 2.0 credit hours (30 contact hours). Lab: 1.0 contact hour (15 contact hours).</td>
<td>3.0 credits (45 contact hours)</td>
</tr>
<tr>
<td>THA 230(3)</td>
<td>Course ID:015598</td>
<td>Unarmed Stage Combat</td>
<td>Provides a study of unarmed combat for the stage from both the classic and contemporary approaches to staging violence. Techniques for punches, slaps, kicks, falls, and rolls will be covered. Lecture: 3.0 credits (45 contact hours).</td>
<td>3.0 credits (45 contact hours)</td>
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<tr>
<td>THA 250(3)</td>
<td>Course ID:006782</td>
<td>Stage Electrics</td>
<td>Provides a comprehensive study of sound production and stage lighting in principle and practice. It concentrates on the fundamentals of circuits, instrumentation, and operation of stage lights and sound. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (90 contact hours).</td>
<td>3.0 credits (45 contact hours)</td>
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<tr>
<td>THA 283(3)</td>
<td>Course ID:000111</td>
<td>American Theatre</td>
<td>Surveys American theatre history, giving particular emphasis to the late nineteenth and twentieth centuries, examining both theatre practice and dramaturgy and placing them within an historical, social, and cultural context. Lecture: 3 credits (45 contact hours).</td>
<td>3 credits (45 contact hours)</td>
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<tr>
<td>TLH 200(4.5)</td>
<td>Course ID:016193</td>
<td>Telehealth Technician Assistant</td>
<td>Telehealth Patient Care</td>
<td>The course will prepare students for a scope of practice in telehealth patient care using electronic communication from one site to another to provide clinical health care at a distance. The course is designed to overcome barriers of time and distance to deliver healthcare services. Lecture: 2.0 credits (30 contact hours). Laboratory: 1.0 credits (30 contact hours). Clinical: 1.5 hours (67.5 contact hours).</td>
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<tr>
<td>TRU 100(6)</td>
<td>Course ID:002902</td>
<td>Truck Driving</td>
<td>The purpose of the program is to prepare individuals as professional drivers for the truck driving industry. The course content is designed to familiarize students with the fundamental and operational procedures to become professional truck drivers. This is the entire curriculum. It is not divided into individual courses. Pre-requisite: CDL Permit. Lecture/Lab: 6 credits (150 contact hours).</td>
<td>6 credits (150 contact hours)</td>
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<tr>
<td>UST 100(3)</td>
<td>Course ID:017195</td>
<td>Intro to Unmanned Systems Technology</td>
<td>Examines the foundations of unmanned systems technology (UST), including human factors, systems engineering principles, mission planning and control, and launch/ recovery systems. Lecture: 3 credit hours (45 contact hours).</td>
<td>3 credits (45 contact hours)</td>
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<tr>
<td>UST 101(2)</td>
<td>Course ID:017196</td>
<td>UST Career Exploration</td>
<td>Explore different careers where the small unmanned systems are utilized. Identify specific fields of interest in which small unmanned systems are used and explain how the technology is integrated into the field. Lecture: 1 credit hour (15 contact hours).</td>
<td>2 credits (30 contact hours)</td>
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<tr>
<td>UST 105(3)</td>
<td>Course ID:017197</td>
<td>Unmanned Systems Safety and Regulations</td>
<td>Examines the current legal considerations of unmanned systems technology operations, provides an outlook on future considerations, and informs students on existing and trending unmanned systems technology related safety standards and regulations. Lecture: 3 credit hours (45 contact hours).</td>
<td>3 credits (45 contact hours)</td>
</tr>
<tr>
<td>UST 170(3)</td>
<td>Course ID:017199</td>
<td>Drone Media Applications</td>
<td>Utilizes small unmanned systems to record events related to photography and real estate. Pre-requisite: UST 107 or Consent of Instructor. Lecture: 3 credit hours (45 contact hours).</td>
<td>3 credits (45 contact hours)</td>
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<tr>
<td>UST 200(4)</td>
<td>Course ID:017306</td>
<td>Drone Fabrication and Repair</td>
<td>Introduces drone fabrication, including safety principals, component selection, healing applications, and basic measurements using the metric system. Emphasizes designing, construction, testing, troubleshooting, and repairing of drones. Pre-requisite: College Ready in all areas. Pre-requisite or Co-requisite: UST 100. Lecture: 3 credits (45 contact hours). Lab: 1 credit (30 contact hours).</td>
<td>4 credits (60 contact hours)</td>
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<tr>
<td>UST 210(2)</td>
<td>Course ID:017588</td>
<td>Visual Observer Operations</td>
<td>Prepares students to be a Visual Observer (VO) in day time unmanned aircraft systems (UAS) missions by monitoring drone flights, assessing risk and mitigation, and communicating flight operations to support the remote pilot in command. Demonstrate an understanding of VO types, visual techniques, and possible hazards that ensure safe day time drone operations. Pre-requisite or Co-requisite: UST 100 AND UST 105 or Consent of Instructor. Lecture: 2 credits (30 contact hours).</td>
<td>2 credits (30 contact hours)</td>
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<tr>
<td>UST 220(2)</td>
<td>Course ID:017200</td>
<td>First Responder Applications</td>
<td>Examines fundamental principles of unmanned systems technologies, capabilities, regulations, legal responsibilities, cost and benefit consideration for potential use in law enforcement, fire, rescue, emergency medical and disaster response applications. Pre-requisite: UST 107 or Consent of Instructor. Lecture: 2 credit hours (30 contact hours).</td>
<td>2 credits (30 contact hours)</td>
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<tr>
<td>UST 221(1)</td>
<td>Course ID:017201</td>
<td>Crew Resource Management</td>
<td>Provides students with an introduction to the principles and concepts of crew resource management (CRM) through interactive discussion and scenario based analysis as it relates to unmanned systems operations. Discusses CRM markers, principles and concepts of CRM, team building, information transfer, problem solving, risk management and decision making, communications process, conflict resolution and maintaining situational awareness when dealing with UAS automated systems. Pre-requisite: UST 107 or Consent of Instructor. Lecture: 1 credit hour (15 contact hours).</td>
<td>1 credit (15 contact hours)</td>
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<tr>
<td>UST 290(1-3)</td>
<td>Course ID:017203</td>
<td>UST Flight Mastery</td>
<td>Develops skills in the flight of small unmanned systems, covering pre-flight procedures, take-off, landing, hovering techniques, operation/navigation, crew resource management, and post-flight procedures. Laboratory: 1-3 contact hours (30-90 contact hours).</td>
<td>1-3 credits (15-90 contact hours)</td>
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<tr>
<td>UST 291(1-3)</td>
<td>Course ID:017614</td>
<td>Selective Topics in UST</td>
<td>Explores concepts and/or skills from special areas of interest in unmanned systems technology. May be repeated with different topics to a maximum of 6 credit hours. Pre-requisite: UST 100 or Consent of Instructor. Pre-requisite or Co-requisite: UST 107 or Consent of Instructor. Lecture: 1-3 credits (15-45 contact hours).</td>
<td>1-3 credits (15-45 contact hours)</td>
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<tr>
<td>UST 295(1-6)</td>
<td>Course ID:017204</td>
<td>UST Learning Experience</td>
<td>Provides on-the-job experience in small unmanned systems, requiring 40 clock/hours per credit hour of appropriate experience approved by the instructor; requires a learning contract, signed by the students, instructor, and supervisor. Pre-requisite: UST 107 or Consent of Instructor. Laboratory: 1-6 credit hours (30-180 contact hours).</td>
<td>1-6 credits (150-360 contact hours)</td>
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<tr>
<td>UST 299(1)</td>
<td>Course ID:017202</td>
<td>UST Capstone Studies</td>
<td>Creates employment related documents, demonstrates proper interviewing skills, and explores employment and careers in the unmanned systems technology area. Pre-requisite: UST 107 or Consent of Instructor. Lecture: 1 credit hour (15 contact hours).</td>
<td>1 credit (15 contact hours)</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Attributes</td>
<td>Components</td>
<td>Lecture/Lab Credits</td>
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<td>VCA 105(3)</td>
<td>Visual Communications Art and Design</td>
<td>Technical</td>
<td>Lecture</td>
<td>2.0 credits (30 contact hours)</td>
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<td>Drawing Concepts</td>
<td>Technical</td>
<td>Lecture</td>
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<td>VCA 120(3)</td>
<td>Digital Photography I</td>
<td>Technical</td>
<td>Lecture</td>
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<tr>
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<td>Digital Photography II</td>
<td>Technical</td>
<td>Lecture</td>
<td>2.0 credits (30 contact hours)</td>
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<td>Digital Color Theory</td>
<td>Technical</td>
<td>Lecture</td>
<td>3 credits (45 contact hours)</td>
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<td>Digital Filmmaking I</td>
<td>Technical</td>
<td>Lecture</td>
<td>2.0 credits (30 contact hours)</td>
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<td></td>
<td>Digital Filmmaking II</td>
<td>Technical</td>
<td>Lecture</td>
<td>2.0 credits (30 contact hours)</td>
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<td>Commercial Photography I</td>
<td>Technical</td>
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<td>3 credits (60 contact hours)</td>
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<td>Commercial Photography II</td>
<td>Technical</td>
<td>Lecture</td>
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<td>Basic Photography</td>
<td>Technical</td>
<td>Lecture</td>
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<td>Portrait Photography</td>
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<td>Advertising Design I</td>
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<td>Advertising Design II</td>
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<td>Package Design</td>
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<td>Digital Filmmaking I</td>
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<td>Digital Filmmaking II</td>
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<td>Digital Filmmaking III</td>
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<td>Digital Filmmaking IV</td>
<td>Technical</td>
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<td>Commercial Photography I</td>
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<td>Commercial Photography II</td>
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<tr>
<td>VCA 263(3)</td>
<td>Product Photography</td>
<td>Applies principles and techniques with emphasis on digital color photographic illustrations captured in the studio. Begins use of lens perspective controls on the 35mm digital view camera. Includes problem solving through assigned projects. Pre-requisite or Co-requisite: VCA 120 or VCA 162 and VCA 163 with a grade of &quot;C&quot; or better. Integrated Lecture/Lab: 3 credits (60 contact hours). Components: Integrated Laboratory, Integrated Lecture Attributes: Technical</td>
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<tr>
<td>VCA 264(3)</td>
<td>VCA 264(3) Commercial Photography</td>
<td>Emphasizes color photography, lighting, and color management of photographic projects inside the studio and on location. Guidance in portfolio development as well as exploration of business practices in photography. Pre-requisite or Co-requisite: VCA 120 or VCA 162 and VCA 163 with a grade of &quot;C&quot; or better. Integrated Lecture/Lab: 3 credits (60 contact hours). Components: Integrated Laboratory, Integrated Lecture Attributes: Technical</td>
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<tr>
<td>VCA 270(4)</td>
<td>VCA 270(4) Advertising Design III</td>
<td>Emphasizes creative design and layout based on extensive use of the industry standard page layout and drawing programs; and critical thinking for problem solving, preparation, and production of electronic artwork. Pre-requisite: VCA 171 with a grade of C or greater or Consent of Instructor. Lecture: 2 credits (30 contact hours); Laboratory: 2 credits (60 contact hours/30:1 ratio). Components: Laboratory, Lecture Attributes: Technical</td>
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<tr>
<td>VCA 271(4)</td>
<td>VCA 271(4) Advertising Design IV</td>
<td>Extends VCA 270 to include creation of a professional portfolio. Pre-requisite: VCA 270 with a grade of C or greater or Consent of Instructor. Lecture: 2 credits (30 contact hours); Laboratory: 2 credits (60 contact hours/30:1 ratio). Components: Laboratory, Lecture Attributes: Technical</td>
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<tr>
<td>VCA 273(3)</td>
<td>VCA 273(3) Corporate Design</td>
<td>Creates and develops a total corporate identity emphasizing relationships between adequate research and development of appropriate concepts for a company image. Pre-requisite: VCA 173 and VCA 174 with a grade of &quot;C&quot; or better. Integrated Lecture/Lab: 3 credits (60 contact hours). Components: Integrated Laboratory, Integrated Lecture Attributes: Technical</td>
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<tr>
<td>VCA 274(3)</td>
<td>VCA 274(3) Advertising Design</td>
<td>Explores and reviews the role of advertising in the marketing mix, and the function of major media forms. Uses a creative brief process to research, create, and design promotional concepts that meet assignment specifications. Explores legal strategies involved in advertising. Students must receive a letter grade of &quot;C&quot; or better. Pre-requisite: VCA 173 and VCA 174 with a grade of &quot;C&quot; or better. Integrated Lecture/Lab: 3 credits (60 contact hours). Components: Integrated Laboratory, Integrated Lecture Attributes: Technical</td>
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<tr>
<td>VCA 280(3)</td>
<td>VCA 280(3) Instructor Consent Required</td>
<td>Introduces students to proper assembly of a professional portfolio and presentation skills. Students will refine work created in previous classes, identify strengths and weaknesses in their work, create a self-presentation package, attend mock interviews and participate in portfolio exhibit. Students must receive a letter grade of &quot;C&quot; to successfully complete this course. Pre-requisite: Permission of Instructor. Lecture: 1.0 credit (15 contact hours); Lab: 2.0 credits (75 contact hours/37:5:1 ratio). Components: Laboratory, Lecture Attributes: Technical</td>
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<tr>
<td>VCA 290(3)</td>
<td>VCA 290(3) Instructor Consent Required Folio Seminar</td>
<td>Prepares advanced design and photography students to complete a professional portfolio. Explores job interview techniques to help students understand their responsibilities in seeking positions. Lecture: 2 credits (30 contact hours); Laboratory: 1 credit (30 contact hours). Pre-requisite: Consent of Instructor. Components: Lecture Attributes: Technical</td>
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<tr>
<td>VCA 298(2 - 6)</td>
<td>VCA 298(2 - 6) Practicum</td>
<td>Incorporates and applies skills and techniques previously learned in the classroom and commercial art laboratory. Provides practical experience in a variety of commercial art establishments in the community. Pre-requisite: VCA 280, VCA 261 or VCA 271 with a grade of C or greater or Consent of Instructor. Lecture: 1 credits (15 contact hours) Lab/Practicum: 3 credits (150 contact hours/50:1 ratio) Components: Laboratory, Lecture Attributes: Technical</td>
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<tr>
<td>VCC 100(3)</td>
<td>VCC 100(3) Visual Communications Core</td>
<td>Introduces the concepts, vocabulary, and processes used in relation to visual communication. Includes various disciplines such as advertising and design, multimedia, and printing. Identifies career paths and specific job skills within the visual communication field. Students must receive a letter grade of &quot;C&quot; or better. Lecture: 3 credits (45 contact hours). Components: Lecture Attributes: Technical</td>
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<td>VCC 106(3)</td>
<td>VCC 106(3) Typography</td>
<td>Explores the use of type as a major element of design. Students become skilled in selecting appropriate type styles and fonts for a variety of media. Provides experience in using type as a creative tool to produce interesting, type-only designs. Applies elements and principles of design. Students must receive a final grade of &quot;C&quot; or better to advance in all Visual Communication courses. Lecture/Lab: 3.0 credits (90 contact hours). Components: Lecture Attributes: Technical</td>
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<tr>
<td>VCC 110(3)</td>
<td>VCC 110(3) Design Concepts</td>
<td>Explores the elements and principles of design to develop skills in producing creative ideas and designs for various media forms. Apply the design process to advertising and marketing strategies that includes legal issues, media strategies, and customer behavior. Students must receive a letter grade of &quot;C&quot; or better to advance in all Visual Communication courses. Pre-requisite Or Co-requisite: VCC 200. Lecture/Lab: 3.0 credits (90 contact hours). Components: Lecture Attributes: Technical</td>
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<td>VCC 125(3)</td>
<td>VCC 125(3) Computer Graphics I</td>
<td>Introduces students to computer technologies that are specific to the visual communication industry and fulfills the digital literacy requirements. Develops primary skills using software applications for page layout, illustration, and digital imaging. Students must complete with a final grade of &quot;C&quot; or better to advance in all Visual Communication courses. Pre-requisite Or Co-requisite: VCC 200. Lecture/Lab: 3.0 credits (90 contact hours). Components: Lecture Attributes: Technical</td>
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<td>VCC 135(3)</td>
<td>VCC 135(3) Photo Editing for Photography</td>
<td>Explores Adobe Lightroom and Adobe Photoshop techniques needed to edit photographs. Explore the differences and similarities of Lightroom and Photoshop and how you can use them together. Develop the skills needed as a photographer to edit photographs after sessions. Students must receive a letter grade of &quot;C&quot; or better to advance in all Visual Communication courses. Integrated Lecture/Lab: 3 credits (90 contact hours). Components: Integrated Laboratory, Integrated Lecture Attributes: Technical</td>
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<td>VCC 150(3)</td>
<td>VCC 150(3) Mac Basics</td>
<td>Provides an introduction to Apple/Mac computer technology. Emphasizes industry specific needs, including hardware and software. Presents basic uses of the Internet, email, file management and computer ethics. This course fulfills the computer/digital literacy requirement. Students must receive a letter grade of &quot;C&quot; or better. Basic keyboarding recommended. Pre-requisite: RDG 020. Lecture: 3.0 credits (45 contact hours). Components: Lecture Attributes: Digital Literacy</td>
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<td>VCC 166(3)</td>
<td>VCC 166(3) Photoshop Basics</td>
<td>Develops skills to correct, enhance, and manipulate digital images, and composites, and prepare images for the print and web using Adobe Photoshop. Introduce raster graphics and their use in the visual communication industry. Create raster graphics from simple to increasingly complex designs and images will be the focus of this course. Students must receive a letter grade of &quot;C&quot; or better to advance in all Visual Communication courses. Pre-requisite: Digital Literacy or VCC 125. Lecture/Lab: 3.0 credits (90 contact hours). Components: Lecture Attributes: Technical</td>
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<td>VCC 200(3)</td>
<td>VCC 200(3) Illustrator Basics</td>
<td>Develops skills to create illustrations and vector graphics for a variety of media using Adobe Illustrator. Introduce vector graphics and their use in the visual communication industry. Create vector graphics from simple to increasingly complex designs and images will be the focus of this course. Students must receive a letter grade of &quot;C&quot; or better to advance in all Visual Communication courses. Pre-requisite: Digital Literacy or VCC 125. Lecture/Lab: 3.0 credits (90 contact hours). Components: Lecture Attributes: Technical</td>
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<td>VCC 210(3)</td>
<td>VCC 210(3) Advanced Computer Illustration</td>
<td>Provides students with advanced knowledge and skills in computer illustration. Creation of vector graphics and complex designs will be the focus of this course. Students must receive a letter grade of &quot;C&quot; or better. Pre-requisite Or Co-requisite: VCC 200. Lecture/Lab: 3.0 credits (90 contact hours). Components: Lecture Attributes: Technical</td>
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<td>VCC 214(3)</td>
<td>VCC 214(3) Production Design I</td>
<td>Introduces concepts, vocabulary, and processes used in relation to the design and production of graphics for various media and promotional materials. Provides students with knowledge and training of various production equipment along with software applications used to design graphs. Students must receive a final grade of &quot;C&quot; or better to advance in all Visual Communication courses. Pre-requisite: VCC 110 &amp; VCC 125. Lecture/Lab: 3.0 credits (90 contact hours). Components: Lecture Attributes: Technical</td>
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<td>VCC 216(3)</td>
<td>VCC 216(3) Production Design II</td>
<td>Introduces students to the technologies of print and screen printing. Provides students with knowledge and training of various equipment and procedures to properly prepare graphics for these printing technologies. Provides students with training in appropriate software applications used to design and prepare graphics or a variety of substrates and promotion products. Students must receive a final grade of &quot;C&quot; or better to advance in all Visual Communication courses. Pre-requisite Or Co-requisite: VCC 110 &amp; VCC 125. Lecture/Lab: 3.0 credits (90 contact hours). Components: Lecture Attributes: Technical</td>
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VCC 218(3)  
**Course ID:** 006661  
**Production Design III**  
Provides basic knowledge of the steps and procedures used to prepare, troubleshoot, and correct files for digital printing. Provides students with the basic skills to produce and utilize PDF files. Provides knowledge in the importance of proper imposition and page-layout of various publications. Provides knowledge and training of various finishing and binding techniques used in the industry. Students must receive a final grade of “C” or better to advance in all Visual Communication courses. Pre-requisite: VCC 110 & VCC 125. Lecture/Lab: 3.0 credits (90 contact hours).  
Components: Integrated Laboratory, Integrated Lecture  
Attributes: Technical

VCC 220(3)  
**Course ID:** 004473  
**Instructor Consent Required**  
**InDesign Basics**  
Develops skills in page design and layout using Adobe InDesign software. Apply concepts and mechanics of page layout to create a variety of publications from single page to multi-page documents. Students must receive a letter grade of “C” or better to advance in all Visual Communication courses. Pre-requisite: Digital Literacy or VCC 125. Lecture/Lab: 3.0 credits (90 contact hours).  
Components: Integrated Laboratory, Integrated Lecture  
Attributes: Technical

VCC 230(3)  
**Course ID:** 004462  
**Advanced InDesign**  
Provides advanced skills in page design and layout using Adobe InDesign software. Design and creation of a variety of complex and multi-page documents will be the focus of this course. Students must receive a letter grade of “C” or better. Pre-requisite: VCC 220. Lecture/Lab: 3.0 credits (90 contact hours).  
Components: Integrated Laboratory, Integrated Lecture  
Attributes: Technical

VCC 235(3)  
**Course ID:** 016770  
**Graphic Design I**  
Explores the use of elements and principles of design in the creative ideation process. Uses the creative brief process to research, design, and create corporate identities, logos, promotional items, collateral materials and advertising. Students must receive a letter grade of “C” or better to advance in all Visual Communication courses. Pre-requisite: VCC 110 & VCC 215. Lecture/Lab: 3.0 credits (90 contact hours).  
Components: Lecture  
Attributes: Technical

VCC 245(3)  
**Course ID:** 016771  
**Graphic Design II**  
Explores advanced techniques in the creative ideation process to design professional corporate identities, product labels, promotional items, collateral materials, signage and advertising campaigns. Emphasizes the use of graphics standards for corporate branding. Defines industry standards and specifications for product labels. Students must receive a letter grade of “C” or better to advance in all Visual Communication courses. Pre-requisite: VCC 235. Lecture/Lab: 3.0 credits (90 contact hours).  
Components: Lecture  
Attributes: Technical

VCC 255(3)  
**Course ID:** 016772  
**Emerging Media Design**  
Explores latest trends of new media technology related to the visual communication field. Topics will be specified by instructor according to latest trends in the region that could include social media, interactive media, advertising and marketing trends and a variety of media technologies. Pre-requisite: VCC 110 and VCC 125. Integrated Lecture/ Lab: 3 credits (90 contact hours).  
Components: Integrated Laboratory, Integrated Lecture  
Attributes: Technical

VCC 260(3)  
**Course ID:** 001509  
**Instructor Consent Required**  
**Computer Graphics II**  
Provides advanced skills in computer graphics using Adobe InDesign, Photoshop, and Illustrator. Create a variety of complex designs and multi-page documents

VCC 266(3)  
**Course ID:** 005142  
**Advanced Photoshop**  
Develops advanced skills to digitally manipulate, enhance, and create composite photographs. Applies advanced principles, concepts, and techniques for graphic design and digital photography. Creation and manipulation of graphics for complex images and designs will be the focus of this course. Students must receive a letter grade of “C” or better. Pre-requisite: VCC 166. Lecture/Lab: 3.0 credits (90 contact hours).  
Components: Lecture  
Attributes: Technical

VCC 270(3)  
**Course ID:** 005798  
**Acrobat Basics**  
Provides students with the basic skills using Adobe Acrobat to produce and utilize PDF documents. Students must receive a letter grade of “C” or better. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  
Attributes: Technical

VCC 285(3)  
**Course ID:** 017318  
**Production Design IV**  
Introduces concepts, vocabulary, and processes used in relation to design and produce vehicle wraps, wall wraps, and other large format graphics. Provides knowledge in the operation of wide format printers, laminators, and vinyl cutters. Covers substrates and laminates for various applications, tools and supplies for preparation and installation of printed graphics, and techniques used to install graphics. Provides students with knowledge and training in design and RIP software used to produce graphics. Students will troubleshoot files and production workflow. Pre-requisite: VCC 110, VCC 125, VCC 214. Integrated Lecture/Lab: 3 credits (90 contact hours).  
Components: Integrated Laboratory, Integrated Lecture  
Attributes: Technical

VCC 297(3)  
**Course ID:** 004469  
**Instructor Consent Required**  
**Internship**  
Provides supervised on-the-job work experience related to the student's educational objectives. Students participating in Internships do not receive compensation for their work. Co-Op/Internship: 3 credits (180 contact hours). Pre-requisite: Permission of Instructor.  
Components: Co-Op  
Attributes: Technical

VCC 298(3)  
**Course ID:** 004463  
**Instructor Consent Required**  
**Practicum**  
Provides supervised on-the-job work experience related to the student's educational objectives. Student participating in the Practicum do not receive compensation. Practicum/ Internship: 3 credits (180 contact hours). Pre-requisite: Permission of Instructor.  
Components: Practicum  
Attributes: Technical

VCM 110(3)  
**Course ID:** 004453  
**Fundamentals of Animation**  
Explores the fundamentals of 2-D animation through history, theory and practical application. Covers the basic concepts of animation including: character design and development, character environment, and storytelling. Students must receive a letter grade of “C” or better. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  
Attributes: Technical

VCM 115(3)  
**Course ID:** 004452  
**2-D Animation**  
Introduces basic computer animation using industry standard software. Uses software to create 2-D animations for various multi-media functions. Students must receive a letter grade of “C” or better. Lecture: 1.0 credit (15 contact hours); Laboratory: 2.0 credits (75 contact hours).  
Components: Lecture  
Attributes: Technical

VCM 125(3)  
**Course ID:** 015851  
**Foundations of Video Production**  
Introduces students to the basics of video production and animation. Includes screening, storyboarding, and planning a video production and animation project. Familiarizes students with video, lighting, and sound equipment. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  
Attributes: Technical

VCM 140(3)  
**Course ID:** 001762  
**Digital Video**  
Provides techniques for digital audio and video acquisition, equipment, and editing software. Emphasis on planning and creating storyboards for digital video project from conception to final product. Students must receive a letter grade of “C” or better. Lecture/Lab: 3.0 credits (90 contact hours).  
Components: Lecture  
Attributes: Technical

VCM 150(3)  
**Course ID:** 017076  
**Audio Production I**  
Introduces basic technical skills, recording equipment, and vocabulary for audio production. Develops skills in evaluation and listening to audio recordings. Utilize industry software for audio recording and editing. Lecture: 3 credits (45 contact hours).  
Components: Lecture  
Attributes: Technical

VCM 205(3)  
**Course ID:** 004454  
**Introduction to HTML**  
Introduces the creation of Web sites using hypertext markup language (HTML) and cascading style sheets (CSS). Students must receive a letter grade of “C” or better to advance in all Visual Communication courses. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  
Attributes: Technical

VCM 210(3)  
**Course ID:** 008434  
**3-D Animation**  
Introduces the principles of animation. Uses commercial 3-D animation packages and storyboards to produce 3-D models and animations. Students must receive a letter grade of “C” or better. Pre-requisite Or Co-requisite: VCM 115. Lecture: 1.0 credit (15 contact hours). Lab: 2.0 credits (75 contact hours).  
Components: Lecture  
Attributes: Technical

VCM 215(3)  
**Course ID:** 005143  
**After Effects**  
Introduces basic compositing techniques and motion graphics using Adobe AfterEffects. Emphasizes an understanding of pre-production for AfterEffects, green screen, lighting, key-framing, creating mattes, animating text, syncing to audio and exporting movies. Students must receive a letter grade of “C” or better. Lecture: 3.0 credits (45 contact hours).  
Components: Lecture  
Attributes: Technical

VCM 220(3)  
**Course ID:** 001767  
**Webpage Design**  
Introduces students to principles and elements used in web design. Explores basic web design tools such as mark-up languages, cascading style sheet, and web authoring software. Identifies fundamentals including website layout, navigation, font usage, color schemes, and site structure to create visually-pleasing websites. Students must receive a letter grade of “C” or better. Pre-requisite: VCC 110 and VCC 125. Lecture: 1.0 credit (15 contact hours); Lab: 2.0 credits (75 contact hours/37.5:1 ratio).  
Components: Laboratory, Lecture  
Attributes: Technical
VET 108(4) Course ID:007428
Clinical Practicum I
Provides practical experience in veterinary clinics and/or related facilities; students complete an average of approximately 12 hours of clinical practicum per week. Pre-requisite: VET 110, 112, and 114. Co-requisite: VET 130. Clinical: 2.0 credits (96 contact hours).

Attributes: Technical

VET 210(3) Course ID:007430
Pharmacology
Introduces the major drug classifications, covers the use and control of drugs, measurements and conversion factors, and methods of drug action and interaction used in small and large animal practice. Pre-requisite: VET 120 and VET 130. Co-requisite: VET 220 and VET 230. Lecture: 3.0 credits (45 contact hours).

Attributes: Technical

VET 220(5) Course ID:007431
Parasitology and Clinical Lab
Covers the study of internal and external parasites of companion, exotic, and farm animals. Life cycles, diagnostic protocol, control, and treatment of the most common parasites will be discussed. Familiarizes students with laboratory techniques performed in veterinary hospitals and clinics. Examination and testing of blood, feces, urine, and exudates are performed for diagnostic and prognostic purposes. Development of skills necessary to maintain a safe laboratory working environment, institute quality control programs, collect, process, store, and transport clinical biological specimens. Pre-requisite: VET 120 and VET 130. Co-requisite: VET 210 and VET 230. Lecture/Lab: 5.0 credits (135 contact hours).

Attributes: Technical

WGS 200(5) Course ID:000815
Introduction to Women’s and Gender Studies in the Social Sciences
Introduces women’s and gender studies from a social science perspective, using a cross-cultural and interdisciplinary approach. Emphasizes social science explanations for sex-typed behavior, social perceptions of women and men, and the roles of women in social and cultural life. Lecture: 3 credits (45 contact hours).

Attributes: Cultural Studies, SB - Social Behavior Science

WGS 201(3) Course ID:000921
Introduction to Women’s and Gender Studies in the Arts and Humanities
Introduces women’s and gender studies from a humanities perspective, using a cross-cultural and interdisciplinary approach including art and literature. Examines issues and problems of women in contemporary society through the lens of race, gender, class, and socio-political spheres. Lecture: 3 credits (45 contact hours).

Attributes: Cultural Studies, AH - Arts and Humanities

WLD 100(2) Course ID:004575
Dye-Fuel Systems
A working knowledge of dye-fuel identification, set-up, inspection, and maintenance; consumable identification, selection and care; principles of operation; and effects of variables for manual and mechanized oxy-fuel cutting, welding, brazing principles and practices, and metallurgy. Shop safety and equipment use are also covered. Lecture: 2 credits (30 contact hours) Co-requisite: WLD 101 or Consent of Instructor.

Attributes: Technical

WLD 110(2) Course ID:004605
Cutting Processes
A working knowledge of various cutting processes used by the welding industry. Will include, but is not limited to, safety, theory of operation, setup and operating techniques, troubleshooting and making minor equipment repairs, terms and definitions, identification, evaluation, repair and prevention of discontinuities of cut surfaces. Includes oxy-fuel cutting, plasma arc cutting, exothermic cutting, air carbon arc cutting, shielded metal arc cutting, and mechanical cutting process. Lecture: 2 credits (30 contact hours) Co-requisite: WLD 111 or Consent of Instructor.

Attributes: Technical

WLD 111(3) Course ID:004577
Cutting Processes Lab
Designed to provide the student with practical experience to become proficient in the use of various metal cutting processes. Safety, setup, and operating techniques are employed. Students will troubleshoot and make minor repairs to equipment. Students will also learn to identify, repair, and prevent recirculation of cut surface discontinuities. Processes shall include, but not limited to: Oxy-Fuel, Plasma arc, and Mechanical. Various materials will be used where appropriate. Lab: 3 credits (90 contact hours/30:1 ratio) Co-requisite: WLD 110 or Consent of Instructor.

Attributes: Technical
WLD 120(2) Course ID:004600
Shielded Metal Arc Welding
Teaches the student the identification, inspection, and maintenance of SMAW electrodes; principles of SMAW; the effects of variables on the SMAW process to weld plate and pipe; and metallurgy. Lecture: 2 credits (30 contact hours). Co-requisite: WLD 121 or Consent of Instructor.
Components: Lecture Attributes: Technical

WLD 121(3) Course ID:004578
Shielded Metal Arc Welding Fillet Lab
Provides laboratory experiences in which the student acquires the manipulative skills to perform fillet welds in all positions. Lab: 3 credits (90 contact hours;30:1 ratio). Co-requisite: WLD 120 or Consent of Instructor.
Components: Laboratory Attributes: Technical

WLD 123(3) Course ID:004599
Shielded Metal Arc Welding Groove with Backing Lab
Provides laboratory experiences in which students acquire the manipulative skills to do groove welds in all positions with backing. Laboratory: 3 credits (90 contact hours;30:1 ratio). Pre-requisite: WLD 120 and 121 or Consent of Instructor.
Components: Laboratory Attributes: Technical

WLD 130(2) Course ID:004579
Gas Tungsten Arc Welding
Identification, inspection, and maintenance of GTAW machines; identification, selection and storage of GTAW electrodes; principles of GTAW; the effects of variables on the GTAW process; and metallurgy. This course also teaches the theory and application of Plasma Arc Cutting. Co-requisite: WLD 131 or Consent of Instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture Attributes: Technical

WLD 131(3) Course ID:004580
Gas Tungsten Arc Welding Fillet Lab
Teaches the necessary manipulative skills needed to apply the Gas Tungsten Arc on various joint designs on plate with both ferrous and non-ferrous metals. Plasma Arc cutting included. Co-requisite: WLD 130 or Consent of Instructor. Laboratory: 3 credits (90 contact hours;30:1 ratio).
Components: Laboratory Attributes: Technical

WLD 133(3) Course ID:004581
Gas Tungsten Arc Welding Groove Lab
Teaches the method of operation and application of the tungsten arc welding process for welding groove welds in both ferrous and non-ferrous plate in all positions. Pre-requisite: WLD 130 or Consent of Instructor. Laboratory: 3 credits (90 contact hours;30:1 ratio).
Components: Laboratory Attributes: Technical

WLD 140(2) Course ID:004582
Gas Metal Arc Welding
Identification, inspection, and maintenance of GMAW machines; identification, selection, and storage of GMAW electrodes; principles of GMAW; and the effects of variables on the GMAW process. Theory and applications of related processes such as FCAW and SAW and metallurgy are also included. Lecture: 2 credits (30 contact hours).
Components: Lecture Attributes: Technical

WLD 141(3) Course ID:004583
Gas Metal Arc Welding Fillet Lab
Teaches the practical application and manipulative skills of Gas Metal Arc Welding and the proper safety situations needed in this process. Both ferrous and non-ferrous metals will be covered, as well as various joint designs on plate in all positions. Co-requisite: WLD 140 or Consent of Instructor. Laboratory: 3 credits (90 contact hours;30:1 ratio).
Components: Laboratory Attributes: Technical

WLD 143(3) Course ID:004584
Gas Metal Arc Welding Groove Lab
Teaches the method of operation and application of the gas metal arc welding process for welding groove welds in both ferrous and non-ferrous plate in all positions using both short circuiting and spray transfer where appropriate. Pre-requisite: WLD 140 or Consent of Instructor. Laboratory: 3 credits (90 contact hours;30:1 ratio).
Components: Laboratory Attributes: Technical

WLD 145(1) Course ID:004586
Gas Metal Arc Welding Aluminum Lab
Teaches welding aluminum using the GMAW process. Fillets and groove welds are made in all positions in both plate and pipe. Short Circuilling and Spray transfers are used where appropriate. Pre-requisite: WLD 140 or Consent of Instructor. Laboratory: 1 credit (30 contact hours;30:1 ratio).
Components: Laboratory Attributes: Technical

WLD 147(1) Course ID:004585
Flux Cored Arc Welding Lab
Acquaints the student with the method of operation and application of the flux cored welding system. Pre-requisite: WLD 140 or Consent of Instructor. Laboratory: 1 credit (30 contact hours;30:1 ratio).
Components: Laboratory Attributes: Technical

WLD 151(2) Course ID:004603
Basic Welding A
Introduction to welding, cutting processes, and related equipment. Basic setup, operation, and related safety are applied. Lecture: 1 credit (15 contact hours). Laboratory: 1 credit (30 contact hours;30:1 ratio).
Components: Laboratory, Lecture Attributes: Technical

WLD 152(5) Course ID:004441
Basic Welding B
An introduction to common cutting and welding processes used in industry. Theory, setup, operation, and related safety are applied. Lecture: 2 credits (30 contact hours). Laboratory: 3 credits (90 contact hours;30:1 ratio).
Components: Laboratory, Lecture Attributes: Technical

WLD 161(1) Course ID:004602
Submerged Arc Welding Lab
Designed to provide the student with a working knowledge of SAW set-up, maintenance, and consumable identification. Includes practice in basic SAW principles and techniques related to the field of study. Laboratory: 1 credit (30 contact hours;30:1 ratio). Pre-requisite: WLD 140 or Consent of Instructor.
Components: Laboratory Attributes: Technical

WLD 170(2) Course ID:004587
Blueprint Reading for Welding
Provides a study of occupational specifically prints for welders. Advanced study of multi-view drawings, assembly drawings, datum dimensions, numerical control drawing, sheet metal prints, castings and forgings, instrumentation and control charts and diagrams, working drawings, geometric dimensioning and tolerancing and use of reference materials and books are included. Occupational specific includes welding drawings, symbols, joint types, grooves, pipe welding symbols, testing symbols and specification interpretation are stressed. Lecture: 2 credits (30 contact hours). Co-requisite: WLD 171 or Consent of Instructor.
Components: Lecture Attributes: Technical

WLD 171(3) Course ID:004588
Blueprint Reading for Welding Lab
Provides students with an understanding of the fabrication process through computer modeling systems and creation of prints or through practice fabricating from a blueprint. Allows students to read and fabricate from detail prints, control distortion during fabrication, and follow proper welding sequence. Provides the option to generate detailed prints, create digital files, and generate work detailing the proper welding sequences. Utilizes welding symbols and study weld sizes and strengths. Lab: 3 credits (90 contact hours;30:1 ratio). Co-requisite: WLD 170 or Consent of Instructor.
Components: Laboratory Attributes: Technical

WLD 181(1) Course ID:004601
Advanced Welding Systems Lab
Provides the student a working knowledge and hands on experience using advanced arc welding machines (SMAW surface tension transfer and pulsed GMA welding) on various joints and metals. Laboratory: 1 credit (30 contact hours;30:1 ratio). Prerequisite: WLD 140 and 141 or Consent of Instructor.
Components: Laboratory

WLD 189(1 - 6) Special Topics in Welding
Various Welding Technology topics, issues and trends will be addressed. Topics may vary from semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours.
Components: Lecture, Laboratory Attributes: Technical

WLD 220(2) Course ID:004589
Welding Certification
Provides the student with a working knowledge of certification encountered in welding. The student will start with developing a WPS, qualify the WPS, and qualify personnel. Documents used in welding certification are developed and used. Co-requisite: WLD 221 or Consent of Instructor. Lecture: 2 credits (30 contact hours).
Components: Lecture Attributes: Technical

WLD 221(3) Course ID:004590
Welding Certification Lab
Provides students an opportunity to test on all types of welding for certification standards. Laboratory: 3 credits (90 contact hours;30:1 ratio). Co-requisite: WLD 220 or Consent of Instructor.
Components: Laboratory Attributes: Technical

WLD 225(3) Course ID:004591
Shielded Metal Arc Welding Open Groove Lab
Designed to build upon SMAW Plate Lab I & II. Offers the student the opportunity to advance skills in the practical aspects of vee-butt plate welding using SMAW. Lab: 3 credits (90 contact hours;30:1 ratio). Pre-requisite: WLD 120 and 121 or Consent of Instructor.
Components: Laboratory Attributes: Technical

WLD 227(3) Course ID:004592
Shielded Metal Arc Welding Pipe Lab A
Teaches the required manipulative skills to arc weld pipe using mild steel electrodes in the 2G and 5G positions including proper pipe preparations, electrodes, safety precautions, and welding sequences. Fillets on pipe joints are also included in 2F, 2FR, 4F, and 5F positions. Lab: 3 credits (90 contact hours;30:1 ratio). Pre-requisite: WLD 225 or Consent of Instructor.
Components: Laboratory Attributes: Technical

WLD 229(3) Course ID:004593
Shielded Metal Arc Welding Pipe Lab B
Teaches the required manipulative skills to arc weld pipe using mild steel electrodes in the 6G position including proper pipe preparations, electrodes, safety precautions, and welding sequences. Lab: 3 credits (90 contact hours;30:1 ratio). Pre-requisite: WLD 225 or Consent of Instructor.
Components: Laboratory Attributes: Technical
WLD 235(3)  Course ID:004594
Gas Tungsten Arc Welding Pipe Lab A
Teaches the method of operation and application of the gas tungsten arc welding system for welding of both ferrous and non-ferrous pipe in 2G and 5G positions. Lab: 3 credits (90 contact hours/30:1 ratio). Pre-requisite: WLD 133 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 237(3)  Course ID:004595
Gas Tungsten Arc Welding Pipe Lab B
Teaches the method of operation and application of the gas tungsten arc welding process for welding of both ferrous and non-ferrous pipe in 6G position. Lab: 3 credits (90 contact hours/30:1 ratio). Pre-requisite: WLD 133 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 239(1)  Course ID:005310
Orbital Tube Welding
Familiarizes students with the orbital weld system, basic setup, operation, and safety. Pre-requisite: WLD 130 & WLD 131 or Permission of Instructor. Laboratory: 1 credit (30 contact hours).
Components: Laboratory
Attributes: Technical

WLD 245(3)  Course ID:004604
Gas Metal Arc Welding Pipe Lab A
Acquaints the student with the operation and application of the Gas Metal Arc System for welding pipe in 2G and 5G positions. Laboratory: 3 credits (90 contact hours/30:1 ratio). Co-requisite: WLD 143 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 247(3)  Course ID:004597
Gas Metal Arc Welding Pipe Lab B
Acquaints the student with the operation and application of the Gas Metal Arc System for welding groove welds in pipe in 6G position. Lab: 3 credits (90 contact hours/30:1 ratio). Pre-requisite: WLD 143 or Consent of Instructor.
Components: Laboratory
Attributes: Technical

WLD 251(1 - 6)  Course ID:004608
Welding Automation Lab
Provides the student a working knowledge and hands-on experience using automatic welding equipment such as robotic welding systems, bug-o systems, and automated GTA welding systems. Pre-requisite: WLD 140/141, or consent of instructor. Lab: 1-6 credit hours (30-180 contact hours).
Components: Laboratory
Attributes: Technical

WLD 253(1)  Course ID:004607
Pipe Fitting and Template Development Lab
Provides experiences in pipe template development and job knowledge and experience with the techniques and tools used to field layout, cut, and fit the various pipe joints that are used in pipe trades. Lab: 1 credit (30 contact hours/30:1 ratio).
Components: Laboratory
Attributes: Technical

WLD 298(1 - 6)  Instructor Consent Required
Welding Practicum
Provides on-the-job work experience related to the student's educational objectives. Students participating in the Practicum do not receive compensation. Laboratory: 1-6 credits (30-180 contact hours/30:1 ratio). Pre-requisite: Consent of Instructor.
Components: Practicum
Attributes: Technical

WLD 299(1 - 6)  Instructor Consent Required
Cooperative Education Program
Components: Co-Op
Attributes: Technical

WMT Wood Manufacturing Technology

WMT 110(2)  Course ID:002176
Technical Drawing and Blueprint Reading
Fundamentals of multiview and pictorial drafting techniques; and reading and interpreting architectural, furniture and cabinet drawings are the focus of this course. Students will apply blueprint reading skills by preparing materials and cutting lists for actual jobs. Lecture: 2 credits (60 contact hours).
Components: Lecture
Attributes: Technical

WMT 120(4)  Course ID:002177
Wood Product Manufacturing
Fundamentals of wood processing and an overview of the secondary wood processing industry are covered in this course. The nature of wood, material selection, terminology, safe set-up, and operation of common woodworking equipment will be discussed. Each student will fabricate a wood product while being introduced to custom woodworking techniques, as well as mass production concepts related to product engineering.
Components: Lecture
Attributes: Technical

WMT 198(2 - 4)  Instructor Consent Required
Practicum
The practicum provides supervised work experience related to the student's educational objective. Students participating in the practicum do not receive compensation. The course may be taken for 2 - 4 credits. Pre-requisite: Permission of the Instructor
Components: Practicum
Attributes: Technical

WMT 199(2)  Instructor Consent Required
Cooperative Education
Co-op provides supervised work experience related to the student's educational objectives. Students participating in the cooperative education program receive compensation for their work. Pre-requisite: Permission of the Instructor. Co-Op: 2 credits (150 contact hours).
Components: Co-Op

WMT 240(4)  Course ID:002185
Cabinet Making Technology
This course is an overview of the cabinet and store fixtures industries. Emphasis will be placed on the design and construction of face frame as well as frameless (32mm) systems. Each student will plan and build a vanity, kitchen cabinet or store fixture which utilizes contemporary casework techniques. Pre-requisite: WMT 110 and WMT 120. Lecture: 4 credits (120 contact hours).
Components: Lecture

WMT 250(4)  Course ID:002186
Furniture Technology
Furniture design principles, structural considerations, joinery, fasteners, veneering, and use of specialized machines for complex operations are the focus of this course. Each student will plan and build a piece of furniture which includes at least one drawer, a door and some veneering. Pre-requisite: WMT 110 and WMT 120. Lecture: 4 credits (120 contact hours).
Components: Lecture

WPP Workplace Principles

WPP 200(3)  Course ID:002193
Workplace Principles
Workplace Principles examines the changing workforce and the skills needed to adapt to constantly changing demands and expectations. The course includes but is not limited to problem solving, teamwork, time management, and self-management skills. Job-seeking and job-retention skills are taught through the development of resumes and job search materials. Maximum benefit is received if this course is taken in the latter part of the student's course work. Lecture: 3 credits (45 contact hours).
Components: Lecture
Attributes: Enrichment Course Other, Technical

WPP 200(1)  Course ID:016787
Soft Skills
Workplace Principles examines the changing workforce and the skills needed to adapt to constantly changing demands and expectations. The course includes but is not limited to problem solving, teamwork, time management, and self-management skills. Lecture: 1.0 credits (15 contact hours).
Components: Lecture
Attributes: Enrichment Course Other