The following list of courses is arranged in alphabetical order by course prefix and in numerical order under the program of study. Following the title are numbers representing lecture, lab, clinical or work experience, and credit. When classes have pre- or co-requisite requirements, those are listed as well. Courses below the 100 level are considered developmental education courses and serve as prerequisites to curriculum study. Grades in all courses below the 100 level will not count as hours/credits earned and will not be used to calculate grade point averages. Courses below the 100 level are counted as hours attempted for financial aid and term course load purposes. Courses without clinical or work experience hours have three numbers listed, as in Example 1 below. Courses with clinical or work experience hours have four numbers listed, as in Example 2 below. The final sentence in some course descriptions indicates the potential transferability of the course, as in Example 3 below.

**EXAMPLE 1**

PSY 118  **Interpersonal Psychology**  
3  0  3  
This course introduces the basic principles of psychology as they relate to personal and professional development. Emphasis is placed on personality traits, communication/leadership styles, effective problem solving, and cultural diversity as they apply to personal and work environments. Upon completion, students should be able to demonstrate an understanding of these principles of psychology as they apply to personal and professional development. S11025

**EXAMPLE 2**

COE 111  **Co-op Work Experience I**  
0  0  10  1  
This course provides work experience with a college-approved employer in an area related to the student’s program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. S11680

**EXAMPLE 1**

ENG 111  **Expository Writing**  
3  0  3  
Prerequisites: ENG 090 and RED 090 or ENG 095  
This course is the required first course in a series of two designed to develop the ability to produce clear expository prose. Emphasis is placed on the writing process including audience analysis, topic selection, thesis support and development, editing, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in English Composition. S13673
**Course Descriptions**

**ACADEMIC RELATED (ACA)**

**ACC 90** Study Skills 3 0 3
This course is intended for those who placed into credit-level course work but who are not maintaining satisfactory academic progress toward meeting program goals. Topics include study skills, note taking, learning styles and strategies, test taking, goal setting, and self-assessment skills. Upon completion, students should be able to manage their learning experiences to successfully meet educational goals. S14331

**ACC 111** College Student Success 1 0 1
This course introduces the college’s physical, academic, and social environment and promotes the personal development essential for success. Topics include campus facilities and resources; policies, procedures, and programs; study skills; and life management issues such as health, self-esteem, motivation, goal-setting, diversity, and communication. Upon completion, students should be able to function effectively within the college environment to meet their educational objectives. S13509

**ACC 118** College Study Skills 1 2 2
This course covers skills and strategies designed to improve study behaviors. Topics include time management, note taking, test taking, memory techniques, active reading strategies, critical thinking, communication skills, learning styles, and other strategies for effective learning. Upon completion, students should be able to apply appropriate study strategies and techniques to the development of an effective study plan. S13503

**ACC 122** College Transfer Success 1 0 1
This course provides information and strategies necessary to develop clear academic and professional goals beyond the community college experience. Topics include the CAA, career exploration, gathering information on senior institutions, strategic planning, and communications skills for a successful academic transition. Upon completion, students should be able to develop an academic plan to transition successfully to senior institutions. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S20286

**ACCOUNTING (ACC)**

**ACC 115** College Accounting 3 2 4
This course introduces basic accounting principles for a business. Topics include the complete accounting cycle with end-of-period statements, bank reconciliation, payrolls, and petty cash. Upon completion, students should be able to demonstrate an understanding of accounting principles and apply those skills to a business organization. S20279

**ACC 120** Principles of Financial Accounting 3 2 4
This course introduces business decision-making, accounting information systems. Emphasis is placed on analyzing, summarizing, reporting, and interpreting financial information. Upon completion, students should be able to prepare financial statements, understand the role of financial information in decision-making and address ethical considerations. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. S20278

**ACC 121** Principles of Managerial Accounting 3 2 4
Prerequisites: ACC 120
This course includes a greater emphasis on managerial and cost accounting skills. Emphasis is placed on managerial accounting concepts for external and internal analysis, reporting and decision-making. Upon completion, students should be able to analyze and interpret transactions relating to managerial concepts including product-costing systems. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. S20282

**ACC 122** Principles of Financial Accounting II 3 0 3
This course provides additional instruction in the financial accounting concepts and procedures introduced in ACC 120. Emphasis is placed on the analysis of specific balance sheet accounts, with in-depth instruction of the accounting principles applied to these accounts. Upon completion, students should be able to analyze data, prepare journal entries, and prepare reports in compliance with generally accepted accounting principles. S20286

**ACC 125** Cost Accounting 3 0 3
Prerequisites: ACC 121
This course introduces the nature and purposes of cost accounting as an information system for planning and control. Topics include direct materials, direct labor, factory overhead, process, job order, and standard cost systems. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered. S10687

**ACC 129** Individual Income Taxes 2 2 3
Prerequisites: ACC 120
This course introduces the relevant laws governing individual income taxation. Topics include tax law, electronic research and methodologies, and the use of technology for preparation of individual tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various individual tax forms. S20283

**ACC 130** Business Income Taxes 2 2 3
Prerequisites: ACC 129
This course introduces the relevant laws governing business and fiduciary income taxes. Topics include tax law relating to business organizations, electronic research and methodologies, and the use of technology for the preparation of business income tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various business tax forms. S20277

**ACC 140** Payroll Accounting 1 2 2
Prerequisites: ACC 115 or ACC 120
This course covers federal and state laws pertaining to wages, payroll taxes, payroll tax forms, and journal and general ledger transactions. Emphasis is placed on computing wages; calculating social security, income, and unemployment taxes; preparing appropriate payroll tax forms; and journalizing/posting transactions. Upon completion, students should be able to analyze data, make appropriate computations, complete forms, and prepare accounting entries using appropriate technology. S20281

**ACC 150** Accounting Software Application 1 2 2
Prerequisites: ACC 115 or ACC 120
This course introduces microcomputer applications related to accounting systems. Topics include general ledger, accounts receivable, accounts payable, inventory, payroll, and correcting, adjusting, and closing entries. Upon completion, students should be able to use a computer accounting package to solve accounting problems. S20275

**ACC 180** Practices in Bookkeeping 3 0 3
This course provides advanced instruction in bookkeeping and record-keeping functions. Emphasis is placed on mastering and adjusting entries, correction of errors, depreciation, payroll, and inventory. Upon completion, students should be able to conduct all key bookkeeping functions for small businesses. S20288

**ACC 220** Intermediate Accounting I 3 2 4
Prerequisites: ACC 120
This course is an introduction of the study of accounting principles with in-depth coverage of theoretical concepts and financial statements. Topics include generally accepted accounting principles and an extensive analysis of financial statements. Upon completion, students should be able to demonstrate competence in the conceptual framework underlying financial accounting, including the application of financial standards. S20836

**ACC 221** Intermediate Accounting II 3 2 4
Prerequisites: ACC 220
This course is a continuation of ACC 220. Emphasis is placed on special problems which may include leases, bonds, investments, ratio analyses, present value applications, accounting changes, and corrections. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered. S10697

**ACC 225** Cost Accounting 3 0 3
Prerequisites: ACC 121
This course introduces the nature and purposes of cost accounting as an information system for planning and control. Topics include direct materials, direct labor, factory overhead, process, job order, and standard cost systems. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered. S10695

**ANIMAL ASSISTED INTERACTIONS (AAI)**

**AAI 110** Animal Assisted Introduction 1 0 1
Corequisites: AAI 120
This course introduces the field of human-animal interactions, its history, agencies, roles and careers. Topics include personal/professional characteristics, animal behavioral profiles, diversity of populations served, disciplines in the field, ethical standards and major theoretical and intervention approaches. Upon completion, students should be able to clearly articulate the knowledge, skills and roles of the animal interaction specialist. S22766
ANT 211  Animal Handling Skills  1 4 3  
Prerequisites: AAI 110 and PSY 150  
This course covers the capacities of different species for work with diverse goals and populations in animal interactions and introduces components critical to animals' well-being. Emphasis is placed on expanding critical thinking, and competences in animal handling and management skills necessary for development as a well-rounded, responsible animal handler. Upon completion, students should be able to demonstrate their ability to identify interaction risks, animal handling and training practices, and assess animal interaction effectiveness. S22768

ANT 210  Interaction Methodology  2 2 3  
Prerequisites: AAI 110 and PSY 150  
This course provides a comprehensive review of techniques, approaches, and experiential methodology for implementing animal interactions in all aspects of human services and education. Emphasis is placed on applying knowledge and animal skills for creating safe and effective, goal oriented interactions within various human service and educational environments. Upon completion, students should be able to demonstrate the knowledge, judgment, safety and methodology skills appropriate for an entry-level position utilizing animal interactions. S22709

ANT 220  Interaction Documentation  3 0 3  
Prerequisites: AAI 110 and PSY 150  
This course covers the knowledge and skills necessary for program evaluation and outcome measurement processes used in animal interaction services. Topics include the effect of animal interactions on participant outcomes, assessment of outcome measures, and evaluation of overall program goals and objectives. Upon completion, students should be able to utilize basic concepts of outcome based evaluation processes to objectively evaluate animal interaction service within supervised settings. S22770

ANTHROPOLOGY (ANT)  

ANT 210  General Anthropology  3 0 3  
This course introduces the physical, biological, and cultural aspects of human diversity and cultural change. Emphasis is placed on the similarities and differences in human cultures. Upon completion, students should be able to demonstrate an understanding of the four major fields of anthropology. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. S13262

ANT 221  Comparative Cultures  3 0 3  
This course provides an ethnographic survey of societies around the world covering their distinctive cultural characteristics and how these relate to cultural change. Emphasis is placed on the similarities and differences in social institutions such as family, economics, politics, education, and religion. Upon completion, students should be able to demonstrate knowledge of a variety of cultural adaptive strategies. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. S10536

ANT 240  Archaeology  3 0 3  
This course introduces the scientific study of the unwritten record of the human past. Emphasis is placed on the processes of human cultural evolution as revealed through archaeological methods of excavation and interpretation. Upon completion, students should be able to demonstrate an understanding of how archaeologists reconstruct the past and describe the variety of past human cultures. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. S10965

ART (ART)  

ART 111  Art Appreciation  3 0 3  
This course introduces the origins and historical development of art. Emphasis is placed on the relationship of design principles to various art forms, including but not limited to, sculpture, painting, and architecture. Upon completion, students should be able to identify and analyze a variety of artistic styles, periods, and media. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. S10139

ART 113  Art Methods and Materials  2 2 3  
This course provides an overview of media and techniques. Emphasis is placed on exploration and manipulation of materials. Upon completion, students should be able to demonstrate familiarity with a variety of methods, materials, and processes. This course has been approved to satisfy the Comprehensive Articulation Agreement transferability as a premajor and/or elective course requirement. S10113

ART 114  Art History Survey I  3 0 3  
This course covers the development of art forms from ancient times to the Renaissance. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. S10200

ART 115  Art History Survey II  3 0 3  
This course covers the development of art forms from the Renaissance to the present. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. S10149

ART 121  Design I  0 6 3  
This course introduces the elements and principles of design as applied to two-dimensional art. Emphasis is placed on two-dimensional visual elements, the principles of visual organization, and the development of visual storytelling. Upon completion, students should be able to understand and use critical and analytical approaches as they apply to two-dimensional visual art. This course has been approved to satisfy the Comprehensive Articulation Agreement transferability as a premajor and/or elective course requirement. S12130

ART 131  Drawing  0 6 3  
This course introduces the language of drawing and the use of various drawing materials. Emphasis is placed on drawing techniques, media, and graphic principles. Upon completion, students should be able to demonstrate competence in the use of graphic form and various drawing processes. This course has been approved to satisfy the Comprehensive Articulation Agreement transferability as a premajor and/or elective course requirement. S10812

ART 122  Drawing II  3 6 3  
This course introduces the principles of design as applied to three-dimensional art. Emphasis is placed on three-dimensional visual elements, the principles of visual organization, and the development of visual storytelling. Upon completion, students should be able to understand and use critical and analytical approaches as they apply to three-dimensional visual art. This course has been approved to satisfy the Comprehensive Articulation Agreement transferability as a premajor and/or elective course requirement. S12130

ART 132  Design II  0 6 3  
This course introduces the elements and principles of design as applied to three-dimensional art. Emphasis is placed on three-dimensional visual elements, the principles of visual organization, and the development of visual storytelling. Upon completion, students should be able to understand and use critical and analytical approaches as they apply to three-dimensional visual art. This course has been approved to satisfy the Comprehensive Articulation Agreement transferability as a premajor and/or elective course requirement. S12130

ARC 112  Constr MATS & Methods  3 2 4  
This course introduces construction materials and methodologies. Topics include construction terminology, traditional and alternative materials and their properties, manufacturing processes, construction techniques, and other related topics. Upon completion, students should be able to detail construction assemblies and identify construction materials and properties. S23271

Competencies

1. Identify construction methods.
2. Identify traditional and sustainable construction materials and their properties.
3. Describe basic construction sequences for residential and commercial applications.
4. Demonstrate an understanding of construction related terminology.

ARC 132  Specifications & Contracts  2 0 2  
Prerequisites: ARC 112  
This course covers the development of written specifications and the implications of different contractual arrangements. Topics include specification development, contracts, bidding material research, and agency responsibilities. Upon completion, students should be able to write a specification section and demonstrate the ability to interpret contractual responsibilities. S12627
**Course Descriptions**

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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<td><strong>ASTRONOMY (AST)</strong></td>
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<tr>
<td>AST 111</td>
<td>Descriptive Astronomy</td>
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<td>This course introduces an overall view of modern astronomy. Topics include an overview of the solar system, the sun, stars, galaxies, and the larger universe. Upon completion, students should be able to demonstrate an understanding of the universe around them. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. S10553</td>
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<td><strong>AST 111A Descriptive Astronomy Lab</strong></td>
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<td>The course is a laboratory to accompany AST 111. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 111 and which provide practical experience. Upon completion, students should be able to demonstrate an understanding of the universe around them. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. S10952</td>
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<td>AST 151</td>
<td>General Astronomy I</td>
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<td>This course introduces the science of modern astronomy with a concentration on the solar system. Emphasis is placed on the history and physics of astronomy and an introduction to the solar system, including the planets, comets, and meteors. Upon completion, students should be able to demonstrate a general understanding of the solar system. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. S10670</td>
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<td><strong>AST 151A General Astronomy I Lab</strong></td>
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<td>The course is a laboratory to accompany AST 151. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 151 and which provide practical experience. Upon completion, students should be able to demonstrate a general understanding of the solar system. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. S10019</td>
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<td>AST 152</td>
<td>General Astronomy II</td>
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<td>This course is a continuation of AST 151 with primary emphasis beyond the solar system. Topics include the sun, stars, galaxies, and the larger universe, including cosmology. Upon completion, students should be able to demonstrate a working knowledge of astronomy. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. S10028</td>
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<td><strong>AST 152A General Astronomy II Lab</strong></td>
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<td>The course is a laboratory to accompany AST 152. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 152 and which provide practical experience. Upon completion, students should be able to demonstrate a working knowledge of astronomy. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. S12436</td>
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**AUTOMATION AND ROBOTICS (ATR)**

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<td>ATR 112</td>
<td>Introduction to Automation</td>
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<td>This course introduces the basic principles of automated manufacturing and describes the tasks that technicians perform on the job. Topics include the history, development, and current applications of robots and automated systems including their configuration, operation, components, and controls. Upon completion, students should be able to understand the basic concepts of automation and robotic systems. S13610</td>
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<td>ATR 280</td>
<td>Robotic Fundamentals</td>
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<td>This course covers application, programming, and maintenance fundamentals for robotic devices. Emphasis is placed on terminology, problem solving, robotic systems controls, and hands-on projects. Upon completion, students should be able to apply basic concepts in application, programming, and robotic control systems. S12171</td>
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<td>ATR 282</td>
<td>Robotics and CIM</td>
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<td>This course covers robotics and CIM. Topics include application, programming, and maintenance of robotic devices and the relationship between robotics and CIM. Upon completion, students should be able to safely program, operate, and maintain robots and understand the relationship between robotics and CIM. S20675</td>
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**ALTERNATIVE TRANSPORTATION TEC (ATT)**

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<td>ATT-115</td>
<td>Green Trans Safety &amp; Service</td>
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<td>This course covers workplace safety, hazardous material and environmental regulation relevant to electric, hybrid and alternative fueled vehicles. Topics include safety of high voltage vehicle systems, gaseous fuel systems and alternative liquid fuels. Upon completion, students should be able to describe safe work practices, utilize appropriate shop tools and explain government regulations associated with alternative transportation. S23426</td>
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<td>ATT-125</td>
<td>Hybrid-Electric Tran</td>
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<td>This course covers the theory and operation of hybrid-electric drive vehicles. Topics include maintenance, diagnostics, repair and safety procedures for electrically propelled and hybrid vehicles. Upon completion, students should be able to perform diagnostics, maintenance and repair hybrid-electric drive vehicles. S23428</td>
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<tr>
<td>ATT-140</td>
<td>Emerging Transp Tech</td>
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<td>This course covers emerging technologies in the automotive industry and diagnostic procedures associated with those technologies. Topics include exploring new technologies, diagnostic tools, methods and repairs. Upon completion, students should be able to demonstrate practical skills applicable to emerging automotive technologies. S23432</td>
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**AUTOMOTIVE (AUT)**

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<tr>
<td>AUT 110</td>
<td>Introduction to Automotive Technology</td>
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<td>3</td>
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<tr>
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<td>This course covers workplace safety, hazardous material and environmental regulations, use of hand tools, service information resources, basic concepts, systems, and terms of automotive technology. Topics include familiarization with vehicle systems along with identification and proper use of various automotive hand and power tools. Upon completion, students should be able to describe safety and environmental procedures, terms associated with automobiles, identify and use basic tools and shop equipment. S21683</td>
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<tr>
<td>AUT 114</td>
<td>Safety and Emissions</td>
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<td>This course covers the laws, procedures, and specifications needed to perform a North Carolina State Safety and Emissions inspection. Topics include brake, steering and suspension, lighting, horn, windshield wiper, tire, mirrors, and emission control device inspection. Upon completion, students should be able to perform complete and thorough North Carolina State Safety and Emissions inspections. S21685</td>
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<tr>
<td>AUT 114A</td>
<td>Safety and Emissions Lab</td>
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<td>This course is an optional lab that allows students to enhance their understanding of North Carolina State Emissions Inspection failures. Topics include evaporation, positive crankcase ventilation, exhaust gas recirculation and exhaust emissions systems operation, including catalytic converter failure diagnosis. Upon completion, students should be able to employ diagnostic strategies to repair vehicle emissions failures resulting from North Carolina State Emissions inspection. S21686</td>
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### Course Descriptions

#### AUT 116  Engine Repair  
2 3 3  
This course covers the theory, construction, inspection, diagnosis, and repair of internal combustion engines and related systems. Topics include fundamental operating principles of engines and diagnosis, inspection, adjustment, and repair of automotive engines using appropriate service information. Upon completion, students should be able to perform basic diagnosis, measurement and repair of automotive engines using appropriate tools, equipment, procedures, and service information. S21687

**Corequisites:** AUT 116  
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include diagnosis, inspection, adjustment, and repair of automotive engines using appropriate service information. Upon completion, students should be able to perform basic diagnosis, measurement and repair of automotive engines using appropriate tools, equipment, procedures, and service information. S21688

#### AUT 123  Powertrain Diagnosis & Service  
1 3 2  
This course covers the diagnosis, repair and service of the vehicle powertrain and related systems. Topics include fundamental operating principles of engines and transmissions and use of proper service procedures for diagnosis, service and removal and replacement of major components. Upon completion, students should be able to perform basic service and diagnosis of the powertrain and related systems, and to perform in vehicle repairs and remove and replace components. S21689

**Corequisites:** AUT 141  
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels. S21690

**Corequisites:** AUT 141A  
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels. S21691

#### AUT 151  Brake Systems  
2 3 3  
This course covers principles of operation and types, diagnosis, service, and repair of brake systems. Topics include drum and disc brakes involving hydraulic, vacuum boost, hydro-boost, electrically powered boost, and anti-lock and parking brake systems. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems. S21692

**Corequisites:** AUT 151  
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include drum and disc brakes involving hydraulic, vacuum-boost, hydra-boost, electrically powered boost, and anti-lock, parking brake systems and emerging brake systems technologies. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems. S21693

**Corequisites:** AUT 151A  
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include drum and disc brakes involving hydraulic, vacuum-boost, hydra-boost, electrically powered boost, and anti-lock, parking brake systems and emerging brake systems technologies. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems. S21693

#### AUT 161  Basic Automotive Electricity  
4 3 5  
This course covers basic electrical theory, wiring diagrams, test equipment, and diagnosis, repair, and replacement of batteries, starters, and alternators. Topics include Ohm's Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns. S21697

#### AUT 163  Advanced Automotive Electricity  
2 3 3  
**Prerequisites:** TRN 120  
This course covers electrical theory, wiring diagrams, test equipment, and diagnosis, repair, and replacement of electronics, lighting, gauges, horn, wiper, accessories, and body modules. Topics include networking and module communication, circuit construction, wiring diagrams, circuit testing, and troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair wiring, lighting, gauges, accessories, modules, and electronic concerns. S23604

#### AUT 171  Auto Climate Control  
2 4 3  
This course covers the theory of refrigeration and heating, electrical/electronic/pneumatic controls, and diagnosis/repair of climate control systems. Topics include diagnosis and repair of climate control components and systems, recovery/recycling of refrigerants, and safety and environmental regulations. Upon completion, students should be able to describe the operation, diagnose, and safely service climate control systems using appropriate tools, equipment, and service information. S21700

**Corequisites:** AUT 181  
This course covers the introduction, theory of operation, and basic diagnostic procedures required to restore engine performance to vehicles equipped with complex engine control systems. Topics include an overview of engine operation, ignition components and systems, fuel delivery, injection components and systems and emission control devices. Upon completion, students should be able to describe operation and diagnose/repair basic ignition, fuel and emission related driveability problems using appropriate test equipment/service information. S21701

**Corequisites:** AUT 181A  
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include overviews of engine operation, ignition components and systems, fuel delivery, injection components and systems and emission control devices and emerging engine performance technologies. Upon completion, students should be able to describe operation and diagnose/repair basic ignition, fuel and emission related driveability problems using appropriate test equipment/service information. S21702

**Prerequisites:** AUT 181  
This course covers study of the electronic engine control systems, the diagnostic process used to locate engine performance concerns, and procedures used to restore normal operation. Topics will include currently used fuels and fuel systems, exhaust gas analysis, emission control components and systems, OBD II (on-board diagnostics) and inter-related electrical/electronic systems. Upon completion, students should be able to diagnose and repair complex engine performance concerns using appropriate test equipment and service information. S21703

**Corequisites:** AUT 231  
This course covers the operation, diagnosis, and repair of manual transmissions/transaxles, clutches, driveshafts, axles, and final drives. Topics include theory of torque, power flow, and manual drive train servicing and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to explain operational theory, diagnose and repair manual drive trains. S22040

**Corequisites:** AUT 231A  
This course is an optional lab for the program that needs to meet NATEF hour standards but does not have a co-op component in the program. Topics include manual drive train diagnosis, service and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to diagnose and repair manual drive trains. S21712

**Corequisites:** AUT 281  
This course utilizes service information and specialized test equipment to diagnose and repair power train control systems. Topics include computerized ignition, fuel and emission systems, related diagnostic tools and equipment, data communication networks, and service information. Upon completion, students should be able to perform diagnosis and repair. S21713

### BIOLOGY (BIO)

**Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by the college's placement test.**

**BIO 90 Foundations of Biology**

**Corequisites:** RED 990  
This course introduces basic biological concepts. Topics include basic biochemistry, cell structure and function, interrelationships among organisms, scientific methodology, and other related topics. Upon completion, students should be able to demonstrate preparedness for college-level biology courses. S12386
Course Descriptions

BIO 094 Concepts of Human Biology
Corequisites: ENG 095 or HED 090
This course focuses on fundamental concepts of human biology. Topics include terminology, biochemistry, cell biology, tissues, body systems, and other related topics. Upon completion, students should be able to demonstrate an understanding of the human body as it applies to everyday life. Under the CAA, this course satisfies the general education Natural Science requirement for the AA and AFA degrees. It does not satisfy the general education Natural Science requirement for the AS degree. S13789

BIO 140 Environmental Biology
This course introduces environmental processes and the influence of human activities upon them. Topics include ecological concepts, population growth, natural resources, and a focus on current environmental problems from scientific, social, political, and economic perspectives. Upon completion, students should be able to demonstrate an understanding of environmental interrelationships and of contemporary environmental issues. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. S14188

BIO 140A Environmental Biology Lab
Corequisites: BIO 140
This course provides a laboratory component to complement BIO 140. Emphasis is placed on laboratory and field experience. Upon completion, students should be able to demonstrate a practical understanding of environmental interrelationships and of contemporary environmental issues. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. S13684

BIO 145 Ecology
Prerequisites: BIO 110 or BIO 111
This course provides an introduction to ecological concepts using an ecosystems approach. Topics include energy flow, nutrient cycling, succession, population dynamics, community structure, and other related topics. Upon completion, students should be able to demonstrate comprehension of basic ecosystem structure and dynamics. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S11555

BIO 146 Regional Natural History
This course is an interdisciplinary and historical analysis of the natural resources of the region. Emphasis is placed on geology, climate, forest systems, watersheds, water resources, and fish and wildlife resources of the region. Upon completion, students should be able to demonstrate comprehension of the natural history and the integration of the natural resources of the region.

BIO 161 Introduction to Human Biology
This course provides a basic survey of human biology. Emphasis is placed on the basic structure and function of the human body. Topics include reproduction, development, and the classification of body systems. Upon completion, students should be able to demonstrate an understanding of normal anatomy and physiology and the appropriate use of medical terminology. S13508

BIO 163 Basic Anatomy & Physiology
This course provides a basic study of the structure and function of the human body. Topics include a basic study of the body systems as well as an introduction to homeostasis, cells, tissues, nutrition, acid-base balance, and electrolytes. Upon completion, students should be able to demonstrate a basic understanding of the functions of the body and their interrelationships. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S11555

BIO 168 Anatomy and Physiology I
Prerequisites: BIO 094 (Required for Nursing Program)
This course provides a comprehensive study of the anatomy and physiology of the human body. Topics include body organization, homeostasis, cytology, histology, and the integumentary, skeletal, muscular, and nervous systems. Emphasis is placed on understanding of principles of anatomy and physiology and their interrelationships. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S11555

BIO 169 Anatomy and Physiology II
Prerequisites: BIO 168
This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems as well as metabolism, nutrition, acid-base balance, and fluid and electrolyte balance. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S11629

BIO 173 Microbes in World Affairs
Prerequisites: BIO 110 or BIO 111
This course provides an integrated and comprehensive study of the microbial world and its influence on global events and human affairs. Topics include plant and animal diseases caused by viral, bacterial, and fungal pathogens and their impacts on history, industrial microbiology, biotechnology, and microbial ecology. Upon completion, students should be able to demonstrate an understanding of the importance of microbes in human and world affairs. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S12302

Course Descriptions
This course covers the principles of microbiology with emphasis on microorganisms and human disease. Topics include an overview of microbiology and aspects of medical microbiology, identification and control of pathogens, disease transmission, host resistance, and immunity. Upon completion, students should be able to demonstrate knowledge of microorganisms and the disease process as well as aseptic and sterile techniques. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S20491

BIO 224  Local Flora Spring
This course provides an introduction to the identification of native plants. Emphasis is placed on spring wild flowers. Upon completion, students should be able to identify a variety of spring wildflowers and native plants. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S14362

BIO 225  Local Flora Summer
This course provides an introduction to the identification of native plants. Emphasis is placed on summer wild flowers. Upon completion, students should be able to identify a variety of summer wild flowers and native plants. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S14233

BIO 226  Local Flora Fall
This course provides an introduction to the identification of native plants. Emphasis is placed on fall wildflowers. Upon completion, students should be able to identify a variety of fall wild flowers and native plants. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S14245

BIO 242  Natural Resource Conservation
Prerequisites: Take One Set: Set 1: BIO 112 Set 2: BIO 140 and BIO 140A
This course covers the importance of natural resources and their role in our environment. Emphasis is placed on the physical, biological, and ecological principles underlying natural resource conservation with attention to the biological consequences of human impacts. Upon completion, students should be able to demonstrate an understanding of natural resource conservation. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. This course has been approved for transfer under the ICAA as a premajor and/or elective course requirement. S22584

BIO 243  Marine Biology
Prerequisites: BIO 110 or BIO 111
This course covers the physical and biological components of the marine environment. Topics include major habitats, the diversity of organisms, their biology and ecology, marine productivity, and the use of marine resources by humans. Upon completion, students should be able to identify various marine habitats and organisms and to demonstrate a knowledge of their biology and ecology. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S13534

BIO 271  Pathophysiology
Prerequisites: BIO 163, BIO 166, or BIO 169
This course provides an in-depth study of human pathological processes and their effects on homeostasis. Emphasis is placed on interrelationships among organ systems in deviations from homeostasis. Upon completion, students should be able to demonstrate an understanding of the effects and uses of radiation in diagnostic and therapeutic modalities. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S13002

BIO 273  Radiation Biology
Prerequisites: BIO 163, BIO 166, or BIO 169
This course covers the principles of radiation biology. Emphasis is placed on the effects of ionizing radiation on body tissues, uses of radiation in medicine, and protective measures. Upon completion, students should be able to demonstrate an understanding of the effects and uses of radiation in diagnostic and therapeutic modalities. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S13007

BUS 110  Introduction to Business
This course provides a survey of the business world. Topics include the basic principles and practices of contemporary business. Upon completion, students should be able to demonstrate an understanding of contemporary business concepts as a foundation for studying other business subjects. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11499

BUS 115  Business Law I
This course introduces the ethics and legal framework of business. Emphasis is placed on contracts, negotiable instruments, Uniform Commercial Code, and the working of the court systems. Upon completion, students should be able to apply ethical issues and laws covered to selected business decision-making situations. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11427

BUS 116  Business Law II
Prerequisites: BUS 115
This course continues the study of ethics and business law. Emphasis is placed on bailments, sales, risk-bearing, forms of business ownership, and copyrights. Upon completion, students should be able to apply ethical issues and laws covered to selected business decision-making situations. S11517

BUS 121  Business Math
This course covers fundamental mathematical operations and their application to business problems. Topics include payroll, pricing, interest and discount, commission, taxes, and other pertinent uses of mathematics in the field of business. Upon completion, students should be able to apply mathematical concepts to business. S14289

BUS 125  Personal Finance
This course provides a study of individual and family financial decisions. Emphasis is placed on building useful skills in buying, managing finances, increasing resources, and coping with current economic conditions. Upon completion, students should be able to develop a personal financial plan. S14300

BUS 137  Principles of Management
This course is designed to be an overview of the major functions of management. Emphasis is placed on planning, organizing, controlling, directing, and communicating. Upon completion, students should be able to work as contributing members of a team utilizing these functions of management. S12782

Course Descriptions
### Course Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<td>Business Ethics</td>
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<td>Organic and Biochemistry</td>
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<td>CHM 152</td>
<td>General Chemistry II</td>
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<td>CHE 90</td>
<td>Chemistry Concepts</td>
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COMPUTER INFORMATION SYSTEMS (CIS)

CIS 70  Fundamentals of Computing  0  2  1
This course covers fundamental functions and operations of the computer. Topics include identification of components, overview of operating systems, and other basic computer operations. Upon completion, students should be able to operate computers, access files, print documents and perform basic applications operations. S11239

CIS 110  Introduction to Computers  2  2  3
Prerequisites: CIS 070
This course introduces computer concepts, including fundamental functions and operations of the computer. Topics include identification of hardware components, basic computer operations, security issues, and use of software applications. Upon completion, students should be able to demonstrate an understanding of the role and function of computers and use the computer to solve problems. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Mathematics (Quantitative). S21058

CIS 111  Basic PC Literacy  1  2  2
Prerequisites: CIS 070
This course provides an overview of computer concepts. Emphasis is placed on the use of personal computers and applications for personal and fundamental workplace use. Upon completion, students should be able to demonstrate basic personal computer skills. S21059

CIS 115  Introduction to Programming & Logic  2  3  3
Prerequisites: MAT 070, MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 141, or MAT 171
This course introduces computer programming and problem solving in a structured program logic environment. Topics include language syntax, data types, program organization, problem solving methods, algorithm design, and logic control structures. Upon completion, students should be able to manage files with operating system commands, use top-down algorithm design, and implement algorithmic solutions in a programming language. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Mathematics (Quantitative). S21061

CIS 126  Graphics Software Introduction  2  2  3
This course provides an introduction to graphic design and execution of pictorial graphics using a variety of software packages. Emphasis is placed on creation and manipulation of images using graphic design software. Upon completion, students should be able to create graphic designs and incorporate these designs into printed publications. S10029

CIS 165  Desktop Publishing I  2  2  3
This course provides an introduction to desktop publishing software capabilities. Emphasis is placed on efficient use of a page layout software package to create, design, and print publications; hardware/software compatibility; and integration of specialized peripherals. Upon completion, students should be able to prepare publications given design specifications. S10453

CRIMINAL JUSTICE (CJC)

CJC 111  Introduction to Criminal Justice  3  0  3
This course introduces the components and processes of the criminal justice system. Topics include history, structure, functions, and philosophy of the criminal justice system and their relationship to life in our society. Upon completion, students should be able to define and describe the major system components and their interrelationships and evaluate career options. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S10631

CJC 112  Criminology  3  0  3
This course introduces the study of the behavior as it relates to criminal activity. Topics include theories of crime causation; statistical analysis of criminal behavior; past, present, and future social control initiatives; and other related topics. Upon completion, students should be able to explain and discuss various theories of crime causation and societal response. S10598

CJC 113  Juvenile Justice  3  0  3
This course covers the juvenile justice system and related juvenile issues. Topics include an overview of the juvenile justice system, treatment and prevention programs, special areas and laws unique to juveniles, and other related topics. Upon completion, students should be able to identify/discuss juvenile court structure/ procedures, function and jurisdiction of juvenile agencies, processing/detention of juveniles, and case disposition. S10602

CJC 114  Investigative Photography  1  2  2
This course covers the operation of digital photographic equipment and its application to criminal justice. Topics include the use of digital cameras, storage of digital images, the retrieval of digital images and preparation of digital images as evidence. Upon completion, students should be able to demonstrate and explain the role and use of digital photography, image storage and retrieval in criminal investigations. S20900

CJC 120  Interviews/Interrogations  1  2  2
This course covers basic and special techniques employed in criminal justice interviews and interrogations. Emphasis is placed on the interview/interrogation process, including interpretation of verbal and physical behavioral cues and legal perspectives. Upon completion, students should be able to conduct interviews/interrogations in a legal, efficient, and professional manner and obtain the truth from suspects, witnesses, and victims. S11674

CJC 121  Law Enforcement Operations  3  0  3
This course introduces fundamental law enforcement operations. Topics include the contemporary evolution of law enforcement operations and related issues. Upon completion, students should be able to explain theories, practices, and issues related to law enforcement operations. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S11746

CJC 122  Community Policing  3  0  3
This course covers the historical, philosophical, and practical dimensions of community policing. Emphasis is placed on the empowerment of police and the community to find solutions to problems by forming partnerships. Upon completion, students should be able to define community policing, describe how community policing strategies solve problems, and compare community policing to traditional policing. S11648

CJC 131  Criminal Law  3  0  3
This course covers the history/evolution/principles and contemporary applications of criminal law. Topics include sources of substantive law, classification of crimes, parties to crime, elements of crimes, matters of criminal responsibility, and other related topics. Upon completion, students should be able to discuss the sources of law and identify, interpret, and apply the appropriate statutes/elements. S11110

CJC 132  Court Procedure & Evidence  3  0  3
This course covers judicial structure/process/procedure from incident to disposition, kinds and degrees of evidence, and the rules governing admissibility of evidence in court. Topics include consideration of state and federal courts, arrest, search and seizure laws, exclusionary and statutory rules of evidence, and other related issues. Upon completion, students should be able to identify and discuss procedures necessary to establish a lawful arrest/search, proper judicial procedures, and the admissibility of evidence. S11046

CJC 141  Corrections  3  0  3
This course covers the history, major philosophies, components, and current practices and problems of the field of corrections. Topics include historical evolution, functions of the various components, alternatives to incarceration, treatment programs, inmate control, and other related topics. Upon completion, students should be able to explain the various components, processes, and functions of the correctional system. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S12643

CJC 142  Ethics & Community Relations  3  0  3
This course covers ethical considerations and accepted standards applicable to criminal justice organizations and professionals. Topics include ethical systems; social change, values, and norms; cultural diversity; citizen involvement in criminal justice issues; and other related topics. Upon completion, students should be able to apply ethical considerations to the decision-making process in identifiable criminal justice situations. S10970

CJC 143  Substance Abuse  3  0  3
This course is a study of substance abuse in our society. Topics include the history and classifications of drug abuse and the social, physical, and psychological impact of drug abuse. Upon completion, students should be able to identify various types of drugs, their effects on human behavior and society, and treatment modalities. S10983

CJC 144  Victimology  3  0  3
This course introduces the study of victims. Emphasis is placed on roles/characteristics of victims, victim interaction with the criminal justice system and society, current victim assistance programs, and other related topics. Upon completion, students should be able to discuss and identify victims, the uniqueness of victims' roles, and current victim assistance programs. S10951
### Course Descriptions

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<td>CMT 214</td>
<td>Planning and Scheduling</td>
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<td>CMT 216</td>
<td>Costs and Productivity</td>
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<td>CMT 218</td>
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<td>Co-op Work Experience I</td>
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<td>COM 110</td>
<td>Introduction to Communication</td>
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<tr>
<td>COM 120</td>
<td>Introduction to Interpersonal Communication</td>
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### CONSTRUCTION MANAGEMENT (CMT)

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<td>CMT 120</td>
<td>Codes and Inspections</td>
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This course covers building codes and the code inspections process used in the design and construction of residential and commercial buildings. Emphasis is placed on commercial, residential, and accessibility (ADA) building codes. Upon completion, students should understand the building code inspections process and apply building code principals and requirements to construction projects. S23269

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### COOPERATIVE EDUCATION (COE)

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<td>Co-op Work Experience I</td>
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This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. S11680

### COMMUNICATION (COM)

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<td>COM 120</td>
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This course introduces the practices and principles of interpersonal communication in both dyadic and group settings. Emphasis is placed on the communication process, perception, listening, self-disclosure, speech apprehension, ethics, nonverbal communication, conflict, power, and dysfunctional communication relationships. Upon completion, students should be able to demonstrate interpersonal communication skills, apply basic principles of group discussion, and manage conflict in interpersonal communication situations. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts (Substitute). S13264
COM 130  Nonverbal Communication  3  0  3  
Prerequisites: COM 110 or COM 120  
This course introduces the contemporary study of nonverbal communication in daily life. Topics include haptics, kinesics, proxemics, facial displays, and appearance. Upon completion, students should be able to analyze/interpret nonverbal communication and demonstrate greater awareness of their own nonverbal communication habits. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S22359

COM 140  Introduction to Intercultural Communication  3  0  3  
This course introduces techniques of cultural research, definitions, functions, characteristics, and impacts of cultural differences in public address. Emphasis is placed on how diverse backgrounds influence the communication act and how cultural perceptions and experiences determine how one sends and receives messages. Upon completion, students should be able to demonstrate an understanding of the principles and skills needed to become effective in communicating outside one’s primary culture. This course has been approved for transfer under the CAA as a general education course in Humanities/Fine Arts (Substitute). S22118

COM 150  Introduction to Mass Communication  3  0  3  
Prerequisite: ENG 111  
This course introduces print and electronic media and the new information technologies in terms of communication theory and as economic, political, and social institutions. Topics include the nature, history, functions, and responsibilities of mass communication industries in a global environment and their role and impact in American society. Upon completion, students should be able to demonstrate awareness of the pervasive nature of mass media and how media operate in an advanced post-industrial society. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S22466

COM 160  Small Group Communication  3  0  3  
This course provides an overview of the theory, practice, and critical analysis of communication in the small group setting. Emphasis is placed on group development, conflict, and conformity; leadership skills and styles; group roles and ranks; and decision making, problem solving, and conflict resolution. Upon completion, students should be able to apply topics of gender, culture, and socio-emotional functions within group settings. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S21739

COM 231  Public Speaking  3  0  3  
Prerequisite: ENG 111  
This course provides instruction and experience in preparation and delivery of speeches within a public setting and group discussion. Emphasis is placed on research, preparation, delivery, and evaluation of informative, persuasive, and special occasion public speaking. Upon completion, students should be able to prepare and deliver well-organized speeches and participate in group discussion with appropriate audiovisual support. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S21601

COM 233  Persuasive Speaking  3  0  3  
Prerequisites: ENG 112 or ENG 113  
This course introduces theory and history of persuasive speaking, covering critical thinking skills in analyzing problems, assessing solutions, and communicating the information to an audience. Emphasis is placed on analysis, evidence, reasoning, and library and field research used to enhance persuasive public speaking skills. Upon completion, students should be able to apply the principles of persuasive speaking in a public setting. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S21535

COM 251  Debate I  3  0  3  
This course introduces the principles of debate. Emphasis is placed on argument, refutation, research, and logic. Upon completion, students should be able to use research skills and arguments within the context of formal debate. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S12166

COSMOLOGY (COS)  

COS 111  Cosmetology Concepts I  4  0  4  
Corequisites: COS 112  
This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manikines, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting. S12363

COS 112  Salon I  0  24  8  
Corequisites: COS 111  
This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services. S12316

COS 113  Cosmetology Concepts II  4  0  4  
Prerequisites: COS 111 and COS 112  
Corequisites: COS 114  
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, chemistry, manicuring, chemical restructuring, and hair coloring. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting. S12335

COS 114  Salon II  0  24  8  
Corequisites: COS 111 and COS 112  
Corequisites: COS 113  
This course provides experience in a simulated salon setting. Topics include basic skin care, manicuring, nail application, scalp treatments, shampooing, rinsing, hair color, design, haircutting, chemical restructuring, pressing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services. S12284

COS 115  Cosmetology Concepts III  4  0  4  
Prerequisites: COS 113 and COS 114  
Corequisites: COS 116  
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, salon management, salesmanship, skin care, electricity/light therapy, wigs, thermal hair styling, lash and brow tinting, superfluous hair removal, and other related topics. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting. S12373

COS 116  Salon III  0  12  4  
Prerequisites: COS 113 and COS 114  
Corequisites: COS 115  
This course provides comprehensive experience in a simulated salon setting. Emphasis is placed on intermediate-level of skin care, manicuring, scalp treatments, shampooing, haircutting, chemical restructuring, pressing, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services. S12300

COS 117  Cosmetology Concepts IV  2  0  2  
Prerequisites: COS 111, COS 112, COS 113, COS 114, COS 115 and COS 116  
Corequisites: COS 118  
This course covers advanced cosmetology concepts. Topics include chemistry and hair structure, advanced cutting and design, and an overview of the licensing examination. Upon completion, students should be able to demonstrate an understanding of these cosmetology concepts and meet program completion requirements. S12343

COS 118  Salon IV  0  21  7  
Prerequisites: COS 111, COS 112, COS 113, COS 114, COS 115 and COS 116  
Corequisites: COS 117  
This course provides advanced experience in a simulated salon setting. Emphasis is placed on efficient and competent delivery of all salon services in preparation for the licensing examination and employment. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology Licensing Examination and meet entry-level employment requirements. S20023

COS 119  Esthetics Concepts I  2  0  2  
This course covers the concepts of esthetics. Topics include orientation, anatomy, physiology, hygiene, sterilization, first aid, chemistry, basic dermatology, and professional ethics. Upon completion, students should be able to demonstrate an understanding of the concepts of esthetics and meet course requirements. S12170

COS 120  Esthetics Salon I  0  18  6  
This course covers the techniques of esthetics in a comprehensive experience in a simulated salon setting. Topics include client consultation, facial, body treatments, hair removal, make-up applications, and color analysis. Upon completion, students should be able to safely and competently demonstrate esthetic services on clients in a salon setting. S10851
Course Descriptions

COS 121 Manicure/Nail Technology I  4 6 6
This course covers techniques of nail technology, hand and arm massage, and recognition of nail diseases and disorders. Topics include OSHA/safety, sanitation, bacteriology, product knowledge, salesmanship, manicures, artificial applications, pedicures, massage, and other related topics. Upon completion, students should be able to safely and competently perform nail care, including manicures, pedicures, massage, dressing, and artificial applications in a salon setting. S14134

COS 125 Esthetics Concepts II  2 0 2
This course covers more comprehensive esthetics concepts. Topics include nutrition, business management, make-up, and color analysis. Upon completion students should be able to demonstrate an understanding of the advanced esthetics concepts and meet course requirements. S10785

COS 126 Esthetics Salon II  0 18 6
This course provides experience in a simulated esthetics setting. Topics include machine facials, aroma therapy, massage therapy, electricity, and apparatus. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology licensing examination for Estheticians. S10869

COS 222 Manicure/Nail Technology II  4 6 6
Prerequisites: COS 121
This course covers advanced techniques of nail technology and hand and arm massage. Topics include OSHA/safety, product knowledge, customer service, salesmanship, artificial applications, nail art, and other related topics. Upon completion, students should be able to demonstrate competence necessary for the licensing examination, including advanced nail care, artificial enhancements, and decorations. S10861

COS 260 Design Applications  1 3 2
This course provides an overview of the design concepts used in cosmetology. Topics include the application of art principles and elements to artistically design hair, nails, and make-up and other related topics. Upon completion, students should be able to demonstrate knowledge and techniques associated with design concepts. S11199

COS 271 Instructor Concepts I  5 0 5
Corequisites: COS 272
This course introduces the basic cosmetology instructional concepts. Topics include orientation, theories of education, unit planning, daily lesson planning, laboratory management, student assessment, record keeping, and other related topics. Upon completion, students should be able to identify theories of education, develop lesson plans, demonstrate supervisory techniques, and assess student performance in a classroom setting. S11990

COS 272 Instructor Practicum I  0 21 7
Corequisites: COS 271
This course introduces supervisory and instructional skills for teaching entry-level cosmetology students in a laboratory setting. Topics include demonstrations of services, supervision, and entry-level student assessment. Upon completion, students should be able to demonstrate salon services and instruct and objectively assess the entry-level student. S12026

COS 273 Instructor Concepts II  5 0 5
Prerequisites: COS 271 and COS 272
Corequisites: COS 274
This course covers advanced cosmetology instructional concepts. Topics include practical demonstrations, lesson planning, lecture techniques, development and administration of assessment tools, record keeping, and other related topics. Upon completion, students should be able to develop lesson plans, demonstrate supervision techniques, assess student performance in a classroom setting, and keep accurate records. S11965

COS 274 Instructor Practicum II  0 21 7
Prerequisites: COS 271 and COS 272
Corequisites: COS 273
This course is designed to develop supervisory and instructional skills for teaching advanced cosmetology students in a laboratory setting. Topics include practical demonstrations, supervision, and advanced student assessment. Upon completion, students should be able to demonstrate competence in the areas covered by the Instructor Licensing Examination and meet program completion requirements. This is a certificate-level course. S12085

COS 274 Instructor Practicum II  0 21 7
Prerequisites: COS 271 and COS 272
Corequisites: COS 273
This course is designed to develop supervisory and instructional skills for teaching advanced cosmetology students in a laboratory setting. Topics include practical demonstrations, supervision, and advanced student assessment. Upon completion, students should be able to demonstrate competence in the areas covered by the Instructor Licensing Examination and meet program completion requirements. This is a certificate-level course. S12085

Course Descriptions

CST-111 Construction I  3 3 4
This course covers standard and alternative building methods to include wall framing. Topics include safety and footings, foundations, floor framing systems, and wall framing systems commonly used in the construction industry. Upon completion, students should be able to safely erect all framing necessary to begin roof framing. S10559

CST-112 Construction II  3 3 4
Prerequisites: CST-111
This course covers building methods and materials used to dry-in a building. Topics include safety, ceiling/roof framing applications, roof finishes, windows, and exterior doors. Upon completion, students should be able to safely erect different roof types and properly install windows and exterior doors, roofing, and exterior finish materials. S10519

CST-150 Building Science  2 2 3
This course introduces concepts and techniques for the design and interaction of the mechanical systems of high performance buildings. Topics include building envelope, heating, ventilation and air conditioning (HVAC), indoor air quality, lighting, plumbing and electrical. Upon completion, students should be able to understand building systems interaction and performance. S23517

CST-221 Statics/Structures  3 3 4
Prerequisites: Take One Set: Set 1: MAT-115 and ARC-112; Set 2: MAT-115 and CAR-112; Set 3: MAT-115 and CST-112; Set 4: MAT-120 and ARC-112; Set 5: MAT-120 and CAR-112; Set 6: MAT-120 and CST-112; Set 7: MAT-121 and ARC-112; Set 8: MAT-121 and CAR-112; Set 9: MAT-121 and CST-112; Set 10: MAT-161 and ARC-112; Set 11: MAT-161 and CAR-112; Set 12: MAT-161 and CST-112; Set 13: MAT-171 and ARC-112; Set 14: MAT-171 and CAR-112; Set 15: MAT-171 and CST-112; Set 16: MAT-175 and ARC-112; Set 17: MAT-175 and CAR-112; Set 18: MAT-175 and CST-112
This course covers the principles of statics and strength of materials as applied to structural building components. Topics include forces on columns, beams, girders, and footing and connection points when timber, steel, and concrete members are used. Upon completion, students should be able to accurately analyze load conditions present in structural members. S21174

CST-231 Soils & Site Work  3 2 4
Prerequisites: Take One: MAT-115, MAT-120, MAT-121, MAT-161, MAT-171, or MAT-175
This course covers site conditions and soil types and their physical properties. Topics include site preparation, access, mechanical analysis, classification of soils, and hydrostatics of groundwater. Upon completion, students should be able to adequately prepare a building site according to plans and specifications. S21176

CST-241 Planning/Estimating I  2 2 3
Prerequisites: Take One: BPR-130, MAT-120, MAT-121, MAT-161, MAT-171, or MAT-175
This course covers the procedures involved in planning and estimating a construction/building project. Topics include performing quantity take-offs of materials necessary for a building project. Upon completion, students should be able to accurately complete a take-off of materials and equipment needs involved in a construction project. S23282

Competencies
• Student Learning Outcomes
  1. Identify and define terminology specific to planning and estimating.
  2. Generate quantity take-offs for a construction project using the CSI format.
  3. Create an estimate based on materials, equipment, and labor.

CST-244 Sustainable Bldg Design  2 3 3
This course is designed to increase student knowledge about integrating sustainable design principles and green building technologies into mainstream residential construction practices. Emphasis is placed on reducing negative environmental impact and improving building performance, indoor air quality and the comfort of a building's occupants. Upon completion, students should be able to identify principles of green building, environmental efficiency and conservation of natural resources in relation to basic construction practices. S22260
Course Descriptions

CUSTOMER SERVICE TECHNOLOGY (CSV)

CSV 110  Introduction to Customer Service  
This course introduces the fundamentals of customer service technology. Topics include retail sales, order entry, credit, collection, authorization services, and fraud control. Upon completion, students should be able to exhibit an extensive vocabulary of customer service terminology and be prepared for advanced study in customer service technology. S14181

CSV 210  Advanced Customer Service  
This course focuses on improving communication and negotiation skills within a customer service environment. Emphasis is placed on working in fast-paced operations where speed and accuracy are important. Upon completion, students should be able to respond to complex customer requirements and efficiently handle stressful situations. S13537

CSV 220  Consumer Credit  
This course introduces the techniques and regulatory requirements of installment lending. Emphasis is placed on establishing credit, obtaining and checking credit information, servicing loans, and collecting amounts due. Upon completion, students should be able to demonstrate knowledge of the consumer lending process from application through closing and collection. S12161

CSV 221  Letters of Credit  
This course introduces the uses of letters of credit and the examination of related documents. Topics include shipping documents, mechanics of the letter of credit, payment and reimbursement, and document examination. Upon completion, students should be able to demonstrate knowledge of the documents required, processes included, and closing procedures for letters of credit. S12192

COMPUTER SCIENCE (CSC)

CSC 134  C++ Programming  
This course introduces computer programming using the C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. This course has been approved for transfer under the ICAA as a premajor and/or elective course requirement. S21066

CSC 139  Visual BASIC Programming  
This course introduces computer programming using the Visual BASIC programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S21071

CSC 151  JAVA Programming  
This course introduces computer programming using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S21076

COMPUTER INFORMATION TECHNOLOGY (CTS)

CTS 80  Computing Fundamentals  
This course covers fundamental functions and operations of the computer. Topics include identification of components and basic computer operations including introduction to operating systems, the Internet, web browsers, and communication using World Wide Web. Upon completion, students should be able to operate computers, access files, print documents and perform basic applications operations. S20994

CTS 112  Windows  
This course includes the fundamentals of the Windows software. Topics include graphical user interface, icons, directories, file management, accessories, and other applications. Upon completion, students should be able to use Windows software in an office environment. S20995

CTS 115  Information Systems Business Concept  
The course introduces the role of IT in managing business processes and the need for business process and IT alignment. Emphasis is placed on industry need for understanding business challenges and developing/managing information systems to contribute to the decision making process based on these challenges. Upon completion, students should be able to demonstrate knowledge of the ‘hybrid business manager’ and the potential offered by new technology and systems. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S20996

CTS 118  IS Professional Communication  
This course prepares the information systems professional to communicate with corporate personnel from management to end-users. Topics include information systems cost justification tools, awareness of personal hierarchy of needs, assessing these needs, and discussing technical issues with non-technical personnel. Upon completion, students should be able to communicate information systems issues to technical and non-technical personnel. S20997

CTS 120  Hardware/Software Support  
Prerequisites: CIS 110 or CIS 111  
This course covers the basics of a personal computer, including installation, operations and interactions with software. Topics include component identification, memory-system, peripheral installation and configuration, preventive maintenance, hardware diagnostics/repair, installation and optimization of system software, commercial programs, system configuration, and device-drivers. Upon completion, students should be able to select appropriate computer equipment and software, upgrade/maintain existing equipment and software, and troubleshoot/repair non-functioning personal computers. S20998

CTS 125  Presentation Graphics  
Prerequisites: CIS 110 or CIS 111  
This course provides hands-on experience with a graphics presentation package. Topics include terminology, effective chart usage, design and layout, integrating hardware components, and enhancing presentations with text, graphics, audio and video. Upon completion, students should be able to design and demonstrate an effective presentation. S20999

CTS 130  Spreadsheet  
Prerequisites: CIS 110 or CIS 111 or OST 137  
This course introduces basic spreadsheet design and development. Topics include writing formulas, using functions, enhancing spreadsheets, creating charts, and printing. Upon completion, students should be able to design and print basic spreadsheets and charts. S21000

CTS 135  Integrated Software Introduction  
Prerequisites: CIS 110 or CIS 111  
This course instructs students in the Windows or Linux based program suites for word processing, spreadsheet, database, personal information manager, and presentation software. This course prepares students for introductory level skills in database, spreadsheet, personal information manager, word processing, and presentation applications to utilize data sharing. Upon completion, students should be able to design and integrate data at an introductory level to produce documents using multiple technologies. S21001

CTS 155  Tech Support Functions  
This course introduces a variety of diagnostic and instructional tools that are used to evaluate the performance of technical support technologies. Emphasis is placed on technical support management techniques and support technologies. Upon completion, students should be able to determine the best technologies to support and solve actual technical support problems. S21002

CTS 210  Computer Ethics  
Prerequisites: CIS 110 or CIS 111 or NET 110 OR TNE 111  
This course introduces the student to current legal and ethical issues in the computer/engineering field. Topics include moral reasoning, ethical standards, intellectual property, social issues, encryption, software piracy, constitutional issues, and public policy in related matters. Upon completion, students should be able to demonstrate an understanding of the moral and social responsibilities and public policy issues facing an industry. S21003

Course Descriptions
Course Descriptions

CTS 217  Computer Training/Support  2 2 3
This course introduces computer training and support techniques. Topics include methods of adult learning, training design, delivery, and evaluation, creating documentation, and user support methods. Upon completion, students should be able to design and implement training and provide continued support for computer users. S21004

CTS 220  Advanced Hardware/Software Support
Prerequisites: CTS 120
This course provides advanced knowledge and competencies in hardware and operating system technologies for computer technicians to support personal computers. Emphasis is placed on: configuring and upgrading; diagnosis and troubleshooting; as well as preventive maintenance of hardware and system software. Upon completion, students should be able to install, configure, diagnose, perform preventive maintenance, and maintain basic networking on personal computers. S21005

CTS 230  Advanced Spreadsheet
Prerequisites: CTS 130
This course covers advanced spreadsheet design and development. Topics include advanced functions and statistics, charting, macros, databases, and linking. Upon completion, students should be able to demonstrate competence in designing complex spreadsheets. S21006

CTS 235  Integrated Software Advanced
Prerequisites: CTS 135
This course provides strategies to perform data transfer among software programs. Emphasis is placed on data interchange among word processors, spreadsheets, presentation graphics, databases and communications products. Upon completion, students should be able to integrate data to produce documents using multiple technologies. S21007

CTS 240  Project Management
Prerequisites: CIS 110 or CIS 111
This course introduces computerized project management software. Topics include identifying critical paths, cost management, and problem solving. Upon completion, students should be able to plan a complete project and project time and costs accurately. S21542

CTS 250  User Support & Software Evaluations
Prerequisites: CTS 120 and NOS 130
This course provides an opportunity to evaluate software and hardware and make recommendations to meet end-user needs. Emphasis is placed on software and hardware evaluation, installation, training, and support. Upon completion, students should be able to present proposals and make hardware and software recommendations based on their evaluations. S21009

CTS 255  Advanced Tech Support Functions
Prerequisites: CTS 155
This course introduces a variety of diagnostic and instructional tools that are used to evaluate the performance of technical support technologies. Topics include technical support management techniques, evaluation, and methods of deployment for technical support technologies. Upon completion, students should be able to determine the best technologies to support and solve more complex technical support problems. S21010

CTS 270  Essentials of System Performance
Prerequisites: CTS 255
This course introduces performance factors that affect the reliability and performance of networks. Topics include service-oriented indicators such as availability, response time, and accuracy, as well as efficiency-oriented indicators including throughput and utilization. Upon completion, students should be able to estimate how the limitations of network components affect the overall performance of a network. S21011

CTS 285  Systems Analysis & Design
Prerequisites: CIS 115
This course introduces established and evolving methodologies for the analysis, design, and development of an information system. Emphasis is placed on system characteristics, managing projects, prototyping, CASE/OOM tools, and systems development life cycle phases. Upon completion, students should be able to analyze a problem and design an appropriate solution using a combination of tools and techniques. S21012

CTS 286  Network Support
Prerequisites: NOS 230 or NOS 231
This course provides experience using CD ROM and on-line research tools and hands-on experience for advanced hardware support and troubleshooting. Emphasis is placed on troubleshooting network adapter cards and cabling, network storage devices, the DOS workstation, and network printing. Upon completion, students should be able to analyze, diagnose, research, and fix network hardware problems. S21013

CTS 287  Emerging Technologies
This course introduces emerging information technologies. Emphasis is placed on evolving technologies and trends in business and industry. Upon completion, students should be able to articulate an understanding of the current trends and issues in emerging technologies for information systems. S21014

CTS 288  Professional Practices in IT
This course provides students with the business skills needed for success in the information technology field. Topics include portfolio development, resume design, interviewing techniques and professional practices. Upon completion, students should be able to present themselves and their work in the information technology field in a professional manner. S20944

CTS 289  System Support Project
Prerequisites: CTS 285
This course provides an opportunity to complete a significant support project with minimal instructor assistance. Emphasis is placed on written and oral communication skills, project definition, documentation, installation, testing, presentation, and user training. Upon completion, students should be able to complete a project from the definition phase through implementation. S21015

DATABASE MANAGEMENT TECHNOLOGY (DBA)

DBA 110  Database Concepts
Prerequisites: CIS 070
This course introduces database design and creation using a DBMS product. Emphasis is placed on data dictionaries, normalization, data integrity, data modeling, and creation of simple tables, queries, reports, and forms. Upon completion, students should be able to design and implement normalized database structures by creating simple database tables, queries, reports, and forms. S21017

DBA 112  Database Utilization
Prerequisites: CIS 110 or CIS 111 or OST 137
This course introduces basic database functions and uses. Emphasis is placed on database manipulation with queries, reports, forms, and some table creation. Upon completion, students should be able to enter and manipulate data from the end user mode. S21018

DBA 115  Database Applications
Prerequisites: DBA 110
This course applies concepts learned in DBA 110 to a specific DBMS. Topics include manipulating multiple tables, advanced queries, screens and reports, linking, and command files. Upon completion, students should be able to create multiple table systems that demonstrate updates, screens, and reports representative of industry requirements. S21019

DBA 120  Database Programming I
This course is designed to develop SQL programming proficiency. Emphasis is placed on data definition, data manipulation, and data control statements as well as on report generation. Upon completion, students should be able to write programs which create, update, and produce reports. S21020

DBA 210  Database Administration
This course covers database administration issues and distributed database concepts. Topics include: database administrator (DBA) goals and functions, backup and recovery, standards and procedures, training, and database security and performance evaluations. Upon completion, students should be able to produce functional concepts documentation and administer a database. S21021

DBA 220  Oracle DB Programming II
Prerequisites: DBA 120
This course is designed to enhance programming skills developed in DBA 120. Topics include application development with GUI front-ends and embedded programming. Upon completion, students should be able to develop an Oracle DBMS application which includes a GUI front-end and report generation. S21022
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<td>SQL Server DB Programming II</td>
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<td>DBA 223</td>
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**DEVELOPMENTAL MATHEMATICS (DMA)**

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This course provides a conceptual study of integers and integer operations. Topics include integers, absolute value, exponents, square roots, perimeter and area of basic geometric figures, Pythagorean theorem, and use of the correct order of operations. Upon completion, students should be able to demonstrate an understanding of pertinent concepts and principles and apply this knowledge in the evaluation of expressions. Competencies: Visually represent an integer and its opposite on the number line - Explain the concept of the absolute value of an integer - Demonstrate the conceptual understanding of operations with integers to solve application problems - Correctly apply commutative and associative properties to integer operations - Apply the properties of exponents and calculate the principal square root of perfect squares - Simplify multi-step expressions using the rules for order of operations - Solve geometric application problems involving area and perimeter of rectangles and triangles, angles, and correctly apply the Pythagorean theorem S23164
Course Descriptions

**DMA 020 Fractions and Decimals**
Prerequisites: DMA 010  
This course provides a conceptual study of the relationship between fractions and decimals and covers related problems. Topics include application of operations and solving contextual application problems, including determining the circumference and area of circles with the concept of pi. Upon completion, students should be able to demonstrate an understanding of the connections between fractions and decimals. Competencies: Solve contextual application problems involving operations with fractions and decimals. Visually represent fractions and their decimal equivalents. Simplify fractions. Find the least common denominator of two fractions. Correctly perform arithmetic operations on fractions. Explain the relationship between a number and its reciprocal. Order correctly order fractions and decimals on a number line. Convert decimals between standard notation and word form. Round decimals to a specific place value. Estimate sums, differences, products, and quotients with decimals. Demonstrate an understanding of the connection between fractions and decimals. Convert between standard notation and scientific notation. Solve geometric applications involving the circumference and area of circles.  

**DMA 030 Proportions, Ratio, Rate and Percent**
Prerequisites: DMA 010 and DMA 020  
This course provides a conceptual study of the problems that are represented by rates, ratios, percent, and proportions. Topics include rates, ratios, percent, proportion, conversion of English and metric units, and applications of the geometry of similar triangles. Upon completion, students should be able to use their understanding to solve conceptual application problems. Competencies: Apply the concepts of ratio, rates, proportions, and percents to application problems. Recognize and choose the correct units in application problems using ratios, rates, and proportions. Calculate a unit rate. Convert measurements within and between the U.S. customary and metric system using unit analysis. Compare percents, decimals, and fractions. Apply the concepts of part, whole, and percent to solve contextual application problems.  

**DMA 040 Expressions, Linear Equations and Inequalities**
Prerequisites: Take One Set: Set 1: DMA 010, DMA 020 and DMA 030 Set 2: MAT 060  
This course provides a conceptual study of the problems involving linear expressions, equations, and inequalities. Emphasis is placed on solving contextual application problems. Upon completion, students should be able to distinguish between simplifying expressions and solving equations and apply this knowledge to problems involving linear expressions, equations, and inequalities. Competencies: Differentiate between expressions, equations, and inequalities. Simplify and evaluate, when appropriate, expressions, equations, and inequalities. Effectively apply algebraic properties of equality. Correctly represent the solution to an inequality on the number line. Represent the structure of application problems pictorially and algebraically. Apply effective problem solving strategies to contextual application problems. Demonstrate conceptual knowledge by modeling and solving applications using linear equations and inequalities.  

**DMA 050 Graphs and Equations of Lines**
Prerequisites: Take One Set: Set 1: DMA 010, DMA 020, DMA 030 and DMA 040 Set 2: DMA 040 and MAT 060  
This course provides a conceptual study of problems involving graphic and algebraic representations of lines. Topics include slope, equations of lines, interpretation of basic graphs, and linear modeling. Upon completion, students should be able to solve contextual application problems and represent real-world situations as linear equations in two variables. Competencies: Read and interpret basic graphs to solve problems. Apply the concept of slope as a rate of change in real-world situations. Write and graph linear equations in two variables to model real-world situations. Represent real-world situations as linear equations in two variables in tabular form, graphically, and algebraically.  

**DMA 060 Polynomial and Quadratic Applications**
Prerequisites: Take One Set: Set 1: DMA 010, DMA 020, DMA 030, DMA 040 and DMA 050 Set 2: DMA 040, DMA 050, and MAT 060 Set 3: MAT 060 and MAT 070  
This course provides a conceptual study of problems involving graphic and algebraic representations of quadratics. Topics include basic polynomial operations, factoring polynomials, and solving polynomial equations by means of factoring. Upon completion, students should be able to find algebraic solutions to contextual problems with quadratic applications. Competencies: Represent real-world applications as quadratic equations in tabular, graphic, and algebraic forms. Apply exponent rules. Solve application problems involving polynomial operations. Apply the principles of factoring when solving problems. Represent contextual applications using function notation. Analyze graphs of quadratic functions to solve problems.  

**DMA 070 Rational Expressions and Equations**
Prerequisites: Take One Set: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 and DMA 060 Set 2: DMA 040, DMA 050, DMA 060, and MAT 060 Set 3: DMA 060, MAT 060, and MAT 070 Set 4: DMA 010, DMA 020, DMA 030, DMA 060, and MAT 070  
This course provides a conceptual study of problems involving graphic and algebraic representations of rational expressions. Topics include simplifying and performing operations with rational expressions and equations, understanding the domain, and determining the reasonableness of an answer. Upon completion, students should be able to find algebraic solutions to contextual problems with rational applications. Competencies: Solve contextual application problems involving operations on rational expressions and/or equations. Represent real-world situations as rational equations and graphically using a graphing calculator. Analyze the meaning of asymptotes using a graphing calculator. Explain the reasonableness of solutions found. Correctly perform operations with radical expressions. Use a graphing calculator to analyze radical functions.  

**DME 110 Introduction to Digital Media**
Prerequisites: DMA 010 and DMA 020  
This course introduces students to key concepts, technologies, and issues related to digital media. Topics include emerging standards, key technologies and related design issues, terminology, media formats, career paths, and ethical issues. Upon completion, students should be able to demonstrate the various media formats that are used in digital media technology.  

**DME 115 Graphic Design Tools**
Prerequisites: DME 110  
This course introduces students with an introduction to creative expression and art/design techniques in a digital environment. Emphasis is placed on designing and creating visual components consisting of bit-mapped and vector-based images, drawings, banners, text, simple animations, and multiple layers. Upon completion, students should be able to design and produce a range of visual products using digital processing techniques.  

**DME 120 Introduction to Multimedia Application**
Prerequisites: DME 110  
This course introduces students with an introduction to creative expression and art/design techniques in a digital environment. Emphasis is placed on designing and creating visual components consisting of bit-mapped and vector-based images, drawings, banners, text, simple animations, and multiple layers. Upon completion, students should be able to design and produce a range of visual products using digital processing techniques.  

**DME 130 Digital Animation I**
Prerequisites: DME 110  
This course introduces concepts for planning and developing animation sequences. Emphasis will be placed on review of digital animation concepts and exploration of various animation software packages. Upon completion, students should be able to produce simple animations.  

**DME 140 Introduction to Audio/Video Media**
Prerequisites: DME 110  
This course is designed to teach students how to manipulate digital audio and video content for multimedia applications. Topics include format conversion and a review of current technologies and digital formats. Upon completion, students should be able to modify existing audio and video content to meet a range of production requirements associated with digital media applications.  

**DME 210 User Interface Design**
Prerequisites: DME 110  
This course covers current design approaches and emerging standards related to the design and development of user interfaces. Emphasis is placed on conducting research, and analyzing and reviewing current practices in effective interface design. Upon completion, students should be able to intelligently discuss and evaluate new and existing digital media products in terms of the user interface.  

**DIGITAL MEDIA TECHNOLOGY (DME)**

This course provides a conceptual study of problems involving graphic and algebraic representations of rational expressions. Topics include simplifying and performing operations with rational expressions and equations, understanding the domain, and determining the reasonableness of an answer. Upon completion, students should be able to find algebraic solutions to contextual problems with rational applications. Competencies: Solve contextual application problems involving operations on rational expressions and/or equations. Represent real-world situations as rational equations and graphically using a graphing calculator. Analyze the meaning of asymptotes using a graphing calculator. Explain the reasonableness of solutions found. Correctly perform operations with radical expressions. Use a graphing calculator to analyze radical functions.
Course Descriptions

DME 220 Interactive Multi-Media Programming 2 2 3
Prerequisites: DME 120
This course is designed to build on concepts developed in DME 120 and teaches students to apply custom programming to develop advanced applications and components. Emphasis is placed on scripting language functionalities associated with a variety of software packages. Upon completion, students should be able to produce advanced, high-quality interactive multimedia applications. S20556

DME 230 Digital Animation II 2 2 3
Prerequisites: DME 130
This course introduces state-of-the-art 3D animation techniques and concepts. Emphasis is placed on utilizing the features of current animation software. Upon completion, students should be able to produce 3D animations as components of a multimedia application. S20557

DME 240 Media Compression 2 2 3
Prerequisites: DME 110 and DME 140
This course introduces software and usage of digital audio and video compression and streaming media technologies. Topics include compression technologies, file formats and codecs, streaming media, streaming media services, and current and emerging trends. Upon completion, students should be able to utilize compressed media in a variety of video, web and multimedia applications. S21735

DME 260 Emerging Technology in Digital Media 2 2 3
Prerequisites: DME 120 and DME 130
This course provides students with the latest technologies and strategies in the field of digital media. Emphasis is placed on the evaluation of emerging digital media technologies and presenting those findings to the class. Upon completion, students should be able to critically analyze emerging digital media technologies and establish informed opinions. S20558

DME 270 Professional Practices in Digital Media 2 2 3
Prerequisites: DME 120 and DME 130
This course introduces students to business skills needed to succeed in the digital media workplace. Topics include portfolio development, resume design, and preparation of media contacts. Upon completion, students should be able to prepare themselves and their work for a career in the digital media workplace. S20559

DME 285 Systems Projects 2 2 3
Prerequisites: DME 120 and DME 130
This course provides an opportunity to complete a significant digital media project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, testing, presentation, and implementation. Upon completion, students should be able to complete, maintain and implement a digital media project. S20560

DRA 111 Theatre Appreciation 3 0 3
This course provides a study of the art, craft, and business of the theatre. Emphasis is placed on the audience's appreciation of the work of the playwright, director, actor, designer, producer, and critic. Upon completion, students should be able to demonstrate a vocabulary of theatre terms and to recognize the contributions of various theatre artists. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S11248

DRA 170 Play Production I 0 0 3
This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production. This course has been approved for transfer under the Comprehensive Articulation Agreement as a pre-major and/or elective course requirement. S10529

DEVELOPMENTAL READING/ENGLISH (DRE)

DRE-096 Integrated Reading and Writing 2.50 1 3
This course is designed to develop proficiency in specific integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and cognition and composition of well-developed, coherent, and unified texts; these topics are primarily taught at the introductory level using texts primarily in a Lexile® range of 960 to 1115. Upon completion, students should

be able to apply those skills toward understanding a variety of academic and career-related texts and composing effective paragraphs. S23585

Competencies
- Students will demonstrate the use of pre-reading, reading, and post-reading strategies, including previewing to comprehend texts; activating prior knowledge; identifying text structures using context clues; identifying stated main ideas in paragraph-length texts; and making text-to-self connections.
- Students will demonstrate the use of the writing process (prewriting, drafting, revising, editing, and proofreading), including narrowing the focus of the text, establishing a clear main idea, generating supporting details, and determining appropriate organization.
- Students will apply critical thinking strategies in reading and writing and demonstrate an understanding of technical-and academic language, including the difference between formal and informal language.
- Students will demonstrate an understanding of purpose, point of view, and tense.
- Students will demonstrate an understanding of fact and opinion in reading and by writing paragraphs using facts and opinions for support of main ideas.
- Students will recognize inferences in texts and analyze and evaluate graphic materials in a text.
- Students will recognize and compose well-developed, coherent, and unified texts, including writing clear topic sentences and relevant body sentences; demonstrating an understanding of specific and adequate supporting information; and analyzing and evaluating body sentences in texts and student writings for specific and adequate support.
- Students will demonstrate an understanding of coherence through organizational patterns, including employing a variety of organizational patterns to draft texts; and using transitions, key words, and synonyms to connect ideas and achieve coherence in writing.
- Students will apply the conventions of Standard Written English.

DRE-097 Integrated Reading Writing II 2.50 1 3
Prerequisites: DRE-096
This course is designed to develop proficiency in integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and cognition and composition of well-developed, coherent, and unified texts; these topics are taught at a reinforcement level using texts primarily in a Lexile® range of 1070 to 1220. Upon completion, students should be able to demonstrate and apply those skills toward understanding a variety of complex academic and career texts and composing essays incorporating relevant, valid evidence. S23586

Competencies
- Students will demonstrate the use of pre-reading, reading, and post-reading strategies, including applying a variety of previewing strategies to complex texts; activating prior knowledge; identifying important text attributes; using context clues; distinguishing between connotative and denotative meanings and between literal and implied meanings in Standard Written English; employing introductory metacognitive strategies; identifying stated and implied main ideas at the introductory level; recognizing organizational patterns; responding in writing to complex texts using text-to-text connections; and paraphrasing and summarizing texts at an introductory level.
- Students will demonstrate the use of the writing process (prewriting, drafting, revising, editing, and proofreading), including narrowing the focus of the text; establishing a clear main idea (thesis statement); generating supporting details for a specific purpose and audience; determining appropriate organization; composing and revising drafts; and using MLA or APA guidelines.
- Students will apply critical thinking strategies to analyze complex texts and to inform and strengthen their writing, including making logical conclusions based on prior knowledge and inference; understanding the difference between formal and informal language; using types of technical and academic language in complex texts; recognizing figurative language/simile, metaphor, and personification; determining the author's purpose, point of view, and tone in complex texts; identifying fact and opinion statements in complex texts; demonstrating an understanding of verbal and situational irony; and understanding bias, logical fallacies, and propaganda techniques.
- Students will identify and write clear thesis statements, including identifying thesis statements in multi-paragraph complex texts, and writing clear, focused thesis statements for essays.
- Students will demonstrate an understanding of specific and adequate supporting information, including analyzing and evaluating body paragraphs in complex texts and student writings for specific and adequate support; assessing, synthesizing, and integrating relevant and valid evidence from assigned readings to support a main idea; avoiding plagiarism by paraphrasing; and documenting source material using MLA or APA guidelines.
- Students will achieve unity and coherence in essays, including identifying points that are off-topic in complex texts, and composing body paragraphs that support the thesis statement of an essay.
- Students will apply the conventions of Standard Written English.
- Students will employ appropriate technology when composing texts.
Students will apply the conventions of Standard Written English.

Employing a variety of organizational patterns to draft texts and using transitional strategies to connect ideas and support statements; using inference skills; demonstrating an understanding of verbal and situational irony; interpreting imagery, symbols, and analogies; determining the author's purpose and point of view; identifying fact and opinion statements; using inference skills; demonstrating an understanding of verbal and situational irony; understanding bias, logical fallacies, and propaganda techniques; and demonstrating consistent point of view, clear purpose, appropriate tone, and appropriate use of facts and expert opinions.

Students will recognize and compose well-developed, coherent, and unified texts, including clear thesis statements and specific and adequate supporting information; analyzing and evaluating body paragraphs in texts at the career and college ready level and to inform and strengthen writing, including comprehending figurative language—simile, metaphor, personification; interpreting imagery, symbols, and analogies; determining the author's purpose and point of view; identifying fact and opinion statements; using inference skills; demonstrating an understanding of verbal and situational irony; understanding bias, logical fallacies, and propaganda techniques; and demonstrating consistent point of view, clear purpose, appropriate tone, and appropriate use of facts and expert opinions.

Students will demonstrate the use of pre-reading, reading, and post-reading strategies to comprehend texts at the career and college ready level, including activating prior knowledge; identifying important text attributes; using context clues; distinguishing between connotative and denotative meanings and between informal language and Standard Written English; employing metacognitive strategies; identifying stated and implied main ideas and details in career and college ready texts and student writing; recognizing organizational patterns in career and college ready texts; summarizing; and responding to texts using text-to-world connections.

Students will understand the use of the writing process (prewriting, drafting, revising, editing, and proofreading), including narrowing the focus of the text; establishing a clear main idea; generating supporting details for a specific purpose and audience; determine appropriate organization; composing and revising drafts; using editing and proofreading strategies to reflect Standard Written English; using MLA or APA guidelines.

Students will apply critical thinking strategies to analyze texts at the career and college ready level and to inform and strengthen writing, including comprehending figurative language—simile, metaphor, personification; interpreting imagery, symbols, and analogies; determining the author's purpose and point of view; identifying fact and opinion statements; using inference skills; demonstrating an understanding of verbal and situational irony; understanding bias, logical fallacies, and propaganda techniques; and demonstrating consistent point of view, clear purpose, appropriate tone, and appropriate use of facts and expert opinions.

Students will apply the conventions of Standard Written English.

Students will employ appropriate technology when composing texts.
Course Descriptions

EDU 145 Child Development II
Prerequisites: Take one set: ENG 080, RED 080 Set 2: ENG 085
This course includes the theories of child development, needs, milestones, and factors that influence development, from preschool through middle childhood. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S22289

EDU 146 Child Guidance
Prerequisites: Take one set: ENG 080, RED 080 Set 2: ENG 085
This course introduces principles and practical techniques including the design of learning environments for providing developmentally appropriate guidance for all children, including those at risk. Emphasis is placed on observing and understanding causes of behavior, appropriate expectations, development of self control and the role of communication and guidance. Upon completion, students should be able to demonstrate direct/indirect strategies for preventing problem behaviors, teaching appropriate/acceptable behaviors, negotiation, setting limits and recognizing at risk behaviors. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S22290

EDU 151 Creative Activities
Prerequisites: Take one set: ENG 080, RED 080 Set 2: ENG 085
This course covers planning, creation and adaptation of developmentally supportive learning environments with attention to curriculum, interactions, teaching practices and learning materials. Emphasis is placed on creating and adapting integrated, meaningful, challenging and engaging developmentally supportive learning experiences in art, music, movement and dramatics for all children. Upon completion, students should be able to create, adapt, implement and evaluate developmentally supportive learning materials, experiences and environments. S22294

EDU 153 Health, Safety & Nutrition
Prerequisites: Take one set: ENG 080, RED 080 Set 2: ENG 085
This course covers promoting and maintaining the health and well-being of all children. Topics include health and nutrition, child-care for children with deafness, special education, hygiene, safety and healthy learning environments, recognition and reporting of abuse and neglect and state regulations. Upon completion, students should be able to demonstrate knowledge of health, safety, and nutritional needs, safe learning environments, and adhere to state regulations. S22300

EDU 162 Observation & Assessment in ECE
Prerequisites: Take one set: ENG 080, RED 080 Set 2: ENG 085
This course introduces the research, benefits, goals, and ethical considerations associated with observation and assessment in Early Childhood Education. Emphasis is placed on observation/assessment strategies including anecdotal records, event samples, rating scales, and portfolios to create appropriate learning experiences. Upon completion, students should be able to practice responsible assessment and use assessments to enhance programming and collaboration for children and families. S22305

EDU 163 Classroom Management & Instruction
Prerequisites: Take one set: ENG 080, RED 080 Set 2: ENG 085
This course covers classroom management and instructional techniques with school-age populations. Topics include classroom management and organization, teaching strategies, individual student differences and learning styles, and developmentally appropriate classroom guidance techniques. Upon completion, students should be able to utilize developmentally appropriate behavior management and instructional strategies that enhance the teaching/learning process and promote students' academic success. S22306

EDU 184 Early Child Intro Pract
Prerequisites: Take one set: ENG 080, RED 080, EDU 119 Set 2: ENG 085, EDU 119
This course introduces students to early childhood settings and applying skills in a three star (minimum) or NAECY accredited or equivalent, quality early childhood environments. Emphasis is placed on observing children and assisting in the implementation of developmentally appropriate activities/environments for all children; and modeling reflective/professional practices. Upon completion, students should be able to demonstrate developmentally appropriate interactions with children and ethical/professional behaviors as indicated by assignments and onsite facility visits. S22368

Course Descriptions

EDU 216 Foundations of Education
Prerequisites: Take one set: ENG 090, RED 090 Set 2: ENG 095
This course introduces the American educational system and the teaching profession. Topics include historical and philosophical foundations of education, contemporary educational, structural, legal, and financial issues, and teaching in public school education. Students should be able to relate classroom observations to the roles of teachers and schools and the process of teacher education. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S22317

EDU 221 Children with Exceptionalities
Prerequisites: Take one set: ENG 090, RED 090, EDU 144 EDU 145 Set 2: ENG 090, RED 090, PSY 244 PSY 245 Set 3: ENG 095, EDU 144 EDU 145 Set 4: ENG 095, PSY 244 PSY 245
This course introduces children with exceptionalities, their families, support services, inclusive/diverse settings, and educational/family plans based on the foundations of child development. Emphasis is placed on the characteristics of exceptionalities, observation and assessment of children, strategies for adapting the learning environment, and identification of community resources. Upon completion, students should be able to recognize exceptions, describe the referral process, and depict collaboration with professionals to plan/implement, and promote best practice. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement at select institutions only. S22318

EDU 222 Learners with Behavioral Disorders
(EDU 222 replaced EDU 147)
Prerequisites: Take one set: ENG 090, RED 090, EDU 144, EDU 145 Set 2: ENG 090, RED 090, PSY 244, PSY 245 Set 3: ENG 095, EDU 144, EDU 145 Set 4: ENG 095, PSY 244, PSY 245
This course provides a comprehensive study of learners with behavioral disorders encompassing characteristics, assessments, placement alternatives, inclusion and family interventions. Topics include legislation, appropriate management interventions, and placement options for children with behavior disorders. Upon completion, students should be able to identify, develop, and utilize positive behavior support systems. S22291

EDU 223 Specific Learning Disabilities
Prerequisites: Take one set: ENG 090, RED 090, EDU 144, EDU 145 Set 2: ENG 090, RED 090, PSY 244, PSY 245 Set 3: ENG 095, EDU 144, EDU 145 Set 4: ENG 095, PSY 244, PSY 245
This course provides a comprehensive study of characteristics, alternative assessments, teaching strategies, placement options, inclusion, and family intervention for children with specific learning disabilities. Topics include causes, assessment instruments, learning strategies, and collaborative/inclusion methods for children with specific learning disorders. Upon completion, students should be able to identify, assess, and providing educational interventions for children with specific learning disabilities and their families. S22292

EDU 234 Infants, Toddlers, & Twos
Prerequisites: Take one set: ENG 090, RED 090, EDU 119 Set 2: ENG 095, EDU 119
This course covers the unique needs and rapid changes that occur in the first three years of life and the related factors that influence development. Emphasis is placed on recognizing and supporting developmental milestones through purposeful strategies, responsive care routines and identifying elements of quality, inclusive early care and education. Upon completion, students should be able to demonstrate respectful relationships that provide a foundation for healthy infant/toddler/twos development, plan/select activities/materials, and partner with diverse families. S22321

EDU 235 School-Age Development & Program
Prerequisites: Take one set: ENG 090, RED 090 Set 2: ENG 095
This course includes developmentally appropriate practices in group settings for school-age children. Emphasis is placed on principles of development, environmental planning techniques. Upon completion, students should be able to discuss developmental principles for all children ages five to twelve and plan and implement developmentally-appropriate activities. S22322

EDU 241 Adult-Child Relations
Prerequisites: Take one set: ENG 090, RED 090 Set 2: ENG 095
This course covers self-concept and effective and active listening skills in positive one-to-one interactions with individuals and groups of children. Emphasis is placed on self-concept development and effective communication techniques used with children. Upon completion, students should be able to identify principles underlying self-concept and demonstrate effective listening and communication skills used by adults with children. S22324
Course Descriptions

EDU 243  Learning Theory  3  0  3
Prerequisites: Take one set: Set 1: ENG 090, RED 090 Set 2: ENG 095
This course provides lateral entry teachers an introduction to learning theory, various styles of learning, and motivational factors involved in the learning process. Emphasis is placed on the development of cognitive skills using the eight types of intelligence and applying these to practical classroom situations. Upon completion, students should be able to describe theories and styles of learning and discuss the relationship between different types of intelligence to learning motivation. S22325

EDU 247  Sensory & Physical Disabilities  3  0  3
Prerequisites: Take one set: Set 1: ENG 090, RED 090, EDU 144, EDU 145 Set 2: ENG 090, RED 090, PSY 244, PSY 245 Set 3: ENG 095, EDU 144, EDU 145 Set 4: ENG 095, PSY 244, PSY 245
This course covers characteristics, intervention strategies, assistive technologies, and inclusive practices for children with special needs. Topics include inclusions, utilization of support services, other health impairments and family involvement for children with sensory and physical disabilities. Upon completion, students should be able to identify and utilize intervention strategies and service delivery options for those specific disabilities. S22328

EDU 248  Developmental Delays  3  0  3
Prerequisites: Take one set: Set 1: ENG 090, RED 090, EDU 144, EDU 145 Set 2: ENG 090, RED 090, PSY 244, PSY 245 Set 3: ENG 095, EDU 144, EDU 145 Set 4: ENG 095, PSY 244, PSY 245
This course covers the causes and assessment of developmental delays and individualized instruction and curriculum for children with developmental delays. Emphasis is placed on definition, characteristics, assessment, educational strategies, inclusion, family involvement, and services for children with developmental delays. Upon completion, students should be able to identify, assess, and plan educational intervention strategies for children with developmental delays and their families. S22329

EDU 250  PRAXIS I Preparation  1  0  1
Prerequisites: Take one set: Set 1: ENG 090, RED 090 Set 2: ENG 095
This course is designed to prepare potential teachers for the PRAXIS I exam that is necessary to enter the field of education. Emphasis is placed on content specifications of the PRAXIS I exam, study skills and simulated examinations. Upon completion, students should be able to demonstrate an understanding of the content necessary for successful completion of the PRAXIS I exam. S22330

EDU 251  Exploration Activities  3  0  3
Prerequisites: Take one set: Set 1: ENG 090, RED 090 Set 2: ENG 090
This course covers discovery experiences in science, math, and social studies. Emphasis is placed on developing concepts for each area and encouraging young children to explore, discover, and construct concepts. Upon completion, students should be able to discuss the discovery approach to teaching, explain major concepts in each area, and plan appropriate experiences for children. S22331

EDU 252  Math & Science Activities  3  0  3
Prerequisites: Take one set: Set 1: ENG 090, RED 090 Set 2: ENG 095
This course introduces discovery experiences in math and science. Topics include concepts, facts, phenomena, and skills in each area. Upon completion, students should be able to identify, plan, select materials and equipment, and implement and evaluate developmentally appropriate curriculum materials. S22332

EDU 256  Instructional Strategies in Social Studies  2  2  3
Prerequisites: Take one set: Set 1: ENG 090, RED 090 Set 2: ENG 095
This course covers objectives, content, materials, and instructional approaches to social studies. Topics include the integration of history, geography, economics, and government materials; research/study techniques; and critical thinking. Upon completion, students should be able to assess, plan, implement, and evaluate developmentally appropriate experiences as it relates to the NC Standard Course of Study. S22343

EDU 259  Curriculum Planning  3  0  3
Prerequisites: Take one set: ENG 090, RED 090, EDU 119 Set 2: ENG 095, EDU 119
This course is designed to focus on curriculum planning for three to five year olds. Topics include philosophy, curriculum models, indoor and outdoor environments, scheduling, authentic assessment, and planning developmentally appropriate experiences. Upon completion, students should be able to design children's development, critique curriculum, plan for individual and group needs, and assess and create quality environments. S22345

EDU 261  Early Childhood Administration I  3  0  3
Prerequisites: Take one set: Set 1: ENG 090, RED 090 Set 2: ENG 095
Corequisites: EDU 119
This course introduces principles of basic programming and staffing, budgeting/financial management and marketing, and rules and regulations of diverse early childhood programs. Topics include program structure and philosophy, standards of NC child care programs, finance, funding resources, and staff and organizational management. Upon completion, students should be able to develop components of program/personnel handbooks, a program budget, and demonstrate knowledge of fundamental marketing strategies and NC standards. S22346

EDU 262  Early Childhood Administration II  3  0  3
Prerequisites: Take one set: Set 1: ENG 090, RED 090, EDU 261 Set 2: ENG 095, EDU 261
Corequisites: EDU 119
This course focuses on advocacy/leadership, public relations/community outreach and program quality/evaluation for diverse early childhood programs. Topics include program evaluation/accreditation, involvement in early childhood professional organizations, leadership/mentoring, family, volunteer and community involvement and early childhood advocacy. Upon completion, students should be able to define and evaluate all components of early childhood programs, develop strategies for advocacy and integrate community into programs. S22347

EDU 271  Educational Technology  2  2  3
Prerequisites: Take one set: Set 1: ENG 090, RED 090 Set 2: ENG 095
This course introduces the use of technology to enhance teaching and learning in all educational settings. Topics include technology concepts, instructional strategies, materials and adaptive technology for children with special needs, evaluations, facilitation of assessment/evaluation, and ethical issues surrounding the use of technology. Upon completion, students should be able to apply technology enhanced instructional strategies, use a variety of technology resources and demonstrate appropriate technology skills in educational environments. S22337

EDU 280  Language & Literacy Experience  3  0  3
Prerequisites: Take one set: Set 1: ENG 090, RED 090 Set 2: ENG 095
This course is designed to expand students' understanding of children's language and literacy development and provides strategies for enhancing language/literacy experiences in an enriched environment. Topics include selection of diverse literature and interactive media, the integration of literacy concepts throughout the curriculum, appropriate observations/assessments and inclusive practices. Upon completion, students should be able to select, plan, implement and evaluate developmentally appropriate and diverse language/literacy experiences. S22339

EDU 281  Instructional Strategies in Reading & Writing (EDU 281 replaced EDU 186)  2  2  3
Prerequisites: Take one set: Set 1: ENG 090, RED 090 Set 2: ENG 095
This course covers concepts, resources, and strategies for teaching reading and writing to elementary through middle-grade children. Topics include the importance of literacy learning styles, skills assessment, various reading and writing approaches and instructional strategies. Upon completion, students should be able to assess, plan, implement and evaluate school-age literacy experiences as related to the North Carolina Standard Course of Study. S22293

EDU 284  Early Child Capstone Practicum  1  9  4
Prerequisites: Take One Set: Set 1: ENG 090, RED 090, EDU 119, EDU 144, EDU 145, EDU 146, and EDU 151 Set 2: ENG 090, RED 090, PSY 244, PSY 245, PSY 246, EDU 119, EDU 144, EDU 145, EDU 146, and EDU 151 Set 3: ENG 090, RED 090, EDU 119, PSY 245, EDU 144, EDU 145, and EDU 151 Set 4: ENG 090, RED 090, EDU 119, PSY 244, EDU 145, EDU 146, and EDU 151 Set 5: ENG 095, EDU 119, EDU 144, EDU 145, EDU 146, and EDU 151 Set 6: ENG 095, EDU 119, PSY 244, PSY 245, EDU 144, and EDU 151 Set 7: ENG 095, EDU 119, EDU 144, PSY 244, PSY 245, EDU 144, and EDU 151 Set 8: ENG 095, EDU 119, EDU 145, PSY 244, EDU 145, and EDU 151
This course is designed to allow students to apply skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on designing, implementing and evaluating developmentally appropriate activities and environments for all children; supporting/involving families in child development; reflecting on practice. Upon completion, students should be able to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and ethical/professional behaviors as indicated by assignments and onsite faculty visits. S22273

EDU 285  Internship Experience-School Age  1  9  4
Prerequisites: Take one set: Set 1: ENG 090, RED 090, EDU 144, EDU 145, EDU 118, EDU 163 Set 2: ENG 090, RED 090, PSY 244, PSY 245, EDU 118, EDU 163 Set 3: ENG 090, RED 090, PSY 244, PSY 245, EDU 216, EDU 163 Set 6: ENG 090, RED 090, EDU 144, EDU 145,
EDU 287 Leadership/Early Child Education  
Prerequisites: Take one set. Set 1: ENG 090, RED 090, EDU 119, EDU 131, EDU 144, EDU 145 Set 2: ENG 090, RED 090, EDU 119, EDU 131, PSY 244, PSY 245 Set 3: ENG 095, EDU 119, EDU 131, EDU 144, EDU 145 Set 4: ENG 095, EDU 119, EDU 131, PSY 244, PSY 245  
This course is designed to facilitate and guide the development of early childhood professionals preparing for leadership roles in improving community early childhood services. Topics include principles of social change, characteristics of effective leaders, techniques of action research, childcare funding mechanisms, quality initiatives, and key issues in early care. Upon completion, students should be able to identify key issues; develop strategic plans; establish relationships with community leaders; and identify opportunities and barriers for advocacy. S22351

EDU 288 Advanced Issues in Early Childhood Education  
Prerequisites: Take one set. Set 1: ENG 090, RED 090 Set 2: ENG 095  
This course covers advanced topics and issues in early childhood. Emphasis is placed on current advocacy issues, emerging technology, professional growth experiences, and other related topics. Upon completion, students should be able to list, discuss, and explain advanced current topics and issues in early childhood education. S22342

EDU 289 Advanced Issues in School Age  
Prerequisites: Take one set. Set 1: ENG 090, RED 090 Set 2: ENG 095  
This course covers advanced topics and issues that relate to school-age programs. Emphasis is placed on current advocacy issues, emerging technology, professional growth, ethics, and organizations for providers/teachers working with school-age populations. Upon completion, students should be able to list, discuss, and explain advanced current topics and issues surrounding school-aged populations. S22775

ENGINEERING (EGR)

EGR 110 Introduction to Engineering Technology  
1 2 2  
This course introduces general topics relevant to engineering technology. Topics include career assessment, professional ethics, critical thinking and problem solving, usage of college resources for study and research, and using tools for engineering computations. Upon completion, students should be able to choose a career option in engineering technology and utilize college resources to meet their educational goals. S20645

EGR 120 Engineering and Design Graphics  
2 3 2  
This course introduces the graphical tools for engineering and design communications. Emphasis is placed upon selecting the appropriate methods and tools and conveying ideas using sketches, orthographic views and projections, and computer graphics applications. Upon completion, students should be able to communicate essential features or two-dimensional and three-dimensional objects using the proper tools and methods. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S23536

Competencies / Student Learning Outcomes
1. Apply basic concepts of engineering graphics to problem solving. 2. Develop designs from initial concepts to final working drawings. 3. Utilize two dimensional computer aided drawing (CAD) tools to generate a working drawing. 4. Develop and prepare a drawing with orthographic views of an object. 5. Apply proper dimensions and tolerances per industry standard.

EGR 131 Introduction to Electronics Technology  
1 2 2  
This course introduces the basic skills required for electrical/electronic technicians. Topics include soldering/desoldering, safety and sustainability practices, test equipment, scientific calculators, A/V wire table, the resistor color code, electronic devices, problem solving, and use of hand tools. Upon completion, students should be able to solder/desolder, operate test equipment, apply problem-solving techniques, and use a scientific calculator. S23480

Course Descriptions
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<thead>
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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Units</th>
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<tbody>
<tr>
<td>ELC 128</td>
<td>Introduction to PLC</td>
<td>2</td>
<td>3</td>
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<tr>
<td>ELC 130</td>
<td>Advanced Motors/Controls</td>
<td>2</td>
<td>3</td>
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<tr>
<td>ELC 131</td>
<td>DC/AC Circuit Analysis</td>
<td>4</td>
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<td>Electrical Drawings</td>
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<td>ELC 135</td>
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<td>Electrical Machines II</td>
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<td>ELC 228</td>
<td>PLC Applications</td>
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<tr>
<td>ELC-231</td>
<td>Electric Power Systems</td>
<td>3</td>
<td>2</td>
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</tbody>
</table>

**Course Descriptions**

**ELC 128 Introduction to PLC**
- This course introduces the programmable logic controller (PLC) and its associated applications. Topics include ladder logic diagrams, input/output modules, power supplies, surge protection, selection/installation of controllers, and interfacing of controllers with equipment. Upon completion, students should be able to understand basic PLC systems and create simple programs. S23522

**ELC 130 Advanced Motors/Controls**
- Prerequisites: ELC-111, ELC-112, or ELC-138
- This course covers motors concepts, construction and characteristics and provides a foundation in motor controls. Topics include motor control ladder logic, starters, timers, overload protection, braking, reduced voltage starting, SCR control, AC/DC drives, system and component level troubleshooting. Upon completion, students should be able to specify, connect, control, troubleshoot, and maintain motors and motor control systems. S22727

**ELC 131 DC/AC Circuit Analysis**
- This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, verify, and analyze DC/AC circuits; and properly use test equipment. S23482

**ELC 132 Electrical Drawings**
- This course introduces the technical documentation that is typically found or used in the industrial environment. Topics include interpretation of service manuals, freehand sketching, orthographic views and dimensions, and print reading. Upon completion, students should be able to interpret technical documents and prints and use basic drafting skills to prepare usable field drawings. S23523

**ELC 135 Electrical Machines**
- This course covers magnetic circuits, transformers, DC/AC machines, and the three-phase circuit fundamentals including power factor. Topics include magnetic terms and calculations, transformer calculations based on primary or secondary equivalent circuits, and regulation and efficiency calculations. Upon completion, students should be able to perform regulation and efficiency calculations for DC/AC machine circuits. S21596

**ELC 136 Electrical Machines II**
- This course covers DC/AC machine fundamentals including applications and control. Topics include control devices and induction single and polyphase AC motors, DC motors, stepper, and special purpose motors. Upon completion, students should be able to perform regulation and efficiency calculations and apply motor theory to practical control applications. S21597

**ELC 228 PLC Applications**
- Prerequisites: ELC 128
- This course covers programming and applications of programmable logic controllers. Emphasis is placed on programming techniques, networking, specialty I/O modules, and system troubleshooting. Upon completion, students should be able to specify, implement, and maintain complex PLC controlled systems. S21601

**ELC-231 Electric Power Systems**
- This course covers the basic principles of electric power systems, including transmission lines, generator and transformer characteristics, and fault detection and correction. Emphasis is placed on line diagrams and per unit calculations for circuit performance analysis in regards to voltage regulation, power factor, and protection devices. Upon completion, students should be able to analyze simple distribution subsystems, calculate fault current, and compare different types and sizes of circuit protection devices. S21603

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**Course Descriptions**

**EMS 110 EMT-Basic**
- This course introduces basic emergency medical care. Topics include preparatory, airway, patient assessment, medical emergencies, trauma, infants and children, and operations. Upon completion, students should be able to demonstrate the knowledge and skills necessary to achieve North Carolina State or National Registry EMT-Basic certification. S16335

**EMS 120 Intermediate Intervention**
- Prerequisites: EMS-110
- Corequisites: Take one set. Set 1: EMS-121, EMS-130 and EMS-131 Set 2: EMS-122, EMS-130, and EMS-131
- This course is designed to provide the necessary information for interventions appropriate to the EMT-Intermediate and is required for intermediate certification. Topics include automated external defibrillation, basic cardiac electrophysiology, intravenous therapy, venipuncture, acid-base balance, and fluids and electrolytes. Upon completion, students should be able to properly establish an IV line, obtain venous blood, utilize AEDs, and correctly interpret arterial blood gases. S10478

**EMS 121 EMS Clinical Practicum I**
- Prerequisites: EMS-110
- Corequisites: EMS-120, EMS-130, and EMS-131
- This course is the initial hospital and field internship and is required for intermediate and paramedic certification. Emphasis is placed on intermediate-level care. Upon completion, students should be able to demonstrate competence with intermediate-level skills. S10423
<table>
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<th>Course Code</th>
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<th>Hours</th>
<th>Credits</th>
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<td>Pharmacology I for EMS</td>
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<td></td>
<td>Prerequisites: EMS-110</td>
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<td>Corequisites: EMS-120 and EMS-131</td>
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This course introduces the fundamental principles of pharmacology and medication administration and is required for intermediate and paramedic certification. Topics include terminology, pharmacokinetics, pharmacodynamics, weights, measures, drug calculations, legislation, and administration routes. Upon completion, students should be able to accurately calculate drug dosages, properly administer medications, and demonstrate general knowledge of pharmacology. S16339

| EMS 131     | Advanced Airway Management                       | 1     | 2     | 0       |
|             | Prerequisites: EMS-110                          |       |       |         |
|             | Corequisites: EMS-120 and EMS-131                |       |       |         |

This course is designed to provide advanced airway management techniques and is required for intermediate and paramedic certification. Topics include respiratory anatomy and physiology, airway, ventilation, adjuncts, surgical intervention, and rapid sequence intubation. Upon completion, students should be able to properly utilize all airway adjuncts and pharmacology associated with airway control and maintenance. S13314

| EMS 140     | Rescue Scene Management                          | 1     | 3     | 0       |
|             | Prerequisites: EMS-110                          |       |       |         |

This course introduces rescue scene management and is required for paramedic certification. Topics include response to hazardous material conditions, medical incident command, and extraction of patients from a variety of situations. Upon completion, students should be able to recognize and manage rescue operations based on initial and follow-up scene assessment. S16340

| EMS 150     | Emergency Vehicles & EMS Communication          | 1     | 3     | 0       |
|             | Prerequisites: Take 1 set from: Set 1: EMS-120, EMS-121, EMS-130, and EMS-131 Set 2: EMS-120, EMS-122, EMS-130, and EMS-131 |       |       |         |

This course examines the principles governing emergency vehicles, maintenance of emergency vehicles, and EMS communication equipment and is required for paramedic certification. Topics include applicable motor vehicle laws affecting emergency vehicle operation, defensive driving, collision avoidance techniques, communication systems, and information management systems. Upon completion, students should have a basic knowledge of emergency vehicles, maintenance, and communication needs. S11566

| EMS 210     | Advanced Patient Assessment                      | 1     | 3     | 0       |
|             | Prerequisites: Take 1 set from: Set 1: EMS-120, EMS-121, EMS-130, and EMS-131 Set 2: EMS-120, EMS-122, EMS-122, EMS-130, and EMS-131 |       |       |         |

This course covers advanced patient assessment techniques and is required for paramedic certification. Topics include initial assessment, medical-trauma history, field impression, complete physical exam process, on-going assessment, and documentation skills. Upon completion, students should be able to utilize basic communication skills and record and report collected patient data. S14042

| EMS 220     | Cardiology                                       | 2     | 6     | 0       |
|             | Prerequisites: EMS-120, EMS-130, and EMS-131     |       |       |         |

This course provides an in-depth study of cardiovascular emergencies and is required for paramedic certification. Topics include anatomy and physiology, pathophysiology, rhythm interpretation, cardiac pharmacology, and patient treatment. Upon completion, students should be able to certify at the Advanced Cardiac Life Support Provider level utilizing American Heart Association guidelines. S16342

| EMS 221     | EMS Clinical Practicum II                       | 0     | 0     | 9       |
|             | Prerequisites: Take 1 set from: Set 1: EMS-121 Set 2: EMS-122 and COE-111 |       |       |         |

This course is a continuation of the hospital and field internship required for paramedic certification. Emphasis is placed on advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care. S10590

| EMS 230     | Pharmacology II for EMS                         | 1     | 3     | 0       |
|             | Prerequisites: EMS-130                          |       |       |         |

This course explores the fundamental classification and action of common pharmacologic agents. Emphasis is placed on the action and use of compounds most commonly encountered in the treatment of chronic and acutely ill patients. Upon completion, students should be able to demonstrate general knowledge of drugs covered during the course. S16343

| EMS 231     | EMS Clinical Practicum III                      | 0     | 9     | 3       |
|             | Prerequisites: Take One Set: Set 1: EMS-221 Set 2: EMS-222 and COE-121 |       |       |         |

This course is a continuation of the hospital and field internship required for paramedic certification. Emphasis is placed on advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care. S11637

| EMS 240     | Special Needs Patients                          | 1     | 2     | 0       |
|             | Prerequisites: Take One Set: Set 1: EMS-120, EMS-121, EMS-130, and EMS-131 Set 2: EMS-120, EMS-122, EMS-130, and EMS-131 |       |       |         |

This course includes concepts of crisis intervention and techniques of dealing with special needs patients and is required for paramedic certification. Topics include behavioral emergencies, abuse, assault, challenged patients, personal well-being, home care, and psychotherapeutic pharmacology. Upon completion, students should be able to recognize and manage frequently encountered special needs patients. S16346

| EMS 241     | EMS Clinical Practicum IV                       | 0     | 0     | 9       |
|             | Prerequisites: Take One Set: Set 1: EMS-231 Set 2: EMS-232 and COE-131 |       |       |         |

This course is a continuation of the hospital and field internship required for paramedic certification. Emphasis is placed on advanced-level care. Upon completion, students should be able to provide advanced-level patient care as an entry-level paramedic. S11052

| EMS 250     | Advanced Medical Emergencies                    | 2     | 3     | 0       |
|             | Prerequisites: Take One Set: Set 1: EMS-120, EMS-121, EMS-130, and EMS-131 Set 2: EMS-120, EMS-122, EMS-130, and EMS-131 |       |       |         |

This course provides an in-depth study of medical conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics include pulmonology, neurology, endocrinology, anaphylaxis, gastroenterology, toxicology, and environmental emergencies integrating case presentation and emphasizing pharmacotherapeutics. Upon completion, students should be able to recognize and manage frequently encountered medical conditions based upon initial patient impression. S11267

| EMS 260     | Advanced Trauma Emergencies                     | 1     | 3     | 0       |
|             | Prerequisites: Take One Set: Set 1: EMS-120, EMS-121, EMS-130, and EMS-131 Set 2: EMS-120, EMS-122, EMS-130, and EMS-131 |       |       |         |

This course provides in-depth study of trauma including pharmacological interventions for conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics include hemorrhage control, shock, burns, and trauma to head, spine, soft tissue, thoracic, abdominal, and musculoskeletal areas with case presentations utilized for special problem situations. Upon completion, students should be able to recognize and manage trauma situations based upon patient impressions and meet requirements of BTLs or PHTLS courses. S10208

| EMS 270     | Life Span Emergencies                           | 2     | 2     | 0       |
|             | Prerequisites: EMS-120, EMS-130, and EMS-131    |       |       |         |

This course, required for paramedic certification, covers medical/ethical/legal issues and the spectrum of age-specific emergencies from conception through death. Topics include gynecological, obstetrical, neonatal, pediatric, and geriatric emergencies and pharmacological therapeutics. Upon completion, students should be able to recognize and treat age-specific emergencies and certify at the Pediatric Advanced Life Support Provider level. S12208

| EMS 285     | EMS Capstone                                    | 1     | 3     | 0       |
|             | Prerequisites: EMS-220, EMS-250, and EMS-260    |       |       |         |

This course provides an opportunity to demonstrate problem-solving skills as a team leader in simulated patient scenarios and is required for paramedic certification. Emphasis is placed on critical thinking, integration of didactic and psychomotor skills, and effective performance in simulated emergency situations. Upon completion, students should be able to recognize and appropriately respond to a variety of EMS-related events. S10931

**ENGLISH (ENG)**

Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by the college's placement test.

| ENG 75      | Reading & Language Essentials                  | 5     | 0     | 0       |
|            | This course uses whole language to develop proficiency in basic reading and writing. Emphasis is placed on coverage of vocabulary, developing comprehension skills, and improving grammar. Upon completion, students should be able to understand and create grammatically and syntactically correct sentences. This course integrates ENG 070 and RED 070. This course does not satisfy the developmental reading and writing prerequisite for ENG 111 or ENG 111A. S12307 |       |       |         |
Course Descriptions

ENG 85 Reading & Writing Foundations  
Prerequisites: ENG 070 and RED 070, or ENG 075  
This course uses whole language to develop proficiency in reading and writing for college. Emphasis is placed on applying analytical and critical reading skills to a variety of texts and on introducing the writing process. Upon completion, students should be able to recognize and use various patterns of text organization and compose effective paragraphs. This course integrates ENG 080 and RED 080. This course does not satisfy the developmental reading and writing for ENG 111 or ENG 111A. S10797

ENG 95 Reading & Composition Strategies  
Prerequisites: ENG 080 and RED 080; or ENG 085  
This course uses whole language to strengthen proficiency in reading and writing for college. Emphasis is placed on applying critical reading skills to narrative and expository texts and on using the writing process. Upon completion, students should be able to comprehend, analyze, and evaluate college texts and to compose essays in preparation for college writing. This course integrates ENG 090 and RED 090. This course satisfies the developmental reading and writing for ENG 111 and ENG 111A. S12996

ENG 101 Applied Communications I  
3 0 3  
This course is designed to enhance reading and writing skills for the workplace. Emphasis is placed on technical reading, job-related vocabulary, sentence writing, punctuation, and spelling. Upon completion, students should be able to identify main ideas with supporting details and produce mechanically correct short writings appropriate to the workplace. This is a diploma-level course. S12858

ENG 111 Expository Writing  
Prerequisites: ENG 090 and RED 090 or ENG 095  
This course is the required first course in a series of two designed to develop the ability to produce clear expository prose. Emphasis is placed on the writing process including audience analysis, topic selection, thesis support and development, editing, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in English Composition. S13673

ENG 113 Literature-Based Research  
Prerequisites: ENG 111  
This course, the second in a series of two, expands the concepts developed in ENG 111 by focusing on writing that involves literature-based research and documentation. Emphasis is placed on critical reading and thinking and the analysis and interpretation of prose, poetry, and drama: plot, characterization, theme, cultural context, etc. Upon completion, students should be able to construct mechanically-sound, documented essays and research papers that analyze and respond to literary works. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in English Composition. S13650

ENG 114 Professional Research & Reporting  
Prerequisites: ENG 111  
This course, the second in a series of two, is designed to teach professional communication skills. Emphasis is placed on research, listening, critical reading and thinking, analysis, interpretation, and design used in oral and written presentations. Upon completion, students should be able to work individually and collaboratively to produce well-designed business and professional written and oral presentations. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in English Composition. S13706

ENG 125 Creative Writing I  
Prerequisites: ENG 111  
This course is designed to provide students with the opportunity to practice the art of creative writing. Emphasis is placed on writing, fiction, poetry, and sketches. Upon completion, students should be able to compose effective paragraphs. This course integrates ENG 080 and RED 080. This course does not satisfy the developmental reading and writing for ENG 111 or ENG 111A. S12088

ENG 231 American Literature I  
Prerequisites: ENG 113 or ENG 114  
This course covers selected works in American literature from its beginnings to 1865. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S13883

ENG 232 American Literature II  
Prerequisites: ENG 113 or ENG 114  
This course covers selected works in American literature from 1865 to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S13856

ENG 233 Major American Writers  
Prerequisites: ENG 113 or ENG 114  
This course provides an intensive study of the works of several major American authors. Emphasis is placed on American history, culture, and the literary merits. Upon completion, students should be able to interpret, analyze, and evaluate the works studied. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S13908

ENG 235 Survey of Film as Literature  
Prerequisites: ENG 113  
This course is a study of the medium of film with a focus on the historical impact and the various literary genres of movies. Emphasis is placed on an appreciation of film as a form of literature which demonstrates various elements of fiction (character, setting, theme, etc.). Upon completion, students should be able to analyze film critically in various literary contexts. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S13856

ENG 241 British Literature I  
Prerequisites: ENG 113 or ENG 114  
This course covers selected works in British literature from its beginnings to the Romantic Period. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S11763

ENG 242 British Literature II  
Prerequisites: ENG 113 or ENG 114  
This course covers selected works in British literature from the Romantic Period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S11638

ENG 243 Major British Writers  
Prerequisites: ENG 113 or ENG 114  
This course provides an intensive study of the works of several major British authors. Emphasis is placed on British history, culture, and the literary merits. Upon completion, students should be able to interpret, analyze, and evaluate the works studied. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S11728

ENG 251 Western World Literature I  
Prerequisites: ENG 113 or ENG 114  
This course provides a survey of selected European works from the Classical period through the Renaissance. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S14255
Course Descriptions

ENG 252 Western World Literature II 3 0 3
Prerequisites: ENG 113 or ENG 114
This course provides a survey of selected European works from the Neoclassical period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S14203

ENG 261 World Literature I 3 0 3
Prerequisites: ENG 113 or ENG 114
This course introduces selected works from the Pacific, Asia, Africa, Europe, and the Americas from their literary beginnings through the seventeenth century. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S12708

ENG 262 World Literature II 3 0 3
Prerequisites: ENG 113 or ENG 114
This course introduces selected works from the Pacific, Asia, Africa, Europe, and the Americas from the eighteenth century to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S12600

ENG 272 Southern Literature 3 0 3
Prerequisites: ENG 113 or ENG 114
This course provides an analytical study of the works of several Southern authors. Emphasis is placed on the historical and cultural contexts, themes, aesthetic features of individual works, and biographical backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and discuss selected works. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S13535

ENG 273 African-American Literature 3 0 3
Prerequisites: ENG 113 or ENG 114
This course provides an analytical study of the development of African-American literature from its beginnings to the present. Emphasis is placed on historical and cultural context, themes, literary traditions, and backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and respond to selected texts. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S13578

ENG 274 Literature by Women 3 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114
This course provides an analytical study of the works of several women authors. Emphasis is placed on the historical and cultural contexts, themes and aesthetic features of individual works, and biographical backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and discuss selected works. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S13548

ENG 275 Science Fiction 3 0 3
Prerequisites: ENG 113 or ENG 114
This course covers the relationships between science and literature through analysis of short stories and novels. Emphasis is placed on scientific discoveries that shaped Western culture and our changing view of the universe as reflected in science fiction literature. Upon completion, students should be able to trace major themes and ideas and illustrate relationships between science, worldview, and science fiction literature. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S13564

Entrepreneurship (ETR) 196

ETR 215 Law for Entrepreneurs 3 0 3
This course introduces students to basic legal concepts specifically relevant to a business start-up venture. Topics include contracts and documents of title, nature and form of sales, risk and property rights, obligations and performance, business organizations, and agency and employment. Upon completion, students should be able to assess the legal responsibilities of a business start-up. S22096

FRENCH (FRE)

FRE 111 Elementary French I 3 0 3
This course introduces the fundamental elements of the French language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written French and demonstrate cultural awareness. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. S11554

FRE 112 Elementary French II 3 0 3
Prerequisite: FRE 111
This course is a continuation of FRE 111 focusing on the fundamental elements of the French language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written French and demonstrate further cultural awareness. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. S11626

FRE 141 Culture and Civilization 3 0 3
This course, taught in English, provides an opportunity to explore issues related to the Francophone world. Topics include historical and current events, geography, and customs. Upon completion, students should be able to identify and discuss selected topics and cultural differences related to the Francophone world. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S10038

GEOLOGY (GEL)

GEL 111 Introductory Geology 3 2 4
This course introduces basic landforms and geological processes. Topics include rocks, minerals, volcanoes, fluvial processes, geological history, plate tectonics, glaciers, and coastal dynamics. Upon completion, students should be able to identify and discuss selected topics and cultural differences related to the Francophone world. This course has been approved to satisfy the Comprehensive Articulation Agreement as a general education core requirement in natural sciences/mathematics. S12347

Course Descriptions
### Course Descriptions

#### GEOGRAPHY (GEO)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 111</td>
<td>World Regional Geography</td>
<td>3</td>
<td>This course introduces the regional concept which emphasizes the spatial association of people and their environment. Emphasis is placed on the physical, cultural, and economic systems that interact to produce the distinct regions of the earth. Upon completion, students should be able to describe variations in physical and cultural features of a region and demonstrate an understanding of their functional relationships. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. S13742</td>
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#### HEALTH (HEA)

<table>
<thead>
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<tbody>
<tr>
<td>HEA 110</td>
<td>Personal Health/Wellness</td>
<td>3</td>
<td>This course provides an introduction to basic personal health and wellness. Emphasis is placed on current health issues such as nutrition, mental health, and fitness. Upon completion, students should be able to demonstrate an understanding of the factors necessary to the maintenance of health and wellness. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S10185</td>
</tr>
<tr>
<td>HEA 112</td>
<td>First Aid &amp; CPR</td>
<td>1+2+2</td>
<td>This course introduces the basics of emergency first aid treatment. Topics include rescue breathing, CPR, first aid for choking and bleeding, and other first aid procedures. Upon completion, students should be able to demonstrate skills in providing emergency care for the sick and injured until medical help can be obtained. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. This course has been approved for transfer under the ICAA as a premajor and/or elective course requirement. S10211</td>
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#### HISTORY (HIS)

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<tr>
<td>HIS 115</td>
<td>Introduction to Global History</td>
<td>3</td>
<td>This course introduces the study of global history. Emphasis is placed on topics such as colonialism, industrialism, and nationalism. Upon completion, students should be able to analyze significant global historical issues. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S10822</td>
</tr>
<tr>
<td>HIS 116</td>
<td>Current World Problems</td>
<td>3</td>
<td>This course covers current events from an historical perspective. Topics include regional problems as well as international concerns. Upon completion, students should be able to analyze significant current world problems from an historical perspective. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S10826</td>
</tr>
<tr>
<td>HIS 117</td>
<td>History of Religions</td>
<td>3</td>
<td>This course surveys the historical development of the world's major religions. Topics include systems of belief and religious practice, polytheism, monotheism, and current religious movements. Upon completion, students should be able to analyze the world's major religious traditions. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S10780</td>
</tr>
<tr>
<td>HIS 121</td>
<td>Western Civilization I</td>
<td>3</td>
<td>This course introduces western civilization from pre-history to the early modern era. Topics include ancient Greece, Rome, and Christian institutions of the Middle Ages and the emergence of national monarchies in western Europe. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early western civilization. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S13000</td>
</tr>
<tr>
<td>HIS 122</td>
<td>Western Civilization II</td>
<td>3</td>
<td>This course introduces western civilization from the early modern era to the present. Topics include the religious wars, the Industrial Revolution, World Wars I and II, and the Cold War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern western civilization. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S13096</td>
</tr>
<tr>
<td>HIS 131</td>
<td>American History I</td>
<td>3</td>
<td>This course is a survey of American history from pre-history through the Civil War era. Topics include the migrations to the Americas, the colonial and revolutionary periods, the development of the Republic, and the Civil War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early American history. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S10370</td>
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<tr>
<td>HIS 132</td>
<td>American History II</td>
<td>3</td>
<td>This course is a survey of American history from the Civil War era to the present. Topics include industrialization, immigration, the Great Depression, the major American wars, the Cold War, and conflict. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in American history since the Civil War. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S10386</td>
</tr>
<tr>
<td>HIS 141</td>
<td>Genealogy &amp; Local History</td>
<td>3</td>
<td>This course explores the role of the local or family historian. Emphasis is placed on historical or genealogical research techniques including a survey of local, state, and national archival resources. Upon completion, students should be able to conduct genealogical research and do a major research project on local or family history. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11285</td>
</tr>
<tr>
<td>HIS 151</td>
<td>Hispanic Civilization</td>
<td>3</td>
<td>This course surveys the cultural history of Spain and its impact on the New World. Topics include Spanish and Latin American culture, literature, religion, and the arts. Upon completion, students should be able to analyze the cultural history of Spain and Latin America. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S11246</td>
</tr>
<tr>
<td>HIS 161</td>
<td>Science and Technology</td>
<td>3</td>
<td>This course examines the history of science and technology from pre-history to the present. Topics include the origins, impact, and consequences of scientific and technological developments. Upon completion, students should be able to analyze significant developments in the history of science and technology. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S12542</td>
</tr>
<tr>
<td>HIS 162</td>
<td>Women and History</td>
<td>3</td>
<td>This course surveys the experience of women in historical perspective. Topics include the experiences and contributions of women in culture, politics, economics, science, and religion. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural contributions of women in history. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S12886</td>
</tr>
<tr>
<td>HIS 163</td>
<td>The World Since 1945</td>
<td>3</td>
<td>This course surveys world developments since the end of World War II. Topics include the Cold War, nationalism, colonialism, the Third World, the arms race, and global capitalism and regionalism. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the world since 1945. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S12914</td>
</tr>
<tr>
<td>HIS 165</td>
<td>Twentieth-Century World</td>
<td>3</td>
<td>This course covers the major developments, issues, and ideas in twentieth-century world history. Emphasis is placed on contrasting political systems, the impact of science and technology, and the philosophical temperament of twentieth-century people. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the twentieth century. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S12963</td>
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<tr>
<td>HIS 212</td>
<td>Medieval History</td>
<td>3</td>
<td>This course traces the cultural, political, economic, social, religious, and intellectual history of Europe during the Middle Ages. Topics include the decline of the Roman Empire, the Frankish Kingdoms, the medieval church, feudalism, the rise of national monarchies, urbanization, and the rise of universities. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in medieval Europe. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S10435</td>
</tr>
<tr>
<td>HIS 221</td>
<td>African-American History</td>
<td>3</td>
<td>This course covers African-American history from the Colonial period to the present. Topics include African origins, the slave trade, the Civil War, Reconstruction, the Jim Crow era, the civil rights movement, and contributions of African Americans. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the history of African Americans. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11507</td>
</tr>
</tbody>
</table>
HIS 226 The Civil War 3 0 3
This course examines the social, political, economic, and ideological forces that led to the Civil War and Reconstruction. Topics include regional conflicts and sectionalism, dissolution of the Union, military campaigns, and the War's socioeconomic impact, aftermath, and consequences. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the United States during the era of the Civil War. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11444

HIS 227 Native American History 3 0 3
This course surveys the history and cultures of Native Americans from pre-history to the present. Topics include Native American civilizations, relations with Europeans, and the continuing evolution of Native American cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments among Native Americans. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11493

HIS 228 History of the South 3 0 3
This course covers the origin and development of the South as a distinct region of the United States. Emphasis is placed on Southern identity and its basis in cultural, social, economic, and political developments during the 19th and 20th centuries. Upon completion, students should be able to identify and analyze the major cultural, social, economic, and political developments in the South. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S10435

HIS 231 Recent American History 3 0 3
This course is a study of American society from the post-Depression era to the present. Topics include World War II, the Cold War, social unrest, the Vietnam War, the Great Society, and current political trends. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in recent America. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11165

HIS 233 History of Appalachia 3 0 3
This course introduces the Appalachian region and its relationship to mainstream American history. Topics include regional settlement patterns and a study of Appalachian culture. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in Appalachia. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11169

HIS 234 Cherokee History 3 0 3
This course is a survey of the history and culture of the Cherokees. Topics include origins, belief systems, contact and conflict with European settlers, removals, and contemporary problems faced by the Cherokees. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in Cherokee history. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11138

HIS 236 North Carolina History 3 0 3
This course is a study of geographical, political, economic, and social conditions existing in North Carolina from America's discovery to the present. Topics include native and immigrant backgrounds; colonial, antebellum, and Reconstruction periods; party politics; race relations; and the transition from an agrarian to an industrial economy. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in North Carolina. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S11126

HIS 262 Middle East History 3 0 3
This course surveys the history of the Middle East from the development of civilization in Mesopotamia to the present. Emphasis is placed on social, political, economic, religious, and governmental structures in the Middle East. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the Middle East. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11865

HUMAN SERVICES (HSE)

HSE 110 Introduction to Human Services 2 2 3
This course introduces the human services field, including the history, agencies, roles, and careers. Topics include personal/professional characteristics, diverse populations, community resources, disciplines in the field, systems, ethical standards, and major theoretical and treatment approaches. Upon completion, students should be able to identify the knowledge, skills, and roles of the human services worker. S12827

HUM-101 Values in the Workplace 2 0 2
This course is a study of the influence of human values in the workplace and of the workplace on human values. Emphasis is placed on the ways in which the workplace affects and is affected by human values. Upon completion, students should be able to demonstrate a broad-based awareness and appreciation of the inter-connectedness between human values and the world of work. S12241

HUM 110 Technology and Society 3 0 3
This course considers technological change from historical, artistic, and philosophical perspectives and its effect on human needs and concerns. Emphasis is placed on the causes and consequences of technological change. Upon completion, students should be able to critically evaluate the implications of technology. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S14059

HUM 115 Critical Thinking 3 0 3
This course introduces the use of critical thinking skills in the context of human conflict. Emphasis is placed on evaluating information, problem solving, approaching cross-cultural perspectives, and resolving controversies and dilemmas. Upon completion, students should be able to demonstrate orally and in writing the use of critical thinking skills in the analysis of appropriate texts. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S20059

HUM 120 Cultural Studies 3 0 3
This course introduces the distinctive features of a particular culture. Topics include art, history, music, literature, politics, philosophy, and religion. Upon completion, students should be able to appreciate the unique character of the study culture. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S12973
HUM 121 The Nature of America 3 0 3
This course provides an interdisciplinary survey of the American cultural, social, and political experience. Emphasis is placed on the multicultural character of American society, distinctive qualities of various regions, and the American political system. Upon completion, students should be able to analyze significant cultural, social, and political aspects of American life. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S13080

HUM 122 Southern Culture 3 0 3
This course explores the major qualities that make the South a distinct region. Topics include music, politics, literature, art, religion, race relations, and the role of social class in historical and contemporary contexts. Upon completion, students should be able to identify the characteristics that distinguish Southern culture. This course has been approved for transfer under the CAA as a general education course in Humanities/Fine Arts. S13050

HUM 123 Appalachian Culture 3 0 3
This course provides an interdisciplinary study of the unique features of Appalachian culture. Topics include historical, political, sociological, psychological, and artistic features which distinguish this region. Upon completion, students should be able to demonstrate a broad-based awareness and appreciation of Appalachian culture. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S13041

HUM 130 Myth in Human Culture 3 0 3
This course provides an in-depth study of myths and legends. Topics include the varied sources of myths and their influence on the individual and society within diverse cultural contexts. Upon completion, students should be able to analyze and identify significant developments in myths and legends on modern culture. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S13721

HUM 140 History of Architecture 3 0 3
This course covers the political and religious influences upon architecture. Topics include specific historical buildings evidencing architectural advancement, with special emphasis upon modern architecture. Upon completion, students should be able to analyze and identify significant developments in architecture. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S11314

HUM 145 History of Landscape Arch 3 0 3
This course covers the political, religious, and technological development of landscape architecture. Topics include specific historical landscapes showing architectural advancement. Upon completion, students should be able to analyze and identify significant developments in landscape architecture. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S11389

HUM 150 American Women's Studies 3 0 3
This course provides an inter-disciplinary study of the history, literature, and social roles of American women from Colonial times to the present. Emphasis is placed on women's roles as reflected in American language usage, education, law, the workplace, and mainstream culture. Upon completion, students should be able to identify and analyze the roles of women as reflected in various cultural forms. This course has been approved for transfer under the CAA as a general education course in Humanities/Fine Arts. S11249

HUM 160 Introduction to Film 2 2 3
This course introduces the fundamental elements of film artistry and production. Topics include film styles, history, and production techniques, as well as the social values reflected in film art. Upon completion, students should be able to critically analyze the elements covered in relation to selected films. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S16395

HUM 161 Advanced Film Studies 2 2 3
Prerequisites: HUM 160
This course provides an advanced study of film art and production, building on skills learned in HUM 160. Topics include film production techniques, film genres, examination of master directors' styles, and the relation of film to culture. Upon completion, students should be able to recognize and critically analyze advanced elements of film production. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S10896

HUM-170 The Holocaust 3 0 3
This course provides a survey of the destruction of European Jewry by the Nazis during World War II. Topics include the anti-Semitic ideology, bureaucratic structures, and varying conditions of European occupation and domination under the Third Reich. Upon completion, students should be able to demonstrate an understanding of the historical, social, religious, political, and economic factors which cumulatively resulted in the Holocaust. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S13684

HUM-180 Internat Cultural Explor 2 3 3
This course provides a framework for students to visit, examine, and analyze a country/region outside the United States to learn about the place and people. Emphasis is placed on the distinctive cultural characteristics of a country or region. Upon completion, students should be able to identify similarities/differences, analyze causes/effects, and clearly articulate the impact of one or more cultural elements. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S22360

HUM 211 Humanities I 3 0 3
Prerequisites: ENG 111
This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind's answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from ancient through early modern times. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S10430

HUM 212 Humanities II 3 0 3
Prerequisites: ENG 111
This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind's answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from early modern times to the present. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S10457

HUM 220 Human Values and Meaning 3 0 3
Prerequisites: ENG 111
This course presents some major dimensions of human experience as reflected in art, music, literature, philosophy, and history. Topics include the search for identity, the quest for knowledge, the need for love, the role of the individual and society, and the meaning of life. Upon completion, students should be able to recognize interdisciplinary connections and distinguish between open and closed questions and between narrative and scientific models of understanding. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S11527

HUM 230 Leadership Development 3 0 3
Prerequisites: ENG 111
This course explores the theories and techniques of leadership and group process. Emphasis is placed on leadership styles, theories of group dynamics, and the moral and ethical responsibilities of leadership. Upon completion, students should be able to identify and analyze a personal philosophy and style of leadership and integrate these concepts in various practical situations. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S11544

INDUSTRIAL SCIENCE (ISC)

ISC 112 Industrial Safety 2 0 2
This course introduces the principles of industrial safety. Emphasis is placed on industrial safety and OSHA regulations. Upon completion, students should be able to demonstrate knowledge of a safe working environment and OSHA compliance. S23527

Competencies
• Student Learning Outcomes
 1. Describe and identify safety practices required to perform various job-related activities.
 2. Describe the application of OSHA procedures and requirements for compliance.
### Course Descriptions

#### ITALIAN (ITA)

<table>
<thead>
<tr>
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<th>Credits</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ITA 111</td>
<td>Elementary Italian I</td>
<td>3</td>
<td>0</td>
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<tr>
<td>ITA 112</td>
<td>Elementary Italian II</td>
<td>3</td>
<td>0</td>
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#### JOURNALISM (JOU)

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<tr>
<td>JOU 110</td>
<td>Introduction to Journalism</td>
<td>3</td>
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<tr>
<td>JOU 216</td>
<td>Writing for Mass Media</td>
<td>2</td>
<td>2</td>
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<tr>
<td>JOU 217</td>
<td>Feature/Editorial Writing</td>
<td>2</td>
<td>2</td>
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#### MACHINING TECHNOLOGY (MAC)

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<tr>
<td>MAC 111</td>
<td>Machining Technology I</td>
<td>2</td>
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<tr>
<td>MAC 112</td>
<td>Machining Technology II</td>
<td>2</td>
<td>12</td>
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<tr>
<td>MAC 113</td>
<td>Machining Technology III</td>
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### Mathematics (MAT)

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<th>Credits</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MAT 101</td>
<td>Applied Mathematics I</td>
<td>2</td>
<td>2</td>
</tr>
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</table>

Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by that college’s placement test.
MAT 110 Mathematical Measurement 2 2 3
Prerequisites: Take One Set: Set 1: DMA-010, DMA-020, and DMA-030 Set 2: MAT-060* and MAT-070
Set 3: MAT-060* and MAT-080 Set 4: MAT-060* and MAT-090 Set 5: MAT-095 Set 6: MAT-120
Set 7: MAT-121 Set 8: MAT-161 Set 9: MAT-171 Set 10: MAT-175
This course provides an activity-based approach to utilizing, interpreting, and communicating data in a variety of measurement systems. Topics include accuracy, precision, conversion, and estimation within metric, apothecary, and avoirdupois systems; ratio and proportion; measures of central tendency and dispersion; and charting of data. Upon completion, students should be able to apply proper techniques to gathering, recording, manipulating, analyzing, and communicating data. S20801

MAT 115 Mathematical Models 2 2 3
Prerequisites: Take One Set: Set 1: DMA-010, DMA-020, DMA-030, DMA-040, and DMA-050
Set 1: MAT-060* and MAT-070 Set 2: MAT-060* and MAT-080 Set 3: MAT-060* and MAT-090
Set 4: MAT-095 Set 5: MAT-120 Set 6: MAT-121 Set 7: MAT-161 Set 8: MAT-171 Set 9: MAT-175
This course develops the ability to utilize mathematical skills and technology to solve problems at a level found in non-mathematics-intensive programs. Topics include applications to percent, ratio and proportion, formulas, statistics, function notation, linear functions, probability, sampling techniques, scatter plots, and modeling. Upon completion, students should be able to solve practical problems, reason and communicate with mathematics, and work confidently, collaboratively, and independently. S20802

MAT 121 Algebra/Trigonometry I 2 2 3
Prerequisites: Take One Set: Set 1: DMA-010, DMA-020, DMA-030, and DMA-040, and DMA-050
Set 2: MAT-060* and MAT-070 Set 3: MAT-060* and MAT-080 Set 4: MAT-060* and MAT-090
Set 5: MAT-095
This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include simplification, evaluation, and solving of algebraic and radical functions; complex numbers; right triangle trigonometry; systems of equations; and the use of technology. Upon completion, students should be able to demonstrate an understanding of the use of mathematics and technology to solve problems and analyze and communicate results. S20804

MAT 140 Survey of Mathematics 3 3 0
Prerequisites: Take One Set: Set 1: DMA-010, DMA-020, DMA-030, and DMA-040 Set 1: MAT-060* and MAT-070 Set 2: MAT-060* and MAT-080 Set 3: MAT-060* and MAT-090 Set 4: MAT-095 Set 5: MAT-120 Set 6: MAT-121 Set 7: MAT-161 Set 8: MAT-171 Set 9: MAT-175
This course provides an introduction in a non-technical setting to selected topics in mathematics. Topics may include, but are not limited to, sets, logic, probability, statistics, matrices, mathematical systems, geometry, topology, mathematics of finance, and modeling. Upon completion, students should be able to understand a variety of mathematical applications, think logically, and be able to work collaboratively and independently. Under the Comprehensive Articulation Agreement, this course satisfies the general education Mathematics requirement for the AA and AFA degrees. It does not satisfy the general education Mathematics requirement for the AS degree. S20907

MAT 140A Survey of Mathematics Lab 0 2 1
Prerequisites: Take One Set: Set 1: DMA-010, DMA-020, DMA-030, and DMA-040 Set 1: MAT-060* and MAT-070 Set 2: MAT-060* and MAT-080 Set 3: MAT-060* and MAT-090 Set 4: MAT-095 Set 5: MAT-120 Set 6: MAT-121 Set 7: MAT-161 Set 8: MAT-171 Set 9: MAT-175
Corequisites: MAT 140
This course is a laboratory for MAT 140. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Mathematics (Quantitative). S21171

MAT 141 Mathematical Concepts I 3 0 3
Prerequisites: Take One Set: Set 1: DMA-010, DMA-020, DMA-030, and DMA-040 Set 2: MAT-060* and MAT-080 Set 3: MAT-060* and MAT-090 Set 4: MAT-095 Set 5: MAT-120 Set 6: MAT-121 Set 7: MAT-161 Set 8: MAT-171 Set 9: MAT-175
This course is the first of a two-course sequence that develops a deeper understanding and appreciation of the basic concepts of mathematics. Emphasis is placed on sets, logic, number bases, elementary number theory, introductory algebra, measurement including metrics, and problem solving. Upon completion, students should be able to communicate orally and in writing these basic mathematical concepts. This course satisfies the general education Mathematics requirement for the AA and AFA degrees. It does not satisfy the general education Mathematics requirement for the AS degree. S20909

MAT 141A Mathematical Concepts I Lab 0 2 1
Prerequisites: Take One Set: Set 1: DMA-010, DMA-020, DMA-030, and DMA-040 Set 2: MAT-060* and MAT-080 Set 3: MAT-060* and MAT-090 Set 4: MAT-095 Set 5: MAT-120 Set 6: MAT-121 Set 7: MAT-161 Set 8: MAT-171 Set 9: MAT-175
Corequisites: MAT 141
This course is a laboratory for MAT 141. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S20910

MAT 142 Mathematical Concepts II 3 0 3
Prerequisites: MAT 141
This course is the second of a two-course sequence that develops a deeper understanding and appreciation of the basic concepts of mathematics. Emphasis is placed on probability, statistics, functions, introductory geometry, and mathematics of finance. Upon completion, students should be able to communicate orally and in writing these basic mathematical concepts and utilize technology as a mathematical tool. Under the Comprehensive Articulation Agreement, this course satisfies the general education Mathematics requirement for the AA and AFA degrees. It does not satisfy the general education Mathematics requirement for the AS degree. S20300

MAT 142A Mathematical Concepts II Lab 0 2 1
Prerequisites: MAT 141
Corequisites: MAT 142
This course is a laboratory for MAT 142. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. S20301

MAT 151 Statistics I 3 0 3
Prerequisites: Take One Set: Set 1: DMA-010, DMA-020, DMA-030, DMA-040, and DMA-050
This course provides a project-based approach to the study of basic probability, descriptive and inferential statistics, and decision making. Emphasis is placed on measures of central tendency and dispersion, correlation, regression, discrete and continuous probability distributions, quality control, population parameter estimation, and hypothesis testing. Upon completion, students should be able to describe important characteristics of a set of data and draw inferences about a population from sample data. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Mathematics (Quantitative). S21171

MAT 151A Statistics I Lab 0 2 1
Prerequisites: Take One Set: Set 1: DMA-010, DMA-020, DMA-030, DMA-040, and DMA-050
Corequisites: MAT 151
This course is a laboratory for MAT 151. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S21482

MAT 155 Statistical Analysis 3 0 3
Set 1: DMA-010, DMA-020, DMA-030, and DMA-040
Set 2: MAT-060* and MAT-080 Set 3: MAT-060* and MAT-090 Set 4: MAT-095 Set 5: MAT-120 Set 6: MAT-121 Set 7: MAT-161 Set 8: MAT-171 Set 9: MAT-175
This course is an introduction to descriptive and inferential statistics. Topics include sampling, distributions, plotting data, central tendency, dispersion, Central Limits Theorem, confidence intervals, hypothesis testing, correlations, regressions, and multinomial experiments. Upon completion, students should be able to describe data and test inferences about populations using sample data. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Mathematics (Quantitative). S20914

MAT 155A Statistical Analysis Lab 0 2 1
Set 1: DMA-010, DMA-020, DMA-030, DMA-040, and DMA-050
Set 2: MAT-060* and MAT-080 Set 3: MAT-060* and MAT-090 Set 4: MAT-095 Set 5: MAT-120 Set 6: MAT-121 Set 7: MAT-161 Set 8: MAT-171 Set 9: MAT-175
Corequisites: Take MAT-155
### Course Descriptions

This course is a laboratory for MAT 155. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S20915

**MAT 161 College Algebra**

| 3 | 0 | 3 |

Prerequisites: Take One Set: DMA-010, DMA-020, DMA-030, DMA-040, DMA-050, DMA-060, DMA-070, and DMA-080 Set 2: MAT-060* and MAT-080 Set 3: MAT-060* and MAT-090 Set 4: MAT-095

This course provides an integrated technological approach to algebraic topics used in problem solving. Emphasis is placed on properties and applications of transcendental functions and their graphs, right and oblique triangle trigonometry, conic sections, vectors, and polar coordinates. Upon completion, students should be able to choose an appropriate model to fit a data set and use the model for analysis and prediction. Under the Comprehensive Articulation Agreement, this course satisfies the general education Mathematics requirement for the AA and AFA degrees. It does not satisfy the general education Mathematics requirement for the AS degree. S20916

**MAT 161A College Algebra Lab**

| 0 | 2 | 1 |

Prerequisites: Take One Set: DMA-010, DMA-020, DMA-030, DMA-040, DMA-050, DMA-060, DMA-070, and DMA-080 Set 2: MAT-060* and MAT-080 Set 3: MAT-060* and MAT-090 Set 4: MAT-095

Corequisites: MAT 161

This course is a laboratory for MAT 161. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S20917

**MAT 165 Finite Mathematics**

| 3 | 0 | 3 |

Prerequisites: Take One: MAT-161, MAT-171, or MAT-175

This course provides topics used to formulate models and to solve and interpret solutions using an algorithmic approach. Topics include linear algebra, linear programming, simplex method, sets and counting, probability, mathematics of finance, and logic. Upon completion, students should be able to demonstrate both an understanding of the theoretical concepts of finite mathematics and the ability to solve related problems. Under the Comprehensive Articulation Agreement, this course satisfies the general education Mathematics requirement for the AA and AFA degrees. It does not satisfy the general education Mathematics requirement for the AS degree. S20918

**MAT 165A Finite Mathematics Lab**

| 0 | 2 | 1 |

Prerequisites: Take One: MAT-161, MAT-171, or MAT-175

Corequisites: Take MAT-165

This course is a laboratory for MAT 165. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S20919

**MAT 167 Discrete Mathematics**

| 3 | 0 | 3 |

Prerequisites: MAT 121, MAT 161, MAT 171, or MAT 280

This course is a study of discrete mathematics with emphasis on applications. Topics include number systems, combinations/permutations, mathematical logic/proofs, sets/counting, Boolean algebra, mathematical induction, trees/graphs, and algorithms. Upon completion, students should be able to demonstrate competence in the topics covered. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S13895

**MAT 171 Precalculus**

| 3 | 0 | 3 |

Prerequisites: Take One Set: DMA-010, DMA-020, DMA-030, DMA-040, DMA-050, DMA-060, DMA-070, DMA-080 Set 2: MAT-060* and MAT-080 Set 3: MAT-060* and MAT-090 Set 4: MAT-095 Set 5: MAT-161

This is the first of two courses designed to emphasize topics which are fundamental to the study of calculus. Emphasis is placed on equations and inequalities, functions (linear, polynomial, rational, systems of equations and inequalities, and parametric equations. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and predictions. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Mathematics. S20807

**MAT 171A Precalculus Lab**

| 0 | 2 | 1 |

Prerequisites: Take One Set: DMA-010, DMA-020, DMA-030, DMA-040, DMA-050, DMA-060, DMA-070, DMA-080 Set 2: MAT-060* and MAT-080 Set 3: MAT-060* and MAT-090 Set 4: MAT-095 Set 5: MAT-161

**Course Descriptions**

**MAT 172 Precalculus Trigonometry**

| 3 | 0 | 3 |

Prerequisites: MAT 171

This is the second of two courses designed to emphasize topics which are fundamental to the study of calculus. Emphasis is placed on properties and applications of transcendental functions and their graphs, right and oblique triangle trigonometry, conic sections, vectors, and polar coordinates. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Mathematics. S11061

**MAT 172A Precalculus Trigonometry Lab**

| 0 | 2 | 1 |

Prerequisites: Take One Set: MAT-171, MAT-172

Corequisites: MAT 172

This course is a laboratory for MAT 172. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S13758

**MAT 175 Precalculus**

| 4 | 0 | 4 |

This course provides an intense study of the topics which are fundamental to the study of calculus. Emphasis is placed on functions and their graphs with special attention to polynomial, rational, exponential, logarithmic and trigonometric functions, and analytic trigonometry. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction. This course has been approved for transfer under the CAA as a general education course in Mathematics. S11270

**MAT 175A Precalculus Lab**

| 0 | 2 | 1 |

Corequisites: MAT 175

This course is a laboratory for MAT 175. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11867

**MAT 252 Statistics II**

| 3 | 0 | 3 |

Prerequisites: Take One Set: MAT-151 and MAT-121 Set 2: MAT-155 and MAT-121 Set 3: MAT-151 and MAT-161 Set 4: MAT-155 and MAT-161 Set 5: MAT-151 and MAT-175 Set 6: MAT-155 and MAT-175 Set 7: MAT-151 and MAT-271 Set 8: MAT-155 and MAT-271

This course provides a technology-based treatment of multiple sample inferential statistics. Emphasis is placed on two sample hypothesis tests and confidence intervals, linear and multiple regression, analysis of variance, experimental design, and non-parametric techniques. Upon completion, students should be able to draw statistical inferences on multiple sample data taken from business and health, and social, natural, and applied sciences. This course is approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S20500

**MAT 252A Statistics II Lab**

| 0 | 2 | 1 |

Corequisites: MAT 151 and either MAT 121 or MAT 161

Corequisites: MAT 252

This course is a laboratory for MAT 252. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S10287

**MAT 271 Calculus I**

| 3 | 2 | 4 |

Prerequisites: MAT 172 or MAT 175

This course covers in depth the differential calculus portion of a three-course calculus sequence. Topics include limits, continuity, derivatives, and integrals of algebraic and transcendental functions of one variable, with applications. Upon completion, students should be able to apply differentiation and integration techniques to algebraic and transcendental functions. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Mathematics. S13631
### Course Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MED 110</td>
<td>Orientation to Medical Assisting</td>
<td>1</td>
<td>This course covers the history of medicine and the role of the medical assistant in the health care setting. Emphasis is placed on professionalism, communication, attitude, behaviors, and duties in the medical profession of medical assisting. S11175</td>
</tr>
<tr>
<td>MED 121</td>
<td>Medical Terminology I</td>
<td>3</td>
<td>This course introduces prefixes, suffixes, and word roots used in the language of medicine. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. Upon completion, students should be able to project a positive attitude and promote the professional of medical assisting. S12737</td>
</tr>
<tr>
<td>MED 122</td>
<td>Medical Terminology II</td>
<td>3</td>
<td>This course is the second in a series of medical terminology courses. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. Upon completion, students should be able to pronounce, spell, and define medical terms as related to selected body systems and their pathological disorders. S12833</td>
</tr>
<tr>
<td>MEC 110</td>
<td>Introduction to CAD/CAM</td>
<td>1</td>
<td>This course introduces CAD/CAM. Emphasis is placed on transferring part geometry from CAD to CAM software to produce a CNC program. S14051</td>
</tr>
<tr>
<td>MEC 111</td>
<td>Machine Processes</td>
<td>2</td>
<td>This course introduces shop safety, hand tools, machine processes, measuring instruments, and the operation of machine shop equipment. Topics include use and care of tools, safety, measuring tools, and the basic setup and operation of machine tools. Upon completion, students should be able to safely machine simple parts to specified tolerances. S20654</td>
</tr>
<tr>
<td>MED 130</td>
<td>Administrative Office Procedures I</td>
<td>1</td>
<td>Prerequisites: ENG 095 This course introduces medical office administrative procedures. Topics include appointment processing, written and oral communications, medical records, patient orientation, and safety. Upon completion, students should be able to perform basic administrative skills within the medical environment. S10285</td>
</tr>
<tr>
<td>MED 131</td>
<td>Administrative Office Procedures II</td>
<td>2</td>
<td>Prerequisites: MED 130 This course provides medical office procedures in both economic and management skills. Topics include physical plant maintenance, equipment and supplies, liability coverage, medical economics, and introductory insurance procedures. Upon completion, students should be able to manage the economics of the medical office and supervise personnel. S16431</td>
</tr>
<tr>
<td>MED 134</td>
<td>Medical Transcription</td>
<td>2</td>
<td>Prerequisites: MED 121 &amp; ENG 095 This course provides the basic knowledge, understanding, and skills required to complete medical reports and transcribe medical dictation. Emphasis is placed on correct punctuation, capitalization, and spelling. Upon completion, students should be able to demonstrate competence in exam room procedures. S11885</td>
</tr>
<tr>
<td>MED 140</td>
<td>Exam Room Procedures I</td>
<td>3</td>
<td>Prerequisites: MED 150 &amp; MED 272 This course provides instruction in clinical examining room procedures. Topics include assepsis, infection control, assisting with exams and treatment, patient education, preparation and administration of medications, EKG, vital signs, and medical emergencies. Upon completion, students should be able to demonstrate competence in exam room procedures. S11885</td>
</tr>
<tr>
<td>MED 150</td>
<td>Laboratory Procedures I</td>
<td>3</td>
<td>Prerequisites: BIO 161 &amp; MED 121 This course provides instruction in basic lab techniques used by the medical assistant. Topics include lab safety, quality control, collecting and processing specimens, performing selective tests, phlebotomy, screening and follow-up of test results, and OSHA/CJIA regulations. Upon completion, students should be able to perform basic lab tests/skills based on course topics. S10688</td>
</tr>
<tr>
<td>MED 260</td>
<td>MED Clinical Practicum</td>
<td>0</td>
<td>Corequisites: MED 110, MED 131, MED 134, MED 140, MED 150, MED 232 &amp; OST 149 This course provides the opportunity to apply clinical, laboratory, and administrative skills in a medical facility. Emphasis is placed on enhancing competence in clinical and administrative skills necessary for comprehensive patient care and operating professional communications and interactions. Upon completion, students should be able to function as an entry-level health care professional. Students must complete first three semesters prior to entering MED 260. S22977</td>
</tr>
<tr>
<td>MED 262</td>
<td>Clinical Perspectives</td>
<td>1</td>
<td>Corequisites: MED 260 This course is designed to explore personal and occupational responsibilities of the practicing medical assistant. Emphasis is placed on problems encountered during externships and development of problem-solving skills. Upon completion, students should be able to demonstrate courteous and diplomatic behavior when solving problems in the medical facility. S13608</td>
</tr>
<tr>
<td>MED 270</td>
<td>Symptomatology</td>
<td>2</td>
<td>Prerequisites: BIO 161 This course covers the study of disease symptoms and the appropriate actions taken by medical assistants in a medical facility in relation to these symptoms. Emphasis is placed on interviewing skills and appropriate triage, preparing patients for procedures, and screening test results. Upon completion, students should be able to recognize how certain symptoms relate to specific diseases, recognize emergency situations, and take appropriate actions. S111862</td>
</tr>
<tr>
<td>MED 272</td>
<td>Drug Therapy</td>
<td>3</td>
<td>Prerequisites: MAT 140 This course focuses on major drug groups, including their side effects, interactions, methods of administration, and proper documentation. Emphasis is placed on the theory of drug administration. Upon completion, students should be able to identify, spell, recognize side effects of, and document the most commonly used medications in a physician's office. S16433</td>
</tr>
</tbody>
</table>
**Course Descriptions**

### MARKETING & RETAILING (MKT)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Units</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 120</td>
<td>Principles of Marketing</td>
<td>3</td>
<td>0</td>
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<tr>
<td></td>
<td>This course introduces principles and problems of marketing goods and services. Topics include promotion, placement, and pricing strategies for products. Upon completion, students should be able to apply marketing principles in organizational decision making. S12573</td>
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<tr>
<td>MKT 125</td>
<td>Buying and Merchandising</td>
<td>3</td>
<td>0</td>
<td>3</td>
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<tr>
<td></td>
<td>This course includes an analysis of the organization for buying-what, when and how to buy-and the principles of effective inventory and stock control. Topics include organization for buying, analysis of buyers' responsibilities, pricing, inventory control, planning, cost effectiveness, and vendor relationships. Upon completion, students should be able to demonstrate an understanding of the concepts covered through application. S12675</td>
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<tr>
<td>MKT 220</td>
<td>Advertising and Sales Promotion</td>
<td>3</td>
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<td>3</td>
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<tr>
<td></td>
<td>This course covers the elements of advertising and sales promotion in the business environment. Topics include advertising and sales promotion appeals, selection of media, use of advertising and sales promotion as a marketing tool, and means of testing effectiveness. Upon completion, students should be able to demonstrate an understanding of the concepts covered through application. S12356</td>
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<tr>
<td>MKT 222</td>
<td>Credit Procedures</td>
<td>3</td>
<td>0</td>
<td>3</td>
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<td></td>
<td>This course covers areas of collection that provide an understanding of the expertise needed to manage collection operations. Topics include principles and practices in the extension of credit, collection procedures, and laws pertaining to credit extension and collection. Upon completion, students should be able to demonstrate an understanding of the concepts covered. S12329</td>
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### THERAPEUTIC MASSAGE (MTH)

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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Units</th>
<th>Semester</th>
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</thead>
<tbody>
<tr>
<td>MTH 110</td>
<td>Fundamentals of Massage</td>
<td>6</td>
<td>9</td>
<td>3</td>
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<tr>
<td></td>
<td>This course introduces concepts basic to the role of the massage therapist in a variety of clinical settings. Emphasis is placed on beginning theory and techniques of body work as well as skill in therapeutic touch. Upon completion of the course, the student should be able to apply basic practical massage therapy skills. S22033</td>
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<tr>
<td>MTH 120</td>
<td>Therapeutic Massage Applications</td>
<td>6</td>
<td>9</td>
<td>3</td>
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<td>Prerequisites: MTH 110</td>
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<td>This course provides an expanded knowledge and skill base for the massage therapist in a variety of clinical settings. Emphasis is placed on selected therapeutic approaches throughout the lifespan. Upon completion, students should be able to perform entry level therapeutic massage on various populations. S22036</td>
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<tr>
<td>MTH 125</td>
<td>Ethics of Massage</td>
<td>2</td>
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<td>This course is designed to explore issues related to the practice of massage therapy. Emphasis is placed on ethical, legal, professional, and political issues. Upon completion, students should be able to discuss issues relating to the practice of massage therapy, client/therapist relationships as well as ethical issues. S20862</td>
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<tr>
<td>MTH 210</td>
<td>Advance Skills of Massage</td>
<td>4</td>
<td>9</td>
<td>3</td>
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<tr>
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<td>Prerequisites: MTH 120 or MTH 121</td>
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<td>This course provides knowledge and skills in diverse body work modalities in a variety of clinical settings. Emphasis is placed on selected techniques such as Neuromuscular Therapy, Sports Massage, Soft Tissue Release, Spa Approaches, Oriental Therapies, and energy techniques. Upon completion, students should be able to perform basic skills in techniques covered. S22034</td>
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<tr>
<td>MTH 220</td>
<td>Outcome-Based Massage</td>
<td>4</td>
<td>6</td>
<td>3</td>
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<tr>
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<td>Prerequisites: MTH 120, MTH 121, or MTH 221</td>
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<td>This course provides knowledge and skills in more complex body works modalities in a variety of clinical settings. Emphasis is placed on developing advanced skills in outcome-based Massage. Upon completion, students should be able to perform basic skills in techniques covered. S22035</td>
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### MUSIC (MUS)

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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Units</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 110</td>
<td>Music Appreciation</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>This course is a basic survey of the music of the Western world. Emphasis is placed on the elements of music, terminology, composers, form, and style within a historical perspective. Upon completion, students should be able to demonstrate skills in basic listening and understanding of the art of music. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S13676</td>
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<tr>
<td>MUS 113</td>
<td>American Music</td>
<td>3</td>
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<tr>
<td></td>
<td>This course introduces various musical styles, influences, and composers of the United States from pre-Colonial times to the present. Emphasis is placed on the broad variety of music particular to American culture. Upon completion, students should be able to demonstrate skills in basic listening and understanding of American music. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S13699</td>
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<tr>
<td>MUS 114</td>
<td>Non-Western Music</td>
<td>3</td>
<td>0</td>
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<tr>
<td></td>
<td>This course provides a basic survey of the music of the non-Western world. Emphasis is placed on non-traditional instruments, sources, and performing practices. Upon completion, students should be able to demonstrate skills in basic listening and understanding of the art of non-Western music. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S13659</td>
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<tr>
<td>MUS 131</td>
<td>Chorus I</td>
<td>0</td>
<td>2</td>
<td>1</td>
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<tr>
<td></td>
<td>This course provides an opportunity to gain experience singing in a chorus. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S14027</td>
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<tr>
<td>MUS 132</td>
<td>Chorus II</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Prerequisites: MUS 131</td>
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<tr>
<td></td>
<td>This course provides a continuation of studies begun in MUS 131. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S13988</td>
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<tr>
<td>MUS 141</td>
<td>Ensemble I</td>
<td>0</td>
<td>2</td>
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<tr>
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<td>This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. This course has been approved for transfer under the ICAA as a premajor and/or elective course requirement. S13666</td>
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<tr>
<td>MUS 142</td>
<td>Ensemble II</td>
<td>0</td>
<td>2</td>
<td>1</td>
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<tr>
<td></td>
<td>This course is a continuation of MUS 141. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. This course has been approved for transfer under the ICAA as a premajor and/or elective course requirement. S13271</td>
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</table>

### NETWORKING TECHNOLOGY (NET)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Units</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>NET 110</td>
<td>Networking Concepts</td>
<td>2</td>
<td>2</td>
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</tr>
<tr>
<td></td>
<td>This course introduces students to the networking field. Topics include network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, students should be able to perform tasks related to networking, mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols. S21056</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Hours</td>
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<tr>
<td>NET 125</td>
<td>Networking Basics</td>
<td>1</td>
<td>4</td>
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<tr>
<td></td>
<td>This course introduces the networking field. Emphasis is placed on network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, students should be able to perform tasks related to networking mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols. S21095</td>
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<tr>
<td>NET 126</td>
<td>Routing Basics</td>
<td>1</td>
<td>4</td>
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<tr>
<td></td>
<td>Prerequisites: NET 125</td>
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<td></td>
<td>This course focuses on initial router configuration, router software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Emphasis will be placed on the fundamentals of router configuration, managing router software, routing protocol, and access lists. Upon completion, students should have an understanding of routers and their role in WANs, router configuration, routing protocols, TCP/IP, troubleshooting, and ACLs. S21096</td>
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<tr>
<td>NET 175</td>
<td>Wireless Technology</td>
<td>2</td>
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<td></td>
<td>Prerequisites: NET 110 or NET 125</td>
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<tr>
<td></td>
<td>This course introduces the student to wireless technology and interoperability with different communication protocols. Topics include Wireless Application Protocol (WAP), Wireless Mark-up language (WML), link manager, service discovery protocol, transport layer and frequency band. Upon completion, students should be able to discuss in written and oral form protocols and procedures required for different wireless applications. S21097</td>
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<tr>
<td>NET 225</td>
<td>Routing &amp; Switching I</td>
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<td>4</td>
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<tr>
<td></td>
<td>Prerequisites: NET 126</td>
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<td></td>
<td>This course focuses on advanced IP addressing techniques, intermediate routing protocols, command-line interface configuration of switches, Ethernet switching, VLANs, STP and VTP. Emphasis will be placed on application and demonstration of skills acquired in pre-requisite courses. Upon completion, students should be able to perform tasks related to VLSM, routing protocols, switching concepts and configuration, STP, VLANs, and VTP. S21098</td>
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<tr>
<td>NET 226</td>
<td>Routing &amp; Switching II</td>
<td>1</td>
<td>4</td>
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<td></td>
<td>Prerequisites: NET 225</td>
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<td>This course introduces WAN theory and design, WAN technology, PPP, Frame Relay, ISDN, and additional case studies. Topics include network congestion problems, TCP/IP transport and network layer protocols, advanced routing and switching configuration, ISDN protocols, PPP encapsulation operations on a router. Upon completion, students should be able to provide solutions for network routing problems, identify ISDN protocols, and describe the Spanning Tree protocol. S21099</td>
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<tr>
<td>NET 230</td>
<td>Wide Area Networking</td>
<td>2</td>
<td>2</td>
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<td></td>
<td>Prerequisites: NET 110 or NET 125</td>
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<td>This course is designed to introduce significant aspects of network interconnectivity. Topics include LAN-to-LAN, LAN-to-host, LAN-to-WAN connectivity, Internet connections, and voice-video data transmission. Upon completion, students should be able to demonstrate an understanding of wide area networking. S21100</td>
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<tr>
<td>NET 240</td>
<td>Network Design</td>
<td>3</td>
<td>0</td>
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<td></td>
<td>Prerequisites: NET 110 or NET 125</td>
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<td></td>
<td>This course covers the principles of the design of LANs and WANs. Topics include network architecture, transmission systems, traffic management, bandwidth requirements, Internet working devices, redundancy, and broadband versus base-band systems. Upon completion, students should be able to design a network to meet specified business and technical requirements. S21170</td>
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<tr>
<td>NET 260</td>
<td>Internet Development &amp; Support</td>
<td>3</td>
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<td></td>
<td>Prerequisites: NET 110 or NET 125</td>
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<td>This course covers issues relating to the development and implementation of Internet related tools and services. Topics include Internet organization, site registration, e-mail servers, Web servers, Web page development, legal issues, firewalls, multimedia, TCP/IP, service providers, FTP, list servers, and gateways. Upon completion, students should be able to develop and support the Internet services needed within an organization. S21424</td>
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<tr>
<td>NET 270</td>
<td>Building Scalable Networks</td>
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<td>4</td>
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<tr>
<td></td>
<td>Prerequisites: NET 226</td>
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<td>This course covers principles and techniques of scalable networks. Topics include building multi-layer networks, controlling overhead traffic in growing routed networks, and router capabilities used to control traffic over LANs and WANs. Upon completion, students should be able to design; implement; and improve traffic flow, reliability, redundancy, and performance in enterprise networks. S21101</td>
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</tbody>
</table>

**Course Descriptions**

**NET 271** Remote Access Networks  
Prerequisites: NET 226  
This course covers how to build a remote access network to interconnect central sites to branch offices, home offices, and telecommuters. Topics include enabling on-demand/permanent connections to the central site, scaling and troubleshooting remote access networks, and maximizing bandwidth utilization of remote links. Upon completion, students should be able to assemble and configure equipment, establish WAN connections, enable protocols/technologies, allow traffic between sites, and implement accessible access control. S21102

**NET 272** Multi-Layer Networks  
Prerequisites: NET 226  
This course covers building campus networks using multi-layer switching technologies over a high-speed Ethernet. Topics include improving IP routing performance with multi-layer switching, implementing fault tolerance routing, and managing high bandwidth broadcast while controlling IP multi-cast access to networks. Upon completion, students should be able to install and configure multi-layer enterprise networks and determine the required router configurations to support new services and applications. S21103

**NET 273** Internetworking Support  
Prerequisites: NET 226  
This course covers how to baseline and troubleshoot internetworking environment using routers and switches for multi-protocol client, host and servers. Topics include troubleshooting processes, routing and routed protocols, campus switching, and WAN troubleshooting. Upon completion, students should be able to troubleshoot Ethernet, Fast Ethernet, and Token Ring LANs and Serial, Frame Relay, and ISDN connections. S21104

**NET 289** Networking Project  
Corequisites: NET 226  
This course provides an opportunity to complete a significant networking project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, documentation, installation, testing, presentation, and training. Upon completion, students should be able to complete a project from the definition phase through implementation. S21106

**NETWORKING OPERATING SYSTEMS (NOS)**

**NOS 110** Operating System Concepts  
Prerequisites: CIS 070  
This course introduces students to a broad range of operating system concepts, including installation and maintenance. Emphasis is placed on operating system concepts, management, maintenance, and resource requirements. Upon completion of this course, students will have an understanding of OS concepts, installation, management, maintenance, using a variety of operating systems. S20980

**NOS 111** Operating System - DOS  
This course introduces operating system concepts for DOS operating systems. Topics include hardware management, file and memory management, system configuration/optimization, and utilities. Upon completion, students should be able to perform operating system functions at the support level in a DOS environment. S20981

**NOS 120** Linux/UNIX Single User  
Prerequisites: NOS 110  
This course develops the necessary skills for students to develop both GUI and command line skills for using and customizing a Linux workstation. Topics include Linux file system and access permissions, GNOME Interface, VI editor, X Window System expression pattern matching, I/O redirection, network and printing utilities. Upon completion, students should be able to customize and use Linux systems for command line requirements and desktop productivity roles. S20982

**NOS 130** Windows Single User  
Prerequisites: NOS 110  
This course introduces operating system concepts for single-user systems. Topics include hardware management, file and memory management, system configuration/optimization, and utilities. Upon completion, students should be able to perform operating systems functions at the support level in a single-user environment. S20983

**NOS 149** Operating System - MVSTM  
This course introduces operating systems concepts for MVStm operating systems. Topics include hardware management, file and memory management, system configuration/optimization, utilities, Job Control Language, and support functions. Upon completion, students should be able to perform operating system functions at the support level in an MVS environment. S20984
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
<th>Credits</th>
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<tbody>
<tr>
<td>NOS 211</td>
<td>AS/400 Maintenance And Operation</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>NOS 220</td>
<td>Linux/UNIX Administration I</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>NOS 221</td>
<td>Linux/UNIX Administration II</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>NOS 222</td>
<td>Linux/UNIX Administration III</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>NOS 230</td>
<td>Windows Administration I</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>NOS 231</td>
<td>Windows Administration II</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>NOS 232</td>
<td>Windows Administration III</td>
<td>2</td>
<td>2</td>
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<tr>
<td>NOS 240</td>
<td>Novell Administration I</td>
<td>2</td>
<td>2</td>
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<tr>
<td>NOS 244</td>
<td>Operating System - AS/400</td>
<td>2</td>
<td>2</td>
</tr>
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</table>

**Course Descriptions**

**NUR 111  Introduction to Health Concepts**
This course introduces the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts within each domain including medication administration, assessment, nutrition, ethics, interdisciplinary teams, informatics, evidence-based practice, individual-centered care, and quality improvement. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course. S22213

**NUR 112  Health-Illness Concepts**
Prerequisites: NUR 111
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of acid-base, metabolism, cellular regulation, oxygenation, infection, stress/coping, health-wellness-illness, communication, caring interventions, managing care, safety, and advocacy. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course. S22212

**NUR 113  Family Health Concepts**
Prerequisites: NUR 111
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of oxygenation, sexuality, reproduction, grief/loss, mood/affect, behaviors, development, family, health-wellness-illness, communication, caring interventions, managing care, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course. S22214

**NUR 114  Holistic Health Concepts**
Prerequisites: NUR 111
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, inflammation, sensory perception, stress/coping, mood/affect, cognition, self, violence, health-wellness-illness, professional behaviors, caring interventions, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course. S22215

**NUR 117  Pharmacology**
This course introduces information concerning sources, effects, legalities, and the safe use of medications as therapeutic agents. Emphasis is placed on nursing responsibility, accountability, pharmacokinetics, routes of medication administration, contraindications and side effects. Upon completion, students should be able to compute dosages and administer medication safely. S20178

**NUR 211  Health Care Concepts**
Prerequisites: NUR 111
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, infection, immunity, mobility, comfort, behaviors, health-wellness-illness, clinical decision-making, caring interventions, managing care, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course. S22216

**NUR 212  Health System Concepts**
Prerequisites: NUR 111
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of grief/loss, violence, health-wellness-illness, collaboration, managing care, safety, advocacy, legal issues, policy, quality, ethics, accountability, and evidence-based practice. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course. S22217

**NUR 213  Complex Health Concepts**
Prerequisites: NUR 111, NUR 112, NUR 113, NUR 114, NUR 211, and NUR 212
This course is designed to assimilate the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of fluid/electrolytes, metabolism, perfusion, mobility, stress/coping, violence, health-wellness-illness, professional behaviors, caring interventions, managing care, healthcare systems, and quality improvement. Upon completion, students should be able to demonstrate the knowledge, skills, and attitudes necessary to provide quality, individualized, entry level nursing care. S22219
## NUTRITION (NUT)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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<tbody>
<tr>
<td>NUT 110</td>
<td>Nutrition</td>
<td>3</td>
<td>0</td>
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</tbody>
</table>

This course covers basic principles of nutrition and their relationship to human health. Topics include meeting nutritional needs of healthy people, menu modification based on special dietary needs, food habits, and contemporary problems associated with food selection. Upon completion, students should be able to apply basic nutritional concepts as they relate to health and well-being. S16468

## OFFICE SYSTEMS TECHNOLOGY (OST)

### Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by that college's placement test.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>OST 80</td>
<td>Keyboarding Literacy</td>
<td>1</td>
<td>2</td>
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</table>

This course is designed to develop elementary keyboarding skills. Emphasis is placed on mastery of the keyboard. Upon completion, students should be able to demonstrate basic proficiency in keyboarding. S12295

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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<tbody>
<tr>
<td>OST 122</td>
<td>Office Computations</td>
<td>1</td>
<td>2</td>
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</table>

This course introduces the keypad and the touch method using the electronic calculator. Topics include mathematical functions in business applications. Upon completion, students should be able to use the electronic calculator to solve a wide variety of problems commonly encountered in business. S13297

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>OST 131</td>
<td>Keyboarding</td>
<td>1</td>
<td>2</td>
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</table>

This course covers basic keyboarding skills. Emphasis is placed on the touch system, correct techniques, and development of speed and accuracy. Upon completion, students should be able to key at an acceptable speed and accuracy level using the touch system. S13790

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>OST 134</td>
<td>Text Entry &amp; Formatting</td>
<td>2</td>
<td>2</td>
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</tbody>
</table>

This course is designed to provide skills needed to increase speed, improve accuracy, and format documents. Topics include letters, memos, tables, and business reports. Upon completion, students should be able to produce documents and key timed writings at speeds commensurate with employability. S22142

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>OST 136</td>
<td>Word Processing</td>
<td>2</td>
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This course is designed to introduce word processing concepts and applications. Topics include preparation of a variety of documents and mastery of specialized software functions. Upon completion, students should be able to work effectively in a computerized word processing environment. S22144

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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<tbody>
<tr>
<td>OST 141</td>
<td>Medical Terms I-Medical Office</td>
<td>3</td>
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</table>

This course uses a language-structure approach to present the terminology and vocabulary that will be encountered in medical office settings. Topics include word parts that relate to systemic components, conditions, pathology, and disorder remediation in approximately one-half of the systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms. S11561

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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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<tbody>
<tr>
<td>OST 148</td>
<td>Medical Coding Billing &amp; Insurance</td>
<td>3</td>
<td>0</td>
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</table>

Prerequisites: MED 121

This course introduces fundamentals of medical coding, billing, and insurance. Emphasis is placed on the medical billing cycle to include third party payers, coding concepts, and form preparation. Upon completion, students should be able to explain the life cycle of and accurately complete a medical insurance claim. S22148

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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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<tbody>
<tr>
<td>OST 149</td>
<td>Medical Legal Issues</td>
<td>3</td>
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</table>

This course introduces the complex legal, moral, and ethical issues involved in providing health-care services. Emphasis is placed on the legal requirements of medical practices; the relationship of physician, patient, and office personnel; professional liabilities; and medical practice liability. Upon completion, students should be able to demonstrate a working knowledge of current medical law and accepted ethical behavior. S10679

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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>OST 155</td>
<td>Legal Terminology</td>
<td>3</td>
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</table>

This course covers the terminology appropriate to the legal profession. Topics include legal research, court systems, litigation, civil and criminal law, probate, real and personal property, contracts and leases, domestic relations, equity, and corporations. Upon completion, students should be able to spell, pronounce, define, and accurately use legal terms. S22150

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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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<tbody>
<tr>
<td>OST 223</td>
<td>Administrative Office Transcript I</td>
<td>2</td>
<td>3</td>
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</table>

Prerequisites: OST 136

This course provides opportunities to explore emerging technologies. Emphasis is placed on identifying, researching, and presenting current technological topics for class consideration and discussion. Upon completion, students should be able to use reference materials to compose and edit text. S14189

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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>OST 233</td>
<td>Office Publications Design</td>
<td>2</td>
<td>2</td>
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</tbody>
</table>

Prerequisites: OST 136

This course provides entry-level skills in using software with desktop publishing capabilities. Topics include principles of page layout, desktop publishing terminology and applications, and legal and ethical considerations of software use. Upon completion, students should be able to design and produce professional business documents and publications. S14246

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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<tbody>
<tr>
<td>OST 243</td>
<td>Medical Office Simulation</td>
<td>2</td>
<td>3</td>
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</table>

Prerequisites: OST 148

This course introduces medical systems used to process information in the automated office. Topics include traditional and electronic information resources, storing and retrieving information, and the billing cycle. Upon completion, students should be able to use the computer accurately to schedule, bill, update, and make corrections. S12315

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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<tbody>
<tr>
<td>OST 252</td>
<td>Legal Transcription I</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Prerequisites: OST 134 or OST 136 and OST 155

This course provides experience in transcribing legal correspondence, forms, and documents. Emphasis is placed on developing listening skills to transcribe documents. Upon completion, students should be able to transcribe office documents. S22154

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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>OST 284</td>
<td>Emerging Technologies</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

This course provides opportunities to explore emerging technologies. Emphasis is placed on identifying, researching, and presenting current technological topics for class consideration and discussion. Upon completion, students should be able to understand the importance of keeping abreast of technological changes that affect the office professional. S10158

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OST 286</td>
<td>Professional Development</td>
<td>3</td>
<td>0</td>
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</table>

This course covers the personal competencies and qualities needed to project a professional image in the office. Topics include interpersonal skills, health lifestyles, appearance, attitude, personal and professional growth, multicultural awareness, and professional etiquette. Upon completion, students should be able to demonstrate these attributes in the classroom, office, and society. S106301
**Course Descriptions**

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**OST 289 Administrative Office Management**

- **Credit Hours:** 2
- **Contact Hours:** 2
- **Prerequisites:** OST 164 or either OST 134 or OST 136

This course is designed to be a capstone course for the office professional and provides a working knowledge of modern office procedures. Emphasis is placed on scheduling, telephone procedures, travel arrangements, event planning, office design, and ergonomics. Upon completion, students should be able to adapt in an office environment. S21362

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**PED 110 Fit and Well for Life**

- **Credit Hours:** 1
- **Contact Hours:** 2

This course is designed to investigate and apply the basic concepts and principles of lifetime physical fitness and other health-related factors. Emphasis is placed on wellness through the study of nutrition, weight control, stress management, and consumer facts on exercise and fitness. Upon completion, students should be able to plan a personal, lifelong fitness program based on individual needs, abilities, and interests. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S11789

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**PED 111 Physical Fitness I**

- **Credit Hours:** 3
- **Contact Hours:** 1

This course provides an individualized approach to physical fitness utilizing the five major components. Emphasis is placed on the scientific basis for setting up and engaging in personalized physical fitness programs.Upon completion, students should be able to set up and implement an individualized physical fitness program. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S11678

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**PED 121 Walk, Jog, Run**

- **Credit Hours:** 0
- **Contact Hours:** 3
- **Prerequisites:** PED 130

This course covers the basic concepts involved in safely and effectively improving cardiovascular fitness. Emphasis is placed on walking, jogging, or running as a means of achieving fitness. Upon completion, students should be able to understand and appreciate the benefits derived from these activities. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S11039

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**PED 122 Golf-Beginning**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course covers the fundamentals of golf. Topics include the proper grip, stance, alignment, swings for the short and long game, putting, and the rules and etiquette of golf. Upon completion, students should be able to demonstrate the knowledge of the rules and etiquette of golf. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S11067

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**PED 123 Golf-Beginning**

- **Credit Hours:** 2
- **Contact Hours:** 1
- **Prerequisites:** PED 130

This course covers the more advanced phases of golf. Emphasis is placed on refining the fundamental skills and learning more advanced phases of the game such as club selection, trouble shots, and course management. Upon completion, students should be able to demonstrate the knowledge and ability to play a recreational round of golf. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S11033

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**PED 130 Tennis-Beginning**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course emphasizes the fundamentals of tennis. Topics include basic strokes, rules, etiquette, and court play. Upon completion, students should be able to play recreational tennis. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S12680

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**PED 131 Tennis-Beginning**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course emphasizes the refinement of playing skills. Topics include continuing the development of fundamentals, learning advanced serves, and strokes and pace and strategies in singles and doubles play. Upon completion, students should be able to play competitive tennis. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S12604

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**PED 137 Badminton**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course covers the fundamentals of badminton. Emphasis is placed on the basics of serving, clears, drops, drives, smashes, and the rules and strategies of singles and doubles. Upon completion, students should be able to apply these skills in playing situations. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S12153

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**PED 138 Archery**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course introduces the basic archery safety and skills. Topics include proper techniques of stance, bracing, drawing, and releasing as well as terminology and scoring. Upon completion, students should be able to participate safely in target archery. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S12688

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**PED 139 Bowling-Beginning**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course introduces the fundamentals of bowling. Emphasis is placed on ball selection, grips, stance, and delivery along with rules and etiquette. Upon completion, students should be able to participate in recreational bowling. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S12615

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**PED 142 Lifetime Sports**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course is designed to give an overview of a variety of sports activities. Emphasis is placed on the skills and rules necessary to participate in a variety of lifetime sports. Upon completion, students should be able to demonstrate an awareness of the importance of participating in lifetime sports activities. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S10204

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**PED 143 Volleyball-Beginning**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course introduces the fundamentals of volleyball. Emphasis is placed on the basics of serving, passing, setting, spiking, blocking, and the rules and etiquette of volleyball. Upon completion, students should be able to participate in recreational volleyball. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S10176

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**PED 144 Volleyball-Beginning**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course covers the more advanced volleyball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, students should be able to participate in competitive volleyball. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S10128

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**PED 145 Basketball-Beginning**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course covers the fundamentals of basketball. Emphasis is placed on skill development, knowledge of the rules, and basic game strategy. Upon completion, students should be able to participate in recreational basketball. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S10188

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**PED 146 Basketball-Beginning**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course covers more advanced basketball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, students should be able to play basketball at a competitive level. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S10225

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**PED 147 Softball**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course introduces the fundamental skills and rules of softball. Emphasis is placed on proper techniques and strategies for playing softball. Upon completion, students should be able to participate in recreational softball. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S10178

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**PED 170 Backpacking**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course covers the proper techniques for establishing a campsite, navigating in the wilderness, and planning for an overnight trip. Topics include planning for meals, proper use of maps and compass, and packing and dressing for extended periods in the outdoors. Upon completion, students should be able to identify quality backpacking equipment, identify the principles of no-trace camping, and successfully complete a backpacking experience. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S13081

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**PED 171 Nature Hiking**

- **Credit Hours:** 0
- **Contact Hours:** 2
- **Prerequisites:** PED 130

This course provides instruction on how to equip and care for oneself on the trail. Topics include clothing, hygiene, trail ethics, and necessary equipment. Upon completion, students should be able to successfully participate in nature trail hikes. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. S13031
**PHILOSOPHY (PHI)**

**PHI 220 Western Philosophy I**
3 0 3
Prerequisites: ENG 111
This course covers Western intellectual and philosophic thought from the early Greeks through the medievalists. Emphasis is placed on such figures as the pre-Socratics, Plato, Aristotle, Epicurus, Epictetus, Augustine, Suarez, Anselm, and Aquinas. Upon completion, students should be able to trace the development of leading ideas regarding reality, knowledge, reason, and faith. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts.

**PHI 221 Western Philosophy II**
3 0 3
Prerequisites: ENG 111
This course covers Western intellectual and philosophic thought from post-medievalists through recent thinkers. Emphasis is placed on such figures as Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, Kant, Hegel, Marx, Mill, and representatives of pragmatism, logical positivism, and existentialism. Upon completion, students should be able to trace the development of leading ideas concerning knowledge, reality, science, society, and the limits of reason. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts.

**PHI 240 Introduction to Ethics**
3 0 3
Prerequisites: ENG 111
This course introduces theories about the nature and foundations of moral judgments and applications to contemporary moral issues. Emphasis is placed on utilitarianism, rule-based ethics, existentialism, relativism versus objectivism, and egoism. Upon completion, students should be able to apply various ethical theories to individual moral issues such as euthanasia, abortion, crime and punishment, and justice. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts.

**PHYSICS (PHY)**

**PHY 80 Introduction to Physics**
3 2 4
This course introduces applied principles of physics through hands-on activities and guided discussions. Emphasis is placed on basic graphical analysis, machines, friction, work, energy, power, momentum, rotational mechanics, and periodic motion. Upon completion, students should be able to use the basic language of physics and utilize problem-solving skills necessary for success in certificate-level physics courses.

**Course Descriptions**

**PED 172 Outdoor Living**
1 2 2
This course is designed to acquaint the beginning camper with outdoor skills. Topics include camping techniques such as cooking and preserving food, safety, and setting up camp. Upon completion, students should be able to set up camp sites in field experiences using proper procedures. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**PED 186 Dancing for Fitness**
0 2 1
This course is designed to develop movement and recreational dance skills, safety, fitness, coordination, and techniques used to teach various groups. Emphasis is placed on participation and practice with adapting dances for ages and ability levels. Upon completion, students should be able to demonstrate knowledge of fitness through social, folk, and square dance participation and instruction. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**PED 210 Team Sports**
0 3 1
This course introduces the fundamentals of popular American team sports. Emphasis is placed on rules, equipment, and motor skills used in various sports. Upon completion, students should be able to demonstrate knowledge of the sports covered. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

**PHY 110 Conceptual Physics**
3 0 3
This course provides a conceptually-based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles studied. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Natural Science.

**PHY 110A Conceptual Physics Lab**
0 2 1
Corequisites: PHY 110
This course is a laboratory for PHY 110. Emphasis is placed on laboratory experiences that enhance materials presented in PHY 110. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in PHY 110. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Natural Science.

**PHY 151 College Physics I**
3 2 4
Prerequisites: MAT 161, MAT 171, or MAT 175
This algebra/trigonometry-based course introduces fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, vectors, motion, forces, Newton’s laws of motion, work, energy, power, momentum, and properties of matter. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.

**PHY 152 College Physics II**
3 2 4
Prerequisites: PHY 151
This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Natural Science.

**PHY 251 General Physics I**
3 3 4
Prerequisites: MAT 271
Corequisites: PHY 272
This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vector operations, linear kinematics and dynamics, energy, power, momentum, rotational mechanics, periodic motion, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Natural Science.

**PHY 252 General Physics II**
3 3 4
Prerequisites: PHY 272 and PHY 251
This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Natural Science.
POLITICAL SCIENCE (POL)

POL 110 Introduction to Political Science 3 0 3
This course introduces basic political concepts used by governments and addresses a wide range of political issues. Topics include political theory, ideologies, legitimacy, and the role of organized interests in democratic and non-democratic systems. Upon completion, students should be able to discuss a variety of issues inherent in all political systems and draw logical conclusions in evaluating these systems. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S13770

POL 120 American Government 3 0 3
This course is a study of the origins, development, structure, and functions of American national government. Topics include the constitutional framework, federalism, the three branches of government including the bureaucracy, civil rights and liberties, political participation and behavior, and policy formation. Upon completion, students should be able to demonstrate an understanding of the basic concepts and participatory processes of the American political system. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S11509

POL 210 Comparative Government 3 0 3
This course provides a cross-national perspective on the government and politics of contemporary nations such as Great Britain, France, Germany, and Russia. Topics include each country's historical uniqueness, key institutions, attitudes and ideologies, patterns of interaction, and current political problems. Upon completion, students should be able to identify and compare various nations' governmental structures, processes, ideologies, and capacity to resolve major problems. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S14332

POL 220 International Relations 3 0 3
This course provides a study of the effects of ideologies, trade, armaments, and alliances on relations among nation-states. Emphasis is placed on regional and global cooperation and conflict, economic development, trade, non-governmental organizations, and international institutions such as the World Court and UN. Upon completion, students should be able to identify and discuss major international relationships, institutions, and problems. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S12877

PSYCHOLOGY (PSY)

PSY 115 Stress Management 2 0 2
This course covers stressors and techniques for stress management. Topics include anger, assertiveness, adaptation to change, conflict, coping skills, identification of stressors, time management, and the physiology of stress and burnout. Upon completion, students should be able to demonstrate an understanding of the effective management of stress. S11106

PSY 118 Interpersonal Psychology 3 0 3
This course introduces the basic principles of psychology as they relate to personal and professional development. Emphasis is placed on personality traits, communication/leadership styles, effective problem solving, and cultural diversity as they apply to personal and work environments. Upon completion, students should be able to demonstrate an understanding of these principles of psychology as they apply to personal and professional development. S11025

PSY 150 General Psychology 3 0 3
This course provides an overview of the scientific study of human behavior. Topics include history, methodology, biopsychology, sensation, perception, learning, motivation, cognition, abnormal behavior, personality theory, social psychology, and other relevant topics. Upon completion, students should be able to demonstrate a basic knowledge of the science of psychology. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S10777

PSY 183 Psychology of Addiction 3 0 3
This course covers historical and theoretical perspectives on addictive behavior and the genetic, familial, and sociocultural influences on addiction. Topics include addictions to eating, gambling, alcohol, drugs, relationships, work, and sex. Upon completion, students should be able to demonstrate a knowledge of the theories of addiction and the factors underlying addictive behaviors. S11416

RED 90 Improved College Reading 3 2 4
Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by that college’s placement test.
REL 111 Eastern Religions 3 0 3
This course introduces the major Asian religious traditions. Topics include Hinduism, Buddhism, Taoism, Confucianism, and Shinto. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S13358

REL 112 Western Religions 3 0 3
This course introduces the major western religious traditions. Topics include Zoroastrianism, Islam, Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S13280

REL 211 Introduction to Old Testament 3 0 3
This course is a survey of the literature of the Hebrews with readings from the law, prophets, and other writings. Emphasis is placed on the use of literary, historical, archeological, and cultural analysis. Upon completion, students should be able to use the tools of critical analysis to read and understand Old Testament literature. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S17107

REL 212 Introduction to New Testament 3 0 3
This course is a survey of the literature of first-century Christianity with readings from the gospels, Acts, and the Pauline and pastoral letters. Topics include the literary structure, audience, and religious perspective of the writings, as well as the historical and cultural context of the early Christian community. Upon completion, students should be able to use the tools of critical analysis to read and understand New Testament literature. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S17123

REL 221 Religion in America 3 0 3
This course is an examination of religious beliefs and practice in the United States. Emphasis is placed on mainstream religious traditions and non-traditional religious movements from the Colonial period to the present. Upon completion, students should be able to recognize and appreciate the diversity of religious traditions in America. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S11026

SCIENCE (SCI)

SCI 90 Skills for the Sciences 2 2 3
This course is designed to provide fundamental skills necessary for entry into college-level science courses. Topics include scientific vocabulary, measurement, scientific notation, the scientific method for solving problems, collaborative skills, and applications to various areas of science. Upon completion, students should be able to demonstrate a readiness for college-level science courses. S14242

INFORMATION SYSTEMS SECURITY (SEC)

SEC 110 Security Concepts 3 0 3
This course introduces the concepts and issues related to securing information systems and the development of policies to implement information security controls. Topics include the historical view of networking and security, security issues, trends, security resources, and the role of policy, people, and processes in information security. Upon completion, students should be able to identify information security risks, create an information security policy, and identify processes to enforce and implement policy. S21053

SEC 150 Secure Communications 2 2 3
Prerequisites: SEC 110 and NET 110 or NET 125
This course provides an overview of current technologies used to provide secure transport of information across networks. Topics include data integrity through encryption, Virtual Private Networks, SSL, SSH, and IPSec. Upon completion, students should be able to implement secure data transmission technologies. S21054

SOCIOLOGY (SOC)

SOC 210 Introduction to Sociology 3 0 3
This course introduces the scientific study of human society, culture, and social interactions. Topics include sociological methods, diversity and inequality, cooperation and conflict, social institutions, and organizations. Upon completion, students should be able to demonstrate knowledge of sociological concepts as they apply to the interplay among individuals, groups, and societies. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S11919

SOC 213 Sociology of the Family 3 0 3
This course covers the institution of the family and other intimate relationships. Emphasis is placed on mate selection, gender roles, sexuality, communication, power and conflict, parenthood, diverse lifestyles, divorce and remarriage, and economic issues. Upon completion, students should be able to analyze the family as a social institution and the social forces which influence its development and change. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S11798

SOC 220 Social Problems 3 0 3
This course provides an in-depth study of current social problems. Emphasis is placed on causes, consequences, and possible solutions to problems associated with families, schools, workplaces, communities, and the environment. Upon completion, students should be able to recognize, define, analyze, and propose solutions to these problems. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S13948

SOC 225 Social Diversity 3 0 3
This course provides a comparison of diverse roles, interests, opportunities, contributions, and experiences in social life. Topics include race, ethnicity, gender, sexual orientation, class, and religion. Upon completion, students should be able to analyze how cultural and ethnic differences evolve and persist in society, how social institutions develop, values, and tolerance. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S13923
SOC 240 Social Psychology 3 0 3
This course examines the influence of culture and social groups on individual behavior and personality. Emphasis is placed on the process of socialization, communication, conformity, deviance, interpersonal attraction, intimacy, race and ethnicity, small group experiences, and social movements. Upon completion, students should be able to identify and analyze cultural and social forces that influence the individual in a society. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Social/Behavioral Sciences. S13849

SOC 250 Sociology of Religion 3 0 3
This course examines religion from a sociological perspective as part and product of human society. Topics include the origins, development, and functions of belief systems; religious organizations; conversion; and interactions with politics, the economy, science, and the class system. Upon completion, students should be able to describe and analyze religious systems. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11715

SOC 254 Rural and Urban Sociology 3 0 3
This course applies sociological concepts to a comparative study of major social issues facing contemporary rural and urban America. Emphasis is placed on growth and development patterns, ecological factors, social organizations, social controls, and processes of change. Upon completion, students should be able to illustrate the differences and similarities that exist between urban and rural environments as they resolve contemporary issues. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11677

SPANISH (SPA)

SPA 111 Elementary Spanish I 3 0 3
This course introduces the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S13047

SPA 112 Elementary Spanish II 3 0 3
Prerequisites: SPA 111
This course is a continuation of SPA 111 focusing on the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate further cultural awareness. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Humanities/Fine Arts. S12995

SPA 141 Culture and Civilization 3 0 3
This course provides an opportunity to explore issues related to the Hispanic world. Topics include historical and current events, geography, and customs. Upon completion, students should be able to identify and discuss selected topics and cultural differences related to the Hispanic world. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement. S11221

SHOOTING/HUNTING SPORTS MANAGEMENT (SSM)

SSM 110 Intro to Shooting Sports 3 3 4
This course covers the theories and fundamentals of shooting sports. Topics include shotgun shooting sports, rifle shooting sports, and handgun shooting sports. Upon completion, students should be able to identify, explain and demonstrate the rules, regulations and equipment used in various shooting sports currently in the United States. S21862

SSM 111 Gun Shop Management 3 0 3
This course introduces managing a gun shop. Topics include handling firearms safely, federal and state firearms laws, purchasing new and used firearms, purchasing related firearms equipment, supplies and firearms security. Upon completion, students should be able to safely and legally start working a firearms counter. S21863

SSM 112 Sports Hunting 3 0 3
This course introduces hunting and hunting sports management techniques. Topics include firearms safety, metal finishes, checkering, wood finishing, stock fit, shotgun chokes, basic firearms design, and custom firearms. Upon completion, students should be able to discuss sports management needs with customers and receive firearms for Gunsmithing work. S21865

SSM 114 Shooting Sports Mgmt 3 6 5
This course introduces shooting and hunting sports management techniques. Topics include firearms safety, metal finishes, checkering, wood finishing, stock fit, shotgun chokes, basic firearms design, and custom firearms. Upon completion, students should be able to identify, explain and demonstrate the firearms and related equipment needed to hunt locally, nationally and in today's world. S21864

SUSTAINABILITY TECHNOLOGIES (SST)

SST-140 Green Bldg & Design Concepts 3 0 3
This course is designed to introduce the student to sustainable building design and construction principles and practices. Topics include sustainable building rating systems and certifications, energy efficiency, indoor environmental quality, sustainable building materials and water use. Upon completion, students should be able to identify the principles and practices of sustainable building design and construction. S23302

SWK 110 Introduction to Social Work 3 0 3
This course examines the historical development, values, orientation, and professional standards of social work and focuses on the terminology and broader systems of social welfare. Emphasis is placed on the various fields of practice including those agencies whose primary function is financial assistance, corrections, mental health, and protective services. Upon completion, students should be able to demonstrate an understanding of the knowledge, values, and skills of the social work professional. S11170

SWK 113 Working With Diversity 3 0 3
This course examines and promotes understanding, sensitivity, awareness, and knowledge of human diversity. Emphasis is placed on professional responsibilities, duties, and skills critical to multicultural human services practice. Upon completion, students should be able to integrate and expand knowledge, skills, and cultural awareness relevant to diverse populations. S11127

SWK 115 Community Resources 2 2 3
This course introduces community resources essential to social work practice. Emphasis is placed on awareness of and interaction with community service personnel. Upon completion, students should be able to identify resources and assess critical community needs. S21488

SWK 214 Social Work Law 3 0 3
Prerequisites: SWK 110
This course introduces the major provisions of social services law, current trends, legislative developments, and court procedures. Emphasis is placed on the interpretation of the laws and court decisions related to various social services populations. Upon completion, students should be able to interpret these laws and their implications for social services practice. S10306

SWK 220 Social Work Issues in Client Services 3 0 3
This course introduces the professional standards, values, and issues in social services. Topics include confidentiality, assessment of personal values, professional responsibilities, competencies, and ethics. Upon completion, students should be able to understand and discuss multiple ethical issues applicable to social work and apply various decision-making models to current issues. S11955
TRN-110 Intro to Transport Tech

This course covers workplace safety, hazardous materials, environmental regulations, hand tools, service information, basic concepts, vehicle systems, and common transportation industry terminology. Topics include familiarization with major vehicle systems, proper use of various hand and power tools, material safety data sheets, and personal protective equipment. Upon completion, students should be able to demonstrate appropriate safety procedures, identify and use basic shop tools, and describe government regulations regarding transportation repair facilities. S23455

Competencies / Student Learning Outcomes

1. Demonstrate work place safety and hazardous waste disposal per OSHA and EPA guidelines that apply to relevant transportation industry work. 2. Given a vehicle or piece of equipment, students will be able to identify it and locate relevant service information in one or more industry-standard databases. 3. Demonstrate proficiency hoisting transportation vehicles through use of lifts and floor jacks. 4. Complete service repair orders with appropriate details: customer contact information; VIN; cause, concern, correction. 5. Identify and communicate about basic systems and terms associated with the transportation industry. 6. Distinguish between transportation systems terms and components either on a written exercise or in a lab environment. 7. Demonstrate proper use and care of related transportation industry tools and equipment. 8. Correctly identify or describe government regulations associated with the transportation industry.

TRN-120 Basic Transp Electricity

This course covers basic electrical theory, wiring diagrams, test equipment, and diagnosis, repair and replacement of batteries, starters, and alternators. Topics include Ohm’s Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns. S23456

Competencies / Student Learning Outcomes

1. Demonstrate work place safety related to transportation electrical systems. 2. Interpret and apply wiring diagram information on a transportation vehicle electrical system. 3. Demonstrate the proper use of electrical diagnostic test equipment. 4. Use Ohm’s law to calculate the value of any of the following given the values of the remaining variables: • Voltage (V) • Resistance (R) • Amperage (A) 5. Given a transportation vehicle with a fault in the battery, starting, and charging system, students will be able to perform successful diagnosis and repairs. 6. Demonstrate the ability to obtain appropriate service information on electrical circuit construction.

TRN-140 Transp Climate Control

This course covers the theory of refrigeration and heating, electrical/electronic/pneumatic controls, and diagnosis and repair of climate control systems. Topics include design and repair of climate control components and systems, recovery/recycling of refrigerants, and safety and environmental regulations. Upon completion, students should be able to diagnose and repair vehicle climate control systems. S23460

Competencies / Student Learning Outcomes

1. In a lab setting, demonstrate work place safety per OSHA and EPA guidelines that apply to relevant climate control systems found on transportation vehicles and equipment. 2. Given a transportation vehicle or related equipment with a fault to the climate control system, diagnose and repair the climate control system using the recommended lab equipment as outlined by the related service information. 3. Using the recommended equipment as outlined by the EPA, identify and perform the proper recovery and recycling procedures for any refrigerant in a transportation vehicle or related equipment. 4. Describe the operation of the heating, ventilation and air condition systems. 5. Describe the use of climate control testing equipment to aid diagnosis of the systems. 6. Describe the use of appropriate service information and capacity charts. 7. Describe the EPA regulations that govern the proper use of refrigerants in a transportation vehicle or related equipment.

TRN-140A Transp Climate Cont Lab

Corequisites: Take TRN-140

This course provides experiences for enhancing student skills in the diagnosis and repair of transportation climate control systems. Emphasis is placed on reclaiming, recovery, recharging, leak detection, climate control components, diagnosis, air conditioning equipment, tools and safety. Upon completion, students should be able to describe the operation, diagnose, and safely service climate control systems using appropriate tools, equipment, and service information. S23461

Competencies / Student Learning Outcomes

1. Given a transportation vehicle or related equipment with a fault in the A/C system, diagnose and repair the system using the recommended lab equipment and service information. 2. Utilize proper equipment to identify a given A/C refrigerant type and the purity of the A/C refrigerant for the transportation industry. 3. Given a transportation vehicle or equipment with an A/C system, use the recommended equipment to properly reclaim, evacuate, recharge and recondition the equipment’s climate control system. 4. Given a Heating Ventilation and Air Conditioning (HVAC) system, properly drain, flush and refill the entire anti-freeze coolant system. 5. Given a Heating Ventilation and Air Conditioning (HVAC) system, evaluate the anti-freeze coolant condition and perform a systems test as recommended by service information for a transportation vehicle or equipment. 7. Diagnose and repair a transportation vehicle or equipment with a fault in the A/C system. 8. Given an A/C system, remove and inspect system components and seals for damage which may cause the system to leak refrigerant. 9. Given a faulty climate control system, diagnose temperature control problems.

WEB 110 Internet/Web Fundamentals

This course introduces World Wide Web Consortium (W3C) standard markup language and services of the Internet. Topics include creating web pages, search engines, FTP and other related topics. Upon completion, students should be able to display a hand-coded web site created with mark-up language, and effectively use and understand the function of search engines. S22058

WEB 111 Introduction to Web Graphics

This course introduces the creation of web graphics, and addressing problems peculiar to WWW display using appropriate software. Topics include web graphics file types, optimization, RGB color, web typography, elementary special effects, transparency, animation, slicing, basic photo manipulation, and other related topics. Upon completion, students should be able to create graphics, such as animated banners, buttons, backgrounds, logos, and manipulate photographic images for Web delivery. S22416

WEB 115 Web Markup and Scripting

This course introduces Worldwide Web Consortium (W3C) standard client-side Internet programming using industry-established practices. Topics include JavaScript, markup elements, stylesheets, validation, accessibility, standards, and browsers. Upon completion, students should be able to develop hand-coded web pages using current markup standards. S22059

WEB 119 Web Tech Prog Orient

This course provides an opportunity for students to develop the knowledge and skills required to succeed in the Web Technologies program. Emphasis is placed on introducing students to the tools and resources available for Web Technologies. Upon completion, students should be able to use the tools, resources, and services available. S21483

WEB 120 Introduction to Internet Multimedia

This is the first of two courses covering the creation of Internet Multimedia. Topics include Internet multimedia file types, file type conversion, acquisition of digital audio/video, streaming audio/video and graphics animation plug-in programs and other related topics. Upon completion, students should be able to create Internet multimedia presentations utilizing a variety of methods and applications. S21280

WEB 140 Web Development Tools

This course provides an introduction to web development software suites. Topics include the creation of web sites and applets using web development software. Upon completion, students should be able to create entire web sites and supporting applets. S21133

WEB 179 JAVA Web Programming

This course introduces the development of dynamic, database-driven web applications using the JAVA programming languages. Topics include Object Oriented Programming JAVA Server Pages, servlets, database interactions, and form handling. Upon completion, students should be able to create and modify JAVA-based internet applications. S21484

WEB 182 PHP Programming

Prerequisites: CIS 115

This course introduces students to the server-side, HTML-embedded scripting language PHP. Emphasis is placed on programming techniques required to create dynamic web pages using PHP scripting language features. Upon completion, students should be able to design, code, test, debug, and create a dynamic web site using the PHP scripting language. S21306
### Course Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
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<td>ColdFusion Programming</td>
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<td>XML Technology</td>
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<td>WEB 120</td>
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<td>Implementing Web Servers</td>
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<td>WLD 121</td>
<td>GMAW (MIG) FCAW/Plate</td>
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<td>WLD 131</td>
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<tr>
<td>WLD 141</td>
<td>Symbols &amp; Specifications</td>
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<td>WLD 212</td>
<td>Inert Gas Welding</td>
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