

## COURSE DESCRIPTIONS

The courses listed on the following pages represent the current curriculum offerings in Arts and Sciences, Business Sciences, and Applied Sciences and Technology.

1. The courses are listed in alphabetical order by a 3-letter prefix (example - BUS for business; ANT for anthropology).
2. The courses are assigned a 3-digit number (example ACA 115)
3. Any course number less than 100 will not earn credit hours toward graduation.
4. The course title follows the number (example-ACA 115 Success & Study Skills)
5. The number of contact and credit hours follow the title (example ACA 115 Success & Study Skills 0 2 1). The first number represents the number of lecture hours per week; the second represents the number of lab, shop, clinical, or practicum hours per week; the last represents the number of credit hours assigned to the course.

### ACADEMIC RELATED

<b>ACA 115</b>	<b>Success &amp; Study Skills</b>	<b>0</b>	<b>2</b>	<b>1</b>
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Prerequisites:

Corequisites: None

This course provides an orientation to the campus resources and academic skills necessary to achieve educational objectives. Emphasis is placed on an exploration of facilities and services, study skills, library skills, self-assessment, wellness, goal-setting, and critical thinking. Upon completion, students should be able to manage their learning experiences to successfully meet educational goals.

### ACCOUNTING

<b>ACC 120</b>	<b>Prin Of Financial Acct</b>	<b>3</b>	<b>2</b>	<b>4</b>
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Prerequisites: None

Corequisites: None

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.*

<b>ACC 121</b>	<b>Prin of Managerial Acct</b>	<b>3</b>	<b>2</b>	<b>4</b>
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Prerequisites: ACC 120

Corequisites: None

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.*

<b>ACC 129</b>	<b>Individual Income Taxes</b>	<b>2</b>	<b>2</b>	<b>3</b>
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Prerequisites:

Corequisites: None

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.

<b>ACC 180</b>	<b>Practices in Bookkeeping</b>	<b>3</b>	<b>0</b>	<b>3</b>
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Prerequisites: ACC 120

Corequisites: None

This course provides advanced instruction in bookkeeping and record-keeping functions. Emphasis is placed on mastering adjusting entries, correction of errors, depreciation, payroll, and inventory. Upon completion, students should be able to conduct all keep bookkeeping functions for small business.

## AIR CONDITIONING, HEATING AND REFRIGERATION

**AHR 120 HVACR Maintenance** 1 3 2

Prerequisites: None

Corequisites: None

This course introduces the basic principles of industrial air conditioning and heating systems. Emphasis is placed on preventive maintenance procedures for heating and cooling equipment and related components. Upon completion, students should be able to perform routine preventive maintenance tasks, maintain records, and assist in routine equipment repairs.

**AHR 130 HVAC Controls** 2 2 3

Prerequisites: AHR 111 or ELC 111

Corequisites: None

This course covers the types of controls found in residential and commercial comfort systems. Topics include electrical and electronic controls, control schematics and diagrams, test instruments, and analysis and troubleshooting of electrical systems. Upon completion, students should be able to diagnose and repair common residential and commercial comfort system controls.

**AHR 151 HVAC Duct Systems I** 1 3 2

Prerequisites: None

Corequisites: None

This course introduces the techniques used to lay out and fabricate duct work commonly found in HVAC systems. Emphasis is placed on the skills required to fabricate duct work. Upon completion, students should be able to lay out and fabricate simple duct work.

**AHR 160 Refrigerant Certification** 1 0 1

Prerequisites: None

Corequisites: None

This course covers the requirements for the EPA certification examinations. Topics include small appliances, high pressure systems, and low pressure systems. Upon completion, students should be able to demonstrate knowledge of refrigerants and be prepared for the EPA certification examinations.

**AHR 210 Residential Building Code** 1 2 2

Prerequisites: None

Corequisites: None

This course covers the residential building codes that are applicable to the design and installation of HVAC systems. Topics include current residential codes as applied to HVAC design, service, and installation. Upon completion, students should be able to demonstrate the correct usage of residential building codes that apply to specific areas of the HVAC trade.

**AHR 211 Residential System Design** 2 2 3

Prerequisites: None

Corequisites: None

This course introduces the principles and concepts of conventional residential heating and cooling system design. Topics include heating and cooling load estimating, basic psychometrics, equipment selection, duct system selection, and system design. Upon completion, students should be able to design a basic residential heating and cooling system.

## ANTHROPOLOGY

**ANT 210 General Anthropology** 3 0 3

Prerequisites:

Corequisites: None

This course introduces the physical, archaeological, linguistic, and ethnological fields of anthropology. Topics include human origins, genetic variations, archaeology, linguistics, primatology, and contemporary 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.

**ANT 220 Cultural Anthropology** 3 0 3

Prerequisites:

Corequisites: None

This course introduces the nature of human culture. Emphasis is placed on cultural theory, methods of fieldwork, and cross-cultural comparisons in the areas of ethnology, language, and the cultural past. Upon completion, students should be able to demonstrate an understanding of basic cultural processes and how cultural data are collected and analyzed. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

## ART

<b>ART 111</b>	<b>Art Appreciation</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites: RED 090, ENG 090 or satisfactory placement test scores				
Corequisites: None				
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.				
<b>ART 121</b>	<b>Design I</b>	<b>1</b>	<b>4</b>	<b>3</b>
Prerequisites				
Corequisites: None				
This course introduces the elements and principles of design as applied to two-dimensional art. Emphasis is placed on the structural elements, the principles of visual organization, and the theories of color mixing and interaction. Upon completion, students should be able to understand and use critical and analytical approaches as they apply to two-dimensional visual art.				
<b>ART 131</b>	<b>Drawing I</b>	<b>0</b>	<b>6</b>	<b>3</b>
Prerequisites:				
Corequisites: None				
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.				
<b>ART 132</b>	<b>Drawing II</b>	<b>0</b>	<b>6</b>	<b>3</b>
Prerequisites: ART 131				
Corequisites: None				
This course continues instruction in the language of drawing and the use of various materials. Emphasis is placed on experimentation in the use of drawing techniques, media, and graphic materials. Upon completion, students should be able to demonstrate increased competence in the expressive use of graphic form and techniques.				
<b>ART 140</b>	<b>Basic Painting</b>	<b>0</b>	<b>4</b>	<b>2</b>
Prerequisites:				
Corequisites: None				
This course introduces the mechanics of painting. Emphasis is placed on the exploration of painting media through fundamental techniques. Upon completion, students should be able to demonstrate a basic understanding and application of painting.				
<b>ART 240</b>	<b>Painting I</b>	<b>0</b>	<b>6</b>	<b>3</b>
Prerequisites: None				
Corequisites: None				
This course introduces the language of painting and the use of various painting materials. Emphasis is placed on the understanding and use of various painting techniques, media, and color principles. Upon completion, students should be able to demonstrate competence in the use of creative processes directed toward the development of expressive form.				
<b>ART 241</b>	<b>Painting II</b>	<b>0</b>	<b>6</b>	<b>3</b>
Prerequisites: ART 240				
Corequisites: None				
This course provides a continuing investigation of the materials, processes, and techniques of painting. Emphasis is placed on the exploration of expressive content using a variety of creative processes. Upon completion, students should be able to demonstrate competence in the expanded use of form and variety.				

## ASTRONOMY

<b>AST 111</b>	<b>Descriptive Astronomy</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites: None				
Corequisites: AST 111A				
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.				

<b>AST 111A</b>	<b>Descriptive Astronomy Lab</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	None			
Corequisites:	AST 111			
This 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.				
<b>AST 151</b>	<b>General Astronomy I</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	151A			
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.				
<b>AST 151A</b>	<b>General Astronomy I Lab</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	None			
Corequisites:	AST 151			
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.				
<b>AST 152</b>	<b>General Astronomy II</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	AST 151/151A			
Corequisites:	AST 152A			
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.				
<b>AST 152A</b>	<b>General Astronomy II Lab</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	AST 151/151A			
Corequisites:	AST 152			
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.				
<b>AST 251</b>	<b>Observational Astronomy</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	AST 111 or AST 152			
Corequisites:	None			
This course covers the operation of the telescope and related observatory equipment. Emphasis is placed on the use of the telescope and related observatory equipment, including techniques of data collection, measurements, and data analysis. Upon completion, students should be able to set up a telescope and use the coordinate system to locate objects, collect data, and make measurements with the telescope.				

### **AUTOMOTIVE BODY REPAIR**

<b>AUB 111</b>	<b>Painting &amp; Refinishing I</b>	<b>2</b>	<b>6</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the proper procedures for using automotive refinishing equipment and materials in surface preparation and application. Topics include federal, state, and local regulations, personal safety, refinishing equipment and materials, surface preparation, masking, application techniques, and other related topics. Upon completion, students should be able to identify and use proper equipment and materials in refinishing following accepted industry standards.				
<b>AUB 112</b>	<b>Painting &amp; Refinishing II</b>	<b>2</b>	<b>6</b>	<b>4</b>
Prerequisites:	AUB 111			
Corequisites:	None			
This course covers advanced painting techniques and technologies with an emphasis on identifying problems encountered by the refinishing technician. Topics include materials application, color matching, correction of refinishing problems, and other related topics. Upon completion, students should be able to perform spot, panel, and overall refinishing repairs and identify and correct refinish problems.				

<b>AUB 114</b>	<b>Special Finishes</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	AUB 111			
Corequisites:	None			
This course introduces multistage finishes, custom painting, and protective coatings. Topics include base coats, advanced intermediate coats, clear coats, and other related topics. Upon completion, students should be able to identify and apply specialized finishes based on accepted industry standards.				
<b>AUB 121</b>	<b>Non-Structural Damage I</b>	<b>1</b>	<b>4</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces safety, tools, and the basic fundamentals of body repair. Topics include shop safety, damage analysis, tools and equipment, repair techniques, materials selection, materials usage, and other related topics. Upon completion, students should be able to identify and repair minor direct and indirect damage including removal/repairing/ replacing of body panels to accepted standards.				
<b>AUB 122</b>	<b>Non-Structural Damage II</b>	<b>2</b>	<b>6</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course covers safety, tools, and advanced body repair. Topics include shop safety, damage analysis, tools and equipment, advanced repair techniques, materials selection, materials usage, movable glass, and other related topics. Upon completion, students should be able to identify and repair or replace direct and indirect damage to accepted standards including movable glass and hardware.				
<b>AUB 131</b>	<b>Structural Damage I</b>	<b>2</b>	<b>4</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces safety, equipment, structural damage analysis, and damage repairs. Topics include shop safety, design and construction, structural analysis and measurement, equipment, structural glass, repair techniques, and other related topics. Upon completion, students should be able to analyze and perform repairs to a vehicle which has received light/moderate structural damage.				
<b>AUB 132</b>	<b>Structural Damage II</b>	<b>2</b>	<b>6</b>	<b>4</b>
Prerequisites:	AUB 131			
Corequisites:	None			
This course provides an in-depth study of structural damage analysis and repairs to vehicles that have received moderate to heavy structural damage. Topics include shop safety, structural analysis and measurement, equipment, structural glass, advanced repair techniques, structural component replacement and alignment, and other related topics. Upon completion, students should be able to analyze and perform repairs according to industry standards.				
<b>AUB 134</b>	<b>Autobody MIG Welding</b>	<b>1</b>	<b>4</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the terms and procedures for welding the various metals found in today's autobody repair industry with an emphasis on personal/environmental safety. Topics include safety and precautionary measures, setup/operation of MIG equipment, metal identification methods, types of welds/joints, techniques, inspection methods, and other related topics. Upon completion, students should be able to demonstrate a basic knowledge of welding operations and safety procedures according to industry standards.				
<b>AUB 136</b>	<b>Plastics &amp; Adhesives</b>	<b>1</b>	<b>4</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers safety, plastic and adhesive identification, and the various repair methods of automotive plastic components. Topics include safety, identification, preparation, material selection, and the various repair procedures including refinishing. Upon completion, students should be able to identify, remove, repair, and/or replace automotive plastic components in accordance with industry standards.				
<b>AUB 141</b>	<b>Mech &amp; Elec Components I</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the basic principles of automotive mechanical and electrical components. Topics include personal and environmental safety and suspension and steering, electrical, brake, heating and air-conditioning, cooling, drive train, and restraint systems. Upon completion, students should be able to identify system components and perform basic system diagnostic checks and/or repairs according to industry standards.				

<b>AUB 150</b>	<b>Automotive Detailing</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the methods and procedures used in automotive detailing facilities. Topics include safety, engine, interior and trunk compartment detailing, buffing/polishing exterior surfaces, and cleaning and reconditioning exterior trim, fabrics, and surfaces. Upon completion, students should be able to improve the overall appearance of a vehicle.				
<b>AUB 160</b>	<b>Body Shop Operations</b>	<b>1</b>	<b>0</b>	<b>1</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the day-to-day operations of autobody repair facilities. Topics include work habits and ethics, customer relations, equipment types, materials cost and control, policies and procedures, shop safety and liabilities, and other related topics. Upon completion, students should be able to understand the general operating policies and procedures associated with an autobody repair facility.				
<b>AUB 162</b>	<b>Autobody Estimating</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course provides a comprehensive study of autobody estimating. Topics include collision damage analysis, industry regulations, flat-rate and estimated time, and collision estimating manuals. Upon completion, students should be able to prepare and interpret a damage report.				

### **BANKING AND FINANCE**

<b>BAF 110</b>	<b>Principles of Banking</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:				
Corequisites:	None			
This course covers the fundamentals of bank functions in a descriptive fashion. Topics include banks and the monetary system, the relationship of banks to depositors, the payment functions, bank loans and accounting, regulations, and examinations. Upon completion, students should be able to demonstrate an understanding of the business of banking from a broad perspective.				
<b>BAF 131</b>	<b>Fund of Bank Lending</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	ACC 120			
Corequisites:	None			
This course introduces the basic knowledge and skills needed to be an effective lender. Topics include the functions of the loan interview and credit investigation, the "C"s of credit, elements of loan documentation, and warning signs of problem loans. Upon completion, students should be able to demonstrate an understanding of the credit functions and regulatory issues affecting this key banking function. This course is a unique concentration requirement of the Banking and Finance concentration in the Business Administration program.				
<b>BAF 141</b>	<b>Law &amp; Banking: Principles</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course provides an overview of the legal aspects of banking and the legal framework within which banks function. Topics include the court system, consumer protection, tangible and intangible property ownership, and the legalities and regulations of bank transactions. Upon completion, students should be able to discuss the non-technical aspects of the legal system and how these affect the bank's organization and operation. This course is a unique concentration requirement of the Banking and Finance concentration in the Business Administration program.				
<b>BAF 222</b>	<b>Money and Banking</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course provides a fundamental treatment of how money and banks function in the US and world economies. Topics include the roles of money in the US economy, the functions of the Federal Reserve Board, and the workings of monetary and fiscal policies. Upon completion, students should be able to explain how the monetary economy functions, how banks are creators of money, and the impact of the Federal Reserve. This course is a unique concentration requirement of the Banking and Finance concentration in the Business Administration program.				

## BIOLOGY

<b>BIO 111</b>	<b>General Biology I</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	RED 090, ENG 090 or satisfactory placement test scores			
Corequisites:	None			
This course introduces the principles and concepts of biology. Emphasis is placed on basic biological chemistry, cell structure and function, metabolism and energy transformation, genetics, evolution, classification, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.				
<b>BIO 112</b>	<b>General Biology II</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	BIO 111			
Corequisites:	None			
This course is a continuation of BIO 111. Emphasis is placed on organisms, biodiversity, plant and animal systems, ecology, and other related topics. Upon completion, students should be able to demonstrate comprehension of life at the organismal and ecological levels. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.				
<b>BIO 120</b>	<b>Introductory Botany</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	BIO 111			
Corequisites:	None			
This course provides an introduction to the classification, relationships, structure, and function of plants. Topics include reproduction and development of seed and non-seed plants, levels of organization, form and function of systems, and a survey of major taxa. Upon completion, students should be able to demonstrate comprehension of plant form and function, including selected taxa of both seed and non-seed plants. This course is intended for all Associate degree programs.				
<b>BIO 140</b>	<b>Environmental Biology</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:				
Corequisites:	BIO 140A			
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.				
<b>BIO 140A</b>	<b>Environmental Biology Lab</b>	<b>0</b>	<b>3</b>	<b>1</b>
Prerequisites:				
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 is intended for all Associate degree programs. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.				
<b>BIO 155</b>	<b>Nutrition</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:				
Corequisites:	None			
This course covers the biochemistry of foods and nutrients with consideration of the physiological effects of specialized diets for specific biological needs. Topics include cultural, religious, and economic factors that influence a person's acceptance of food as well as nutrient requirements of the various life stages. Upon completion, students should be able to identify the functions and sources of nutrients, the mechanisms of digestion, and the nutritional requirements of all age groups.				
<b>BIO 163</b>	<b>Basic Anat &amp; Physiology</b>	<b>4</b>	<b>2</b>	<b>5</b>
Prerequisites:	Reading 90 or satisfactory placement test scores in reading			
Corequisites:	None			
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 fundamental principles of anatomy and physiology and their interrelationships. This course is designed for certificate and diploma programs.				

<b>BIO 165</b>	<b>Anatomy and Physiology I</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	Reading 90 or satisfactory placement test scores in reading			
Corequisites:	None			
This course is the first of a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.				
<b>BIO 166</b>	<b>Anatomy and Physiology II</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	BIO 165			
Corequisites:	None			
This course is the second in a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and the interrelationships of all body systems.				
<b>BIO 168</b>	<b>Anatomy and Physiology I</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
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 and special senses. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their relationships. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.				
<b>BIO 169</b>	<b>Anatomy and Physiology II</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	BIO 168			
Corequisites:	None			
This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include 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.				
<b>BIO 175</b>	<b>General Microbiology</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	BIO 111, BIO 163, BIO 165, or BIO 169			
Corequisites:	None			
This course covers 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 is intended for AAS degree programs.				
<b>BIO 275</b>	<b>Microbiology</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	BIO 111, BIO 112, BIO 163, BIO 165, or BIO 168			
Corequisites:	None			
This course covers principles of microbiology and the impact these organisms have on man the environment. Topics include the various groups of microorganisms, their structure, physiology, genetics, microbial pathogenicity, infectious diseases, immunology, and selected practical applications. Upon completion, students should be able to demonstrate knowledge and skills including microscopy, aseptic technique, staining, culture methods, and identification of microorganisms. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.				
<b><u>BLUEPRINT READING</u></b>				
<b>BPR 111</b>	<b>Blueprint Reading</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the basic principles of blueprint reading. Topics include line types, orthographic projections, dimensioning methods, and notes. Upon completion, students should be able to interpret basic blueprints and visualize the features of a part.				
<b>BPR 121</b>	<b>Blueprint Reading: Mech</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	BPR 111 or MAC 131			
Corequisites:	None			
This course covers the interpretation of intermediate blueprints. Topics include tolerancing, auxiliary views, sectional views, and assembly drawings. Upon completion, students should be able to read and interpret a mechanical working drawing.				

<b>BPR 130</b>	<b>Blueprint Reading/Const</b>	1	2	2
Prerequisites:	None			
Corequisites:	None			

This course covers the interpretation of blueprints and specifications that are associated with the construction trades. Emphasis is placed on interpretation of details for foundations, floor plans, elevations, and schedules. Upon completion, students should be able to read and interpret a set of construction blueprints.

### **BROADCAST PRODUCTION**

<b>BPT 110</b>	<b>Intro to Broadcasting</b>	3	0	3
Prerequisites:	None			
Corequisites:	None			

This course introduces the field of broadcasting and other electronic media. Emphasis is placed on the history, development, and current status of radio, television, and related industries. Upon completion, students should be able to demonstrate knowledge of regulations, organizational structure, revenue sources, historical development, and on-going operation of broadcasting and related industries.

<b>BPT 111</b>	<b>Broadcast Law &amp; Ethics</b>	3	0	3
Prerequisites:	None			
Corequisites:	None			

This course covers judicial, legislative, and administrative policies pertinent to the ethical and legal operation of broadcast and other electronic media organizations. Emphasis is placed on legal and ethical issues including First Amendment protection, FCC regulations, copyright, and libel laws. Upon completion, students should be able to demonstrate an understanding of the historical significance and modern-day application of important broadcast laws and policies.

<b>BPT 112</b>	<b>Broadcast Writing</b>	3	2	4
Prerequisites:	None			
Corequisites:	None			

This course introduces proper copy and script writing techniques and formats for radio, television, and other electronic media. Emphasis is placed on creating effective scripts for programs and promotional materials, including commercial and public radio service announcements for a specific target audience. Upon completion, students should be able to understand and write copy and scripts according to standard industry formats.

<b>BPT 113</b>	<b>Broadcast Sales</b>	3	0	3
Prerequisites:	None			
Corequisites:	None			

This course covers sales principles applicable to radio, television, cable, and other electronic media. Emphasis is placed on prospecting and servicing accounts, developing clients, and preparing sales presentations. Upon completion, students should be able to create a sales presentation based upon standard ratings reports, prospect for new customers, and understand account management.

<b>BPT 115</b>	<b>Public Relations</b>	3	0	3
Prerequisites:	None			
Corequisites:	None			

This course introduces the art and science of analyzing trends, predicting their consequences, counseling organizations, and implementing actions to serve organizational and public interests. Emphasis is placed on identifying public needs, conducting and analyzing research, writing and communicating information, maintaining media relations, and creating an organizational crisis plan. Upon completion, students should be able to summarize public relations history, conduct research, develop press releases, create printed material, and formulate a crisis plan.

<b>BPT 121</b>	<b>Broadcast Speech I</b>	2	3	3
Prerequisites:	None			
Corequisites:	None			

This course covers basic preparation and performance of on-air talents' speaking quality. Emphasis is placed on developing a pleasant and efficient voice with techniques applied to taped news, features, commercial copy, and announcing. Upon completion, students should be able to show improvement and aptitude in proper articulation, pronunciation, rate of delivery, pitch, breathing techniques, inflection, projection, and phrasing.

<b>BPT 122</b>	<b>Broadcast Speech II</b>	2	3	3
Prerequisites:	BPT 121			
Corequisites:	None			

This course covers basic and advanced preparation and performance of on-air speech. Emphasis is placed on enhancing a pleasant, effective voice with techniques applied to impromptu speaking, radio plays, and taped presentations. Upon completion, students should be able to employ proper articulation, pronunciation, rate of delivery, phrasing, and other voice techniques in a professional manner.

<b>BPT 131</b>	<b>Audio/Radio Production I</b>	<b>2</b>	<b>6</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the creation, development, production, and presentation of audio programming elements for broadcast and/or other electronic media applications. Emphasis is placed on the proper operation of professional audio equipment and the study of basic physical behavior and perceptual effects of sound. Upon completion, students should be able to correctly operate audio recording and playback equipment and demonstrate an understanding of the basic components of sound.				
<b>BPT 132</b>	<b>Audio/Radio Production II</b>	<b>2</b>	<b>6</b>	<b>4</b>
Prerequisites:	BPT 131			
Corequisites:	None			
This course cover the use of advanced audio production techniques in broadcast and/or other electronic media applications. Topics include basic audio signal processing equipment and analog and digital professional audio recording and playback equipment. Upon completion, students should be able to optimize the use of professional audio equipment in the production of effective audio programming.				
<b>BPT 135</b>	<b>Radio Performance I</b>	<b>0</b>	<b>6</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.				
<b>BPT 136</b>	<b>Radio Performance II</b>	<b>0</b>	<b>6</b>	<b>2</b>
Prerequisites:	BPT 135			
Corequisites:	None			
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.				
<b>BPT 137</b>	<b>Radio Performance III</b>	<b>0</b>	<b>6</b>	<b>2</b>
Prerequisites:	BPT 136			
Corequisites:	None			
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.				
<b>BPT 138</b>	<b>Radio Performance IV</b>	<b>0</b>	<b>6</b>	<b>2</b>
Prerequisites:	BPT 137			
Corequisites:	None			
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.				
<b>BPT 139</b>	<b>Radio Performance V</b>	<b>0</b>	<b>6</b>	<b>2</b>
Prerequisites:	BPT 138			
Corequisites:	None			
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.				
<b>BPT 140</b>	<b>Intro to TV Systems</b>	<b>2</b>	<b>0</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces technical systems that allow production, transmission, and reception of television and other video media. Emphasis is placed on identifying components and equipment, describing their function within the video chain, and troubleshooting problems within the signal flow. Upon completion, students should be able to demonstrate an understanding of components and equipment in the video chain and provide basic preventive maintenance on equipment.				

<b>BPT 210</b>	<b>Broadcast Management</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers management duties within the fields of broadcasting and other electronic media. Emphasis is placed on the management of broadcast stations and cable systems, including financial, personnel, news, sales, and promotion management. Upon completion, students should be able to demonstrate knowledge of successful station operation, including key management concepts and strategies.				
<b>BPT 215</b>	<b>Broadcast Programming</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers programming methods, research, and resources needed to provide programs for radio, television, cable, and satellite target audiences. Topics include market research and analysis; local, network, and public station programming and program sources; and scheduling procedures for electronic media. Upon completion, students should be able to develop a programming format or schedule.				
<b>BPT 220</b>	<b>Broadcast Marketing</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces broadcast marketing, including cultivating an audience, building an identity, and servicing customers. Topics include the use of effective promotional tools, marketing research, rating analysis, and the development of a unified marketing plan. Upon completion, students should be able to develop a broadcast marketing plan.				
<b>BPT 231</b>	<b>Video/TV Production I</b>	<b>2</b>	<b>6</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the language of film/video, shot composition, set design, lighting, production planning, scripting, editing, and operation of video and television production equipment. Emphasis is placed on mastering the body of knowledge and techniques followed in producing all forms of video and television production. Upon completion, students should be able to produce basic video and television productions in a team environment.				
<b>BPT 232</b>	<b>Video/TV Production II</b>	<b>2</b>	<b>6</b>	<b>4</b>
Prerequisites:	BPT 231			
Corequisites:	None			
This course covers advanced video and television production. Emphasis is placed on field production, post-production, digital video effects, graphics, and multi-camera productions. Upon completion, students should be able to create productions that optimize the use of studio, field, and post-production equipment.				
<b>BPT 235</b>	<b>TV Performance I</b>	<b>0</b>	<b>6</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course provides hands-on experience in the operation of television studios and/or stations. Emphasis is placed on the application of skills through direct participation in the production or distribution of television programs. Upon completion, students should be able to demonstrate competence in performing key station and/or studio duties.				
<b>BPT 236</b>	<b>TV Performance II</b>	<b>0</b>	<b>6</b>	<b>2</b>
Prerequisites:	BPT 235			
Corequisites:	None			
This course provides hands-on experience in the operation of television studios and/or stations. Emphasis is placed on the application of skills through direct participation in the production or distribution of television programs. Upon completion, students should be able to demonstrate competence in performing key station and/or studio duties.				
<b>BPT 237</b>	<b>TV Performance III</b>	<b>0</b>	<b>6</b>	<b>2</b>
Prerequisites:	BPT 236			
Corequisites:	None			
This course provides hands-on experience in the operation of television studios and/or stations. Emphasis is placed on the application of skills through direct participation in the production or distribution of television programs. Upon completion, students should be able to demonstrate competence in performing key station and/or studio duties.				

**BPT 238 TV Performance IV** 0 6 2  
 Prerequisites: BPT 237  
 Corequisites: None  
 This course provides hands-on experience in the operation of television studios and/or stations. Emphasis is placed on the application of skills through direct participation in the production or distribution of television programs. Upon completion, students should be able to demonstrate competence in performing key station and/or studio duties.

**BPT 239 TV Performance V** 0 6 2  
 Prerequisites: BPT 238  
 Corequisites: None  
 This course provides hands-on experience in the operation of television studios and/or stations. Emphasis is placed on the application of skills through direct participation in the production or distribution of television programs. Upon completion, students should be able to demonstrate competence in performing key station and/or studio duties.

**BPT 241 Broadcast Journalism I** 3 2 4  
 Prerequisites: None  
 Corequisites: None  
 This course introduces broadcast journalism, including the gathering, writing, delivery, editing, and production of news stories and reports. Emphasis is placed on proper news writing skills, including the creation of good leads and complete stories in the production of radio voices and reports. Upon completion, students should be able to write broadcast news scripts and produce radio news reports and newscasts.

**BPT 242 Broadcast Journalism II** 3 2 4  
 Prerequisites: BPT 241  
 Corequisites: None  
 This course provides an opportunity to gather, write, edit, and produce broadcast news reports. Emphasis is placed on producing professional broadcast news reports, including script writing, gathering, and editing. Upon completion, students should be able to produce and record professional broadcast news stories.

**BPT 250 Institutional Video** 2 3 3  
 Prerequisites: None  
 Corequisites: None  
 This course covers development and production of non-broadcast video productions for clients. Emphasis is placed on satisfying client objectives, including interviewing, research, site surveying, script review, photography, and post-production. Upon completion, students should be able to plan, write, shoot, and edit an institutional video designed to meet a client's objectives.

**BPT 260 Multi-Track Recording** 2 2 3  
 Prerequisites: BPT 132  
 Corequisites: None  
 This course covers the application of audio production techniques in a multi-track recording setting. Emphasis is placed on proper use of control room equipment and mix-down of multiple sound sources on both analog and digital recorders. Upon completion, students should be able to produce creative music or supplemental works using sound engineering techniques.

**BUSINESS**

**BUS 115 Business Law I** 3 0 3  
 Prerequisites: None  
 Corequisites: None  
 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 to satisfy the comprehensive articulation agreement for transferability as a premajor and/or elective course requirement.

**BUS 116 Business Law II** 3 0 3  
 Prerequisites: BUS 115  
 Corequisites: None  
 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.

<b>BUS 121</b>	<b>Business Math</b>	2	2	3
Prerequisites:	MAT 060			
Corequisites:	None			
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.				
<b>BUS 137</b>	<b>Principles of Management</b>	3	0	3
Prerequisites:	None			
Corequisites:	None			
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.				
<b>BUS 153</b>	<b>Human Resource Management</b>	3	0	3
Prerequisites:	None			
Corequisites:	None			
This course introduces the functions of personnel/human resource management within an organization. Topics include equal opportunity and the legal environment, recruitment and selection, performance appraisal, employee development, compensation planning, and employee relations. Upon completion, students should be able to anticipate and resolve human resource concerns.				
<b>BUS 225</b>	<b>Business Finance</b>	2	2	3
Prerequisites:	ACC 120			
Corequisites:	None			
This course provides an overview of business financial management. Emphasis is placed on financial statement analysis, time value of money, management of cash flow, risk and return, and sources of financing. Upon completion, students should be able to interpret and apply the principles of financial management.				
<b>BUS 230</b>	<b>Small Business Management</b>	3	0	3
Prerequisites:	None			
Corequisites:	None			
This course introduces the challenges of entrepreneurship including the startup and operation of a small business. Topics include market research techniques, feasibility studies, site analysis, financing alternatives, and managerial decision making. Upon completion, students should be able to develop a small business plan. This course is also available through the Virtual Learning Community (VLC).				
<b>BUS 253</b>	<b>Leadership and Mgt Skills</b>	3	0	3
Prerequisites:	None			
Corequisites:	None			
This course includes a study of the qualities, behaviors, and personal styles exhibited by leaders. Emphasis is placed on coaching, counseling, team building, and employee involvement. Upon completion, students should be able to identify and exhibit the behaviors needed for organizational effectiveness.				
<b>BUS 255</b>	<b>Org Behavior in Business</b>	3	0	3
Prerequisites:	None			
Corequisites:	None			
This course covers the impact of different management practices and leadership styles on worker satisfaction and morale, organizational effectiveness, productivity, and profitability. Topics include a discussion of formal and informal organizations, group dynamics, motivation, and managing conflict and change. Upon completion, students should be able to analyze different types of interpersonal situations and determine an appropriate course of action.				
<b>BUS 260</b>	<b>Business Communication</b>	3	0	3
Prerequisites:	ENG 111 and OST 131 or CIS 110			
Corequisites:	None			
This course is designed to develop skills in writing business communications. Emphasis is placed on business reports, correspondence, and professional presentations. Upon completion, students should be able to communicate effectively in the work place.				

## CARPENTRY

<b>CAR 110</b>	<b>Introduction to Carpentry</b>	2	0	2
Prerequisites:	None			
Corequisites:	None			
This course introduces the student to the carpentry trade. Topics include duties of a carpenter, hand and power tools, building materials, construction methods, and safety. Upon completion, students should be able to identify hand and power tools, common building materials, and basic construction methods.				
<b>CAR 111</b>	<b>Carpentry I</b>	3	15	8
Prerequisites:	None			
Corequisites:	None			
This course introduces the theory and construction methods associated with the building industry, including framing, materials, tools, and equipment. Topics include safety, hand/power tool use, site preparation, measurement and layout, footings and foundations, construction framing, and other related topics. Upon completion, students should be able to safely lay out and perform basic framing skills with supervision.				
<b>CAR 112</b>	<b>Carpentry II</b>	3	15	8
Prerequisites:	CAR 111			
Corequisites:	None			
This course covers the advanced theory and construction methods associated with the building industry including framing and exterior finishes. Topics include safety, hand/power tool use, measurement and layout, construction framing, exterior trim and finish, and other related topics. Upon completion, students should be able to safely frame and apply exterior finishes to a residential building with supervision.				
<b>CAR 113</b>	<b>Carpentry III</b>	3	9	6
Prerequisites:	CAR 111			
Corequisites:	None			
This course covers interior trim and finishes. Topics include safety, hand/power tool use, measurement and layout, specialty framing, interior trim and finishes, cabinetry, and other related topics. Upon completion, students should be able to safely install various interior trim and finishes in a residential building with supervision.				
<b>CAR 114</b>	<b>Residential Bldg Codes</b>	3	0	3
Prerequisites:	None			
Corequisites:	None			
This course covers building codes and the requirements of state and local construction regulations. Emphasis is placed on the minimum requirements of the North Carolina building codes related to residential structures. Upon completion, students should be able to determine if a structure is in compliance with North Carolina building codes.				
<b>CAR 115</b>	<b>Res Planning/Estimating</b>	3	0	3
Prerequisites:	BPR 130			
Corequisites:	None			
This course covers project planning, management, and estimating for residential or light commercial buildings. Topics include planning and scheduling, interpretation of working drawings and specifications, estimating practices, and other related topics. Upon completion, students should be able to perform quantity take-offs and cost estimates.				

## COMPUTER ENGINEERING TECHNOLOGY

<b>CET 111</b>	<b>Computer Upgrade/Repair I</b>	2	3	3
Prerequisites:	None			
Co-requisites:	None			
This course covers repairing, servicing, and upgrading computers and peripherals in preparation for industry certification. Topics include CPU/memory/bus identification, disk subsystems, hardware/software installation/configuration, common device drivers, data recovery, system maintenance, and other related topics. Upon completion, students should be able to safely repair and/or upgrade computer systems to perform within specifications.				
<b>CET 160</b>	<b>Object-Oriented Prog Lang</b>	2	3	3
Prerequisites:	None			
Co-requisites:	None			
This course introduces computer programming using a high level 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.				

<b>CET 161</b>	<b>Procedural Programming</b>	2	3	3
<b>Prerequisites:</b> None				
<b>Co-requisites:</b> None				

This course introduces computer programming using a high level language. Emphasis is placed on event-driven programming methods, including creating and manipulating data, sequencing, iteration, and blocking of code. Upon completion, students should be able to design, code, test and debug at a beginning level.

<b>CET 211</b>	<b>Computer Upgrade/Repair II</b>	2	3	3
<b>Prerequisites:</b> None				
<b>Co-requisites:</b> None				

This course covers concepts of repair service, and upgrade of computers and peripherals in preparation for industry certification. Topics may include resolving resource conflicts and system bus specifications, configuration and troubleshooting peripherals, operating system configuration and optimization, and other related topics. Upon completion, students should be able to identify and resolve system conflicts and optimize system performance.

## CHEMISTRY

<b>CHM 131</b>	<b>Introduction to Chemistry</b>	3	0	3
<b>Prerequisites:</b> MAT 070 or satisfactory placement test scores				
<b>Corequisites:</b> CHM 131A				

This course introduces the fundamental concepts of inorganic chemistry. Topics include measurement, matter and energy, atomic and molecular structure, nuclear chemistry, stoichiometry, chemical formulas and reactions, chemical bonding, gas laws, solutions, and acids and bases. Upon completion, students should be able to demonstrate a basic understanding of chemistry as it applies to other fields. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

<b>CHM 131A</b>	<b>Introduction to Chemistry Laboratory</b>	0	3	1
<b>Prerequisites:</b> MAT 070 or satisfactory placement test scores				
<b>Corequisites:</b> CHM 131				

This course is a laboratory to accompany CHM 131. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 131. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 131. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

<b>CHM 132</b>	<b>Organic and Biochemistry</b>	3	3	4
<b>Prerequisites:</b> CHM 131 & 131A or CHM 151				
<b>Corequisites:</b>				

This course provides a survey of major functional classes of compounds in organic and biochemistry. Topics include structure, properties, and reactions of the major organic and biological molecules and basic principles of metabolism. Upon completion, students should be able to demonstrate an understanding of fundamental chemical concepts needed to pursue studies in related professional fields. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

<b>CHM 151</b>	<b>General Chemistry I</b>	3	3	4
<b>Prerequisites:</b> MAT 80 or satisfactory placement test scores				
<b>Corequisites:</b> None				

This course covers fundamental principles and laws of chemistry. Topics include measurement, atomic and molecular structure, periodicity, chemical reactions, chemical bonding, stoichiometry, thermochemistry, gas laws, and solutions. Upon completion, students should be able to demonstrate an understanding of fundamental chemical laws and concepts as needed in CHM 152. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

<b>CHM 152</b>	<b>General Chemistry II</b>	3	3	4
<b>Prerequisites:</b> CHM 151				
<b>Corequisites:</b> None				

This course provides a continuation of the study of the fundamental principles and laws of chemistry. Topics include kinetics, equilibrium, ionic and redox equations, acid-base theory, electrochemistry, thermodynamics, introduction to nuclear and organic chemistry, and complexions. Upon completion, students should be able to demonstrate an understanding of chemical concepts as needed to pursue further study in chemistry and related professional fields. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

<b>CHM 251</b>	<b>Organic Chemistry I</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	CHM 152			
Corequisites:	None			
This course provides a systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of hydrocarbons, alkyl halides, alcohols, and ethers; further topics include isomerization, stereochemistry, and spectroscopy. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of covered organic topics as needed in CHM 252.				
<b>CHM 252</b>	<b>Organic Chemistry II</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	CHM 251			
Corequisites:	None			
This course provides continuation of the systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of aromatics, aldehydes, ketones, carboxylic acids and derivatives, amines and heterocyclics; multi-step synthesis will be emphasized. Upon completion, students should be able to demonstrate an understanding of organic concepts as needed to pursue further study in chemistry and related professional fields.				

## INFORMATION SYSTEMS

<b>CIS 110</b>	<b>Introduction to Computers</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	OST 131 or satisfactory keyboarding skills			
Corequisites:	None			
This course provides an introduction to computers and computing. Topics include the impact of computers on society, ethical issues, and hardware/software applications, including spreadsheets, databases, word processors, graphics, the Internet, and operating systems. 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics. (Quantitative Option)				
<b>CIS 115</b>	<b>Intro to Prog &amp; Logic</b>	<b>2</b>	<b>3</b>	<b>3</b>
Prerequisites:	MAT 070			
Corequisites:	None			
This course introduces computer programming and problem solving in a programming environment, including an introduction to operating systems, text editor, and a language translator. 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics. (Quantitative Option)				
<b>CIS 165</b>	<b>Desktop Publishing I</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	OST 136 or proficiency in word processing			
Corequisites:	None			
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.				

## CRIMINAL JUSTICE

<b>CJC 100</b>	<b>Basic Law Enforcement Training</b>	<b>9</b>	<b>30</b>	<b>19</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the basic skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Topics are divided into general units of study: legal, patrol duties, law enforcement communications, investigations, practical application and sheriff-specific. Upon successful completion, the student will be able to demonstrate competence in topics and areas required for the state comprehensive certification examination. This is a certificate-level course.				
<b>CJC 111</b>	<b>Intro to Criminal Justice</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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 to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.				

<b>CJC 112</b>	<b>Criminology</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces deviant 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.				
<b>CJC 113</b>	<b>Juvenile Justice</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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.				
<b>CJC 120</b>	<b>Interviews/Interrogations</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
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 behavior 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.				
<b>CJC 121</b>	<b>Law Enforcement Operations</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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 pre-major and/or elective course requirement.				
<b>CJC 122</b>	<b>Community Policing</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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.				
<b>CJC 131</b>	<b>Criminal Law</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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.				
<b>CJC 132</b>	<b>Court Procedure &amp; Evidence</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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.				
<b>CJC 141</b>	<b>Corrections</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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 to satisfy the Comprehensive Articulation Agreement for a transferability as a pre-major and/or elective course requirement.				

<b>CJC 212</b>	<b>Ethics &amp; Comm Relations</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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.				
<b>CJC 214</b>	<b>Victimology</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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.				
<b>CJC 215</b>	<b>Organization &amp; Administration</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the components and functions of organization and administration as it applies to the agencies of the criminal justice system. Topics include operations/functions of organizations; recruiting, training, and retention of personnel; funding and budgeting; communications; span of control and discretion; and other related topics. Upon completion, students should be able to identify and discuss the basic components and functions of a criminal justice organization and its administrative operations.				
<b>CJC 221</b>	<b>Investigative Principles</b>	<b>3</b>	<b>2</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the theories and fundamentals of the investigative process. Topics include crime scene/incident processing, information gathering techniques, collection/preservation of evidence, preparation of appropriate reports, court presentations, and other related topics. Upon completion, students should be able to identify, explain, and demonstrate the techniques of the investigative process, report preparation, and courtroom presentation.				
<b>CJC 222</b>	<b>Criminalistics</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the functions of the forensic laboratory and its relationship to successful criminal investigations and prosecutions. Topics include advanced crime scene processing, investigative techniques, current forensic technologies, and other related topics. Upon completion, students should be able to identify and collect relevant evidence at simulated crime scenes and request appropriate laboratory analysis of submitted evidence.				
<b>CJC 223</b>	<b>Organized Crime</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the evolution of traditional and non-traditional organized crime and its effect on society and the criminal justice system. Topics include identifying individuals and groups involved in organized crime, areas of criminal activity, legal and political responses to organized crime, and other related topics. Upon completion, students should be able to identify the groups and activities involved in organized crime and the responses of the criminal justice system.				
<b>CJC 225</b>	<b>Crisis Intervention</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces critical incident intervention and management techniques as they apply to operational criminal justice practitioners. Emphasis is placed on the victim/offender situation as well as job-related high stress, dangerous, or problem-solving citizen contacts. Upon completion, students should be able to provide insightful analysis of emotional, violent, drug-induced, and other critical and/or stressful incidents that require field analysis and/or resolution.				
<b>CJC 231</b>	<b>Constitutional Law</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
The course covers the impact of the Constitution of the United States and its amendments on the criminal justice system. Topics include the structure of the Constitution and its amendments, court decisions pertinent to contemporary criminal justice issues, and other related topics. Upon completion, students should be able to identify/discuss the basic structure of the United States Constitution and the rights/procedures as interpreted by the courts.				

<b>CJC 232</b>	<b>Civil Liability</b>	<b>3</b>	<b>0</b>	<b>3</b>
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Prerequisites: None  
Corequisites: None  
This course covers liability issues for the criminal justice professional. Topics include civil rights violations, tort liability, employment issues, and other related topics. Upon completion, students should be able to explain civil trial procedures and discuss contemporary liability issues.

**COMPUTER SCIENCE**

<b>CSC 134</b>	<b>C++ Programming</b>	<b>2</b>	<b>3</b>	<b>3</b>
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Prerequisites: CIS 115 or prior programming experience  
Corequisites: None  
This course introduces object-oriented computer programming using the C++ programming language. Topics include input/output operations, iteration, arithmetic operations, arrays, pointers, filters, and other related topics. Upon completion, students should be able to design, code, test, and debug C++ language programs. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

<b>CSC 138</b>	<b>RPG Programming</b>	<b>2</b>	<b>3</b>	<b>3</b>
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Prerequisites: CIS 115 or prior programming experience and CIS 244  
Corequisites: None  
This course introduces computer programming using the RPG programming language. Topics include input/output operations, sequence, selection, iteration, arithmetic operations, arrays/tables, and other related topics. Upon completion, students should be able to design, code, test, and debug RPG language programs. This course has been approved to satisfy the Comprehensive Atriculation Agreement for transferability as a premajor and/or elective course requirement.

<b>CSC 139</b>	<b>Visual BASIC Programming</b>	<b>2</b>	<b>3</b>	<b>3</b>
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Prerequisites: CIS 115 or Programming Experience  
Corequisites: None  
This course introduces event-driven computer programming using the Visual BASIC programming language. Topics include input/output operations, sequence, selection, iteration, arithmetic operations, arrays, forms, sequential files, and other related topics. Upon completion, students should be able to design, code, test, and debug Visual BASIC language programs.

<b>CSC 144</b>	<b>AS/400 CL Programming</b>	<b>2</b>	<b>3</b>	<b>3</b>
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Prerequisites: CIS 115 and CIS 211  
Corequisites: None  
This course introduces computer programming using the CL programming language. Topics include CL command structure, command parameters, creating CL programs, manipulating variables, writing commands to control jobs and workflow, and other related topics. Upon completion, students should be able to design, code, test, and debug CL programs.

<b>CSC 160</b>	<b>Intro to Internet Prog</b>	<b>2</b>	<b>2</b>	<b>3</b>
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Prerequisites: CIS 172 & CIS 115  
Corequisites: None  
This course introduces client-side Internet programming using HTML and Javascript. Topics include use of frames and tables, use of meta tags, Javascript techniques for site navigation. Upon completion, students should be able to write HTML documents that incorporate programming to provide web page organization and navigation functions.

<b>CSC 234</b>	<b>Advanced C++</b>	<b>2</b>	<b>3</b>	<b>3</b>
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Prerequisites: CSC 134  
Corequisites: None  
This course is a continuation of CSC 134 using C++ with structured programming principles. Emphasis is placed on advanced arrays/tables, file management/processing techniques, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design, code, test, debug, and document programming solutions.

<b>CSC 238</b>	<b>Advanced RPG</b>	<b>2</b>	<b>3</b>	<b>3</b>
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Prerequisites: CSC 138  
Corequisites: None  
This course is a continuation of CSC 138 using RPG with structured programming principles. Emphasis is placed on advanced arrays/tables, file management/processing techniques, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design, code, test, debug, and document programming solutions.

## COOPERATIVE EDUCATION

<b>COE 110</b>	<b>World of Work</b>			<b>1</b>	<b>0</b>	<b>1</b>
Prerequisites:	None					
Corequisites:	None					
This course covers basic knowledge necessary for gaining and maintaining employment. Topics include job search skills, work ethic, meeting employer expectations, workplace safety, and human relations. Upon completion, students should be able to successfully make the transition from school to work.						
<b>COE 111</b>	<b>Co-op Work Experience I</b>		<b>0</b>	<b>0</b>	<b>10</b>	<b>1</b>
Prerequisites:	None					
Corequisites:	None					
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.						
<b>COE 115</b>	<b>Work Exp Seminar I</b>		<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>
Prerequisites:	None					
Corequisites:	COE 111					
Theories, techniques, and methods observed in the work settings will be discussed. Students will integrate ideas related in course work and practicum situations. This course is designed to coordinate the classroom and industry experience. The practicum correlating with the seminar must be taken the same term.						
<b>COE 121</b>	<b>Co-op Work Experience II</b>		<b>0</b>	<b>0</b>	<b>10</b>	<b>1</b>
Prerequisites:	None					
Corequisites:	None					
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.						
<b>COE 131</b>	<b>Co-op Work Experience III</b>		<b>0</b>	<b>0</b>	<b>10</b>	<b>1</b>
Prerequisites:	None					
Corequisites:	None					
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.						

## COMMUNICATION

<b>COM 231</b>	<b>Public Speaking</b>			<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:						
Corequisites:						
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in speech/communication.						

## COSMETOLOGY

<b>COS 111</b>	<b>Cosmetology Concepts I</b>			<b>4</b>	<b>0</b>	<b>4</b>
Prerequisites:	None					
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, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.						
<b>COS 112</b>	<b>Salon I</b>			<b>0</b>	<b>24</b>	<b>8</b>
Prerequisites:	None					
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.						

<b>COS 113</b>	<b>Cosmetology Concepts II</b>	<b>4</b>	<b>0</b>	<b>4</b>
Prerequisites:	None			
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.				
<b>COS 114</b>	<b>Salon II</b>	<b>0</b>	<b>24</b>	<b>8</b>
Prerequisites:	None			
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.				
<b>COS 115</b>	<b>Cosmetology Concepts III</b>	<b>4</b>	<b>0</b>	<b>4</b>
Prerequisites:	None			
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.				
<b>COS 116</b>	<b>Salon III</b>	<b>0</b>	<b>12</b>	<b>4</b>
Prerequisites:	None			
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, hair color, design, haircutting, chemical restructuring, pressing, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.				
<b>COS 117</b>	<b>Cosmetology Concepts IV</b>	<b>2</b>	<b>0</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	COS 118			
This course covers advanced cosmetology concepts. Topics include chemistry and hair structure, advanced cutting and design, and an overview of all cosmetology concepts in preparation for the licensing examination. Upon completion, students should be able to demonstrate an understanding of these cosmetology concepts and meet program completion requirements.				
<b>COS 118</b>	<b>Salon IV</b>	<b>0</b>	<b>21</b>	<b>7</b>
Prerequisites:	None			
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.				
<b>COS 119</b>	<b>Esthetics Concepts I</b>	<b>2</b>	<b>0</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
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.				
<b>COS 120</b>	<b>Esthetics Salon I</b>	<b>0</b>	<b>18</b>	<b>6</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the techniques of esthetics in a comprehensive experience in a simulated salon setting. Topics include client consultation, facials, 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.				

<b>COS 121</b>	<b>Manicure/Nail Technology I</b>	<b>4</b>	<b>6</b>	<b>6</b>
Prerequisites:	None			
Corequisites:	None			
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, decorating, and artificial applications in a salon setting.				
<b>COS 125</b>	<b>Esthetics Concepts II</b>	<b>2</b>	<b>0</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course covers more comprehensive esthetics concepts. Topics include nutrition, business management, makeup, and color analysis. Upon completion students should be able to demonstrate an understanding of the advanced esthetics concepts and meet course requirements.				
<b>COS 126</b>	<b>Esthetics Salon II</b>	<b>0</b>	<b>18</b>	<b>6</b>
Prerequisites:	None			
Corequisites:	None			
This course provides experience in a simulated esthetics setting. Topics include machine facials, aromatherapy, 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.				
<b>COS 222</b>	<b>Manicure/Nail Technology II</b>	<b>4</b>	<b>6</b>	<b>6</b>
Prerequisites:	COS 121			
Corequisites:	None			
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.				
<b>COS 223</b>	<b>Contemp Hair Coloring</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	COS 111 and COS 112			
Corequisites:	None			
This course covers basic color concepts, hair coloring problems, and application techniques. Topics include color theory, terminology, contemporary techniques, product knowledge, and other related topics. Upon completion, students should be able to identify a client's color needs and safely and competently perform color applications and correct problems.				
<b>COS 224</b>	<b>Trichology &amp; Chemistry</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course is a study of hair and the interaction of applied chemicals. Emphasis is placed on pH actions and the reactions and effects of chemical ingredients. Upon completion, students should be able to demonstrate an understanding of chemical terminology, pH testing, and chemical reactions on hair.				
<b>COS 225</b>	<b>Adv Contemp Hair Coloring</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	COS 223			
Corequisites:	None			
This course covers advanced techniques in coloring applications and problem solving situations. Topics include removing unwanted color, replacing pigment and re-coloring, removing coating, covering gray and white hair, avoiding color fading, and poor tint results. Upon completion, students should be able to apply problem-solving techniques in hair coloring situations.				
<b>COS 240</b>	<b>Contemporary Design</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	COS 111 and COS 112			
Corequisites:	None			
This course covers methods and techniques for contemporary designs. Emphasis is placed on contemporary designs and other related topics. Upon completion, students should be able to demonstrate and apply techniques associated with contemporary design.				
<b>COS 251</b>	<b>Manicure Instr Concepts</b>	<b>8</b>	<b>0</b>	<b>8</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces manicuring 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 supervision techniques, and assess student classroom performance.				

<b>COS 252</b>	<b>Manicure Instr Practicum</b>	0	15	5
Prerequisites:	None			
Corequisites:	COS 251			
This course covers supervisory and instructional skills for teaching manicuring students in a laboratory setting. Topics include demonstrations of services, supervision, student assessment, and other related topics. Upon completion, students should be able to demonstrate competence in the areas covered by the Manicuring Instructor Licensing Examination and meet program completion requirements.				
<b>COS 253</b>	<b>Esthetics Instr Concepts I</b>	6	15	11
Prerequisites:	None			
Corequisites:	None			
This course introduces esthetic instructional concepts and skills. Topics include orientation, theories of education, unit planning, daily lesson plans, laboratory management, student assessment in a laboratory setting. Upon completion, students should be able to demonstrate esthetic services and instruct and objectively assess student performance in a classroom setting.				
<b>COS 254</b>	<b>Esthetics Instr Concepts II</b>	6	15	11
Prerequisites:	None			
Corequisites:	None			
This course covers advanced esthetic instructional concepts and skills. 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 demonstrate competencies in the areas covered by the Esthetics Instructor Licensing Examination and meet program requirements.				
<b>COS 271</b>	<b>Instructor Concepts I</b>	5	0	5
Prerequisites:	None			
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.				
<b>COS 272</b>	<b>Instructor Practicum I</b>	0	21	7
Prerequisites:	None			
Corequisites:	COS 271			
This course covers 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.				
<b>COS 273</b>	<b>Instructor Concepts II</b>	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.				
<b>COS 274</b>	<b>Instructor Practicum II</b>	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.				

**COMPUTER INFORMATION TECHNOLOGY**

<b>CTS 115</b>	<b>Info Sys Business Concept</b>	3	0	3
Prerequisites:	None			
Corequisites:	None			
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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. (TAC – 05/24/06)				

<b>CTS 120</b>	<b>Hardware/Software Support</b>	<b>2</b>	<b>3</b>	<b>3</b>
<b>Prerequisites:</b> CIS 110 or CIS 111				
<b>Corequisites:</b> None				
This course covers the basic hardware 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.				
<b>CTS 125</b>	<b>Presentation Graphics</b>	<b>2</b>	<b>2</b>	<b>3</b>
<b>Prerequisites:</b> CIS 110 or CIS 111				
<b>Corequisites:</b> None				
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.				
<b>CTS 130</b>	<b>Spreadsheet</b>	<b>2</b>	<b>2</b>	<b>3</b>
<b>Prerequisites:</b> CIS 110 or CIS 111 or OST 137				
<b>Corequisites:</b> None				
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.				
<b>CTS 135</b>	<b>Integrated Software Intro</b>	<b>2</b>	<b>4</b>	<b>4</b>
<b>Prerequisites:</b> CIS 110 or CIS 111, and CTS 130, DBA 110, OST 136				
<b>Corequisites:</b> None				
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.				
<b>CTS 155</b>	<b>Tech Support Functions</b>	<b>2</b>	<b>2</b>	<b>3</b>
<b>Prerequisites:</b> None				
<b>Corequisites:</b> None				
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.				
<b>CTS 285</b>	<b>Systems Analysis &amp; Design</b>	<b>3</b>	<b>0</b>	<b>3</b>
<b>Prerequisites:</b> CIS 115				
<b>Corequisites:</b> None				
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.				
<b>CTS 289</b>	<b>System Support Project</b>	<b>1</b>	<b>4</b>	<b>3</b>
<b>Prerequisites:</b> CTS 285				
<b>Corequisites:</b> None				
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.				

## **CONSTRUCTION**

<b>CST 131</b>	<b>OSHA/Safety/Certification</b>	<b>2</b>	<b>2</b>	<b>3</b>
<b>Prerequisites:</b> None				
<b>Corequisites:</b> None				
This course covers the concepts of work site safety. Topics include OSHA regulations, tool safety, and certifications which relate to the construction industry. Upon completion, students should be able to identify and maintain a safe working environment based on OSHA regulations and maintain proper records and certifications.				

<b>CST 211</b>	<b>Construction Surveying</b>	2	3	3
Prerequisites: MAT 115, MAT 120, MAT 121, MAT 161, MAT 171 or MAT 175				
Corequisites: None				
This course covers field surveying applications for residential and commercial construction. Topics include building layout and leveling, linear measurement and turning angles, plumbing vertical members, and topographic and utilities surveys. Upon completion, students should be able to properly and accurately use surveying equipment to lay out residential and commercial buildings.				
<b>CST 221</b>	<b>Statics/Structures</b>	3	3	4
Prerequisites: MAT 115, MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175 and ARC 112 or CAR 112 or CST 112				
Corequisites: None				
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 footings 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.				
<b>CST 231</b>	<b>Soils &amp; Site Work</b>	3	2	4
Prerequisites: MAT 115, MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175				
Corequisites: None				
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.				
<b>CST 241</b>	<b>Planning/Estimating I</b>	2	2	3
Prerequisites: BPR 130 or MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175				
Corequisites: None				
This course covers the procedures involved in planning and estimating a residential structure. Topics include labor and equipment with emphasis placed on quantity take-off of materials necessary to construct a residential structure. Upon completion, students should be able to accurately complete a take-off of materials and equipment needs and plan the labor to construct a residential structure.				
<b>CST 242</b>	<b>Planning/Estimating II</b>	3	2	4
Prerequisites: CST 241				
Corequisites: None				
This course covers planning and estimating practices which are applicable to commercial construction. Emphasis is placed on planning and developing take-offs of materials, labor, and equipment in accordance with industry formats. Upon completion, students should be able to accurately complete take-offs and planning time lines necessary to complete a commercial structure.				

## DATABASE MANAGEMENT

<b>DBA 110</b>	<b>Database Concepts</b>	2	3	3
Prerequisites: None				
Corequisites: None				
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.				
<b>DBA 115</b>	<b>Database Applications</b>	2	2	3
Prerequisites: DBA 110				
Corequisites: None				
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				

## DESIGN DRAFTING

<b>DDF 211</b>	<b>Design Process I</b>	1	6	4
Prerequisites: None				
Corequisites: None				
This course emphasizes design processes for finished products. Topics include data collection from manuals and handbooks, efficient use of materials, design sketching, specifications, and vendor selection. Upon completion, students should be able to research and plan the design process for a finished product.				

<b>DDF 221</b>	<b>Design Drafting Project</b>	<b>0</b>	<b>4</b>	<b>2</b>
Prerequisites:	DFT 111, DFT 112, and DFT 151			
Corequisites:	None			
This course incorporates ideas from concept to final design. Topics include reverse engineering, design for manufacturability, and mock-up construction. Upon completion, students should be able to generate working drawings and models based on physical design parameters.				
<b><u>DRAFTING</u></b>				
<b>DFT 111</b>	<b>Technical Drafting I</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces basic drafting skills, equipment, and applications. Topics include sketching, measurements, lettering, dimensioning, geometric construction, orthographic projections and pictorials drawings, sections, and auxiliary views. Upon completion, students should be able to understand and apply basic drawing principles and practices.				
<b>DFT 111A</b>	<b>Technical Drafting I Lab</b>	<b>0</b>	<b>3</b>	<b>1</b>
Prerequisites:	None			
Corequisites:	DFT 111			
This course provides a laboratory setting to enhance basic drafting skills. Emphasis is placed on practical experiences that enhance the topics presented in DFT 111. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in DFT 111.				
<b>DFT 112</b>	<b>Technical Drafting II</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	DFT 111			
Corequisites:	None			
This course provides for advanced drafting practices and procedures. Topics include detailed working drawings, hardware, fits and tolerances, assembly and sub-assembly, geometric dimensioning and tolerancing, intersections, and developments. Upon completion, students should be able to produce detailed working drawings.				
<b>DFT 112A</b>	<b>Technical Drafting II Lab</b>	<b>0</b>	<b>3</b>	<b>1</b>
Prerequisites:	None			
Corequisites:	DFT 112			
This course provides a laboratory setting to enhance advanced drafting skills. Emphasis is placed on practical experiences that enhance the topics presented in DFT 112. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in DFT 112.				
<b>DFT 115</b>	<b>Architectural Drafting</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces basic drafting practices used in residential and light commercial design. Topics include floor plans, foundations, details, electrical components, elevations, and dimensioning practice. Upon completion, students should be able to complete a set of working drawings for a simple structure.				
<b>DFT 121</b>	<b>Intro to GD &amp; T</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces basic geometric dimensioning and tolerancing principles. Topics include symbols, annotation, theory, and applications. Upon completion, students should be able to interpret and apply basic geometric dimensioning and tolerancing principles to drawings.				
<b>DFT 151</b>	<b>CAD I</b>	<b>2</b>	<b>3</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces CAD software as a drawing tool. Topics include drawing, editing, file management, and plotting. Upon completion, students should be able to produce and plot a CAD drawing.				
<b>DFT 152</b>	<b>CAD II</b>	<b>2</b>	<b>3</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces extended CAD applications. Emphasis is placed upon intermediate applications of CAD skills. Upon completion, students should be able to use extended CAD applications to generate and manage drawings.				

<b>DFT 153</b>	<b>CAD III</b>	2	3	3
Prerequisites:	None			
Corequisites:	None			
This course introduces advanced CAD applications. Emphasis is placed upon advanced applications of CAD skills. Upon completion, students should be able to use advanced CAD applications to generate and manage data.				
<b>DFT 154</b>	<b>Intro Solid Modeling</b>	2	3	3
Prerequisites:	None			
Corequisites:	None			
This course is an introduction to basic three-dimensional solid modeling and design software. Topics include basic design, creation, editing, rendering and analysis of solid models and creation of multiview drawings. Upon completion, students should be able to use design techniques to create, edit, render and generate a multiview drawing.				
<b>DFT 161</b>	<b>Pattern Design &amp; Layout</b>	1	2	2
Prerequisites:	None			
Corequisites:	None			
This course covers the layout of sheet metal and pipe fittings. Topics include the development of patterns and templates for metalworking industries. Upon completion, students should be able to develop, sketch, produce, and angle layouts.				
<b>DFT 211</b>	<b>Gears, Cams, &amp; Pulleys</b>	1	3	2
Prerequisites:	DFT 111 and MAT 121, MAT 161, MAT 171, or MAT 175			
Corequisites:	None			
This course introduces the principles of motion transfer. Topics include gears, cams, pulleys, and drive components. Upon completion, students should be able to solve problems and produce drawings dealing with ratios.				
<b>DFT 231</b>	<b>Jig &amp; Fixture Design</b>	1	2	2
Prerequisites:	None			
Corequisites:	None			
This course introduces the study of jigs and fixtures. Topics include different types, components, and uses of jigs and fixtures. Upon completion, students should be able to analyze, design, and complete a set of working drawings for a jig or fixture.				
<b>DFT 254</b>	<b>Interm Solid Model/Render</b>	2	3	3
Prerequisites:	DFT 154			
Corequisites:	None			
This course presents a continuation of basic three-dimensional solid modeling and design software. Topics include advanced study of parametric design, creation, editing, rendering and analysis of solid model assemblies, and multiview drawing generation. Upon completion, students should be able to use parametric design techniques to create and analyze the engineering design properties of a model assembly.				
<b><u>DRAMA</u></b>				
<b>DRA 122</b>	<b>Oral Interpretation</b>	3	0	3
Prerequisites:	None			
Corequisites:	None			
This course introduces the dramatic study of literature through performance. Emphasis is placed on analysis and performance of poetry, drama, and prose fiction. Upon completion, students should be able to embody and discuss critically the speakers inherent in literature.				
<b>DRA 124</b>	<b>Readers Theatre</b>	3	0	3
Prerequisites:	None			
Corequisites:	None			
This course provides a theoretical and applied introduction to the medium of readers theatre. Emphasis is placed on the group performance considerations posed by various genres of literature. Upon completion, students should be able to adapt and present a literary script following the conventions of readers theatre.				

## ECONOMICS

<b>ECO 251</b>	<b>Prin of Microeconomics</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	MAT 070			
Corequisites:	None			
This course introduces economic analysis of individuals, business, and industry choices in the market economy. Topics include the price mechanism, supply and demand, optimizing economic behavior, costs and revenue, market structures, factor markets, income distribution, market failure, and government intervention. Upon completion, students should be able to identify and evaluate consumer and business alternatives in order to efficiently achieve economic objectives. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.				
<b>ECO 252</b>	<b>Prin of Macroeconomics</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	MAT 060			
Corequisites:	None			
This course introduces economic analysis of aggregate employment, income, and prices. Topics include major schools of economic thought; aggregate supply and demand; economic measures, fluctuations, and growth; money and banking; stabilization techniques; and international trade. Upon completion, students should be able to evaluate national economic components, conditions, and alternatives for achieving socioeconomic goals. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.				

## EDUCATION

<b>EDU 118</b>	<b>Teach Assoc Princ &amp; Prac</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the teacher associate's role in the educational system. Topics include history of education, professional responsibilities and ethics, cultural diversity, communication skills, and identification of the optimal learning environment. Upon completion, students should be able to describe the supporting professional role of the teacher associate, demonstrate positive communication, and discuss educational philosophy. This course is a unique concentration requirement in the Teacher Association concentration in the Early Childhood Associate program.				
<b>EDU 119</b>	<b>Introduction to Early Child Ed</b>	<b>4</b>	<b>0</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the foundations of the education profession, the diverse educational settings for young children, professionalism and planning developmentally appropriate programs for children. Topics include historical foundations, program types, career options, professionalism, and creating inclusive environments and curriculum that are responsive to the needs of children and families. Upon completion, student should be able design career plans and develop appropriate schedules, environments and activity plans while incorporating adaptations for children with exceptionalities.				
<b>EDU 131</b>	<b>Child, Family, &amp; Commun</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the development of partnerships between families, inclusive programs for children/schools that serve young children with and without disabilities, and the community. Emphasis is placed on requisite skills and benefits for successfully establishing, supporting, and maintaining respectful collaborative relationships between today's diverse families, centers/schools, and community resources. Upon completion, students should be able to describe appropriate relationships with parents/caretakers, center/school colleagues, and community agencies that enhance the educational experiences/well-being of all children.				
<b>EDU 144</b>	<b>Child Development I</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the theories of child development, developmental sequences, and factors that influence children's development, from conception through pre-school for all children. Emphasis is placed on sequences in physical/motor, social, emotional, cognitive, and language development and the multiple influences on development and learning of the whole child. Upon completion, students should be able to identify typical and atypical developmental characteristics, plan experiences to enhance development, and describe appropriate interaction techniques and environments.				

<b>EDU 145</b>	<b>Child Development II</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers theories of child development, developmental sequences, and factors that influence children's development, from pre-school through middle childhood for all children. Emphasis is placed on sequences in physical/motor, social, emotional, cognitive, and language development multiple influences on development and learning of the whole child. Upon completion, students should be able to identify typical and atypical developmental characteristics, plan experiences to enhance development, and describe appropriate interaction techniques and environments.				
<b>EDU 146</b>	<b>Child Guidance</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces practical principles and techniques for providing developmentally appropriate guidance for all children with and without disabilities, including those at risk. Emphasis is placed on encouraging self-esteem, cultural awareness, effective communication skills, direct/indirect techniques/strategies and observation to understand the underlying causes of behavior. Upon completion, students should be able to demonstrate appropriate interactions with children and families and promote conflict resolution, self-control, self-motivation, and self-esteem in children.				
<b>EDU 151</b>	<b>Creative Activities</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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 physical skills, and dramatics. Upon completion, students should be able to create, manage, adapt and evaluate developmentally supportive learning materials, experiences and environments.				
<b>EDU 153</b>	<b>Health, Safety, &amp; Nutrition</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course focuses on promoting and maintaining the health and well-being of all children. Topics include health and nutritional guidelines, common childhood illnesses, maintaining safe 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, implement safe learning environments, and adhere to state regulations.				
<b>EDU 161</b>	<b>Intro to Exceptional Child</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course covers exceptional children as learners within the context of the community, school, and family. Emphasis is placed on the legal, social, physical, political, and cultural issues relating to the analysis and teaching of exceptional children. Upon completion, students should be able to demonstrate knowledge of identification processes, mainstreaming techniques, and professional practices and attitudes.				
<b>EDU 175</b>	<b>Intro to Trade &amp; Industrial Ed</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the philosophy, scope, and objectives of industrial education. Topics include the development of industrial education, employment opportunities, current events, current practices, and emerging trends. Upon completion, students should be able to describe the history, identify current practices, and describe current trends in industrial education.				
<b>EDU 176</b>	<b>OCC Analysis &amp; Course Dev</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the principles and techniques of analyzing occupations to select suitable competencies and teaching methods for learning activities. Topics include occupational analysis, instructional methods, competency identification, and curriculum writing. Upon completion, students should be able to identify competencies, organize instructional materials, and select appropriate instructional methods.				
<b>EDU 177</b>	<b>Instructional Methods</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers instructional methods in technical education with emphasis on competency-based instruction. Topics include writing objectives, industrial methods, and determining learning styles. Upon completion, students should be able to select and demonstrate the use of a variety of instructional methods.				

<b>EDU 178</b>	<b>Facilities Org &amp; Planning</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course is a study of the problems related to educational facilities planning, layout, and management. Emphasis is placed on applying basic principles to actual projects relating to specific occupational areas. Upon completion, students should be able to lay out an educational facility for an occupational area and develop a plan for the facilities use.				
<b>EDU 179</b>	<b>Vocational Student Organizations</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers planning and organizing vocational youth clubs by understanding the structure and operating procedures to use club activities for personal and professional growth. Topics include self-assessment to set goals, club structure, election and installation of officers, club activities, function of committees, running meetings, contest preparation, and leadership skills. Upon completion students should be able to set personal goals, outline club structure, elect and install offices.				
<b>EDU 185</b>	<b>Cognitive &amp; Lang Act</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers methods of developing cognitive and language/communication skills in children. Emphasis is placed on planning the basic components of language and cognitive processes in developing curriculum activities. Upon completion, students should be able to identify, plan, select materials and equipment, and implement and evaluate developmentally appropriate curriculum activities.				
<b>EDU 186</b>	<b>Reading &amp; Writing Methods</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers concepts, resources, and methods for teaching reading and writing to school-age 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 developmentally appropriate reading and writing experiences. This course is a unique concentration requirement in the Teacher Associate concentration in the Early Childhood Education program.				
<b>EDU 216</b>	<b>Intro to Education</b>	<b>3</b>	<b>2</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the American educational system and the teaching profession. Topics include historical and philosophical foundations of education, contemporary educational trends and issues, curriculum development, and observation and participation in public school classrooms. Upon completion, 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. This course is also available through the Virtual Learning Community.				
<b>EDU 221</b>	<b>Children with Exceptional</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	EDU 144 and EDU 145 or PSY 244 and PSY 245			
Corequisites:	None			
This course, based on the foundation of typical development, introduces working with children with exceptionalities. Emphasis is placed on the characteristics and assessment of children and strategies for adapting the learning environment. Upon completion, students should be able to recognize atypical development, make appropriate referrals, collaborate with families and professionals to plan, implement, and evaluate inclusion strategies.				
<b>EDU 234</b>	<b>Infants, Toddlers, &amp; Twos</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the skills needed to effectively implement group care for infants, toddlers, and two-year olds. Emphasis is placed on child development and developmentally appropriate practices. Upon completion, students should be able to identify, plan, select materials and equipment, and implement and evaluate a developmentally appropriate curriculum.				
<b>EDU 235</b>	<b>School-Age Dev &amp; Program</b>	<b>2</b>	<b>0</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course presents developmentally appropriate practices in group care for school-age children. Topics include principles of development, environmental planning, and positive guidance techniques. Upon completion, students should be able to discuss developmental principles for children five to twelve years of age and plan and implement age-appropriate activities.				

<b>EDU 240</b>	<b>Work-Based Learning Practices and Techniques</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers definitions and implementation strategies for various work-place learning programs including apprenticeship, cooperative education, entrepreneurship, field trip, internship, mentorship, school-based enterprise, service learning and shadowing. Topics include preparing vocational teachers to guide and involve students in work-based learning programs to help prepare for entry into the workforce. Upon completion, students should be able to work with students to assist with selection and involvement in work-based learning programs for career development.				
<b>EDU 259</b>	<b>Curriculum Planning</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	EDU 112 or EDU 113 or EDU 119			
Corequisites:	None			
This course covers early childhood curriculum planning. Topics include philosophy, curriculum, indoor and outdoor environmental design, scheduling, observation and assessment, and instructional planning and evaluation. Upon completion, students should be able to assess children and curriculum; plan for daily, weekly, and long-range instruction; and design environments with appropriate equipment and supplies.				
<b>EDU 261</b>	<b>Early Childhood Admin I</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the policies, procedures, and responsibilities for the management of early childhood education programs. Topics include implementation of goals, principles of supervision, budgeting and financial management, and meeting the standards for a NC Child Day Care license. Upon completion, students should be able to develop program goals, explain licensing standards, determine budgeting needs, and describe effective methods of personnel supervision.				
<b>EDU 262</b>	<b>Early Childhood Admin II</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	EDU 261			
Corequisites:	None			
This course provides a foundation for budgetary, financial, and personnel management of the child care center. Topics include budgeting, financial management, marketing, hiring, supervision, and professional development of a child care center. Upon completion, students should be able to formulate marketing, financial management, and fund development plans and develop personnel policies, including supervision and staff development plans.				
<b>EDU 271</b>	<b>Educational Technology</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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 exceptionalities, 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.				
<b>EDU 275</b>	<b>Effective Teach Train</b>	<b>2</b>	<b>0</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course provides specialized training using an experienced-based approach to learning. Topics include instructional preparation and presentation, student interaction, time management, learning expectations, evaluation, and curriculum principles and planning. Upon completion, students should be able to prepare and present a six-step lesson plan and demonstrate ways to improve students' time-on-task.				
<b>EDU 280</b>	<b>Language &amp; Literacy Exp</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course explores the continuum of children's communication development, including verbal and written language acquisition and other forms of communication. Topics include selection of literature and other media, the integration of literacy concepts throughout the classroom environment, inclusive practices and appropriate assessments. Upon completion, students should be able to select, plan, implement and evaluate developmentally appropriate literacy experiences.				
<b>EDU 285</b>	<b>Internship Exp-School Age</b>	<b>1</b>	<b>0</b>	<b>1</b>
Prerequisites:	ENG 111			
Corequisites:	COE 121 or COE 122			
This course provides an opportunity to discuss internship experiences with peers and faculty. Emphasis is placed on evaluating and integrating practicum experiences. Upon completion, students should be able to demonstrate competence in early childhood education. This course is a unique concentration in the Teacher Associate concentration in the Early Childhood Associate program.				



<b>ELC 119</b>	<b>NEC Calculations</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	ELC 118 (L)			
Corequisites:	None			
This course covers branch circuit, feeder, and service calculations. Emphasis is placed on sections of the National Electrical Code related to calculations. Upon completion, students should be able to use appropriate code sections to size wire, conduit, and overcurrent devices for branch circuits, feeders, and service.				
<b>ELC 127</b>	<b>Software for Technicians</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Co-requisites:	None			
This course introduces computer software which can be used to solve electrical/electronics problems. Topics include electrical/electronics calculations and applications. Upon completion, students should be able to utilize a personal computer for electrical/electronics- related applications.				
<b>ELC 128</b>	<b>Intro to PLC</b>	<b>2</b>	<b>3</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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 install PLCs and create simple programs.				
<b>ELC 131</b>	<b>DC/AC Circuit Analysis</b>	<b>4</b>	<b>3</b>	<b>5</b>
Prerequisites:	ELC 112 (L)			
Co-requisites:	None			
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.				
<b>ELC 132</b>	<b>Electrical Drawings</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the technical documentation that is typically found or used in the industrial environment. Topics include interpretation of service manuals, freehand sketching of lines, orthographic views and dimensions, and blueprint reading. Upon completion, students should be able to interpret technical documents and blueprints and use basic drafting skills to prepare usable field drawings.				
<b>ELC 135</b>	<b>Electrical Machines I</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	ELC 112 (L)			
Co-requisites:	None			
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.				
<b>ELC 228</b>	<b>PLC Applications</b>	<b>2</b>	<b>6</b>	<b>4</b>
Prerequisites:	ELC 128 (L)			
Co-requisites:	None			
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.				
<b>ELC 229</b>	<b>Applications Project</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course provides an individual and/or integrated team approach to a practical project as approved by the instructor. Topics include project selection and planning, implementation and testing, and a final presentation. Upon completion, students should be able to plan and implement an applications-oriented project.				

## ELECTRONICS

<b>ELN 131</b>	<b>Semiconductor Applications</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	ELC 112 (L)			
Co-requisites:	None			
This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications. Upon completion, students should be able to construct, analyze, verify, and troubleshoot discrete component circuits using appropriate techniques and test equipment.				
<b>ELN 132</b>	<b>Linear IC Applications</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	ELN 131 (L)			
Co-requisites:	None			
This course introduces the characteristics and applications of linear integrated circuits. Topics include op-amp circuits, waveform generators, active filters, IC voltage regulators, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot linear integrated circuits using appropriate techniques and test equipment.				
<b>ELN 133</b>	<b>Digital Electronics</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, MSI and LSI circuits, AD/DA conversion, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment.				
<b>ELN 152</b>	<b>Fabrication Techniques</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Co-requisites:	None			
This course covers the fabrication methods required to create a prototype product from the initial circuit design. Topics include CAD, layout, sheet metal working, component selection, PC board layout and construction, reverse engineering, soldering, and other related topics. Upon completion, students should be able to design and construct an electronic product with all its associated documentation.				
<b>ELN 229</b>	<b>Industrial Electronics</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	ELC 112 (L)			
Co-requisites:	None			
This course covers semiconductor devices used in industrial applications. Topics include the basic theory, application, and operating characteristics of semiconductor devices. Upon completion, students should be able to install and/or troubleshoot these devices for proper operation in an industrial electronic circuit.				
<b>ELN 231</b>	<b>Industrial Controls</b>	<b>2</b>	<b>3</b>	<b>3</b>
Prerequisites:	None			
Co-requisites:	None			
This course introduces the fundamental concepts of control of rotating machinery and associated peripheral devices. Topics include rotating machine theory, ladder logic, electromechanical and solid state relays, motor controls, pilot devices, three-phase power systems, and other related topics. Upon completion, students should be able to interpret schematics and demonstrate an understanding of electromechanical and electronic control of rotating machinery.				
<b>ELN 232</b>	<b>Intro to Microprocessors</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	None			
Co-requisites:	None			
This course introduces microprocessor architecture and microcomputer systems including memory and input/output interfacing. Topics include low-level language programming, bus architecture, I/O systems, memory systems, interrupts, and other related topics. Upon completion, students should be able to interpret, analyze, verify, and troubleshoot fundamental microprocessor circuits and programs using appropriate techniques and test equipment.				
<b>ELN 233</b>	<b>Microprocessor Systems</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	ELN 232 (L)			
Corequisites:	None			
This course covers the application and design of microprocessor control systems. Topics include control and interfacing of systems using AD/DA, serial/parallel I/O, communication protocols, and other related applications. Upon completion, students should be able to design, construct, program, verify, analyze, and troubleshoot fundamental microprocessor interface and control circuits using related equipment.				



<b>ENG 101</b>	<b>Applied Communications I</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:				
Corequisites: None				
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.				
<b>ENG 111</b>	<b>Expository Writing</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites: ENG 090 and RED 090 or ENG 095; or satisfactory placement test scores				
Corequisites: None				
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.				
<b>ENG 113</b>	<b>Literature-Based Research</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites: ENG 111				
Corequisites: None				
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.				
<b>ENG 114</b>	<b>Prof Research &amp; Reporting</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites: ENG 111				
Corequisites: None				
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.				
<b>ENG 115</b>	<b>Oral Communication</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites: None				
Corequisites: None				
This course introduces the basic principles of oral communication in both small group and public settings. Emphasis is placed on the components of the communication process, group decision-making, and public address. Upon completion, students should be able to demonstrate the principles of effective oral communication in small group and public settings.				
<b>ENG 125</b>	<b>Creative Writing I</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites: ENG 111				
Corequisites: None				
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 craft and critique their own writing and critique the writing of others.				
<b>ENG 126</b>	<b>Creative Writing II</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites: ENG 125				
Corequisites: None				
This course is designed as a workshop approach for advancing imaginative and literary skills. Emphasis is placed on the discussion of style, techniques, and challenges for first publications. Upon completion, students should be able to submit a piece of their writing for publication.				
<b>ENG 231</b>	<b>American Literature I</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites: ENG 112, ENG 113, or ENG 114				
Corequisites: None				
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.				

<b>ENG 232</b>	<b>American Literature II</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	ENG 112, ENG 113, or ENG 114			
Corequisites:	None			
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.				
<b>ENG 241</b>	<b>British Literature I</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	ENG 112, ENG 113, or ENG 114			
Corequisites:	None			
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.				
<b>ENG 242</b>	<b>British Literature II</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	ENG 112, ENG 113, or ENG 114			
Corequisites:	None			
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.				
<b>ENG 261</b>	<b>World Literature I</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	ENG 112, ENG 113, or ENG 114			
Corequisites:	None			
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.				
<b>ENG 262</b>	<b>World Literature II</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	ENG 112, ENG 113, or ENG 114			
Corequisites:	None			
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.				
<b>ENG 272</b>	<b>Southern Literature</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	ENG 112, ENG 113, or ENG 114			
Corequisites:	None			
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.				

## FRENCH

<b>FRE 111</b>	<b>Elementary French I</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:				
Corequisites:	None			
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. 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.				
<b>FRE 112</b>	<b>Elementary French II</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	FRE 111			
Corequisites:	None			
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.				

**FRE 181 French Lab 1** 0 2 1

Prerequisites:

Corequisites: None

This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written French and demonstrate cultural awareness.

**FRE 182 French Lab 2** 0 2 1

Prerequisites: FRE 181

Corequisites: None

This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written French and demonstrate cultural awareness.

## FILM AND VIDEO PRODUCTION

**FVP 227 Multimedia Production** 2 3 3

Prerequisites: None

Corequisites: None

This course covers technical terms used in the multimedia industry and introduces skills related to digital manipulation of audio and video materials. Emphasis is placed on technical terms used in multimedia work and integration of sound, video, graphics, and text into a single production. Upon completion, students should be able to define technical terms in multimedia work and work with a variety of computer hardware and software.

## GEOLOGY

**GEL 111 Introductory Geology** 3 2 4

Prerequisites:

Corequisites: None

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 describe basic geological processes that shape the earth. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

**GEL 113 Historical Geology** 3 2 4

Prerequisites: GEL 111

Corequisites: None

This course covers the geological history of the earth and its life forms. Emphasis is placed on the study of rock strata, fossil groups, and geological time. Upon completion, students should be able to identify major fossil groups and associated rock strata and approximate ages of geological formations. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

## GEOGRAPHY

**GEO 111 World Regional Geography** 3 0 3

Prerequisites:

Corequisites: None

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.

**GEO 113 Economic Geography** 3 0 3

Prerequisites:

Corequisites: None

This course covers the patterns and networks of economic interdependence and how they affect human populations. Emphasis is placed on the economic aspects of the production and distribution of goods and services and their impact on the quality of human life. Upon completion, students should be able to describe different economic systems and demonstrate an understanding of the variables that influence economic development. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**GEO 130      General Physical Geography** 3      0      3

Prerequisites:

Corequisites:    None

This course introduces both the basic physical components that help shape the earth and the study of minerals, rocks, and evolution of landforms. Emphasis is placed on the geographic grid, cartography, weather, climate, mineral composition, fluvial processes, and erosion and deposition. Upon completion, students should be able to identify these components and processes and explain how they interact. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

### GRAPHIC ARTS

**GRA 110      Graphic Arts Orientation** 2      0      2

Prerequisites:    None

Corequisites:    None

This course covers the history, development, and commercial applications of the major printing processes. Topics include offset lithography, screen printing, intaglio, relief printing, and emerging technologies. Upon completion, students should be able to demonstrate an understanding of the major characteristics, advantages, and disadvantages of each process.

**GRA 121      Graphic Arts I** 2      4      4

Prerequisites:    None

Corequisites:    None

This course introduces terminology, tools and materials, procedures, and equipment used in graphic arts production. Topics include copy preparation and pre-press production relative to printing. Upon completion, students should be able to demonstrate an understanding of graphic arts production.

### GRAPHIC DESIGN

**GRD 110      Typography I** 2      2      3

Prerequisites:    None

Corequisites:    None

This course introduces the history and mechanics of type and its application to layout and design. Topics include typographic fundamentals, anatomy, measurements, composition, identification, and terminology. Upon completion, students should be able to demonstrate proficiency in design application, analysis, specification, and creation of typographic elements.

**GRD 111      Typography II** 2      2      3

Prerequisites:    GRD 110

Corequisites:    None

This course is a continuation of GRD 110. Emphasis is placed on solving challenging typographic problems. Upon completion, students should be able to understand and demonstrate advanced typographic applications.

**GRD 131      Illustration I** 1      3      2

Prerequisites:    ART 131 or DES 125 or GRD 121

Corequisites:    None

This course introduces the application of rendering techniques to create illustrations. Emphasis is placed on controlling various media, methods, surfaces, design problems, and the appropriate media selection process. Upon completion, students should be able to produce quality illustrations from conception through finished artwork.

**GRD 132      Illustration II** 1      3      2

Prerequisites:    GRD 131

Corequisites:    None

This course is a continuation of GRD 131. Topics include editorial, product, fashion, and advertising illustrations. Upon completion, students should be able to demonstrate increased proficiency in creating quality illustrations from conceptualization through finished artwork.

**GRD 133      Illustration III** 1      3      2

Prerequisites:    GRD 132

Corequisites:    None

This course is designed to strengthen visual techniques and conceptual approaches to illustration. Emphasis is placed on advanced rendering techniques, requirements, and limitations. Upon completion, students should be able to create comprehensive illustrations that meet client/printer requirements.

<b>GRD 141</b>	<b>Graphic Design I</b>	<b>2</b>	<b>4</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the conceptualization process used in visual problem solving. Emphasis is placed on learning the principles of design and on the manipulation and organization of elements. Upon completion, students should be able to apply design principles and visual elements to projects.				
<b>GRD 142</b>	<b>Graphic Design II</b>	<b>2</b>	<b>4</b>	<b>4</b>
Prerequisites:	DES 135 or GRD 141 or ART 121			
Corequisites:	None			
This course covers the application of visual elements and design principles in advertising and graphic design. Topics include creation of various designs, such as logos, advertisements, posters, outdoor advertising, and publication design. Upon completion, students should be able to effectively apply design principles and visual elements to projects.				
<b>GRD 151</b>	<b>Computer Design Basics</b>	<b>1</b>	<b>4</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers designing and drawing with various types of software applications for advertising and graphic design. Emphasis is placed on creative and imaginative use of space, shapes, value, texture, color, and typography to provide effective solutions to advertising and graphic design problems. Upon completion, students should be able to use the computer as a creative tool.				
<b>GRD 152</b>	<b>Computer Design Tech I</b>	<b>1</b>	<b>4</b>	<b>3</b>
Prerequisites:	GRD 151			
Corequisites:	None			
This course covers complex design problems utilizing various design and drawing software applications. Topics include the expressive use of typography, image, and organization to communicate a message. Upon completion, students should be able to use appropriate computer software to professionally present their work.				
<b>GRD 153</b>	<b>Computer Design Tech II</b>	<b>1</b>	<b>4</b>	<b>3</b>
Prerequisites:	GRD 152			
Corequisites:	None			
This course covers advanced theories and practices in the field of computer design. Emphasis is placed on advanced use of color palettes, layers, and paths. Upon completion, students should be able to creatively produce designs and articulate their rationale.				
<b>GRD 160</b>	<b>Photo Fundamentals I</b>	<b>1</b>	<b>4</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces basic camera operations, roll film processing, and photographic print production. Topics include contrast, depth-of-field, subject composition, enlarger operation, and density control. Upon completion, students should be able to produce photographic prints with acceptable density values and quality.				
<b>GRD 161</b>	<b>Photo Fundamentals II</b>	<b>1</b>	<b>4</b>	<b>3</b>
Prerequisites:	GRD 160			
Corequisites:	None			
This course is a continuation of GRD 160. Topics include conversions, toning, color, specialized equipment, lighting, processing, and other methods and materials. Upon completion, students should be able to demonstrate proficiency in producing photographic prints.				
<b>GRD 162</b>	<b>Photography Portfolio</b>	<b>1</b>	<b>4</b>	<b>3</b>
Prerequisites:	GRD 161			
Corequisites:	None			
This course provides an opportunity to develop a portfolio through research and review of previous photographic works. Topics include visual communication skills and presentation of works. Upon completion, students should be able to prepare and present a portfolio of their photographic works.				
<b>GRD 210</b>	<b>Airbrush I</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the mechanics of airbrushing. Topics include care and maintenance of equipment, spraying techniques and surfaces, and selection of materials. Upon completion, students should be able to produce work demonstrating competent use of an airbrush.				

<b>GRD 241</b>	<b>Graphic Design III</b>	<b>2</b>	<b>4</b>	<b>4</b>
Prerequisites: DES 136 or GRD 142				
Corequisites: None				
This course is an advanced exploration of various techniques and media for advertising and graphic design. Emphasis is placed on advanced concepts and solutions to complex and challenging graphic design problems. Upon completion, students should be able to demonstrate competence and professionalism in visual problem solving.				
<b>GRD 242</b>	<b>Graphic Design IV</b>	<b>2</b>	<b>4</b>	<b>4</b>
Prerequisites: GRD 241				
Corequisites: None				
This course is a continuation of GRD 241. Emphasis is placed on using advanced media techniques, concepts, strategies, and professionalism in all aspects of design. Upon completion, students should be able to conceptualize, create, and produce designs for reproduction.				
<b>GRD 263</b>	<b>Illustrative Imaging</b>	<b>1</b>	<b>4</b>	<b>3</b>
Prerequisites: GRD 151 or GRA 151				
Corequisites: None				
This course covers the creative manipulation of images utilizing digital techniques of masking, layering, airbrushing, and painting. Topics include the aesthetic analysis of visual imagery as well as the legalities of manipulating images. Upon completion, students should be able to utilize software applications to creatively manipulate and illustratively build digital images which accomplish design objectives.				
<b>GRD 280</b>	<b>Portfolio Design</b>	<b>2</b>	<b>4</b>	<b>4</b>
Prerequisites: GRD 142 and GRD 152 or GRA 152				
Corequisites: None				
This course covers the organization and presentation of a design/advertising or graphic art portfolio and appropriate related materials. Emphasis is placed on development and evaluation of the portfolio, design and production of a résumé and self-promotional materials, and interview techniques. Upon completion, students should be able to prepare and professionally present an effective portfolio and related self-promotional materials.				
<b>GRD 281</b>	<b>Design of Advertising</b>	<b>2</b>	<b>0</b>	<b>2</b>
Prerequisites: None				
Corequisites: None				
This course explores the origins, roles, scope, forms, and development of advertising. Emphasis is placed on advertising development from idea through production and the interrelationship of marketing to types of advertising, media, and organizational structure. Upon completion, students should be able to demonstrate an understanding of the complexities and relationships involved in advertising design.				
<b><u>HEALTH</u></b>				
<b>HEA 110</b>	<b>Personal Health/Wellness</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:				
Corequisites: None				
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.				
<b>HEA 112</b>	<b>First Aid &amp; CPR</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:				
Corequisites: None				
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.				
<b>HEA 120</b>	<b>Community Health</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:				
Corequisites: None				
This course provides information about contemporary community health and school hygiene issues. Topics include health education and current information about health trends. Upon completion, students should be able to recognize and devise strategies to prevent today's community health problems.				

## HISTORY

**HIS 111      World Civilizations I** 3      0      3

Prerequisites: RED 090 or satisfactory placement test scores

Corequisites: None

This course introduces world history from the dawn of civilization to the early modern era. Topics include Eurasian, African, American, and Greco-Roman civilizations and Christian, Islamic and Byzantine cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in pre-modern world civilizations. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**HIS 112      World Civilizations II** 3      0      3

Prerequisites: RED 090 or satisfactory placement test scores

Corequisites: None

This course introduces world history from the early modern era to the present. Topics include the cultures of Africa, Europe, India, China, Japan, and the Americas. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern world civilizations. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**HIS 131      American History I** 3      0      3

Prerequisites: RED 090 or satisfactory placement test scores

Corequisites: None

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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**HIS 132      American History II** 3      0      3

Prerequisites: RED 090 or satisfactory placement test scores

Corequisites: None

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 social 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**HIS 226      The Civil War** 3      0      3

Prerequisites: None

Corequisites: None

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.

**HIS 236      North Carolina History** 3      0      3

Prerequisites: RED 090 or satisfactory placement test scores

Corequisites: None

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.

## HUMANITIES

**HUM 120      Cultural Studies** 3      0      3

Prerequisites: None

Corequisites: None

This course introduces the distinctive features of a particular culture. Topics include are, 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**HUM 130 Myth in Human Culture** 3 0 3

Prerequisites: None

Corequisites: None

This course provides an in-depth study of myths and legends. Topics included the varied sources of myths and their influence on the individual and society within diverse cultural contexts. Upon completion, students should be able to demonstrate a general familiarity with myths and a broad-based understanding of the influence of myths and legends on modern culture. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**HUM 160 Introduction to Film** 2 2 0 3

Prerequisites: None

Corequisites: None

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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**HUM 211 Humanities I** 3 0 3

Prerequisites: ENG 111

Corequisites: None

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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**HUM 220 Human Values and Meaning** 3 0 3

Prerequisites: ENG 111

Corequisites: None

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 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 is intended for all Associate degree programs. This course may satisfy the SACS humanities requirement.

## HYDRAULICS & PNEUMATICS

**HYD 110 Hydraulics/Pneumatics I** 2 3 3

Prerequisites: None

Corequisites: None

This course introduces the basic components and functions of hydraulic and pneumatic systems. Topics include standard symbols, pumps, control valves, control assemblies, actuators, FRL, maintenance procedures, and switching and control devices. Upon completion, students should be able to understand the operation of a fluid power system, including design, application, and troubleshooting.

## INDUSTRIAL SCIENCE

**ISC 110 Workplace Safety** 1 0 1

Prerequisites: None

Corequisites: None

This course introduces the basic concepts of workplace safety. Topics include fire, ladders, lifting, lock-out/tag-out, personal protective devices, and other workplace safety issues related to OSHA compliance. Upon completion, students should be able to demonstrate an understanding of the components of a safe workplace.

**ISC 112 Industrial Safety** 2 0 2

Prerequisites: None

Corequisites: None

This course introduces the principles of industrial safety. Emphasis is placed on industrial safety, OSHA, and environmental regulations. Upon completion, students should be able to demonstrate knowledge of a safe working environment and OSHA compliance.

<b>ISC 121</b>	<b>Envir Health &amp; Safety</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers workplace environmental health and safety concepts. Emphasis is placed on managing the implementation and enforcement of environmental health and safety regulations and on preventing accidents, injuries, and illnesses. Upon completion, students should be able to demonstrate an understanding of basic concepts of environmental health and safety.				
<b>ISC 132</b>	<b>Mfg Quality Control</b>	<b>2</b>	<b>3</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces quality concepts and techniques used in industry. Topics include elementary statistics and probability, process control, process capability, and quality improvement tools. Upon completion, students should be able to demonstrate an understanding of the concepts and principles of quality and apply them to the work environment.				
<b>ISC 133</b>	<b>Mfg Management Practices</b>	<b>2</b>	<b>0</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course covers successful industrial organizations and management practices for improving quality and productivity. Topics include self-managed work teams, problem-solving skills, and production management techniques. Upon completion, students should be able to demonstrate an understanding of day-to-day plant operations, team management processes, and the principles of group dynamics.				
<b>ISC 210</b>	<b>Oper &amp; Prod Planning</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	Completion of curriculum mathematics requirement			
Corequisites:	None			
This course includes the fundamentals of operations and production planning, forecasting, and scheduling. Topics include demand management, production planning and control, scheduling, and budgeting. Upon completion, students should be able to demonstrate an understanding of the concepts and techniques involved in operations and production planning. This course is a unique concentration requirement of the Operations Management concentration in the Business Administration program.				
<b>ISC 221</b>	<b>Statistical Qual Control</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	Completion of curriculum mathematics requirement			
Corequisites:	None			
This course covers the principles and techniques of statistical process control for the improvement of productivity. Emphasis is placed on basic statistics for quality control, organization and procedures for efficient quality control including inspections, process control, and tests of significance. Upon completion, students should be able to apply statistical principles and techniques to enhance production.				
<b><u>JOURNALISM</u></b>				
<b>JOU 110</b>	<b>Intro to Journalism</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:				
Corequisites:	None			
This course presents a study of journalistic news, feature, and sports writing. Emphasis is placed on basic news writing techniques and on related legal and ethical issues. Upon completion, students should be able to gather, write, and edit news, feature, and sports articles.				
<b>JOU 111</b>	<b>Publication Workshop I</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	JOU 110			
Corequisites:	None			
This course introduces the basic techniques of producing a publication. Emphasis is placed on writing, editing, layout, design, and printing. Upon completion, students should be able to demonstrate competence in the various phases of publication production.				
<b>JOU 112</b>	<b>Publication Workshop II</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	JOU 111			
Corequisites:	None			
This course is a continuation of the basic techniques of producing a publication. Emphasis is placed on writing, editing, layout, design, and printing. Upon completion, students should be able to demonstrate competence in the various phases of publication production.				

<b>JOU 120</b>	<b>JOU/Theory &amp; Production</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	ENG 111			
Corequisites:	None			

This course provides a study of basic journalistic writing and production techniques. Emphasis is placed on interviewing, drafting, editing, layout, design, and printing. Upon completion, students should be able to demonstrate competence in the various phases of writing and producing a publication.

**MACHINING**

<b>MAC 111</b>	<b>Machining Technology I</b>	<b>2</b>	<b>12</b>	<b>6</b>
Prerequisites:	None			
Corequisites:	None			

This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, milling machines, bench grinders, and layout instruments. Upon completion, students should be able to safely perform the basic operations of measuring, layout, drilling, sawing, turning, and milling.

<b>MAC 112</b>	<b>Machining Technology II</b>	<b>2</b>	<b>12</b>	<b>6</b>
Prerequisites:	MAC 111			
Corequisites:	None			

This course provides additional instruction and practice in the use of precision measuring tools, lathes, milling machines, and grinders. Emphasis is placed on setup and operation of machine tools including the selection and use of work holding devices, speeds, feeds, cutting tools, and coolants. Upon completion, students should be able to perform basic procedures on precision grinders and advanced operations of measuring, layout, drilling, sawing, turning, and milling.

<b>MAC 113</b>	<b>Machining Technology III</b>	<b>2</b>	<b>12</b>	<b>6</b>
Prerequisites:	MAC 112			
Corequisites:	None			

This course provides an introduction to advanced and special machining operations. Emphasis is placed on working to specified tolerances with special and advanced setups. Upon completion, students should be able to produce a part to specifications.

<b>MAC 114</b>	<b>Intro to Metrology</b>	<b>2</b>	<b>0</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			

This course introduces the care and use of precision measuring instruments. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. Upon completion, students should be able to demonstrate the correct use of measuring instruments.

<b>MAC 121</b>	<b>Intro to CNC</b>	<b>2</b>	<b>0</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			

This course introduces the concepts and capabilities of computer numerical control machine tools. Topics include setup, operation, and basic applications. Upon completion, students should be able to explain operator safety, machine protection, data input, program preparation, and program storage.

<b>MAC 122</b>	<b>CNC Turning</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			

This course introduces the programming, setup, and operation of CNC turning centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC turning centers.

<b>MAC 124</b>	<b>CNC Milling</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			

This course introduces the manual programming, setup, and operation of CNC machining centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC machining centers.

<b>MAC 151</b>	<b>Machining Calculations</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			

This course introduces basic calculations as they relate to machining occupations. Emphasis is placed on basic calculations and their applications in the machine shop. Upon completion, students should be able to perform basic shop calculations.

**MAC 222      Advanced CNC Turning** 1      3      2

Prerequisites:    MAC 122

Corequisites:    None

This course covers advanced methods in setup and operation of CNC turning centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC turning centers.

**MAC 224      Advanced CNC Milling** 1      3      2

Prerequisites:    MAC 124

Corequisites:    None

This course covers advanced methods in setup and operation of CNC machining centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC machining centers.

### MASONRY

**MAS 140      Intro to Masonry** 1      2      2

Prerequisites:    None

Corequisites:    None

This course introduces basic principles and practices of masonry. Topics include standard tools, materials, and practices used in basic masonry and other related topics. Upon completion, students should be able to demonstrate an understanding of masonry and be able to use basic masonry techniques.

### MATHEMATICS

Initial student placement in developmental courses is based on the Developmental Placement Policy on page 15. Students should begin developmental course work at the appropriate level indicated by placement test scores.

**MAT 060      Essential Mathematics** 3      2      4\*

Prerequisites:    Placement score

Corequisites:    None

This course is a comprehensive study of mathematical skills which should provide a strong mathematical foundation to pursue further study. Topics include principles and applications of decimals, fractions, percents, ratio and proportion, order of operations, geometry, measurement, and elements of algebra and statistics. Upon completion, students should be able to perform basic computations and solve relevant, multi-step mathematical problems using technology where appropriate.

**MAT 070      Introductory Algebra** 3      2      4\*

Prerequisites:    MAT 060 or satisfactory placement test score

Corequisites:    Placement score

This course establishes a foundation in algebraic concepts and problem solving. Topics include signed numbers, exponents, order of operations, simplifying expressions, solving linear equations and inequalities, graphing, formulas, polynomials, factoring, and elements of geometry. Upon completion, students should be able to apply the above concepts in problem solving using appropriate technology.

**MAT 080      Intermediate Algebra** 3      2      4\*

Prerequisites:    MAT 070 or satisfactory placement test score

Corequisites:    Placement score

This course continues the study of algebraic concepts with emphasis on applications. Topics include factoring; rational expressions; rational exponents; rational, radical, and quadratic equations; systems of equations; inequalities; graphing; functions; variations; complex numbers; and elements of geometry. Upon completion, students should be able to apply the above concepts in problem solving using appropriate technology.

\*These credits are institutional credits only and cannot be used for graduation. They are used for determining hour load for payment, eligibility for financial aid, or classification for a full-time student.

**MAT 101      Applied Mathematics I** 2      2      3

Prerequisites:    MAT 060 or satisfactory placement test scores

Corequisites:    None

This course is a comprehensive review of arithmetic with basic algebra designed to meet the needs of certificate and diploma programs. Topics include arithmetic and geometric skills used in measurement, ratio and proportion, exponents and roots, applications of percent, linear equations, formulas, and statistics. Upon completion, students should be able to solve practical problems in their specific areas of study. This course is intended for certificate and diploma programs.

<b>MAT 102</b>	<b>Applied Mathematics II</b>	2	2	3
Prerequisites:	MAT 101			
Corequisites:	None			
This course introduces the concepts of right triangle trigonometry and geometry with emphasis on applications to problem solving. Topics include the basic definitions and properties of plane and solid geometry, area and volume, and right triangle trigonometry. Upon completion, students should be able to solve applied problems both independently and collaboratively. This course is intended for certificate and diploma programs.				
<b>MAT 115</b>	<b>Mathematical Models</b>	2	2	3
Prerequisites:	MAT 070			
Corequisites:	None			
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, functional notation, linear functions and their group, probability, sampling techniques, scatter plots, and modeling.				
<b>MAT 141</b>	<b>Mathematical Concepts I</b>	3	0	3
Prerequisites:	MAT 080 or MAT 090			
Corequisites:	None			
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, measurements including metrics, and problem solving. Upon completion, student should be able to communicate orally and in writing these basic mathematical concepts. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirements in natural sciences/mathematics.				
<b>MAT 141A</b>	<b>Mathematical Concepts I Lab</b>	0	2	1
Prerequisites:	MAT 080 or MAT 090			
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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.				
<b>MAT 142</b>	<b>Mathematical Concepts II</b>	3	0	3
Prerequisites:	MAT 141			
Corequisites:	None			
This course if 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. This course can be used to meet the math requirement for elementary, middle grades and special education only cannot be substituted for other AA/AS programs. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirements in natural sciences/mathematics.				
<b>MAT 142A</b>	<b>Mathematical Concepts II Lab</b>	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 to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.				
<b>MAT 151</b>	<b>Statistics I</b>	3	0	3
Prerequisites:	MAT 080. RED 090 or satisfactory placement test scores			
Corequisites:	None			
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. Additional topics will include standardization, the central limit theorem, and confidence intervals. 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.				

<b>MAT 161</b>	<b>College Algebra</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites: MAT 080, RED 090 or satisfactory placement test scores				
Corequisites: None				
This course provides an integrated technological approach to algebraic topics used in problem solving. Emphasis is placed on equations and inequalities; polynomials, rational, exponential and logarithmic functions; and graphing and data analysis/modeling. Additional topics may include conic sections, sequences and series, and counting techniques. Upon completion, students should be able to choose an appropriate model to fit a data set and use the model for analysis and prediction. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.				
<b>MAT 162</b>	<b>College Trigonometry</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites: MAT 161				
Corequisites: None				
This course provides an integrated technological approach to trigonometry and its applications. Topics include trigonometric ratios, right triangles, oblique triangles, trigonometric functions, graphing, vectors, and complex numbers. Upon completion, students should be able to apply the above principles of trigonometry to problem solving and communication. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.				
<b>MAT 171</b>	<b>Precalculus Algebra</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites: MAT 080, RED 090 or satisfactory placement test scores				
Corequisites: MAT 171A				
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 is intended for AS degree programs.				
<b>MAT 171A</b>	<b>Precalculus Algebra Lab</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites: MAT 080, RED 090 or satisfactory placement test scores				
Corequisites: MAT 171				
This course is a laboratory for MAT 171. 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 is intended for AS degree programs.				
<b>MAT 172</b>	<b>Precalculus Trigonometry</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites: MAT 171				
Corequisites: MAT 172A				
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, and vectors. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction. This course is intended for AS degree programs.				
<b>MAT 172A</b>	<b>Precalculus Trig Lab</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites: MAT 171				
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 is intended for AS degree programs.				
<b>MAT 175</b>	<b>Precalculus</b>	<b>4</b>	<b>0</b>	<b>4</b>
Prerequisites: High School Algebra III/Trigonometry and satisfactory placement test scores				
Corequisites: None				
This course introduces the concept of deductive logic with emphasis on the use of formal logic in analysis. Topics include traditional logic, propositional logic, and determination of validity including truth tables, Venn diagrams, and translational ordinary language discourse. In addition, there will be a focus on an introduction to proof techniques. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.				
<b>MAT 210</b>	<b>Logic</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:				
Corequisites: None				
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. Sequences and series may also be discussed. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.				

<b>MAT 263</b>	<b>Brief Calculus</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	MAT 161			
Corequisites:	MAT 263A			
This course introduces concepts of differentiation and integration and their applications to solving problems; the course is designed for students needing one semester of calculus. Topics include functions, graphing, differentiation, and integration with emphasis on applications drawn from business, economics, and biological and behavioral sciences. Upon completion, students should be able to demonstrate and understanding of the use of basic calculus and technology to solve problems and to analyze and communicate results. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirements in natural sciences/mathematics.				
<b>MAT 263A</b>	<b>Brief Calculus Lab</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	MAT 161			
Corequisites:	MAT 263			
This course is a laboratory for MAT 263. 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 to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.				
<b>MAT 271</b>	<b>Calculus I</b>	<b>3</b>	<b>2</b>	<b>4</b>
Prerequisites:	MAT 175 or satisfactory placement test scores			
Corequisites:	None			
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.				
<b>MAT 272</b>	<b>Calculus II</b>	<b>3</b>	<b>2</b>	<b>4</b>
Prerequisites:	MAT 271			
Corequisites:	None			
This course provides a rigorous treatment of integration and is the second calculus course in a three-course sequence. Topics include applications of definite integrals, techniques of integration, indeterminate forms, improper integrals, infinite series, conic sections, parametric equations, polar coordinates, and differential equations. Upon completion, students should be able to use integration and approximation techniques to solve application problems. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.				
<b>MAT 273</b>	<b>Calculus III</b>	<b>3</b>	<b>2</b>	<b>4</b>
Prerequisites:	MAT 272			
Corequisites:	None			
This course covers the calculus of several variables and is third calculus course in a three-course sequence. Topics include functions of several variables, partial derivatives, multiple integrals, solid analytical geometry, vector-valued functions, and line and surface integrals. Also covered will be differential equations of several variables. Upon completion, students should be able to solve problems involving vectors and functions of several variables. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.				
<b>MAT 280</b>	<b>Linear Algebra</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	MAT 271			
Corequisites:	None			
This course provides a study of linear algebra topics with emphasis on the development of both abstract concepts and applications. Topics include vectors, systems of equations, matrices, determinants, vector spaces, linear transformations in two or three dimensions, eigenvectors, eigenvalues, diagonalization and orthogonality. Upon completion, students should be able to demonstrate both an understanding of the theoretical concepts and appropriate use of linear algebra models to solve application problems.				
<b>MAT 285</b>	<b>Differential Equations</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	MAT 272			
Corequisites:	None			
This course provides an introduction to ordinary differential equations with an emphasis on applications. Topics include first-order, linear higher-order, and systems of differential equations; numerical methods; series solutions; eigenvalues and eigenvectors; Laplace transforms; and Fourier series. Upon completion, students should be able to use differential equations to model physical phenomena, solve the equations, and use the solutions to analyze the phenomena.				

## MECHANICAL

<b>MEC 111</b>	<b>Machine Processes I</b>	1	4	3
Prerequisites:	None			
Corequisites:	None			
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 common machine tools. Upon completion, students should be able to safely machine simple parts to specified tolerances.				
<b>MEC 112</b>	<b>Machine Processes II</b>	2	3	3
Prerequisites:	MEC 111			
Corequisites:	None			
This course covers advanced use of milling machines and lathes. Emphasis is placed on safety and compound setup of milling machines and lathes for manufacture of projects with a specified fit. Upon completion, students should be able to demonstrate proper procedures for manufacture of assembled parts.				
<b>MEC 128</b>	<b>CNC Machining Processes</b>	2	4	4
Prerequisites:	None			
Corequisites:	None			
This course covers programming, setup, and operations of CNC turning, milling, and other CNC machines. Topics include programming formats, control functions, program editing, and part production and inspection. Upon completion, students should be able to manufacture simple parts using CNC machines.				
<b>MEC 145</b>	<b>Mfg Materials I</b>	2	3	3
Prerequisites:	None			
Corequisites:	None			
This course introduces a variety of manufacturing materials and common processing techniques. Emphasis is placed on the processing, testing, and application of materials such as wood, metals, plastics, ceramics, and composites. Upon completion, students should be able to demonstrate an understanding of fundamental engineering applications for a variety of materials, including their process capabilities and limitations.				
<b>MEC 172</b>	<b>Intro to Metallurgy</b>	2	2	3
Prerequisites:	None			
Corequisites:	None			
This course covers the production, properties, testing, classification, microstructure, and heat-treating effects of ferrous and non-ferrous metals. Topics include the iron-carbon phase diagram, ITT diagram, ANSI code, quenching, senescing, and other processes concerning metallurgical transformations. Upon completion, students should be able to understand the iron-carbon phase diagram, ITT diagram, microstructure images, and other phenomena concerning the behavior of metals.				
<b>MEC 180</b>	<b>Engineering Materials</b>	2	3	3
Prerequisites:	None			
Corequisites:	None			
This course introduces the physical and mechanical properties of materials. Topics include materials testing, pre and post-manufacturing processes, and material selection of ferrous and non-ferrous metals, plastics, composites, and non-conventional materials. Upon completion, students should be able to utilize basic material property tests and select appropriate materials for applications.				
<b>MEC 181</b>	<b>Introduction to CIM</b>	2	0	2
Prerequisites:	None			
Corequisites:	None			
This course introduces the elements of computer-integrated manufacturing(CIM). Topics include statistical process control, computer-aided design and manufacturing, numeric control, and flexible systems. Upon completion, students should be able to explain the major components of computer-integrated manufacturing.				
<b>MEC 187</b>	<b>Composite Materials</b>	2	3	3
Prerequisites:	None			
Corequisites:	None			
This course introduces composite engineering materials. Topics include selection and processing of composites. Upon completion, students should be able to select appropriate materials and demonstrate knowledge in processing and curing of composites.				

<b>MEC 188</b>	<b>Processing Composites I</b>	2	3	3
Prerequisites:	None			
Corequisites:	None			
This course covers the properties and forms of various resins used in manufacturing commercial bag and vacuum composites and the processes for commercial application. Emphasis is placed on materials used, including polyester and/or vinyl ester resins, and processes of hand lay-up, vacuum bag and vacuum assisted resin transfer molding. Upon completion, students should be able to produce composite materials suitable for mechanical testing. <i>This course is a unique concentration requirement in the Composites concentration in the Manufacturing Technology program.</i>				
<b>MEC 189</b>	<b>Processing Composites II</b>	2	3	3
Prerequisites:	None			
Corequisites:	None			
This course covers the resins and fibers used in high performance aircraft type composites and processes for advanced composite application. Emphasis is placed on materials used such as epoxy and carbon and the processes of compression molding, vacuum assisted resin transfer molding, and resin transfer molding. Upon completion, students should be able to produce composites suitable for mechanical testing. <i>This course is a unique concentration requirement in the Composites concentration in the Manufacturing Technology program.</i>				
<b>MEC 211</b>	<b>Engineering Mats &amp; Testing</b>	3	3	4
Prerequisites:	None			
Corequisites:	None			
This course introduces the electrical, physical, and mechanical properties of materials and appropriate test methods and equipment. Topics include ferrous and non-ferrous metals, plastics, and other engineering materials. Upon completion, students should be able to solve problems regarding material selection and processing based on knowledge of the behavior and characteristics of engineering materials.				
<b>MEC 212</b>	<b>Composites Materials Test</b>	2	3	3
Prerequisites:	None			
Corequisites:	None			
This course introduces different composite tests and testing procedures. Topics include data analysis, report writing, test machines, and test procedures. Upon completion, students should be able to perform and report results using impact, shear, compressions, flexure, and tension tests. <i>This course is a unique concentration requirement in the Composites concentration in the Manufacturing Technology program.</i>				
<b>MEC 215</b>	<b>Design of Composite Struc</b>	2	3	3
Prerequisites:	None			
Corequisites:	None			
This course introduces the basics of fiber reinforced composites materials, anisotropic theory, stress analysis, and test methods for composites. Topics include anisotropic constitutive equations and associated elastic constants, micromechanics models, theory of failures, classical laminate theory, laminate design, and special laminates. Upon completion, students should be able to apply concepts to the design of simple composite structural components. <i>This course is a unique concentration requirement in the Composites concentration in the Manufacturing Technology program.</i>				
<b>MEC 231</b>	<b>Comp-Aided Manufact I</b>	1	4	3
Prerequisites:	None			
Corequisites:	None			
This course introduces computer-aided design/manufacturing (CAD/CAM) applications and concepts. Topics include software, programming, data transfer and verification, and equipment setup. Upon completion, students should be able to produce parts using CAD/CAM applications.				
<b>MEC 232</b>	<b>Comp-Aided Manufact II</b>	1	4	3
Prerequisites:	MEC 231			
Corequisites:	None			
This course provides an in-depth study of CAM applications and concepts. Emphasis is placed on the manufacturing of complex parts using computer-aided manufacturing software. Upon completion, students should be able to manufacture complex parts using CAM software.				
<b>MEC 236</b>	<b>Regional Mfg</b>	1	4	3
Prerequisites:	None			
Corequisites:	None			
This course introduces the regional manufacturing facilities. Emphasis is placed on on-site tours and interaction with local regional manufacturing personnel. Upon completion, students should be able to identify regional manufacturers, their products, basic methods, personnel, and hiring standards.				

**MEC 250 Statics & Strength of Mat** 4 3 5  
 Prerequisites: None  
 Corequisites: None  
 This course covers the concepts and principles of statics and stress analysis. Topics include systems of forces on structures in equilibrium and analysis of stresses and strains on these components. Upon completion, students should be able to analyze forces and the results of stresses and strains on structural components.

**MEC 270 Machine Design** 3 3 4  
 Prerequisites: DFT 151 and MEC 180, and MEC 250 or MEC 251 and MEC 252  
 Corequisites: None  
 This course covers the basic principles underlying design and selection of machine elements. Topics include stress analysis, selection of components, power transmission, and other design considerations. Upon completion, students should be able to identify and solve mechanical design problems by applying basic engineering principles.

**MEC 271 Machine Design Project** 0 3 1  
 Prerequisites: None  
 Corequisites: MEC 270  
 This course provides an opportunity for involvement in the practical application of machine design by development of a project. Emphasis is placed on the design and engineering processes required to complete an approved project. Upon completion, students should be able to demonstrate the ability to progress from conceptual design to completed project.

**MEDICAL ASSISTING**

**MED 121 Medical Terminology I** 3 0 3  
 Prerequisites: None  
 Corequisites: None  
 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 treatments 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.

**MED 122 Medical Terminology II** 3 0 3  
 Prerequisites: MED 121  
 Corequisites: None  
 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 treatments 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.

**MARKETING AND RETAILING**

**MKT 120 Principles of Marketing** 3 0 3  
 Prerequisites: None  
 Corequisites: None  
 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.

**MKT 122 Visual Merchandising** 3 0 3  
 Prerequisites: None  
 Corequisites: None  
 This course introduces basic layout design and commercial display in retail and service organizations. Topics include an analysis of display as a visual merchandising medium and an examination of the principles and applications of display and design. Upon completion, students should be able to plan, build, and evaluate designs and displays. This course is a unique concentration requirement of the Marketing and Retailing concentration in the Business Administration program.

**MKT 123 Fundamentals of Selling** 3 0 3  
 Prerequisites: None  
 Corequisites: None  
 This course is designed to emphasize the necessity of selling skills in a modern business environment. Emphasis is placed on sales techniques involved in various types of selling situations. Upon completion, students should be able to demonstrate an understanding of the techniques covered.

<b>MKT 125</b>	<b>Buying and Merchandising</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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.				
<b>MKT 220</b>	<b>Advertising and Sales Promotion</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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.				
<b>MKT 225</b>	<b>Marketing Research</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	MKT 120			
Corequisites:	None			
This course provides information for decision making by providing guidance in developing, analyzing, and using data. Emphasis is placed on marketing research as a tool in decision making. Upon completion, students should be able to design and conduct a marketing research project and interpret the results. This course is a unique concentration requirement of the Marketing and Retailing concentration in the Business Administration program.				
<b>MKT 226</b>	<b>Retail Applications</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course is designed to develop occupational competence through participation in case studies, group work, and simulations. Emphasis is placed on all aspects of store ownership and operation, including securing financial backing and a sufficient market share. Upon completion, students should be able to demonstrate an understanding of concepts covered through application. This course is a unique concentration requirement of the Marketing and Retailing concentration in the Business Administration program.				

## **MAINTENANCE**

<b>MNT 110</b>	<b>Intro to Maint Procedures</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course covers basic maintenance fundamentals for power transmission equipment. Topics include equipment inspection, lubrication, alignment, and other scheduled maintenance procedures. Upon completion, students should be able to demonstrate knowledge of accepted maintenance procedures and practices according to current industry standards.				
<b>MNT 150</b>	<b>Basic Building Maintenance</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the basic skills of building maintenance. Topics include basic carpentry and masonry skills including forming, framing, laying block to a line, repairing, and other related topics. Upon completion, students should be able to perform basic carpentry and masonry skills in a maintenance setting.				
<b>MNT 220</b>	<b>Rigging and Moving</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the principles of safe rigging practices for handling, placing, installing, and moving heavy machinery and equipment. Topics include safety, weight and dimensional estimation, positioning of equipment slings, rollers, jacks, levers, dollies, ropes, chains, padding, and other related topics. Upon completion, students should be able to safely relocate and set up equipment using accepted rigging practices.				
<b>MNT 222</b>	<b>Industrial Sys Schematics</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the reading and drawing of schematics and diagrams. Emphasis is placed on water and gas plumbing, hydraulic and pneumatic circuits, electrical circuits, and welding diagrams. Upon completion, students should be able to interpret and construct industrial schematics and diagrams.				

## MUSIC

<b>MUS 110</b>	<b>Music Appreciation</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	RED 090, ENG 090 or satisfactory placement test scores			
Corequisites:	None			
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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.				
<b>MUS 111</b>	<b>Fundamentals of Music</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course is an introductory course for students with little or no music background. Emphasis is placed on music notation, rhythmic patterns, scales, key signatures, intervals, and chords. Upon completion, students should be able to demonstrate an understanding of the rudiments of music. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirements.				
<b>MUS 112</b>	<b>Introduction to Jazz</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:				
Corequisites:	None			
This course introduces the origins and musical components of jazz and the contributions of its major artists. Emphasis is placed on the development of discriminating listening habits, as well as the investigation of the styles and structural forms of the jazz idiom. Upon completion, students should be able to demonstrate skills in listening and understanding this form of American music. This course has been approved to satisfy the Comprehensive Articulation Agreement education core requirement in humanities/fine arts.				
<b>MUS 113</b>	<b>American Music</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:				
Corequisites:	None			
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 to satisfy the Comprehensive Articulation Agreement education core requirement in humanities/fine arts.				
<b>MUS 114</b>	<b>Non-Western Music</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course provides a basic survey of the music of the non-Western world. Emphasis is place on non-traditional instruments, sources, and performing practices. Upon completion, student should be able to demonstrate skills in basic listening and understanding of the art of non-Western music. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.				
<b>MUS 121</b>	<b>Music Theory I</b>	<b>3</b>	<b>2</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course provides an in-depth introduction to melody, rhythm, and harmony. Emphasis is placed on fundamental melodic, rhythmic, and harmonic analysis, introduction to part writing, rear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above.				
<b>MUS 122</b>	<b>Music Theory II</b>	<b>3</b>	<b>2</b>	<b>4</b>
Prerequisites:	MUS 121			
Corequisites:	None			
This course is a continuation of studies begun in MUS 121. Emphasis is placed on advanced melodic, rhythmic, and harmonic analysis and continued studies in part-writing, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above.				
<b>MUS 131</b>	<b>Chorus I</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	Appropriate vocal proficiency			
Corequisites:	None			
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.				

<b>MUS 132</b>	<b>Chorus II</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	MUS 131			
Corequisites:	None			
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.				
<b>MUS 141</b>	<b>Ensemble I</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	Audition			
Corequisites:	None			
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. The ensemble courses will feature show choir literature.				
<b>MUS 142</b>	<b>Ensemble II</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	MUS 141			
Corequisites:	None			
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.				
<b>MUS 151V</b>	<b>Class Music I</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:				
Corequisites:	None			
This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. MUS 151V is the first of two class voice courses.				
<b>MUS 152V</b>	<b>Class Music II</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	MUS 151			
Corequisites:	None			
This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. MUS 152V is a continuation of class voice 1.				
<b>MUS 161</b>	<b>Applied Music I</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	Audition			
Corequisites:	None			
This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.				
<b>MUS 162</b>	<b>Applied Music II</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	MUS 161			
Corequisites:	None			
This course is a continuation of MUS 161. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.				
<b>MUS 231</b>	<b>Chorus III</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	MUS 132			
Corequisites:	None			
This course is a continuation of MUS 132. 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.				
<b>MUS 232</b>	<b>Chorus IV</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	MUS 231			
Corequisites:	None			
This course is a continuation of MUS 231. Emphasis is placed on vocal techniques and the study 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.				

**MUS 241 Ensemble III** 0 2 1  
 Prerequisites: MUS 142  
 Corequisites: None  
 This course is a continuation of MUS 142. 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.

**MUS 242 Ensemble IV** 0 2 1  
 Prerequisites: MUS 241  
 Corequisites: None  
 This course is a continuation of MUS 241. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance.

**MUS 261 Applied Music III** 0 2 1  
 Prerequisites: MUS 162  
 Corequisites: None  
 This course is a continuation of MUS 162. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

**MUS 262 Applied Music IV** 0 2 1  
 Prerequisites: MUS 261  
 Corequisites: None  
 This course is a continuation of MUS 261. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance.

**NETWORKING TECHNOLOGY**

**NET 125 Networking Basics** 1 4 3  
 Prerequisites: None  
 Corequisites: None  
 This course introduces the OSI model, network topologies, IP addressing, and subnet masks, simple routing techniques, and basic switching terminology. Topics include the basic functions of the seven layers of the OSI model, different classes of IP addressing and subnetting, router login scripts. Upon completion, students should be able to list the key internetworking functions of the OSI Networking Layer and how they are performed in a variety of router types.

**NET 126 Routing Basics** 1 4 3  
 Prerequisites: NET 125  
 Corequisites: None  
 This course introduces router configurations, router protocols, switching methods, and hub terminology. Topics include the basic flow control methods, router startup commands, manipulation of router configuration files, IP and data link addressing. Upon completion, students should be able to prepare the initial router configuration files, as well as enable, verify, and configure IP addresses.

**NET 225 Routing and Switching I** 1 4 3  
 Prerequisites: NET 126  
 Corequisites: None  
 This course introduces advanced router configurations, advanced LAN switching theory and design, VLANs, Novell IPX, and threaded case studies. Topics include router elements and operations, adding routing protocols to a configuration, monitoring IPX operations on the router, LAN segmentation, and advanced switching methods. Upon completion students should be able to describe LAN and network segmentation with bridges, routers and switches and describe a virtual LAN.

**NET 226 Routing and Switching II** 1 4 3  
 Prerequisites: NET 225  
 Corequisites: None  
 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, channels, and function groups, and describe the Spanning Tree protocol.

<b>NET 289</b>	<b>Networking Project</b>	1	4	3
Prerequisites:	None			
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.

### NETWORKING OPERATING SYSTEM

<b>NOS 110</b>	<b>Operating System Concepts</b>	2	3	3
Prerequisites:	None			
Corequisites:	None			

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 resources required. Upon completion of this course, students will have an understanding of OS concepts, installation, management, maintenance, using a variety of operating systems.

<b>NOS 120</b>	<b>Linux/UNIX Single User</b>	2	2	3
Prerequisites:	NOS 110			
Corequisites:	None			

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.

<b>NOS 130</b>	<b>Windows Single User</b>	2	2	3
Prerequisites:	NOS 110			
Corequisites:	None			

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.

<b>NOS 220</b>	<b>Linux/UNIX Admin I</b>	2	2	3
Prerequisites:	NOS 120			
Corequisites:	None			

This course introduces the Linux file system, group administration, and system hardware controls. Topics include installation, creation and maintaining file systems, NIS client and DHCP client configuration, NFS, SMB/Samba, Configure X, Gnome, KDE, basic memory, processes, and security. Upon completion, students should be able to perform system administration tasks including installation, configuring and attaching a new Linux workstation to an existing network.

<b>NOS 230</b>	<b>Windows Admin I</b>	2	2	3
Prerequisites:	NOS 130			
Corequisites:	None			

This course covers the installation and administration of a Windows Server network operating system. Topics include managing and maintaining physical and logical devices, access to resources, the server environment, managing users, computers, and groups, and Managing/Implementing Disaster Recovery. Upon completion, students should be able to manage and maintain a Windows Server environment.

<b>NOS 244</b>	<b>Operating System – AS/400</b>	2	2	3
Prerequisites:	None			
Corequisites:	None			

This course includes operating systems concepts for AS/400 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 in an AS/400 environment.

### NURSING

<b>NUR 101</b>	<b>Practical Nursing I</b>	7	6	6	11
Prerequisites:	Enrollment in the Practical Nursing program				
Corequisites:	None				

This course introduces concepts as related to the practical nurse's caregiver and discipline-specific roles. Emphasis is placed on the nursing process, legal/ethical/professional issues, wellness/illness patterns, and basic nursing skills. Upon completion, students should be able to demonstrate beginning understanding of nursing process to promote/maintain/restore optimum health for diverse clients throughout the life span.

<b>NUR 102</b>	<b>Practical Nursing II</b>	<b>8</b>	<b>0</b>	<b>12</b>	<b>12</b>
Prerequisites:	None				
Corequisites:	None				
This course includes more advanced concepts as related to the practical nurse's caregiver and discipline-specific roles. Emphasis is placed on the nursing process, delegation, cost effectiveness, legal/ethical/professional issues, and wellness/illness patterns. Upon completion, students should be able to begin participating in the nursing process to promote/maintain/restore optimum health for diverse clients throughout the life span.					
<b>NUR 103</b>	<b>Practical Nursing III</b>	<b>6</b>	<b>0</b>	<b>12</b>	<b>10</b>
Prerequisites:	None				
Corequisites:	None				
This course focuses on use of nursing/related concepts by practical nurses as providers of care/members of discipline in collaboration with health team members. Emphasis is placed on the nursing process, wellness/illness patterns, entry-level issues, accountability, advocacy, professional development, evolving technology, and changing health care delivery systems. Upon completion, students should be able to use the nursing process to promote/maintain/restore optimum health for diverse clients throughout the life span.					
<b>NUR 107</b>	<b>LPN Refresher</b>	<b>9</b>	<b>0</b>	<b>9</b>	<b>12</b>
Prerequisite:					
Corerequisite:	None				
This refresher course is designed to provide an independent didactic review for the previously licensed practical nurse whose license has lapsed. Emphasis is placed on common medical-surgical conditions and nursing interventions, including mental health principles, pharmacological concepts, and safe clinical practice. Upon completion, students will be eligible to apply for reinstatement of licensure.					
<b>NUR 115</b>	<b>Fundamentals of Nursing</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>5</b>
Prerequisites:	pre-admission to program				
Corequisites:	NUR 117, BIO 155, and BIO 165				
This course introduces concepts basic to beginning nursing practice. Emphasis is placed on the application of the nursing process to provide and manage care as a member of the discipline of nursing. Upon completion, students should be able to demonstrate beginning competence in caring for individuals with common alterations of health.					
<b>NUR 117</b>	<b>Pharmacology</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>2</b>
Prerequisites:	pre-admission to program				
Corequisites:	NUR 115				
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.					
<b>NUR 118</b>	<b>Nutrition/Diet Therapy</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>
Prerequisites:					
Corequisites:	None				
This course covers the six nutrient categories and provides an overview of diet recommendations for promotion and maintenance of health. Topics include the food pyramid recommendations for individuals across the life span, energy balance, and special dietary modifications for common alterations in health. Upon completion, students should be able to complete a nutritional assessment, analyze diets, and recommend dietary adaptations to meet individual health needs.					
<b>NUR 125</b>	<b>Maternal-Child Nursing</b>	<b>5</b>	<b>3</b>	<b>6</b>	<b>8</b>
Prerequisites:	NUR 115 and NUR 135				
Corequisites:	NUR 233				
This course introduces nursing concepts related to the delivery of nursing care for the expanding family. Emphasis is placed on utilizing the nursing process as a framework for managing/providing nursing care to individuals and families along the wellness-illness continuum. Upon completion, students should be able to utilize the nursing process to deliver nursing care to mothers, infants, children, and families.					
<b>NUR 133</b>	<b>Nursing Assessment</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	NUR 115				
Corequisites:	BIO 166				
This course provides theory and application experience for performing nursing assessment of individuals. Emphasis is placed on interviewing and physical assessment techniques and documentation of findings appropriate for nursing. Upon completion, students should be able to complete a health history and perform a noninvasive physical assessment.					

<b>NUR 135</b>	<b>Adult Nursing I</b>	<b>5</b>	<b>3</b>	<b>9</b>	<b>9</b>
Prerequisites:	NUR 115				
Corequisites:	BIO 166				
This course introduces concepts related to the nursing care of individuals experiencing acute and chronic alterations in health. Emphasis is placed on utilizing the nursing process as a framework for providing and managing nursing care to individuals along the wellness-illness continuum. Upon completion, students should be able to apply the nursing process to individuals experiencing acute and chronic alterations in health.					
<b>NUR 185</b>	<b>Mental Health Nursing</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>5</b>
Prerequisites:	NUR 115 and NUR 135				
Corequisites:	NUR 133				
This course includes concepts related to the nursing care of individuals experiencing alterations in social and psychological functioning. Emphasis is placed on utilizing the nursing process to provide and manage nursing care for individuals with common psychiatric disorders or mental health needs. Upon completion, students should be able to apply psychosocial theories in the nursing care of individuals with psychiatric/mental health needs.					
<b>NUR 189</b>	<b>Nursing Transition</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>2</b>
Prerequisites:					
Corequisites:	None				
This course is designed to assist the licensed practical nurse in transition to the role of the associate degree nurse. Topics include the role of the registered nurse, nursing process, homeostasis, and validation of selected nursing skills and physical assessment. Upon completion, students should be able to articulate into the ADN program at the level of the generic student. To register for this course the student must have current, non-restricted license to practice as a Licensed Practical Nurse (LPN) in North Carolina, have passed the advanced placement challenge exam, and be admitted into the Associate Degree Nursing Program as an advanced placement student.					
<b>NUR 233</b>	<b>Leadership in Nursing</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>
Prerequisites:	NUR 135				
Corequisites:	NUR 125				
This course is designed to enhance nursing leadership and management skills in a variety of health care settings. Emphasis is placed on leadership styles, supervision, delegation, leadership and management theories, conflict resolution, change, and time management. Upon completion, students should be able to apply leadership and management skills in a variety of health care settings.					
<b>NUR 235</b>	<b>Adult Nursing II</b>	<b>4</b>	<b>3</b>	<b>15</b>	<b>10</b>
Prerequisites:	NUR 135, NUR 125, and NUR 185				
Corequisites:	NUR 244, NUR 233				
This course provides expanded concepts related to nursing care for individuals experiencing common complex alterations in health. Emphasis is placed on the nurse's role as a member of a multidisciplinary team and as a manager of care for a group of individuals. Upon completion, students should be able to provide comprehensive nursing care for groups of individuals with common complex alterations in health.					
<b>NUR 244</b>	<b>Issues and Trends</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>
Prerequisites:	NUR 135				
Corequisites:	NUR 125				
This course presents an overview of current trends and issues in nursing as they affect nursing practice in a changing health care environment. Emphasis is placed on making an effective transition into the roles of the practicing nurse. Upon completion, students should be able to articulate professional aspects of the practice of nursing.					

## **OPERATIONS MANAGEMENT**

<b>OMT 112</b>	<b>Materials Management</b>		<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:					
Corequisites:	None				
This course covers the basic principles of materials management. Emphasis is placed on the planning, procurement, movement, and storage of materials. Upon completion, students should be able to demonstrate an understanding of the concepts and techniques related to materials management. This course is a unique concentration requirement of the Operations Management concentration in the Business Administration program.					

<b>OMT 260</b>	<b>Issues in Operations Mgt.</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	ISC 121, ISC 210, OMT 112, and ISC 132 or ISC 221			
Corequisites:	None			

This course presents a variety of topics that highlight contemporary problems and issues related to operations management. Emphasis is placed on production and operations planning, environmental health and safety, materials management, and quality systems. Upon completion, students should be able to demonstrate the ability to make decisions and resolve problems in an operations management environment. This course is a unique concentration requirement of the Operations Management concentration in the Business Administration program.

### OFFICE SYSTEMS TECHNOLOGY

<b>OST 131</b>	<b>Keyboarding</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			

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.

<b>OST 134</b>	<b>Text Entry &amp; Formatting</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	OST 131			
Corequisites:	None			

This course is designed to provide the 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 mailable documents.

<b>OST 136</b>	<b>Word Processing</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	OST 131 or Satisfactory Keyboarding Skills			
Corequisites:	None			

This course introduces 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.

<b>OST 148</b>	<b>Med Coding Billing &amp; Insu</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			

This course introduces CPT and ICD coding as they apply to medical insurance and billing. Emphasis is placed on accuracy in coding, forms preparation, and posting. Upon completion, students should be able to describe the steps of the total billing cycle and explain the importance of accuracy.

<b>OST 149</b>	<b>Med Legal Issues</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			

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.

<b>OST 164</b>	<b>Text Editing Applications</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			

This course provides a comprehensive study of editing skills needed in the workplace. Emphasis is placed on grammar, punctuation, sentence structure, proofreading, and editing. Upon completion, students should be able to use reference materials to compose and edit text.

<b>OST 184</b>	<b>Records Management</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			

This course includes the creation, maintenance, protection, security, and disposition of records stored in a variety of media forms. Topics include alphabetic, geographic, subject, and numeric filing methods. Upon completion, students should be able to set up and maintain a records management system.

<b>OST 223</b>	<b>Machine Transcription I</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	OST 134, OST 136, and OST 164			
Corequisites:	None			

This course covers the use of transcribing machines to produce mailable documents. Emphasis is placed on appropriate formatting, advanced text editing skills, and transcription techniques. Upon completion, students should be able to transcribe documents into mailable copy.

<b>OST 241</b>	<b>Med Ofc Transcription I</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	OST 134, OST 136, MED 121, and OST 164			
Corequisites:	None			
This course introduces machine transcription techniques as applied to medical documents. Emphasis is placed on accurate transcription, proofreading, and use of reference materials as well as vocabulary building. Upon completion, students should be able to prepare accurate and usable transcripts of voice recordings in the covered specialities.				
<b>OST 243</b>	<b>Med Office Simulation</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	OST 131 and OST 148			
Corequisites:	None			
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.				
<b>OST 286</b>	<b>Professional Development</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
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.				
<b>OST 289</b>	<b>Office Systems Management</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	OST 134 or OST 136, and OST 164			
Corequisites:	None			
This course provides a capstone course for the office professional. Topics include administrative office procedures, imaging, communication techniques, ergonomics, and equipment utilization. Upon completion, students should be able to function proficiently in a changing office environment.				

## **PHYSICAL EDUCATION**

<b>PED 111</b>	<b>Physical Fitness I</b>	<b>0</b>	<b>3</b>	<b>1</b>
Prerequisites:				
Corequisites:	None			
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. The course includes a study of the role of physical fitness in the development of optimum health and wellness. Upon completion, students should be able to set up and implement an individualized physical fitness program.				
<b>PED 113</b>	<b>Aerobics I</b>	<b>0</b>	<b>3</b>	<b>1</b>
Prerequisites:				
Corequisites:	None			
This course introduces a program of cardiovascular fitness involving continuous, rhythmic exercise. Emphasis is placed on developing cardiovascular efficiency, strength, and flexibility and on safety precautions. Upon completion, students should be able to select and implement a rhythmic aerobic exercise program.				
<b>PED 117</b>	<b>Weight Training I</b>	<b>0</b>	<b>3</b>	<b>1</b>
Prerequisites:				
Corequisites:	None			
This course introduces the basics of weight training. Emphasis is placed on developing muscular strength, muscular endurance, and muscle tone. Upon completion, students should be able to establish and implement a personal eight training program.				
<b>PED 127</b>	<b>Karate</b>	<b>0</b>	<b>3</b>	<b>1</b>
Prerequisites:				
Corequisites:	None			
This course introduces the martial arts using the Japanese Shotokan form. Topics include proper conditioning exercise, book control, proper terminology, historical foundations, and etiquette relating to karate. Upon completion, students should be able to perform line drill techniques and Kata for various ranks.				
<b>PED 128</b>	<b>Golf-Beginning</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:				
Corequisites:	None			
This course emphasizes the fundamentals of golf. Topics include the proper grips, stance, alignment, swings for the short and long game, putting, and the rules and etiquette of golf. Upon completion, students should be able to perform the basic golf shots and demonstrate a knowledge of the rules and etiquette of golf.				

<b>PED 130</b>	<b>Tennis-Beginning</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:				
Corequisites: None				
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.				
<b>PED 137</b>	<b>Badminton</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:				
Corequisites: None				
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.				
<b>PED 138</b>	<b>Archery</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:				
Corequisites: None				
This course introduces 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.				
<b>PED 139</b>	<b>Bowling-Beginning</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:				
Corequisites: None				
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.				
<b>PED 143</b>	<b>Volleyball-Beginning</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:				
Corequisites: None				
This course covers 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.				
<b>PED 152</b>	<b>Swimming-Beginning</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:				
Corequisites: None				
This course is designed for non-swimmers and beginners. Emphasis is placed on developing confidence in the water, learning water safety, acquiring skills in floating, and learning elementary strokes. Upon completion, students should be able to demonstrate safety skills and be able to tread water, back float, and use the crawl stroke for 20 yards.				
<b>PED 153</b>	<b>Swimming-Intermediate</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites: PED 152				
Corequisites: None				
This course is designed for those who have mastered basic swimming skills. Emphasis is placed on refining basic skills and learning new swim strokes. Upon completion, students should be able to demonstrate the four basic strokes, the scissors kick, the underwater swim, and other related skills.				
<b>PED 154</b>	<b>Swimming for Fitness</b>	<b>0</b>	<b>3</b>	<b>1</b>
Prerequisites: PED 152				
Corequisites: None				
This course introduces lap swimming, aquacises, water activities, and games. Emphasis is placed on increasing cardiovascular efficiency through aquatic exercise. Upon completion, students should be able to develop an individualized aquatic fitness program.				
<b>PED 155</b>	<b>Water Aerobics</b>	<b>0</b>	<b>3</b>	<b>1</b>
Prerequisites:				
Corequisites: None				
This course introduces rhythmic aerobic activities performed in water. Emphasis is placed on increasing cardiovascular fitness levels, muscular strength, muscular endurance, and flexibility. Upon completion, students should be able to participate in an individually-paced exercise program.				
<b>PED 156</b>	<b>Scuba Diving</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites: PED 153				
Corequisites: None				
This course provides basic instruction in fundamental skills and safety procedures for scuba diving. Emphasis is placed on the history, theory, and principles of diving; development of diving skills; safety; and care and maintenance of equipment. Upon completion, students should be able to demonstrate skills, knowledge, and techniques of scuba diving in preparation for diver certification.				

**PED 160 Canoeing-Basic** 0 2 1  
 Prerequisites: PED 152  
 Corequisites: None  
 This course provides basic instruction for the beginning canoeist. Emphasis is placed on safe and correct handling of the canoe and rescue skills. Upon completion, students should be able to demonstrate basic canoeing, safe-handling, and self-rescue skills.

**PED 174 Wilderness Pursuits** 0 2 1  
 Prerequisites: None  
 Corequisites: None  
 This course covers the skills necessary to prepare for and participate in a wilderness trip. Emphasis is placed on planning, preparing, and participating in a wilderness pack trip. Upon completion, students should be able to safely participate in overnight wilderness pack trips.

**PED 187 Social Dance-Beginning** 0 2 1  
 Prerequisites: None  
 Corequisites: None  
 This course introduces the fundamentals of popular social dances. Emphasis is placed on basic social dance techniques, dances, and a brief history of social dance. Upon completion, students should be able to demonstrate specific dance skills and perform some dances.

**PHILOSOPHY**

**PHI 215 Philosophical Issues** 3 0 3  
 Prerequisites: ENG 111  
 Corequisites: None  
 This course introduces fundamental issues in philosophy considering the views of classical and contemporary philosophers. Emphasis is placed on knowledge and belief, appearance and reality, determinism and free will, faith and reason, and justice and inequality. Upon completion, students should be able to trace the development of leading ideas regarding reality, knowledge, reason, and faith. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**PHI 240 Introduction to Ethics** 3 0 3  
 Prerequisites: ENG 111  
 Corequisites: None  
 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**PHYSICS**

**PHY 131 Physics-Mechanics** 3 2 4  
 Prerequisites: MAT 121, MAT 161, MAT 171 or MAT 175  
 Corequisites: None  
 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 132 Physics-Elec & Magnetism** 3 2 4  
 Prerequisites: PHY 131  
 Corequisites: None  
 This algebra/trigonometry-based course is a study of fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, waves, electricity, magnetism, circuits, transformers, motors, and generators. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.

**PHY 151 College Physics I** 3 2 4  
 Prerequisites: MAT 162, MAT 172, or MAT 175  
 Corequisites: None  
 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

**PHY 152 College Physics II** 3 2 4  
 Prerequisites: PHY 151  
 Corequisites: None  
 This course uses algebra- and trigonometry-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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

**PHY 251 General Physics I** 3 3 4  
 Prerequisites: MAT 271  
 Corequisites: MAT 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

**PHY 252 General Physics II** 3 3 4  
 Prerequisites: MAT 272 and PHY 251  
 Corequisites: None  
 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

**PLASTICS**

**PLA 110 Introduction to Plastics** 2 0 2  
 Prerequisites: None  
 Corequisites: None  
 This course introduces the plastics processing industry, including thermoplastics and thermosets. Emphasis is placed on the description, classification, and properties of common plastics and processes and current trends in the industry. Upon completion, students should be able to describe the differences between thermoplastics and thermosets and recognize the basics of the different plastic processes.

**PLA 115 Polymer Processing** 2 3 3  
 Prerequisites: None  
 Corequisites: None  
 This course introduces theory and hands-on experience in common polymer processing techniques. Topics include injection molding, extrusion, thermoforming, blow molding, casting, roll forming, thermofusion, and other processes. Upon completion, students should be able to understand the setup, operation, and troubleshooting of common plastic processing equipment. This course is a unique concentration requirement in the Plastics concentration in the Manufacturing Technology program.

**PLA 120 Injection Molding** 2 3 3  
 Prerequisites: None  
 Corequisites: None  
 This course provides theory and processing experience with the injection molding process. Topics include machine type, molds, controls, machine-polymer part relationship, molding factors, troubleshooting, and molding problems/solutions. Upon completion, students should be able to demonstrate an understanding of machine setup and operation and be able to optimize common injection molding machines.

**PLA 162 Plastics Manuf Processes** 2 3 3  
 Prerequisites: None  
 Corequisites: None  
 This course covers manufacturing processes including machining, sawing, routing, milling, drilling, tapping, turning, thermoforming, molding, extrusion, laminating, reinforcing, expansion, casting, coating, assembly, and finishing. Emphasis is placed on the process and equipment requirements, special operational concerns, setup, operation, tooling, capability limitations, maintenance, and safety. Upon completion, students should be able to select the correct process for the material required and discuss machine operation, setup, tooling, safety, and scrap recycling.

<b>PLA 210</b>	<b>Mold Maintenance/Design</b>	<b>2</b>	<b>3</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course provides an in-depth study of the design, maintenance, and repair of molds used in the plastics industry. Topics include mold/die components, materials, types, functions, heating/cooling, designs, cleaning, and repair. Upon completion, students should be able to describe and utilize various types and functions of molds and gates and understand typical plastic design rules. This course is a unique concentration requirement in the Plastics concentration in the Manufacturing Technology program.				
<b>PLA 215</b>	<b>Polymeric Materials</b>	<b>2</b>	<b>3</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course provides an overview of polymeric materials, from commodity grade to advanced/specialty resins. Topics include chemistry, properties, material characterization, testing, and toxicity. Upon completion, students should be able to demonstrate an understanding of the hierarchy of plastics and how it affects material selection, testing, and safety. This course is a unique concentration requirement in the Plastics concentration in the Manufacturing Technology program.				
<b>PLA 220</b>	<b>Moldflow</b>	<b>2</b>	<b>3</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces flow analysis software. Topics include mold flow design principles, concepts, material databases, model construction, and interpretation of results. Upon completion, students should be able to model a part/runner system, optimize gate location, analyze and interpret fill, and recommend design changes.				
<b>PLA 225</b>	<b>Extrusion</b>	<b>2</b>	<b>3</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course provides theory and processing experience with the extrusion molding process. Topics include safe start-up, operation, and shutdown of machines, machine components, blown film, sheet, coating, pipe/profiles, wire coating, and fibers. Upon completion, students should be able to setup, operate, and troubleshoot the extrusion process and its variations.				
<b>PLA 230</b>	<b>Adv Plastics Manufacturing</b>	<b>3</b>	<b>3</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course covers advanced plastics manufacturing processes. Topics include hands-on experience, material selection, manufacturing cost, process optimization, troubleshooting, and project management. Upon completion, students should be able to understand, perform, and troubleshoot advanced processes in a manufacturing environment.				

## **PLUMBING**

<b>PLU 111</b>	<b>Intro to Basic Plumbing</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces basic plumbing tools, materials, and fixtures. Topics include standard tools, materials, and fixtures used in basic plumbing systems and other related topics. Upon completion, students should be able to demonstrate an understanding of a basic plumbing system.				
<b>PLU 130</b>	<b>Plumbing Systems</b>	<b>3</b>	<b>9</b>	<b>6</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the maintenance and repair of plumbing lines and fixtures. Emphasis is placed on identifying and diagnosing problems related to water, drain and vent lines, water heaters, and plumbing fixtures. Upon completion, students should be able to identify and diagnose needed repairs to the plumbing system.				
<b>PLU 211</b>	<b>Commercial/Ind Plumbing</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course covers the installation of various commercial and industrial piping. Topics include piping in steam, gas, air, fire sprinklers, and other related topics. Upon completion, students should be able to select and install various piping systems for a variety of applications.				

## POLITICAL SCIENCE

**POL 120 American Government** 3 0 3

Prerequisites:

Corequisites: None

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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**POL 130 State & Local Government** 3 0 3

Prerequisites:

Corequisites: None

This course includes state and local political institutions and practices in the context of American federalism. Emphasis is placed on procedural and policy differences as well as political issues in state, regional, and local governments of North Carolina. Upon completion, students should be able to identify and discuss various problems associated with intergovernmental politics and their effect on the community and the individual.

## PSYCHOLOGY

**PSY 110 Life Span Development** 3 0 3

Prerequisites:

Corequisites: None

This course provides an introduction to the study of human growth and development. Emphasis is placed on the physical, cognitive, and psychosocial aspects of development from conception to death. Upon completion, students should be able to demonstrate knowledge of development across the life span and apply this knowledge to their specific field of study.

**PSY 150 General Psychology** 3 0 3

Prerequisites: RED 090, or satisfactory placement test scores

Corequisites: None

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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**PSY 241 Developmental Psych** 3 0 3

Prerequisites: PSY 150

Corequisites: None

This course is a study of human growth and development. Emphasis is placed on major theories and perspectives as they relate to the physical, cognitive, and psychosocial aspects of development from conception to death. Upon completion, students should be able to demonstrate knowledge of development across the life span. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**PSY 281 Abnormal Psychology** 3 0 3

Prerequisites: PSY 150

Corequisites: None

This course provides an examination of the various psychological disorders, as well as theoretical, clinical, and experimental perspectives of the study of psychopathology. Emphasis is placed on terminology, classification, etiology, assessment, and treatment of the major disorders. Upon completion, students should be able to distinguish between normal and abnormal behavior patterns as well as demonstrate knowledge of etiology, symptoms, and therapeutic techniques. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

## READING

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.

**RED 080 Intro to College Reading** 3 2 4\*

Prerequisites: Placement test scores

Corequisites: None

This course introduces effective reading and inferential thinking skills in preparation for RED 090. Emphasis is placed on vocabulary, comprehension, and reading strategies. Upon completion, students should be able to determine main ideas and supporting details, recognize basic patterns of organization, draw conclusions, and understand vocabulary in context. This course does not satisfy the developmental reading prerequisite for ENG 111.

<b>RED 090</b>	<b>Improved College Reading</b>	<b>3</b>	<b>2</b>	<b>4*</b>
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Prerequisites: RED 080 or satisfactory placement test scores  
 Corequisites: None  
 This course is designed to improve reading and critical thinking skills. Topics include vocabulary enhancement; extracting implied meaning; analyzing author's purpose, tone, and style; and drawing conclusions and responding to written material. Upon completion, students should be able to comprehend and analyze college-level reading material. This course satisfies the developmental reading prerequisite for ENG 111.

\*These credits are institutional credits only and cannot be used for graduation. They are used for determining hour load for payment, eligibility for financial aid, or classification for a full-time student.

**RELIGION**

<b>REL 110</b>	<b>World Religions</b>	<b>3</b>	<b>0</b>	<b>3</b>
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Prerequisites: RED 090, ENG 090 or satisfactory placement test scores  
 Corequisites: None

This course introduces the world's major religious traditions. Topics include Primal religions, Hinduism, Buddhism, 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

<b>REL 211</b>	<b>Intro to Old Testament</b>	<b>3</b>	<b>0</b>	<b>3</b>
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Prerequisites: RED 090, ENG 090 or satisfactory placement test scores  
 Corequisites: None

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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

<b>REL 212</b>	<b>Intro to New Testament</b>	<b>3</b>	<b>0</b>	<b>3</b>
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Prerequisites: RED 090, ENG 090 or satisfactory placement test scores  
 Corequisites: None

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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**INFORMATION SYSTEMS SECURITY**

<b>SEC 110</b>	<b>Security Concepts</b>	<b>3</b>	<b>0</b>	<b>3</b>
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Prerequisites: None  
 Corequisites: None

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 and information security policy, and identify processes to implement and enforce policy.

**SOCIOLOGY**

<b>SOC 210</b>	<b>Introduction to Sociology</b>	<b>3</b>	<b>0</b>	<b>3</b>
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Prerequisites: RED 090 or satisfactory placement test scores  
 Corequisites: None

This course introduces the scientific study of human society, culture, and social interactions. Topics include socialization, research methods, diversity and inequality, cooperation and conflict, social change, 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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**SOC 213      Sociology of the Family** 3      0      3  
 Prerequisites: RED 090, or satisfactory placement test scores  
 Corequisites: None

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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**SOC 220      Social Problems** 3      0      3  
 Prerequisites: RED 090, or satisfactory placement test scores  
 Corequisites: None

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 to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

**SPANISH**

**SPA 111      Elementary Spanish I** 3      0      3  
 Prerequisites: RED 090, ENG 090 or satisfactory placement test scores  
 Corequisites: SPA 181

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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**SPA 112      Elementary Spanish II** 3      0      3  
 Prerequisites: SPA 111  
 Corequisites: SPA 182

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 to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

**SPA 120      Spanish for the Workplace** 3      0      3  
 Prerequisites: None  
 Corequisites: None

This course offers applied Spanish for the workplace to facilitate basic communication with people whose native language is Spanish. Emphasis is placed on oral communication and career-specific vocabulary that targets health, business, and/or public service professions. Upon completion, the students should be able to communicate at a functional level with native speakers and demonstrate cultural sensitivity.

**SPA 181      Spanish Lab I** 0      2      1  
 Prerequisites:  
 Corequisites: SPA 111

This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness.

**SPA 182      Spanish Lab 2** 0      2      1  
 Prerequisites: SPA 181  
 Corequisites: SPA 112

This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate cultural awareness.

<b>SPA 211</b>	<b>Intermediate Spanish I</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	SPA 112			
Corequisites:	SPA 281			

This course provides a review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

<b>SPA 212</b>	<b>Intermediate Spanish II</b>	<b>3</b>	<b>0</b>	<b>3</b>
Prerequisites:	SPA 211			
Corequisites:	SPA 282			

This course provides a continuation of SPA 211. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

<b>SPA 281</b>	<b>Spanish Lab 3</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	SPA 182			
Corequisites:	SPA 211			

This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future.

<b>SPA 282</b>	<b>Spanish Lab 4</b>	<b>0</b>	<b>2</b>	<b>1</b>
Prerequisites:	SPA 281			
Corequisites:	SPA 212			

This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication.

**SURGICAL TECHNOLOGY**

<b>SUR 110</b>	<b>Intro to Surg Tech</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>
Prerequisites:	None				
Corequisites:	SUR 111				

This course provides a comprehensive study of the operative environment, professional roles, moral/legal/ethical responsibilities, and medical communications used in surgical technology. Topics include historical development, professional behaviors, medical terminology, interdepartmental/peer/relationships, operating room environment/safety, pharmacology, anesthesia, incision sites, and physiology of wound healing. Upon completion, students should be able to apply theoretical knowledge of the course topics to the operative environment.

<b>SUR 111</b>	<b>Periop Patient Care</b>	<b>5</b>	<b>6</b>	<b>0</b>	<b>7</b>
Prerequisites:	None				
Corequisites:	SUR 110				

This course provides theoretical knowledge for the application of essential operative skills during the perioperative phase. Topics include surgical asepsis, sterilization/disinfection, and perioperative patient care. Upon completion, students should be able to demonstrate the principles and practices of aseptic technique, sterile attire, basic case preparation, and other relevant skills.

<b>SUR 122</b>	<b>Surgical Procedures I</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>6</b>
Prerequisites:	SUR 110 and SUR 111				
Corequisites:	SUR 123 or STP 101				

This course introduces a comprehensive study of surgical procedures in the following specialties: general, gastrointestinal, obstetrical/gynecology, urology, otorhinolaryngology, and plastics/reconstructive. Emphasis is placed on related surgical anatomy, pathology, and procedures thereby enhancing theoretical knowledge of patient care, instrumentation, supplies and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics.

<b>SUR 123</b>	<b>SUR Clinical Practice I</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>7</b>
Prerequisites:	SUR 110 and SUR 111				
Corequisites:	SUR 122				

This course provides clinical experience with a variety of perioperative assignments to build upon skills learned in SUR 111. Emphasis is placed on the scrub and circulating roles of the surgical technologist including aseptic technique and basic case preparation for selected surgical procedures. Upon completion, students should be able to prepare, assist with, and dismantle basic surgical cases in both the scrub and circulating roles.

<b>SUR 134</b>	<b>Surgical Procedures II</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>
Prerequisites:	SUR 123 or STP 101				
Corequisites:	None				
This course introduces orthopedic, neurosurgical, peripheral vascular, thoracic, cardiovascular, and ophthalmology surgical specialties. Emphasis is placed on related surgical anatomy, pathology, and procedures thereby enhancing theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics.					
<b>SUR 135</b>	<b>SUR Clinical Practice II</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>4</b>
Prerequisites:	SUR 123				
Corequisites:	SUR 134 or SUR 137				
This course provides clinical experience with a variety of perioperative assignments to build skills required for complex perioperative patient care. Emphasis is placed on greater technical skills, critical thinking, speed, efficiency, and autonomy in the operative setting. Upon completion, students should be able to function in the role of an entry-level surgical technologist.					
<b>SUR 137</b>	<b>Prof Success Prep</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>
Prerequisites:	SUR 123				
Corequisites:	SUR 134 and SUR 135				
This course provides job-seeking skills and an overview of theoretical knowledge in preparation for certification. Topics include test-taking strategies, resume preparation, and interviewing techniques. Upon completion, students should be able to prepare a resume, demonstrate appropriate interview techniques, and identify strengths and weaknesses in preparation for certification.					

## WEB TECHNOLOGIES

<b>WEB 110</b>	<b>Internet/Web Fundamentals</b>		<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	None				
Corequisites:	None				
This course introduces basic markup language, various navigational tools and services of the Internet. Topics include creating web pages, using internet protocols, search engines, file compression/decompression, FTP, email, listservers, and other related topics. Upon completion, students should be able to deploy a website created with basic markup language, retrieve/decompress files, email, FTP, and utilize other internet tools.					
<b>WEB 115</b>	<b>Web Markup and Scripting</b>		<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	None				
Corequisites:	None				
This course introduces client-side Internet programming using the current W3C-recommended presentation markup language and supporting elements. Topics include site management and development, markup elements, stylesheets, validation, accessibility, standards, browsers, and basic JavaScripting. Upon completion, students should be able to hand-code web pages with various media elements according to current markup standards and integrate them into websites.					
<b>WEB 182</b>	<b>PHP Programming</b>		<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	CIS 115				
Corequisites:	None				
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.					
<b>WEB 210</b>	<b>Web Design</b>		<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	None				
Corequisites:	None				
This course introduces intermediate to advanced web page design techniques. Topics include effective use of graphics, fonts, colors, navigation tools, advanced markup language elements, as well as a study of bad design techniques. Upon completion, students should be able to employ advanced design techniques to create high impact and highly functional web pages.					

## WELDING

<b>WLD 110</b>	<b>Cutting Processes</b>		<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None				
Corequisites:	None				
This course introduces oxy-fuel and plasma-arc cutting systems. Topics include safety, proper equipment setup, and operation of oxy-fuel and plasma-arc cutting equipment with emphasis on straight line, curve and bevel cutting. Upon completion, students should be able to oxy-fuel and plasma-arc cut metals of varying thickness.					

<b>WLD 112</b>	<b>Basic Welding Processes</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces basic welding and cutting. Emphasis is placed on beads applied with gases, mild steel fillers, and electrodes and the capillary action of solder. Upon completion, students should be able to set up welding and oxy-fuel equipment and perform welding, brazing, and soldering processes.				
<b>WLD 115</b>	<b>SMAW (Stick) Plate</b>	<b>2</b>	<b>9</b>	<b>5</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, students should be able to perform SMAW fillet and groove welds on carbon plate with prescribed electrodes.				
<b>WLD 116</b>	<b>SMAW (Stick) Plate/Pipe</b>	<b>1</b>	<b>9</b>	<b>4</b>
Prerequisites:	WLD 115			
Corequisites:	None			
This course is designed to enhance skills with the shielded metal arc (stick) welding process. Emphasis is placed on advancing manipulative skills with SMAW electrodes on varying joint geometry. Upon completion, students should be able to perform groove welds on carbon steel with prescribed electrodes in the flat, horizontal, vertical, and overhead positions.				
<b>WLD 121</b>	<b>GMAW (MIG) FCAW/Plate</b>	<b>2</b>	<b>6</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces metal arc welding and flux core arc welding processes. Topics include equipment setup and fillet and groove welds with emphasis on application of GMAW and FCAW electrodes on carbon steel plate. Upon completion, students should be able to perform fillet welds on carbon steel with prescribed electrodes in the flat, horizontal, and overhead positions.				
<b>WLD 122</b>	<b>GMAW (MIG) Plate/Pipe</b>	<b>1</b>	<b>6</b>	<b>3</b>
Prerequisites:	WLD 121			
Corequisites:	None			
This course is designed to enhance skills with the gas metal arc (MIG) welding process. Emphasis is placed on advancing skills with the GMAW process making groove welds on carbon steel plate and pipe in various positions. Upon completion, students should be able to perform groove welds with prescribed electrodes on various joint geometry.				
<b>WLD 131</b>	<b>GTAW (TIG) Plate</b>	<b>2</b>	<b>6</b>	<b>4</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the gas tungsten arc (TIG) welding process. Topics include correct selection of tungsten, polarity, gas, and proper filler rod with emphasis placed on safety, equipment setup, and welding techniques. Upon completion, students should be able to perform GTAW fillet and groove welds with various electrodes and filler materials.				
<b>WLD 132</b>	<b>GTAW (TIG) Plate/Pipe</b>	<b>1</b>	<b>6</b>	<b>3</b>
Prerequisites:	WLD 131			
Corequisites:	None			
This course is designed to enhance skills with the gas tungsten arc (TIG) welding process. Topics include setup, joint preparation, and electrode selection with emphasis on manipulative skills in all welding positions on plate and pipe. Upon completion, students should be able to perform GTAW welds with prescribed electrodes and filler materials on various joint geometry.				
<b>WLD 141</b>	<b>Symbols &amp; Specifications</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the basic symbols and specifications used in welding. Emphasis is placed on interpretation of lines, notes, welding symbols, and specifications. Upon completion, students should be able to read and interpret symbols and specifications commonly used in welding.				
<b>WLD 143</b>	<b>Welding Metallurgy</b>	<b>1</b>	<b>2</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the concepts of welding metallurgy. Emphasis is placed on basic metallurgy, effects of welding on various metals, and metal classification and identification. Upon completion, students should be able to understand basic metallurgy, materials designation, and classification systems used in welding.				

<b>WLD 145</b>	<b>Thermoplastic Welding</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces the thermoplastic welding processes and materials identification. Topics include filler material selection, identification, joint design, and equipment setup with emphasis on bead types and applications. Upon completion, students should be able to perform fillet and groove welds using thermoplastic materials.				
<b>WLD 151</b>	<b>Fabrication I</b>	<b>2</b>	<b>6</b>	<b>4</b>
Prerequisites:	WLD 110 and WLD 115 and WLD 116 and WLD 131			
Corequisites:	None			
This course introduces the basic principles of fabrication. Emphasis is placed on safety, measurement, layout techniques, and the use of fabrication tools and equipment. Upon completion, students should be able to perform layout activities and operate various fabrication and material handling equipment.				
<b>WLD 251</b>	<b>Fabrication II</b>	<b>1</b>	<b>6</b>	<b>3</b>
Prerequisites:	WLD 151			
Corequisites:	None			
This course covers advanced fabrication skills. Topics include advanced layout and assembly methods with emphasis on the safe and correct use of fabrication tools and equipment. Upon completion, students should be able to fabricate projects from working drawings.				
<b>WLD 261</b>	<b>Certification Practices</b>	<b>1</b>	<b>3</b>	<b>2</b>
Prerequisites:	WLD 115 and WLD 121 and WLD 131			
Corequisites:	None			
This course covers certification requirements for industrial welding processes. Topics include techniques and certification requirements for prequalified joint geometry. Upon completion, students should be able to perform welds on carbon steel plate and/or pipe according to applicable codes.				
<b>WLD 262</b>	<b>Inspection and Testing</b>	<b>2</b>	<b>2</b>	<b>3</b>
Prerequisites:	None			
Corequisites:	None			
This course introduces destructive and non-destructive testing methods. Emphasis is placed on safety, types and methods of testing, and the use of testing equipment and materials. Upon completion, students should be able to understand and/or perform a variety of destructive and non-destructive testing processes.				

## ADMINISTRATORS AND FACULTY

Kathy Ackerman.....	Acting Dean of Arts and Sciences
B.A., Bowling Green State University; M.A., UNC-Charlotte; Ph.D., University of South Carolina	
Cathy Alexander .....	Advertising and Graphic Design
B.F.A., Western Carolina University	
Kim Amos .....	Practical Nursing Instructor
BSN., Western Carolina University	
Elisabeth Barrows .....	English
B.A., M.A., Wake Forest University	
Timothy D. Beaver .....	Mathematics
B.S., M.A., Appalachian State University	
Susan Benfield.....	Foothills Nursing Consortium
B.S.N., Winston Salem State University; MSN, UNC-Greensboro	
Peggy Blanton .....	Developmental Mathematics
B.A., M.A.T., Winthrop College	
Jeff Boyle.....	Director of Financial Aid
B.A., Western Kentucky University; M.A., Clemson University	
Ramon Scott Bradey.....	Machining Technology
A.A.S., Isothermal Community College	
Jeanette Murray Cheshire .....	Director, Foothills Nursing Consortium
A.A.S., Western Piedmont Community College; B.S.N., UNC-Chapel Hill; M.P.H., UNC-Chapel Hill; DNP, Case Western Reserve University	
Richard Childress .....	Business Administration
B.S.B.A., M.B.A.; Appalachian State University	
Treva Clayton .....	Office Systems Technology
A.A.S., Isothermal Community College; B.T., M.A., Appalachian State University	
Rebecca E. S. Cleland .....	Librarian
B.A., M.S.L.S., University of Tennessee	
April Cline.....	Practical Nursing Instructor
B.A., Central State University; B.S.N., Lenior Rhyne; M.S.N., UNC-Greensboro	
Jay Coomes .....	Broadcast Production Technology
B.A., Central State University	
Jeremiah Council .....	English
B.A., Syracuse University, M.A., Western Carolina University	
Victoria Covington .....	Developmental Reading and English
B.A., University of North Carolina - Greensboro; M.A. Gardner-Webb University	
Doris Crute.....	HRD Instructor
B.S., Gardner-Webb University	
Rhonda L. Davis.....	Computer Technology/Business Administration
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# WHO TO SEE

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## IF YOU NEED:

## GO TO:

## LOCATED IN:

Academic record	Student Affairs Office	Student Center
Academic advising	Your Advisor	
Non-credit course	Continuing Education	The Foundation
Books to purchase	Bookstore	Student Center
Career assistance	Career Center	Student Center
Complete High School	Continuing Education	The Foundation
Counseling	Career Center	Student Center
Courses - registering	Your Advisor	
Courses - schedule adjustments	Departmental Secretary	
Curriculum changes	Admissions Office	Student Center
Disability Services	Student Affairs Office	Student Center
Emergency Assistance	9-911 if you are using campus telephone system and Switchboard (Dial "0")	Administration
English As A Second Language	Continuing Education	The Foundation
Financial aid	Financial Aid Office	Student Center
Graduation application	Student Affairs Office	Student Center
Graduation information	Your Advisor	
Graduation orders	Bookstore	Student Center
In-state/out-of-state tuition status	Admissions Office	Student Center
Learn to Read	Continuing Education	The Foundation
Lost and found	Student Affairs Secretary or Receptionist/Switchboard	Student Center Administration
Name/address changes	Student Affairs Office	Student Center
Organize a student activity	Dean of Student Affairs	Student Center
Transcripts	Records Office	Student Center
Tuition, fees, payments	Business Office	Administration
Tutoring services	Developmental Education & Academic Support	Administration
Withdraw from College	Your Advisor	