

ACADEMIC RELATED

ACA 090	Study Skills	C-L-SHC 3-0-3
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This course is intended for those who placed into credit-level course work but who are not maintaining satisfactory academic progress toward meeting program goals. Topics include study skills, note taking, learning styles and strategies, test taking, goal setting, and self-assessment skills. Upon completion, students should be able to manage their learning experiences to successfully meet educational goals.

ACCOUNTING

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

ACC 120	Prin. of Financial Acct	3-2-4
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This course introduces business decision-making using 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.

ACC 121	Prin. of Managerial Acct	3-2-4
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Prerequisite: ACC 120

This course is a continuation of accounting principles. 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.

ACC 122	Prin. of Financial Acc II	3-0-3
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Prerequisite: ACC 120

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

ACC 129	Individual Income Taxes	2-2-3
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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 to tax law, and complete various individual tax forms.

ACC 130	Business Income Taxes	2-2-3
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Prerequisite: ACC 120

This course introduces the relevant laws governing business and fiduciary income taxes. Topics include tax law relating to business organizations, electronic research and methodologies, and the use of technology for the preparation of business tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various business tax forms.

ACC 140	Payroll Accounting	1-2-2
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Prerequisites: ACC 115 or ACC 120

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

ACC 149 Intro to Acc Spreadsheets 1-2-2

Prerequisites: ACC 115 or ACC 120

This course provides a working knowledge of computer spreadsheets and their use in accounting. Topics include pre-programmed problems, model-building problems, beginning-level macros, graphics, and what-if analysis enhancements of template problems. Upon completion, students should be able to use a computer spreadsheet to complete many of the tasks required in accounting.

ACC 150 Acct Software Appl 1-2-2

Prerequisites: ACC 115 or ACC 120

This course introduces computer applications related to the accounting systems. Topics include general ledger, accounts receivable, accounts payable, inventory, payroll, and correcting, adjusting, and closing entries. Upon completion, students should be able to use a computer accounting package to solve accounting problems.

ACC 180 Practices in Bookkeeping 3-0-3

Prerequisites: ACC 120

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 key bookkeeping functions for small businesses.

ACC 220 Intermediate Accounting I 3-2-4

Prerequisites: ACC 122

This course is a continuation of the study of accounting principles with in-depth coverage of theoretical concepts and financial statements. Topics include generally accepted accounting principles and extensive analysis of financial statements. Upon completion, students should be able to demonstrate competence in the conceptual framework underlying financial accounting, including the application of financial standards.

ACC 226 Adv Managerial Acct 3-0-3

Prerequisite: ACC 121

This course is designed to develop an appreciation for the uses of cost information in the administration and control of business organizations. Emphasis is placed on how accounting data can be interpreted and used by management in planning and controlling business activities. Upon completion, students should be able to analyze and interpret cost information and present this information in a form that is usable by management.

ACC 269 Audit & Assurance Service 3-0-3

Prerequisite: ACC 220

This course introduces selected topics pertaining to the objectives, theory and practices in engagements providing auditing and other assurance services. Coverage will include planning, conducting and reporting, with emphasis on the related professional ethics and standards. Upon completion, students should be able to demonstrate an understanding of the types of professional services, the related professional standards, and engagement methodology.

AGRICULTURE

AGR 111 Basic Farm Maintenance C-L-SHC
1-3-2

This course covers fundamentals of maintenance and repair of farm facilities and equipment. Topics include safe use of hand tools and farm machinery, carpentry, concrete, painting, wiring, welding, plumbing, and calculating costs and materials needed. Upon completion, students should be able to answer theoretical questions on topics covered and assist with maintenance and repair of farm facilities and equipment.

AGR 121 Biological Pest Mgmt 3-0-3

This course will emphasize the building and maintaining of healthy soil, plant and insect biological cycles as the key to pest and disease management. Course content includes study of major pests and diseases, including structure, life cycle, and favored hosts; and biological and least toxic methods of chemical control. Upon completion, students should be able to identify and recommend methods of prevention and control of selected insects and diseases.

AGR 139 Intro to Sustainable Ag 3-0-3

This course will provide students with a clear perspective on the principles, history and practices of sustainable agriculture in our local and global communities. Students will be introduced to the economic, environmental and social impacts of agriculture. Upon completion, students should be able to identify the principles of sustainable agriculture as they relate to basic production practices.

AGR 160 Plant Science 2-2-3

This course introduces the basic principles of botany that pertain to agricultural production. Emphasis is placed on the anatomy and physiology of flowering plants. Upon completion, students should be able to identify and explain plant systems.

HOR 168 Plant Propagation 2-2-3

This course is a study of sexual and asexual reproduction of plants. Emphasis is placed on seed propagation, grafting, stem and root propagation, micro-propagation, and other propagation techniques. Upon completion, students should be able to successfully propagate ornamental plants. Sustainable agriculture students will focus on fruit and vegetable crop propagation.

AGR 170 Soil Science 2-2-3

This course covers the basic principles of soil fertilizing. Topics include liming, fertilization, management, and plant nutrients. Upon completion, students should be able to give nutrient and liming recommendations for soils.

AGR 212 Farm Business Management 3-0-3

This course introduces budgeting, farm analysis, production costs, business organizations, and general management principles. Topics include enterprise budgets, partial budgets, whole farm budgets, income analysis, and business organizations. Upon completion, students should be able to prepare and analyze a farm budget.

AGR 214 Agricultural Marketing 3-0-3

This course covers basic marketing principles for agricultural products. Topics include buying, selling, processing, standardizing, grading, storing, and marketing of agricultural commodities. Upon completion, students should be able to construct a marketing plan for an agricultural product.

AGR 220 Ag Mechanization 2-2-3

This course is a study of farm machinery and agricultural equipment. Topics include selection and operation of tractors, materials handling equipment, tillage and harvesting equipment, and irrigation systems. Upon completion, students should be able to identify equipment parts and explain the basic principles of machinery operation and management.

AGR 221 Farm Structures 2-2-3

This course covers basic agricultural buildings and structures. Topics include building materials, cost estimating, basic blueprint reading, and job planning. Upon completion, students should be able to complete a cost estimate for constructing an agricultural structure.

AGR 265 Organic Crop Prod: Spring 2-2-3

This course includes a study of spring organic crop production practices, including vegetables, cut flowers, and culinary and medicinal herbs. Topics include variety selection, production methods, and record keeping procedures for certification. Upon completion, students should be able to demonstrate a knowledge of organic crop production appropriate for the spring season.

AGR 266 Organic Crop Prod: Fall 2-2-3

The course includes a study of spring organic crop production practices, including vegetables, cut flowers, and culinary and medicinal herbs. Topics include variety selection, production methods, and record keeping procedures for certification. Upon completion, students should be able to demonstrate a knowledge of organic crop production appropriate for the fall season.

AGR 293 Selected Topics in Sustainable Agriculture 3-0-3

This course provides an opportunity to explore areas of current interest in Sustainable Agriculture. This course provides an opportunity to explore areas of current interest in Sustainable Agriculture. Emphasis is placed on subject matter appropriate to this discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

AIR CONDITIONING, HEATING, AND REFRIGERATION

C-L-SHC

AHR 120 HVACR Maintenance 1-3-2

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 160 Refrigerant Certification 1-0-1

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.

ANIMAL SCIENCE

C-L-SHC

ANS 110 Animal Science 3-0-3

This course introduces the livestock industry. Topics include nutrition, reproduction, production practices, diseases, meat processing, and marketing. Upon completion, students should be able to demonstrate a basic understanding of livestock production practices and the economic impact of livestock in North Carolina.

ANS 111 Sustainable Livestock Mgt 2-2-3

This course covers the integration of livestock as part of a sustainable farming system with emphasis on small-scale production for niche markets and pasture. Topics included are appropriate breed selection, nutrition and living requirements for livestock such as goats, hogs, sheep, poultry, and bees. Upon completion, student should recognize appropriate breeds for their farm needs and demonstrate knowledge of small-scale livestock production.

ANTHROPOLOGY

C-L-SHC

ANT 210 General Anthropology 3-0-3
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
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.

AUTOMOTIVE RESTORATION

ARS 101 Intro to Automotive Rest C-L-SHC
2-0-2
This course introduces the automotive restoration industry. Emphasis is placed on the research of the evolution of the automobile from steam to the internal combustion engine in the United States and Europe. Upon completion, students should be able to describe the process of automotive restoration and note the worldwide impact of the automobile. This is a diploma-level course.

ARS 102 Auto Restoration Research 3-0-3
This course covers identification and collection of information needed to restore classic automobiles. Emphasis is placed on using books, numbers, emblems, titles, bills of sale, and other documents as resources. Upon completion, students should be able to use reference materials in the area of auto restoration to restore classic vehicles. This is a diploma-level course.

ARS 103 Automobile Upholstery 2-4-4
This course covers automobile upholstery work used in restoration of classic automobiles. Emphasis is placed on removing, repairing, or reconstructing worn/damaged upholstery material in classic automobiles. Upon completion, students should be able to disassemble, repair/reconstruct, or replace the seats, headliners, door panels, and other components in the interior of vehicles. This is a diploma-level course.

ARS 104 Restoration Skills I 2-4-4
Corequisites: AUT 131, AUT 161, ARS 103 and ARS 107
This course covers mechanical, electrical, and upholstery restoration. Emphasis is placed on engines, transmissions, brakes, starters, generators, distributors, and replacement or fabrication of upholstery. Upon completion, students should be able to restore, rebuild, or replace specific components in a wide range of classic vehicles. This is a diploma-level course.

ARS 107 Automotive Engines 1-3-2
This course covers the repair, rebuilding, and troubleshooting of internal combustion engines. Emphasis is placed on use of tools and equipment to measure reconditioning tolerances internal combustion engine. Upon completion, students should be able to disassemble, repair and/or replace, and reassemble an internal combustion engine. This is a diploma-level course.

ARS 108 Wood & Metal Restoration 2-2-3
This course introduces various wood materials used in early automobile construction including a general overview of woodworking techniques. Emphasis is placed on wood material, metal behavior, and trim construction. Upon completion, students should be able to perform simple woodworking techniques, attach and remove trim, and be familiar with basic hardware techniques. This is a diploma-level course.

ART

C-L-SHC

ART 111 Art Appreciation

3-0-3

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

ART 131 Drawing I

0-6-3

This course introduces the language of drawing and the use of various drawing materials. Emphasis is placed on drawing techniques, media, and graphic principles. Upon completion, students should be able to demonstrate competence in the use of graphic form and various drawing processes. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 261 Photography I

0-6-3

This course introduces photographic equipment, theory, and processes. Emphasis is placed on camera operation, composition, darkroom technique, and creative expression. Upon completion, students should be able to successfully expose, develop, and print a well-conceived composition. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ASTRONOMY

C-L-SHC

AST 111 Descriptive Astronomy

3-0-3

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.

AST 111A Descriptive Astronomy Lab

0-2-1

Corequisites: AST 111

The course is a laboratory to accompany AST 111. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 111 and which provide practical experience. Upon completion, students should be able to demonstrate an understanding of the universe around them. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

AUTOMATION

C-L-SHC

ATR 280 Robotic Fundamentals

3-2-4

This course covers application, programming, and maintenance fundamentals for robotic devices. Emphasis is placed on terminology, problem solving, robotic systems controls, and hands-on projects. Upon completion, students should be able to apply basic concepts in application, programming, and robotic control systems.

AUTOMOTIVE BODY REPAIR

C-L-SHC

AUB 111 Painting & Refinishing

2-6-4

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.

AUB 112 Painting & Refinishing II 2-6-4

Prerequisites: AUB 111

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.

AUB 121 Non-Structural Damage I 1-4-3

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.

AUB 134 Autobody MIG Welding 1-4-3

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.

AUB 141 Mech & Elec Components I 2-2-3

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.

AUTOMOTIVE

C-L-SHC

AUT 111 Basic Auto Technology 1-2-2

This course introduces basic concepts, terms, workplace safety, regulations, and service information relating to automotive technology. Emphasis is placed on developing familiarity with automotive components along with basic identification and proper use of various hand and power tools and shop equipment. Upon completion, students should be able to define and use terms associated with automobiles and identify and use basic tools and shop equipment.

AUT 115 Engine Fundamentals 2-3-3

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

AUT 116 Engine Repair 1-3-2

This course covers service/repair/rebuilding of block, head, and internal engine components. Topics include engine repair/reconditioning using service specifications. Upon completion, students should be able to rebuild/recondition an automobile engine to service specifications.

AUT 131	Drive Trains	2-3-3
<p>This course introduces principles of operation of basic automotive drive trains. Emphasis is placed on manual and automatic transmissions, transaxles, and final drive components. Upon completion, students should be able to describe, diagnose, and determine needed service and repairs.</p>		
AUT 141	Suspension & Steering Sys	2-4-4
<p>This course covers principles of operation, types, and diagnosis/repair of suspension and steering systems to include steering geometry. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair various steering and suspension components, check and adjust various alignment angles, and balance wheels.</p>		
AUT 151	Brake Systems	2-2-3
<p>This course covers principles of operation and types, diagnosis, service, and repair of brake systems. Topics include drum and disc brakes involving hydraulic, vacuum boost, hydra-boost, electrically powered boost, and anti-lock and parking brake systems. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems.</p>		
AUT 152	Brake Systems Lab	0-2-1
<p>Corequisites: AUT 151 This course provides a laboratory setting to enhance brake system skills. Emphasis is placed on practical experiences that enhance the topics presented in AUT 151. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in AUT 151.</p>		
AUT 161	Electrical Systems	2-6-4
<p>This course covers basic electrical theory and wiring diagrams, test equipment, and diagnosis/repair/replacement of batteries, starters, alternators, and basic electrical accessories. Topics include diagnosis and repair of battery, starting, charging, lighting, and basic accessory systems problems. Upon completion, students should be able to diagnose, test, and repair the basic electrical components of an automobile.</p>		
AUT 162	Chassis Elect & Electronics	2-2-3
<p>This course covers electrical/electronic diagnosis/repair, including wiring diagrams, instrumentation, and electronic/computer-controlled devices and accessories. Topics include interpreting wiring diagrams and diagnosis and repair of chassis electrical and electronic systems. Upon completion, students should be able to read and interpret wiring diagrams and determine/perform needed repairs on chassis electrical and electronic systems.</p>		
AUT 163	Chassis Elec & Elect Lab	0-2-1
<p>Corequisites: AUT 162 This course provides a laboratory setting to enhance chassis electrical and electronic system skills. Emphasis is placed on practical experiences that enhance the topics presented in AUT 162. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in AUT 162.</p>		
AUT 164	Automotive Electronics	2-2-3
<p>This course covers fundamentals of electrical/electronic circuitry, semi-conductors, and microprocessors. Topics include Ohm's law, circuits, AC/DC current, solid state components, digital applications, and the use of digital multimeters. Upon completion, students should be able to apply Ohm's law to diagnose and repair electrical/electronic circuits using digital multimeters and appropriate service information.</p>		
AUT 171	Heating & Air Conditioning	2-3-3

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

AUT 181 Engine Performance-Electrical 2-3-3

This course covers the principles, systems, and procedures required for diagnosing and restoring engine performance using electrical/electronics test equipment. Topics include procedures for diagnosis and repair of ignition, emission control, and related electronic systems. Upon completion, students should be able to describe operation of and diagnose/repair ignition/emission control systems using appropriate test equipment and service information.

AUT 182 Engine Perfor-Elec Lab 0-3-1

Corequisites: AUT 181

This course provides a laboratory setting to enhance the skills for diagnosing and restoring engine performance using electrical/electronics test equipment. Emphasis is placed on practical experiences that enhance the topics presented in AUT 181. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in AUT 181.

AUT 183 Engine Performance-Fuels 2-3-3

This course covers the principles of fuel delivery/management, exhaust/emission systems, and procedures for diagnosing and restoring engine performance using appropriate test equipment. Topics include procedures for diagnosis/repair of fuel delivery/management and exhaust/emission systems using appropriate service information. Upon completion, students should be able to describe, diagnose, and repair engine fuel delivery/management and emission control systems using appropriate service information and diagnostic equipment.

AUT 184 Engine Perfor-Fuels Lab 0-3-1

Corequisites: AUT 183

This course provides a laboratory setting to enhance the skills for diagnosing and repairing fuel delivery/management and emission systems. Emphasis is placed on practical experiences that enhance the topics presented in AUT 183. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in AUT 183.

AUT 185 Emission Controls 1-2-2

This course covers the design and function of emission control devices. Topics include chemistry of combustion as well as design characteristics and emission control devices which limit tailpipe, crankcase, and evaporative emissions. Upon completion, students should be able to troubleshoot, test, and service emission control systems.

AUT 221 Automatic Transmissions 2-6-4

This course covers operation, diagnosis, service, and repair of automatic transmissions/transaxles. Topics include hydraulic, pneumatic, mechanical, and electrical/electronic operation of automatic drive trains and the use of appropriate service tools and equipment. Upon completion, students should be able to explain operational theory and diagnose and repair automatic drive trains.

AUT 231 Manual Drive Trains/Axles 2-3-3

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

AUT 232	Manual Dr Trains/Axles Lab	0-3-1
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Corequisites: AUT 231
This course provides a laboratory setting to enhance the skills for diagnosing and repairing manual transmissions/transaxles, clutches, driveshafts, axles, and final drives. Emphasis is placed on practical experiences that enhance the topics presented in AUT 231. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in AUT 231.

AUT 281	Adv Engine Performance	2-2-3
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This course utilizes service information and specialized test equipment to diagnose/repair power train control systems. Topics include computerized ignition, fuel and emission systems, related diagnostic tools and equipment, data communication networks, and service information. Upon completion, students should be able to perform advanced engine performance diagnosis and repair.

AUT 282	Engine Elec Management	3-9-6
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This course includes principles, systems, and procedures required for diagnosing and restoring engine performance/driveability and emission control through mechanical, electrical, and gas analysis. Emphasis is placed on diagnostics using mechanical, electrical (including on-board), and gas analysis to determine root causes for repair purposes. Upon completion, students should be able to diagnose and repair PCM-related engine performance/driveability and emission problems.

BARBERING

BAR 111	Barbering Concepts I	4-0-4
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Corequisites: BAR 112
This course introduces basic barbering concepts and includes careers in barber styling and various hair treatments. Emphasis is placed on sanitizing equipment, professional ethics, skin, scalp and hair disorders and treatment and safe work practices. Upon completion, students should be able to safely and competently apply barbering concepts in the shop setting.

BAR 112 Barbering Clinic I		0-24-8
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Corequisites: BAR 111
This course introduces basic clinic services. Topics include a study of sanitizing procedures for implements and equipment, determination of hair texture, hair cutting, and hair processing. Upon completion, students should be able to safely and competently demonstrate shop services.

BAR 113	Barbering Concepts II	4-0-4
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Corequisites: BAR 114
This course covers more comprehensive barbering concepts. Topics include safety and sanitation, product knowledge as well as both wet and thermal hairstyling. Upon completion, students should be able to safely and competently apply these barbering concepts in the shop setting.

BAR 114	Barbering Clinic II	0-24-8
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Corequisites: BAR 113
This course provides experience in a simulated shop setting. Topics include draping, shampooing, hair cutting, and hair drying as well as chemical processing. Upon completion, students should be able to safely and competently apply these barbering concepts in the shop setting.

BAR 115	Barbering Concepts III	4-0-4
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Corequisites: BAR 116
This course covers more comprehensive barbering concepts. Topics include hair processing as well as finger waving, wet and thermal hairstyling, skin care, including electricity/light therapy, and manicuring. Upon

completion, students should be able to safely and competently apply these barbering concepts in the shop setting

BAR 116 Barbering Clinic III 0-12-4

Corequisites: BAR 115

This course covers more comprehensive barbering concepts. Emphasis is placed on intermediate-level of skin care manicuring, scalp treatments, hair design, chemical restructuring and other related topics. Upon completion, students should be able to safely and competently apply these barbering concepts in the shop setting.

BAR 117 Barbering Concepts IV 2-0-2

Corequisites: BAR 118

This course covers advanced barbering concepts. Topics include hair color, advanced hair cutting techniques, hair styling, shaving, skin care, retailing, and preparing for a job interview. Upon completion, students should be able to demonstrate an understanding of these barbering concepts and meet program completion requirements.

BAR 118 Barbering Clinic IV 0-21-7

Corequisites: BAR 117

This course provides advanced experience in a simulated shop setting. Emphasis is placed on efficient and competent delivery of all shop services in preparation for the licensing examination and employment. Upon completion, students should be able to demonstrate competence in the areas covered on the Barbering Licensing Examination and meet entry-level employment requirements.

BIOLOGY

C-L-SHC

BIO 090 Foundations of Biology 3-2-4

Corequisites: 80 CPT Reading, or 18 ACT score, or 450 verbal SAT score, or successful completion of developmental requirements.

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

BIO 094 Concepts of Human Biology 3-2-4

Corequisites: 80 CPT Reading, or 18 ACT score, or 450 verbal SAT score, or successful completion of developmental requirements.

This course focuses on fundamental concepts of human biology. Topics include terminology, biochemistry, cell biology, tissues, body systems, and other related topics. Upon completion, students should be able to demonstrate preparedness for college-level anatomy and physiology courses.

BIO 110 Principles of Biology 3-3-4

This course provides a survey of fundamental biological principles for non-science majors. Emphasis is placed on basic chemistry, cell biology, metabolism, genetics, taxonomy, evolution, ecology, diversity, and other related topics. Upon completion, students should be able to demonstrate increased knowledge and better understanding of biology as it applies to everyday life. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

BIO 111 General Biology I 3-3-4

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.

- BIO 112 General Biology II 3-3-4
Prerequisites: BIO 111
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.
- BIO 120 Introductory Botany 3-3-4
Prerequisites: BIO 110 or BIO 111
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 the 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 has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics.
- BIO 130 Introductory Zoology 3-3-4
Prerequisites: BIO 110 or BIO 111
This course provides an introduction to the classification, relationships, structure and function of major animal phyla. Emphasis is placed on levels of organization, reproduction and development, comparative systems, and a survey of selected phyla. Upon completion students should be able to demonstrate comprehension of animal form and function, including comparative systems of selected groups. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics.
- BIO 140 Environmental Biology 3-0-3
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.
- BIO 140A Environmental Biology Lab 0-3-1
Corequisites: BIO 140
This course provides a laboratory component to complement BIO 140. Emphasis is placed on laboratory and field experience. Upon completion, students should be able to demonstrate a practical understanding of environmental interrelationships and of contemporary environmental issues. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.
- BIO 161 Intro to Human Biology 3-0-3
This course provides a basic survey of human biology. Emphasis is placed on the basic structure and function of body systems and the medical terminology used to describe normal and pathological states. Upon completion, students should be able to demonstrate an understanding of normal anatomy and physiology and the appropriate use of medical terminology.
- BIO 163 Basic Anat & Physiology 4-2-5
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 has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

BIO 165 Anatomy and Physiology I 3-3-4

Prerequisites: BIO 090 or BIO 094, or BIO 110 or permission of instructor

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. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

BIO 166 Anatomy and Physiology II 3-3-4

Prerequisites: BIO 165

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. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

BIO 168 Anatomy and Physiology I 3-3-4

Prerequisites: BIO 090 or BIO 094, or BIO 110 or permission of instructor

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 interrelationships. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

BIO 169 Anatomy and Physiology II 3-3-4

Prerequisites: BIO 168

This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems as well as metabolism, nutrition, acid-base balance, and fluid and electrolyte balance. Upon completion students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

BIO 175 General Microbiology 2-2-3

Prerequisites: BIO 110, BIO 163, BIO 166 or BIO 169

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 has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

BIO 176 Adv General Microbiology 1-2-2

Prerequisites: BIO 175

This course is a continuation of BIO 175. Emphasis is placed on microbial metabolism, genetics, and environmental and food microbiology. Upon completion, students should be able to identify unknown microbes and demonstrate an understanding of the fundamentals of molecular biology and microbial ecology. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

BIO 271 Pathophysiology 3-0-3

Prerequisites: BIO 163, BIO 166, or BIO 169

This course provides an in-depth study of human pathological processes and their effects on homeostasis. Emphasis is placed on interrelationships among organ systems in deviations from homeostasis. Upon completion, students should be able to demonstrate a detailed knowledge of pathophysiology. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

BIO 275 Microbiology 3-3-4

Prerequisites: BIO 110, BIO 112, BIO 163, BIO 165, or BIO 168

This course covers principles of microbiology and the impact these organisms have on man and 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 pre-major and/or elective course requirement.

BIO 280 Biotechnology 2-3-3

Prerequisites: BIO 111 or CHM 151

This course provides experience in selected laboratory procedures. Topics include proper laboratory techniques in biology and chemistry. Upon completion, students should be able to identify laboratory techniques and instrumentation in basic biotechnology. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

BIOPROCESS MANUFACTURING

C-L-SHC

BPM 110 Bioprocess Practices 3-4-5

This course provides a study of plant operations including various plant utility systems and detailed study of the varied plant environments in a bioprocessing facility. Emphasis is placed on quality mindset and principles of validation through applications of monitoring procedures. Upon completion, students should be able to demonstrate the rigors of industry regulation and its necessity.

BPM 111 Bioprocess Measurements 3-3-4

Prerequisite: BIO 110 and BPM 110

This course covers a variety of physical measurements. Emphasis is placed on pH, temperature, pressure and flow rates, as well as spectrophotometry, and biochemical and chemical analytical methods. Upon completion, students should be able to demonstrate and perform many aspects of process monitoring.

BPM 112 Upstream Bioprocessing 3-4-5

Prerequisites: BPM 111

This course introduces techniques involved in cell growth and fractionation. Topics include fermentation theory and application, as well as cell harvesting, cell disruption, and fractionation methods. Upon completion, students should be able to grow cells as well as isolate and collect various fractions.

BPM 113 Downstream Bioprocessing 3-3-4

Prerequisites: BPM 111 and CHM 131 and CHM 131A

This course introduces a variety of techniques involved in separation procedures. Topics include extraction and precipitation, concentration and molecular filtration methods as well as different types of chromatography. Upon completion, students should be able to perform most separation procedures with an understanding of industrial scale procedures.

BLUEPRINT READING

C-L-SHC

BPR 111 Blueprint Reading 1-2-2

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.

BPR 115 Elc/Fluid Power Diagrams 1-2-2

This course covers sketching of detail and assembly drawings and reading of hydraulic, pneumatic, electrical, mechanical, and piping schematics. Emphasis is placed on interpretation and communication skills utilizing sketches, symbols, diagrams, and other related topics. Upon completion, students should be able to read, demonstrate an understanding of, and draw sketches and schematics commonly used in industry.

BPR 121 Blueprint Reading: Mech 1-2-2

Prerequisites: BPR 111 or MAC 131

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.

BPR 130 Blueprint Reading/Const 1-2-2

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

C-L-SHC

BPT 110 Intro to Broadcasting 3-0-3

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.

BPT 111 Broadcast Law & Ethics 3-0-3

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.

BPT 112 Broadcast Writing 3-2-4

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.

BPT 113 Broadcast Sales 3-0-3

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.

BPT 121 Broadcast Speech I 2-3-3

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.

BPT 122 Broadcast Speech II 2-3-3

Prerequisites: BPT 121

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.

BPT 131 Audio/Radio Production I 2-6-4

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.

BPT 132 Audio/Radio Production II 2-6-4

Prerequisites: BPT 131

This course covers 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.

BPT 135 Radio Performance I 0-6-2

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.

BPT 210 Broadcast Management 3-0-3

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.

BPT 215 **Broadcast Programming** **3-0-3**
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.

BPT 231 **Video/TV Production I** **-6-4**
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.

BPT 232 **Video/TV Production II** **2-6-4**
Prerequisites: BPT 231
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.

BPT 235 **TV Performance I** **0-6-2**
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 250 **Institutional Video** **2-3-3**
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.

BUSINESS

C-L-SHC

BUS 110 **Introduction to Business** **3-0-3**
This course provides a survey of the business world. Topics include the basic principles and practices of contemporary business. Upon completion, students should be able to demonstrate an understanding of business concepts as a foundation for studying other business subjects. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

BUS 115 **Business Law I** **3-0-3**
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 pre-major and/or elective course requirement.

BUS 116 **Business Law II** **3-0-3**
Prerequisites: BUS 115
This course continues the study of ethics and business law. Emphasis is placed on bailments, sales, risk-bearing, forms of business ownership, and copyrights. Upon completion, students should be able to apply ethical issues and laws covered to selected business decision-making situations.

BUS 121 **Business Math** **2-2-3**

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.

BUS 125 Personal Finance 3-0-3

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

BUS 137 Principles of Management 3-0-3

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.

BUS 147 Business Insurance 3-0-3

This course surveys the basic concepts of risk management. Topics include principles and applications of health, property, life, and casualty insurance. Upon completion, students should be able to evaluate different insurance needs and assist an organization in acquiring adequate insurance coverage.

BUS 151 People Skills 3-0-3

This course introduces the basic concepts of identity and communication in the business setting. Topics include self-concept, values, communication styles, feelings and emotions, roles versus relationships, and basic assertiveness, listening, and conflict resolution. Upon completion, students should be able to distinguish between unhealthy, self-destructive, communication patterns and healthy, non-destructive, positive communication patterns.

BUS 152 Human Relations 3-0-3

This course introduces the concepts of effective human interaction in the business work environment. Topics include effective communication techniques, motivation, ego states, stress, and conflict. Upon completion, students should be able to explain the importance of human relations, apply motivational techniques, and implement strategies for resolving work-related conflicts.

BUS 153 Human Resource Management 3-0-3

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.

BUS 217 Employment Law and Regs 3-0-3

This course introduces the principle laws and regulations affecting public and private organizations and their employees or prospective employees. Topics include fair employment practices, EEO, affirmative action, and employee rights and protections. Upon completion, students should be able to evaluate organization policy for compliance and assure that decisions are not contrary to law.

BUS 225 Business Finance 2-2-3

Prerequisites: ACC 120

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.

BUS 228 Business Statistics 2-2-3

Prerequisites: MAT 115, MAT 140, or MAT 161

This course introduces the use of statistical methods and tools in evaluating research data for business applications. Emphasis is placed on basic probability, measures of spread and dispersion, central tendency, sampling, regression analysis, and inductive inference. Upon completion, students should be able to apply statistical problem solving to business. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

BUS 230 Small Business Management 3-0-3

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.

BUS 234 Training and Development 3-0-3

This course covers developing, conducting, and evaluating employee training with attention to adult learning principles. Emphasis is placed on conducting a needs assessment, using various instructional approaches, designing the learning environment, and locating learning resources. Upon completion, students should be able to design, conduct, and evaluate a training program.

BUS 235 Performance Management 3-0-3

This course includes the legal background for performance management and the basic methodology used in developing and validating a performance management system. Emphasis is placed on job analysis, job descriptions, appraisal instruments, and action plans. Upon completion, students should be able to develop, implement, and maintain a comprehensive performance management system.

BUS 236 Adv Training & Dev 3-0-3

Prerequisite: BUS 234

This course covers the skills necessary for presenting active training programs applying the principles learned in BUS 234. Emphasis is placed on the equipment and materials employed by various media techniques. Upon completion, students should be able to make a variety of presentations based on audience, purpose of presentation, and presentation objectives.

BUS 237 Current Management Issues 2-0-2

This course introduces current management issues and problems. Emphasis is placed on the management topics and challenges faced by all employees in an organization. Upon completion, students should be able to critically analyze alternative solutions within a team environment.

BUS 240 Business Ethics 3-0-3

This course introduces contemporary and controversial ethical issues that face the business community. Topics include moral reasoning, moral dilemmas, law and morality, equity, justice and fairness, ethical standards, and moral development. Upon completion, students should be able to demonstrate an understanding of their moral responsibilities and obligations as members of the workforce and society.

BUS 252 Labor Relations 3-0-3

This course covers the history of the organized labor movement and the contractual relationship between corporate management and employees represented by a union. Topics include labor laws and unfair labor practices, the role of the NLRB, organizational campaigns, certification / decertification elections, and grievance procedures. Upon completion, students should be able to act in a proactive and collaborative manner in an environment where union representation exists.

BUS 253 Leadership and Mgt. Skills 3-0-3

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.

BUS 255 Org Behavior in Business 3-0-3
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.

BUS 256 Recruit Select & Per Plan 3-0-3
This course introduces the basic principles involved in managing the employment process. Topics include personnel planning, recruiting, interviewing and screening techniques, maintaining employee records; and voluntary and involuntary separations. Upon completion, students should be able to acquire and retain employees who match position requirements and fulfill organizational objectives. This course is a unique concentration requirement of the Human Resources Management concentration in the Business Administration program.

BUS 257 Testing and Assessment 3-0-3
This course presents the tools and techniques human resource managers use for selection, advancement, research, and evaluation. Emphasis is placed on using valid and reliable testing methods, attitude surveys, performance appraisal instruments, and decision-making tools. Upon completion, students should be able to use the methods covered in the course to collect and analyze information for management decision making.

BUS 258 Compensation and Benefits 3-0-3
This course is designed to study the basic concepts of pay and its role in rewarding performance. Topics include wage and salary surveys, job analysis, job evaluation techniques, benefits, and pay-for-performance programs. Upon completion, students should be able to develop and manage a basic compensation system to attract, motivate, and retain employees. This course is a unique concentration requirement of the Human Resources Management concentration in the Business Administration program.

BUS 259 HRM Applications 3-0-3
Prerequisites: BUS 217 and BUS 234 and BUS 256 and BUS 258
This course provides students in the Human Resources Management concentration the opportunity to reinforce their learning experiences from preceding HRM courses. Emphasis is placed on application of day-to-day HRM functions by completing in-basket exercises and through simulations. Upon completion, students should be able to determine the appropriate actions called for by typical events that affect the status of people at work.

BUS 260 Business Communication 3-0-3
Prerequisites: ENG 111
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.

BUS 261 Diversity in Mgmt 3-0-3
This course is designed to help managers recognize the need to incorporate diversity into all phases of organizational management. Topics include self-evaluation, management, sexual harassment, workforce diversity, dual careers, role conflict, and communication issues. Upon completion, students should be able to implement solutions that minimize policies, attitudes, and stereotypical behaviors that block effective team building.

BUS 270 Professional Development 3-0-3

This course provides basic knowledge of self-improvement techniques as related to success in the professional world. Topics include positive human relations, job-seeking skills, and projecting positive self-image. Upon completion, students should be able to demonstrate competent personal and professional skills necessary to get and keep a job.

BUS 280 REAL Small Business 4-0-4

This course introduces hands-on techniques and procedures for planning and opening a small business, including the personal qualities needed for entrepreneurship. Emphasis is placed on market research, finance, time management, and day-to-day activities of owning/operating a small business. Upon completion, students should be able to write and implement a viable business plan and seek funding.

BUS 291 Selected Topics in Entrepreneurial Planning 0-2-1

Prerequisite: BUS 280

This course provides an opportunity to explore areas of current interest in entrepreneurial training. Emphasis is placed on business planning and implementation options. Upon completion, the students should be able to demonstrate an understanding of small business planning and implementation strategies.

CABINETMAKING

C-L-SHC

CAB 111 Cabinetmaking I

4-9-7

This course introduces wood technology, materials, purchasing, estimating, design considerations, and cabinet construction. Topics include wood identification and use, hand tools, safe machine operation, glue and clamping, abrasives, wood joinery, kitchen and bath layout, laminates, and finishing techniques. Upon completion, students should be able to select and process materials; make sound production decisions; and design, lay out, construct, and install cabinets. This is a diploma-level course.

CARPENTRY

C-L-SHC

CAR 111 Carpentry I

3-15-8

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. This is a diploma-level course.

CAR 112 Carpentry II 3-15-8

Prerequisites: CAR 111

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.

CAR 113 Carpentry III 3-9-6

Prerequisites: CAR 111

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.

CAR 114 Residential Bldg Codes 3-0-3

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.

CAR 115 Res Planning/Estimating 3-0-3

Prerequisites: BPR 130

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

C-L-SHC

CET 111 Computer Upgrade/Repair I 2-3-3

This course is the first of two courses covering repairing, servicing, and upgrading computers and peripherals in preparation for industry certification. Topics include safety practices, CPU/memory/bus identification, disk subsystem, 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.

CET 211 Computer Upgrade/Repair II 2-3-3

Prerequisites: CET 111

This course is the second of two courses covering repairing, servicing, and upgrading computers and peripherals in preparation for industry certification. Topics 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.

CET 222 Computer Architecture 2-0-2

This course introduces the organization and design philosophy of computer systems with respect to resource management, throughput, and operating system interaction. Topics include instruction sets, registers, data types, memory management, virtual memory, cache, storage management, multi-processing, and pipelining. Upon completion, students should be able to evaluate system hardware and resources for installation and configuration purposes.

CET 225 Digital Signal Processing 2-2-3

Prerequisite: ELN 133

This course covers the theory and use of digital signal processing techniques. Topics include Fourier analysis, digital filtering, Z transforms, IIR, FIR, convolution, pulse methods, and DSP programming. Upon completion, students should be able to implement and troubleshoot DSP systems in hardware and software.

CHEMISTRY

C-LSHC

CHM 090 Chemistry Concepts 4-0-4

This course provides a non-laboratory based introduction to basic concepts of chemistry. Topics include measurements, matter, energy, atomic theory, bonding, molecular structure, nomenclature, balancing equations, stoichiometry, solutions, acids and bases, gases, and basic organic chemistry. Upon completion, students should be able to understand and apply basic chemical concepts necessary for success in college-level science courses.

CHM 130 Gen, Org, & Biochemistry 3-0-3

Corequisites: CHM 130A

This course provides a survey of basic facts and principles of general, organic, and biochemistry. Topics include measurement, molecular structure, nuclear chemistry, solutions, acid-base chemistry, gas laws, and

the structure, properties, and reactions of major organic and biological groups. Upon completion, students should be able to demonstrate an understanding of fundamental chemical concepts. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

CHM 130A Gen, Org, & Biochemistry Lab 0-2-1

Corequisites: CHM 130

This course is a laboratory for CHM 130. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 130. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 130. Also included are EMR, spectrophotometry, extraction, safety and feed analysis. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

CHM 131 Introduction to Chemistry 3-0-3

Corequisites: 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.

CHM 131A Introduction to Chemistry Lab 0-3-1

Corequisites: 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. Also included are EMR, spectrophotometry, extraction, safety and feed analysis. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

CHM 132 Organic and Biochemistry 3-3-4

Prerequisites: CHM 131

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. Additional topics are spectrophotometer, extraction, MSDS and a project. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

CHM 151 General Chemistry I 3-3-4

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. Additional topics include laboratory and chemical safety rules, electromagnetic spectrum, spectrometer and chromatography. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

CHM 152 General Chemistry II 3-3-4

Prerequisites: CHM 151

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 complex ions. 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. The spectrophotometer, pH meters, solids, liquids and properties of solutions are covered. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

CHM 251 Organic Chemistry I 3-3-4

Prerequisites: CHM 152

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. Additional topics covered are chromatography and safety. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

CHM 252 Organic Chemistry II 3-3-4

Prerequisites: CHM 251

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. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

Computer Information Systems

C-L-SHC

CIS 110 Introduction to Computers 2-2-3

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 sciences/mathematics.

CIS 111 Basic PC Literacy 1-2-2

This course provides a brief overview of computer concepts. Emphasis is placed on the use of personal computers and software applications for personal and workplace use. Upon completion, students should be able to demonstrate basic personal computer skills.

CIS 112 Windows™ 1-2-2

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

CIS 115 Intro to Prog & Logic 2-2-3

Prerequisites: CPT math score of 57 and algebra score of 38, or ACT score of 18, or SAT mathematics score of 450, or successful completion of developmental requirements.

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 sciences/mathematics.

CIS 116 Intro PC App Development 2-3-3
This course provides an introductory study of the principles of application development and end-use interface design principles. Emphasis is placed on tables, file management, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design and program a PC application at the introductory level.

CIS 120 Spreadsheet I 2-2-3
Prerequisites: CIS 110 or CIS 111 or OST 137
This course introduces basic spreadsheet design and development. Topics include writing formulas, using functions, enhancing spreadsheets, creating charts, and printing. Upon completion, students should be able to design and print basic spreadsheets and charts.

CIS 121 User Support & Softw Eva. 1-4-3
Prerequisites: CIS 110 or CIS 111
This course provides an opportunity to evaluate software and hardware and make recommendations to meet end-user needs. Emphasis is placed on software and hardware evaluation, installation, training, and support. Upon completion, students should be able to present proposals and make hardware and software recommendations based on their evaluations.

CIS 125 Core Integrated Software 2-2-3
This course instructs the student in the CORE Windows or Linux-based program suites for word processing, spreadsheet, database, and presentation software. This course prepares the student in the CORE level development of database, spreadsheet, word processing, and presentation application to utilize data sharing.

CIS 128 Computer Language Survey 3-0-3
This course provides an opportunity to compare various computer languages. Emphasis is placed on appropriate uses, syntax, and comparative programming. Upon completion, students should be able to select the appropriate language for problem solving.

CIS 130 Survey of Operating Sys 2-3-3
The course covers operating system concepts which are necessary for maintaining and using computer systems. Topics include disk, file, and directory structures; installation and setup; resource allocation, optimization, and configuration; system security; and other related topics. Upon completion, students should be able to install and configure operating systems and optimize performance.

CIS 135 PC Diagnostics/Configuration 2-2-3
This course covers personal computer hardware including identification, installations, diagnostics, and repair. Topics include component/bus identification, safety procedures, hardware/software installation and configuration, diagnosing and replacing field replaceable units including memory and storage devices. Upon completion, students should be able to identify, install, upgrade, maintain, diagnose and repair/replace basic microcomputer components.

CIS 144 Operating System - DOS 2-2-3
This course introduces operating systems concepts for DOS operating systems. Topics include hardware management, file and memory management, system configuration/optimization, and utilities. Upon completion, students should be able to perform operating system functions at the support level in a DOS environment.

CIS 145 Operating System-Single-User 2-2-3
This course introduces operating systems 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 system functions at the support level in a single-user environment.

CIS 147 Operating System – Windows™ 2-2-3

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

CIS 148 Operating Sys.-Windows™ NT 2-2-3

This course introduces operating systems concepts for the Windows NT operating system. Topics include hardware management, file and memory management, system configuration/optimization, networking options, and utilities. Upon completion, students should be able to perform operating system functions at the single/multi-user support level in a Windows NT environment.

CIS 152 Database Concepts & Apps 2-2-3

Prerequisites: CIS 110, CIS 111, or CIS 115

This course introduces database design and creation using a DBMS product. Topics include database terminology, usage in industry, design theory, types of DBMS models, and creation of simple tables, queries, reports, and forms. Upon completion, students should be able to create simple database tables, queries, reports, and forms which follow acceptable design practices.

CIS 153 Database Applications 2-2-3

Prerequisites: CIS 152

This course covers advanced database functions continued from CIS 152. 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.

CIS 157 Database Programming I 2-2-3

Prerequisite: CIS 130 and CIS 152

This course is designed to develop programming proficiency in a selected DBMS. Emphasis is placed on the Data Definition Language (DDL) and Data Manipulation Language (DML) of the DBMS as well as on report generation. Upon completion, students should be able to write programs, which create, update, and produce reports representative of industry requirements.

CIS 165 Desktop Publishing I 2-2-3

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

CIS 169 Business Presentations 1-2-2

Prerequisites: CIS 110 or CIS 111

This course provides hands-on experience with a graphics presentation package. Topics include terminology, effective chart usage, design and layout, integrating hardware components, and enhancing presentations with text and graphics. Upon completion, students should be able to design and demonstrate an effective presentation.

CIS 172 Intro to the Internet 2-3-3

This course introduces the various navigational tools and services of the Internet. Topics include using Internet protocols, search engines, file compression/decompression, FTP, e-mail, listservers, and other

related topics. Upon completion, students should be able to use Internet resources, retrieve/decompress files, and use e-mail, FTP, and other Internet tools.

- CIS 173 Network Theory 2-2-3
This course examines Token Ring, Ethernet, and Arcnet networks. Topics include LAN topologies and design; cable characteristics; cable, interface cards, server, and client installation; basic management techniques; linking networks; and troubleshooting LAN problems. Upon completion, students should be able to install both hardware and software for a small client/server LAN and troubleshoot common network problems.
- CIS 174 Network System Manager I 2-2-3
This course covers effective network management. Topics include network file system design and security, login scripts and user menus, printing services, e-mail, and backup. Upon completion, students should be able to administer an office network system.
- CIS 175 Network Management I 2-2-3
This course covers fundamental network administration and system management. Topics include accessing and configuring basic network services, managing directory services, and using network management software. Upon completion, students should be able to apply system administrator skills in developing a network management strategy.
- CIS 192 Selected Topics in Information 0-4-2
This course provides opportunities to explore areas of current professional interest in computing. Emphasis is placed on professional certification. Upon completion, successful students will have a foundation for studying and passing a professional computer certification test.
- CIS 193 Selected Topics in Information Systems 2-2-3
This course provides opportunities to explore areas of current professional interest in computing. Emphasis is placed on professional certification. Upon completion, successful students will have a foundation for studying and passing a professional computer certification test.
- CIS 215 Hardware Install/Maint 2-3-3
Prerequisites: CIS 110, CIS 111 OR CIS 115
This course covers the basic hardware of a personal computer, including operations and interactions with software. Topics include component identification, the memory system, peripheral installation and configuration, preventive maintenance, and diagnostics and repair. Upon completion, students should be able to select appropriate computer equipment, upgrade and maintain existing equipment, and troubleshoot and repair non-functioning personal computers.
- CIS 216 Software Install/Maint 1-2-2
Prerequisites: CIS 130
This course introduces the installation and troubleshooting aspects of personal computer software. Emphasis is placed on initial installation and optimization of system software, commercial programs, system configuration files, and device drivers. Upon completion, students should be able to install, upgrade, uninstall, optimize, and troubleshoot personal computer software.
- CIS 220 Spreadsheets II 1-2-2
Prerequisites: CIS 120
This course covers advanced spreadsheet design and development. Topics include advanced functions, charting, macros, databases, and linking. Upon completion, students should be able to demonstrate competence in designing complex spreadsheets.
- CIS 225 Integrated Software 1-2-2

Prerequisites: CIS 120 and CIS 152 and OST 136 OR CIS 125 and CIS 152.

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

CIS 226 Trends in Technology 1-2-2

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

CIS 235 Adv PC Diagnostic/Configuration 2-2-3

Prerequisites: CIS 215 or CIS 135

This course covers upgrading and repairing personal computers and peripherals. Topics include configuring and troubleshooting peripherals, installing device drivers, resolving resource conflicts, configuring and optimizing operating systems, and related topics. Upon completion, students should be able to install peripherals and upgrade personal computers components, diagnose problems, resolve resource conflict, and optimize system performance.

CIS 236 + Certification Prep 2-2-3

Prerequisites: CIS 215 or CIS 135

This course is designed to prepare students for the A+ Hardware Certification exam. Topics include portable computer systems, installing and troubleshooting printers, basic networking concepts and procedures, testing electrical components, using diagnostics utilities, and achieving customer satisfaction. Upon completion, students should be able to repair portable systems and printers, understand basic networking, and use utilities and voltmeters to test computer components.

CIS 244 Operating System - AS/400 2-3-3

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.

CIS 246 Operating System - UNIX 2-3-3

This course includes operating systems concepts for UNIX operating systems. Topics include hardware management, file and memory management, system configuration/optimization, utilities, and other related topics. Upon completion, students should be able to effectively use the UNIX operating system and its utilities.

CIS 260 Business Graphics Apps 2-2-3

Prerequisites: CIS 110 or CIS 111

This course utilizes graphics software in a variety of business applications. Topics include terminology, design and evaluation, graphics formats and conversion, practical applications of graphics software, and integration of peripherals. Upon completion, students should be able to create and incorporate graphic designs to enhance business communications.

CIS 274 Network System Manager II 2-2-3

Prerequisites: CIS 174

This course is a continuation of CIS 174 focusing on advanced network management, configuration, and installation. Emphasis is placed on server configuration files, startup procedures, server protocol support, memory and performance concepts, and management and maintenance. Upon completion, students should

be able to install and upgrade networks and servers for optimal performance. This course is a unique concentration requirement in the Network Administration and Support concentration in the Information Systems program.

CIS 275 Network Management II 2-2-3

Prerequisites: CIS 175

This course is a continuation of CIS 175 focusing on advanced enterprise networks. Topics include directory service tree planning, management distribution and protection, improving network security, auditing the network, printing, networking, and system administration of an Internet node. Upon completion, students should be able to manage client services and network features and optimize network performance. This course is a unique concentration requirement in the Network Administration and Support concentration in the Information Systems program.

CIS 277 Network Design & Imp 2-2-3

Prerequisites: CIS 275

This course focuses on the design, analysis, and integration of a network operating system. Topics include determination of a directory tree structure and object placement, creation of time synchronization strategy, security, and routing services. Upon completion, students should be able to implement a network design strategy, develop a migration strategy, and create a network implementation schedule.

CIS 279 UNIX System Admin 3-3-4

Prerequisite: CIS 246

This course provides an advanced study of the UNIX operating system for maintaining UNIX systems. Topics include administering user accounts, using back-up utilities, installing and maintaining UNIX file systems, configuring devices, controlling processes, using advanced scripts, and other related topics. Upon completion, students should be able to set up, configure, maintain, and administer a UNIX system.

CIS 282 Network Technology 3-0-3

This course examines concepts of network architecture. Topics include various network types, topologies, transmission methods, media and access control, the OSI model, and the protocols which operate at each level of the model. Upon completion, students should be able to design a network based on the requirements of a company.

CIS 286 System Analysis & Design 3-0-3

Prerequisites: CIS 115

This course examines established and evolving methodologies for the analysis, design, and development of a business information system. Emphasis is placed on business systems characteristics, managing information systems projects, prototyping, CASE 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.

CIS 287 Network Support 2-2-3

Prerequisites: CIS 274 or CIS 275

This course provides experience using CD ROM and on-line research tools and hands-on experience for advanced hardware support and troubleshooting. Emphasis is placed on troubleshooting network adapter cards and cabling, network storage devices, the DOS workstation, and network printing. Upon completion, students should be able to analyze, diagnose, research, and fix network hardware problems. This course is a unique concentration requirement in the Network Administration and Support concentration in the Information Systems program.

CIS 288 Systems Project 1-4-3

Prerequisites: CIS 227 or CIS 286

This course provides an opportunity to complete a significant systems 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.

CIS 292 Selected Topics - Advanced IST 0-4-2

This course provides opportunities to explore areas of current professional interest in advanced computing. Emphasis is placed on preparation for professional certification. Upon completion, successful students will have an advanced foundation for studying and passing a professional computer certification test.

CRIMINAL JUSTICE

C-L-SHC

CJC 100 Basic Law Enforcement Trn 8-30-18

This course covers the 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 the topics and areas required for the state comprehensive certification examination. This is a certificate-level course.

CJC 111 Intro to Criminal Justice3-0-3

This course introduces the components and processes of the criminal justice system. Topics include history, structure, functions, and philosophy of the criminal justice system and their relationship to life in our society. Upon completion, students should be able to define and describe the major system components and their interrelationships and evaluate career options. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

CJC 112 Criminology 3-0-3

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.

CJC 113 J Juvenile Justice 3-0-3

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

CJC 120 Interviews/Interrogations 1-2-2

This course covers basic and special techniques employed in criminal justice interviews and interrogations. Emphasis is placed on the interview/interrogation process, including interpretation of verbal and physical 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.

CJC 121 Law Enforcement Operations 3-0-3

This course introduces fundamental law enforcement operations. Topics include the contemporary evolution of law enforcement operations and related issues. Upon completion, students should be able to explain theories, practices, and issues related to law enforcement operations. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

CJC 122	Community Policing	3-0-3
<p>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.</p>		
CJC 131	Criminal Law	3-0-3
<p>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.</p>		
CJC 132	Court Procedure & Evidence	3-0-3
<p>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.</p>		
CJC 141	Corrections	3-0-3
<p>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 transferability as a pre-major and/or elective course requirement.</p>		
CJC 151	Intro to Loss Prevention	3-0-3
<p>This course introduces the concepts and methods related to commercial and private security systems. Topics include the historical, philosophical, and legal basis of security, with emphasis on security surveys, risk analysis, and associated functions. Upon completion, students should be able to demonstrate and understand security systems, risk management, and the laws relative to loss prevention.</p>		
CJC 160	Terrorism: Underlying Issues	3-0-3
<p>Prerequisites: None Corequisites: None</p> <p>This course identifies the fundamental reasons why America is a target for terrorists, covering various domestic/international terrorist groups and ideologies from a historical aspect. Emphasis is placed upon recognition of terrorist crime scene; weapons of mass destruction; chemical, biological, and nuclear terrorism; and planning consideration involving threat assessments. Upon completion, the student should be able to identify and discuss the methods used in terrorists' activities and complete a threat assessment for terrorists' incidents.</p>		
CJC 212	Ethics & Comm Relations	3-0-3
<p>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.</p>		
CJC 213	Substance Abuse	3-0-3

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

CJC 215 Organization & Administration -0-3

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.

CJC 221 Investigative Principles 3-2-4

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.

CJC 225 Crisis Intervention 3-0-3

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.

CJC 231 Constitutional Law 3-0-3

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.

COOPERATIVE EDUCATION

C-L-W-SHC

COE 110 World of Work 1-0-0-1

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.

COE 111 Co-op Work Experience I 0-10-1

Prerequisite: Approval of Instructor or Department Chairperson

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.

COE 112 Co-op Work Experience I 0-20-2

Prerequisite: Approval of Instructor or Department Chairperson

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.

COE 115 Work Exp Seminar I 1-0-1
Corequisites: COE 111, COE 112, COE 113, or COE 114
This course may accompany COE 111, COE 112, COE 113, or COE 114. Students will present their work experience and evaluate work opportunities afforded by the co-op.

COE 121 Co-op Work Experience II 0-10-1
Prerequisite: Approval of Instructor or Department Chairperson
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.

COE 122 Co-op Work Experience II 0-20-2
Prerequisite: Approval of Instructor or Department Chairperson
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.

COE 125 Work Exp Seminar II 1-0-1
Corequisites: COE 121, COE 122, COE 123, or COE 124
This course may accompany COE 121, COE 122, COE 123, or COE 124. Students will present their work experience and evaluate work opportunities afforded by the co-op.

COE 131 Co-op Work Experience III 0-10-1
Prerequisite: Approval of Instructor or Department Chairperson
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.

COE 135 Work Exp Seminar III 1-0-1
Corequisites: COE 131, COE 132, COE 133, or COE 134
This course may accompany COE 131, COE 132, COE 133, or COE 134. Students will present their work experience and evaluate work opportunities afforded by the co-op.

COMMUNICATION

C-L-SHC

COM 110 Intro to Communication 3-0-3
This course provides an overview of the basic concepts of communication and the skills necessary to communicate in various contexts. Emphasis is placed on communication theories and techniques used in interpersonal group, public, intercultural, and mass communication situations. Upon completion, students should be able to explain and illustrate the forms and purposes of human communication in a variety of contexts. This course has been approved to satisfy the comprehensive articulation agreement general education core requirement in humanities/fine arts.

COM 120 Interpersonal Communication 3-0-3
This course introduces the practices and principles of interpersonal communication in both dyadic and group settings. Emphasis is placed on the communication process, perception, listening, self-disclosure, speech apprehension, ethics, nonverbal communication, conflict, power, and dysfunctional communication relationships. Upon completion, students should be able to demonstrate interpersonal communication skills, apply basic principles of group discussion, and manage conflict in interpersonal communication situations.

This course has been approved to satisfy the comprehensive articulation agreement general education core requirement in humanities/fine arts.

COM 130 Nonverbal Communication 3-0-3

Prerequisites: COM 120

This course introduces the contemporary study of nonverbal communication in daily life. Topics include haptics, kinesics, proxemics, facial displays and appearance. Upon completion students should be able to analyze/interpret nonverbal communication and demonstrate greater awareness of their own verbal communication habits. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

COM 140 Intercultural Commun. 3-0-3

This course introduces techniques of cultural research, definitions, functions, characteristics and impacts of cultural differences in public address. Emphasis is placed on how diverse backgrounds influence the communication act and how cultural perceptions and experiences determine how one sends and receives messages. Upon completion students should be able to demonstrate an understanding of the principles and skills needed to become effective in communicating outside one's primary culture. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

COM 231 Public Speaking 3-0-3

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 humanities/fine arts.

COSMETOLOGY

C-L-SHC

COS 111 Cosmetology Concepts I

4-0-4

Corequisites: COS 112

This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.

COS 112 Salon I 0-24-8

Corequisites: COS 111

This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.

COS 113 Cosmetology Concepts II 4-0-4

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.

COS 114 Salon II 0-24-8

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.

COS 115 Cosmetology Concepts III 4-0-4

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.

COS 116 Salon III 0-12-4

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.

COS 117 Cosmetology Concepts IV 2-0-2

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.

COS 118 Salon IV 0-21-7

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.

COS 119 Esthetics Concepts I 2-0-2

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

COS 120 Esthetics Salon I 0-18-6

This course covers the techniques of esthetics in a comprehensive experience in a simulated salon setting. Topics include client consultation, 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.

COS 125 Esthetics Concepts II 2-0-2

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

COS 126 Esthetics Salon II 0-18-6

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

COS 253 Esthetics Instr Concepts I 6-15-11
This course introduces esthetic instructional concepts and skills. Topics include orientation, theories of education, unit planning, daily lesson plans, laboratory management, and 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.

COS 254 Esthetics Instr Concepts II 6-15-11
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.

COS 271 Instructor Concepts I 5-0-5
Prerequisites: Cosmetology License and six months experience as a licensed cosmetologist
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.

COS 272 Instructor Practicum I 0-21-7
Prerequisites: Cosmetology License and six months experience as a licensed cosmetologist
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.

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

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

COMPUTER SCIENCE

CSC 133 C Programming C-L-SHC
2-3-3
This course introduces computer programming using the C programming language. Topics include input/output operations, sequence, selection, iteration, arithmetic operations, arrays tables, pointers, and other

related topics. Upon completion, students should be able to design, code, test, and debug C language programs.

CSC 134 C++ Programming 2-3-3

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 pre-major and/or elective course requirement.

CSC 135 COBOL Programming 2-3-3

This course introduces computer programming using the COBOL 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 COBOL language programs.

CSC 136 FORTRAN Programming 2-3-3

This course introduces computer programming using the FORTRAN programming language. Topics include input/output operations, sequence, selection, iteration, arithmetic operations, arrays, subprograms, and other related topics. Upon completion, students should be able to design, code, test, and debug FORTRAN language programs. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

CSC 137 Pascal Programming 2-3-3

This course introduces structured computer programming using the Pascal programming language. Topics include input/output operations, sequence, selection, iteration, arithmetic operations, arrays, and other related topics. Upon completion, students should be able to design, code, test, and debug Pascal language programs.

CSC 138 RPG Programming 2-3-3

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.

CSC 139 Visual BASIC Programming 2-3-3

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.

CSC 141 Visual C++ Programming 2-3-3

This course introduces event-driven computer programming using the Visual C++ programming language. Topics include input/output operations, sequence, selection, iteration, arithmetic operations, arrays, and other related topics. Upon completion, students should be able to design, code, test, and debug Visual C++ language programs.

CSC 143 Object-Oriented Prog 2-3-3

This course introduces the concepts of object-oriented programming. 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, test, debug, and implement objects at the application level using the appropriate environment.

CSC 148 JAVA Programming 2-3-3

This course introduces computer programming using the JAVA language. Topics include selection, iteration, arithmetic and logical operators, classes, inheritance, methods, arrays, user interfaces, basic applet creation and other related topics. Upon completion, students should be able to design, code, test, and debug JAVA language programs. This course has been approved to satisfy the comprehensive articulation agreement pre-major and/or elective course requirement.

CSC 160 Intro to Internet Prog 2-2-3

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.

CSC 185 Perl Programming 2-3-3

Prerequisite: CIS 115

This course introduces students to the Perl Programming language. Topics include programming techniques using CGI script, input/output operations, sequence, iteration, selection, arithmetic operations, subroutines, modules, integrating database, pattern matching and other related topics. Upon completion, students should be able to design, code, test, and debug Perl language programs.

CSC 192 Selected Topics: Theory of Interaction & Play 2-0-2

Prerequisite: CIS 115

This course introduces the theory of game development. Topics include gaming history, different genres of games, character development and gaming interaction. Upon completion, students should be able to design and implement a game with original characters, setting, and interaction.

CSC 193 Selected Topics in Computer Science 2-3-3

This course provides the opportunities to explore areas of current professional interest in computer programming. Emphasis is placed on programming principles in a specific area. Upon completion, students should have a basic understanding of the program specified.

CSC 234 Advanced C++ 2-3-3

Prerequisites: CSC 134

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.

CSC 235 Advanced COBOL 2-3-3

Prerequisites: CSC 135

This course is a continuation of CSC 135 using COBOL 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.

CSC 236 Advanced Fortran 2-3-3

Prerequisites: CSC 136

This course is a continuation of CSC 136 using FORTRAN with structured programming principles. Emphasis is placed on advanced arrays, file management/processing techniques, data structures, sub-programs, interactive processing, algorithms, and libraries. Upon completion, students should be able to design, code, test, debug, and document programming solutions.

CSC 237	Advanced Pascal	2-3-3
Prerequisites: CSC 137		
This course is a continuation of CSC 137 using Pascal with structured programming principles. Emphasis is placed on advanced arrays, file management/processing techniques, data structures, sub-programs, interactive processing, algorithms, and libraries. Upon completion, students should be able to design, code, test, debug, and document programming solutions.		
CSC 238	Advanced RPG	2-3-3
Prerequisites: CSC 138		
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.		
CSC 239	Advanced Visual BASIC	2-3-3
Prerequisites: CSC 139		
This course is a continuation of CSC 139 using Visual BASIC 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.		
CSC 241	Advanced Visual C++	2-3-3
Prerequisites: CSC 141		
This course is a continuation of CSC 141 using Visual C++ with object-oriented programming principles. Emphasis is placed on advanced arrays, file management/processing techniques, data structures, sub-programs, interactive processing, algorithms, and libraries. Upon completion, students should be able to design, code, test, debug, and document programming solutions.		
CSC 248	Adv Internet Progr	2-3-3
Prerequisites: CSC 134 or CSC 141 or CSC 148 or CSC 160		
This course covers advanced programming skills required to design Internet applications. Emphasis is placed on programming techniques required to support network applications. Upon completion, students should be able to design, code, debug, and document network-based programming solutions to various real-world problems using an appropriate programming language.		
CSC 285	Programming Project	2-3-3
Prerequisite: CIS 115		
This course provides an opportunity to complete a significant programming project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, testing, presentation, and implementation. Upon completion, students should be able to complete a project from the definition phase through implementation.		
CSC 293	Selected Topics: Game-based Programming	2-3-3
Prerequisite: CIS 115		
This course introduces game development using a modern programming language. Topics include the theory of gaming, interface design using graphics and sound, character development, and game flow. Upon completion, students should be able to create and implement an original computer game.		
DESIGN DRAFTING		
		C-L-SHC
DDF 211	Design Drafting I	2-6-4

Prerequisites: DFT 112

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.

DDF 211 Design Process I 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.

DRAFTING

C-L-SHC

DFT 111 Technical Drafting I 1-3-2

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.

DFT 111A Technical Drafting I Lab 0-3-1

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.

DFT 112 Technical Drafting II 1-3-2

Prerequisites: DFT 111

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.

DFT 112A Technical Drafting II Lab 0-3-1

Corequisites: DFT 112

This course provides a laboratory setting to enhance advance 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.

DFT 119 Basic CAD 1-2-2

This course introduces computer-aided drafting software for specific technologies to non-drafting majors. Emphasis is placed on understanding the software command structure and drafting standards for specific technical fields. Upon completion, students should be able to create and plot basic drawings.

DFT 151 CAD I 2-3-3

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.

DFT 152 CAD II 2-3-3

Prerequisites: DFT 151

This course is a continuation of DFT 151. Topics include advanced two-dimensional, three-dimensional, and solid modeling and extended CAD applications. Upon completion, students should be able to generate and manage CAD drawings and models to produce engineering documents.

DFT 153	CAD III	2-3-3
Prerequisites: DFT 151		
This course covers basic principles of three-dimensional CAD wireframe and surface models. Topics include user coordinate systems, three-dimensional viewpoints, three-dimensional wireframes, and surface components and viewpoints. Upon completion, students should be able to create and manipulate three-dimensional wireframe and surface models.		
DFT 154	Intro Solid Modeling	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 multi-view drawings. Upon completion, students should be able to use design techniques to create, edit, render and generate a multi-view drawing.		
DFT 170	Engineering Graphics	2-2-3
This course introduces basic engineering graphics skills, equipment, and applications (manual and computer-aided). Topics include sketching, measurements, lettering, dimensioning, geometric construction, orthographic projections and pictorial drawings, and sectional and auxiliary views. Upon completion, students should be able to demonstrate an understanding of basic engineering graphics principles and practices. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.		
DRAMA/THEATRE		
		C-L-SHC
DRA 111	Theatre Appreciation	3-0-3
This course provides a study of the art, craft, and business of the theatre. Emphasis is placed on the audience's appreciation of the work of the playwright, director, actor, designer, producer, and critic. Upon completion, students should be able to demonstrate a vocabulary of theatre terms and to recognize the contributions of various theatre artists. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.		
DRA 124	Readers Theatre	3-0-3
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. Basics of acting are introduced as needed for performance. Upon completion, students should be able to adapt and present a literary script following the conventions of readers theatre. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.		
DRA 130	Acting I	0-6-3
This course provides an applied study of the actor's craft. Topics include role analysis, training the voice, and body concentration, discipline, and self-evaluation. Upon completion, students should be able to explore their creativity in an acting ensemble. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.		
DRA 170	Play Production I	0-9-3
Prerequisites: None		
Corequisites: None		
This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a		

college theatre production. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

ELECTRONIC COMMERCE

ECM 168 Electronic Business 2-2-3
This course provides a survey of the world of electronic business. Topics include the definition of electronic business, current practices as they evolve using Internet strategy in business, and application of basic business principles to the world of e-commerce. Upon completion, students should be able to define electronic business and demonstrate an understanding of the benefits of e-commerce as a foundation for developing plans leading to electronic business implementation.

ECM 210 Intro to E-Commerce 2-2-3
This course introduces the concepts and tools to implement electronic commerce via the Internet. Topics include application and server software selection, securing transactions, use and verification of credit cards, publishing of catalogs, and site administration. Upon completion, students should be able to set up a working e-commerce Internet web site.

ECM 220 E-Commerce Plan. & Implem 2-2-3
This course builds on currently accepted business practices to develop a business plan and implementation model for e-commerce. Topics include analysis and synthesis of the planning cycle, cost/benefit analysis, technical systems, marketing, security, financial support, Internet strategies, website design, customer support and feedback and assessment. Upon completion, student should be able to develop a plan for e-commerce in a small to medium size business.

ECM 230 Capstone Project 2-2-3
Prerequisites: ECM 220
This course provides experience in Electronic Commerce. Emphasis is placed on the implementation of an e-commerce model for an existing business. Upon completion, students should be able to successfully develop and implement a plan for e-commerce in a small to medium size business.

ECONOMICS

ECO 151 Survey of Economics C-L-SHC
3-0-3
This course introduces basic concepts of micro- and macroeconomics. Topics include supply and demand, optimizing economic behavior, prices and wages, money, interest rates, banking system, unemployment, inflation, taxes, government spending, and international trade. Upon completion, students should be able to explain alternative solutions for economic problems faced by private and government sectors. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

ECO 251 Prin. of Microeconomics 3-0-3
This course introduces economic analysis of individual, 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.

ECO 252 Prin. of Macroeconomics 3-0-3
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

C-L-SHC

EDU 118

Teach Assoc Princ & Prac

3-0-3

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 Associate concentration in the Early Childhood Associate program.

EDU 119

Early Childhood Ed

4-0-4

This course covers the foundations of the education profession, types of programs, professionalism, and planning quality programs for children. Topics include historical foundations, career options, types of programs, professionalism, observational skills, and planning developmentally appropriate schedules, environments, and activities for children. Upon completion, students should be able to demonstrate observational skills, identify appropriate schedules and environments, develop activity plans, and describe influences on the profession.

EDU 131

Child, Family, & Commun

3-0-3

This course covers the relationships between the families, programs for children/schools, and the community. Emphasis is placed on establishing and maintaining positive collaborative relationships with families and community resources. Upon completion, students should be able to demonstrate strategies for effectively working with diverse families and identifying and utilizing community resources.

EDU 144

Child Development I

3-0-3

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. This course is also available through the Virtual Learning Community (VLC).

EDU 145

Child Development II

3-0-3

Prerequisite: EDU 144

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. This course is also available through the Virtual Learning Community (VLC).

EDU 146

Child Guidance

3-0-3

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. This course is also available through the Virtual Learning Community (VLC).

EDU 151 Creative Activities 3-0-3
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.

EDU 153 Health, Safety, & Nutrit 3-0-3
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.

EDU 186 Reading & Writing Methods 3-0-3
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 Associate program.

EDU 216 Intro to Education 3-2-4
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 (VLC).

EDU 221 Children with Exceptional 3-0-3
Prerequisites: EDU 144 and EDU 145 or PSY 244 and PSY 245
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. This course is also available through the Virtual Learning Community (VLC).

EDU 234 Infants, Toddlers, & Twos 3-0-3
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.

EDU 235 School-Age Dev & Program 2-0-2

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.

EDU 241 Adult-Child Relations 2-0-2

This course covers self-concept and effective and active listening skills in positive one-to-one interactions with individuals and groups of children. Emphasis is placed on self-concept development and effective communication techniques used with children. Upon completion, students should be able to identify principles underlying self-concept and demonstrate effective listening and communication skills used by adults with children.

EDU 252 Math & Sci Activities 3-0-3

This course introduces discovery experiences in math and science. Topics include concepts, facts, phenomena, and skills in each area. Upon completion, students should be able to identify, plan, select materials and equipment, and implement and evaluate developmentally appropriate curriculum materials.

EDU 254 Music & Move for Child 1-2-2

This course covers the use of music and creative movement for children. Topics include a general survey of the basic elements of music and planning, designing, and implementing music and movement experiences for creative learning. Upon completion, students should be able to use voice and various musical instruments to provide musical and movement activities for children.

EDU 259 Curriculum Planning 3-0-3

Prerequisites: EDU 112, EDU 113, or EDU 119

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.

EDU 261 Early Childhood Admin I 2-0-2

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.

EDU 262 Early Childhood Admin II 3-0-3

Prerequisite: EDU 261

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.

EDU 275 Effective Teach Train 2-0-2

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.

EDU 280 Language & Literacy Exp 3-0-3

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. This course is also available through the Virtual Learning Community (VLC).

EDU 285 Internship Exp-School Age 1-0-1

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 requirement in the Teacher Associate concentration in the Early Childhood Associate program.

EDU 287 Leadership Early Child Ed 3-0-3

Prerequisites -Choose one set:

EDU 111, EDU 112, EDU 131, EDU 144 & EDU 145 OR

EDU 111, EDU 113, EDU 131, EDU 144 & EDU 145 OR

EDU 119, EDU 131, EDU 144 & EDU 145 OR

EDU 111, EDU 112, EDU 131, PSY 244 & PSY 245 OR

EDU 111, EDU 113, EDU 131, PSY 244 & PSY 245 OR

EDU 119, EDU 131, PSY 244 & PSY 245

This course covers advanced topics and issues in early childhood. Emphasis is placed on current advocacy issues, emerging technology, professional growth experiences, and other related topics. Upon completion, students should be able to list, discuss, and explain advanced current topics and issues in early childhood education.

ENGINEERING

C-L-SHC

EGR 131 Intro To Electronics Tech 1-2-2

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

EGR 285 Design Project 0-4-2

This course provides the opportunity to design and construct an instructor-approved project using previously acquired skills. Emphasis is placed on selection, proposal, design, construction, testing, and documentation of the approved project. Upon completion, students should be able to present and demonstrate operational projects.

ELECTRICITY

C-L-SHC

ELC 111 Intro to Electricity 2-2-3

Prerequisites: None

Corequisites: None

This course introduces the fundamental concepts of electricity and test equipment to non-electrical/electronics majors. Topics include basic DC and AC principles (voltage, resistance, current, impedance); components (resistors, inductors, and capacitors); power; and operation of test equipment. Upon completion, students should be able to construct and analyze simple DC and AC circuits using electrical test equipment.

- ELC 112 DC/AC Electricity 3-6-5
 This course introduces the fundamental concepts of and computations related to DC/AC electricity. Emphasis is placed on DC/AC circuits, components, operation of test equipment; and other related topics. Upon completion, students should be able to construct, verify, and analyze simple DC/AC circuits.
- ELC 113 Basic Wiring I 2-6-4
 This course introduces the care/usage of tools and materials used in electrical installations and the requirements of the National Electrical Code. Topics include NEC, electrical safety, and electrical blueprint reading; planning, layout; and installation of electrical distribution equipment; lighting; overcurrent protection; conductors; branch circuits; and conduits. Upon completion, students should be able to properly install conduits, wiring, and electrical distribution equipment associated with basic electrical installations.
- ELC 114 Basic Wiring II 2-6-4
 Prerequisites: ELC 113
 This course provides additional instruction in the application of electrical tools, materials, and test equipment associated with electrical installations. Topics include the NEC; safety; electrical blueprints; planning, layout, and installation of equipment and conduits; and wiring devices such as panels and overcurrent devices. Upon completion, students should be able to properly install equipment and conduit associated with electrical installations.
- ELC 117 Motors and Controls 2-6-4
 Prerequisites: ELC 111, ELC 112 or ELC 131
 This course introduces the fundamental concepts of motors and motor controls. Topics include ladder diagrams, pilot devices, contactors, motor starters, motors, and other control devices. Upon completion, students should be able to properly select, connect, and troubleshoot motors and control circuits.
- ELC 118 National Electrical Code 1-2-2
 This course covers the use of the current National Electrical Code. Topics include the NEC history, wiring methods, overcurrent protection, materials, and other related topics. Upon completion, students should be able to effectively use the NEC.
- ELC 119 NEC Calculations 1-2-2
 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.
- ELC 121 Electrical Estimating 1-2-2
 Prerequisites: ELC 113
 This course covers the principles involved in estimating electrical projects. Topics include take-offs of materials and equipment, labor, overhead, and profit. Upon completion, students should be able to estimate simple electrical projects.
- ELC 125 Diagrams and Schematics 1-2-2
 This course covers the interpretation of electrical diagrams, schematics, and drawings common to electrical applications. Emphasis is placed on reading and interpreting electrical diagrams and schematics. Upon completion, students should be able to read and interpret electrical diagrams and schematics.
- ELC 126 Electrical Computations 2-2-3
 This course introduces the fundamental applications of mathematics, which are used by an electrical/electronics technician. Topics include whole numbers, fractions, decimals, powers, roots, simple electrical formulas, and usage of a scientific calculator. Upon completion, students should be able to solve simple electrical mathematical problems.

- ELC 127 Software for Technicians 1-2-2
 This course introduces computer software which can be used to solve electrical/electronics problems. Topics include electrical/electronics calculations, applications, and controls. Upon completion, students should be able to utilize a personal computer for electrical/electronics- related applications.
- ELC 128 Intro to PLC 2-3-3
 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.
- ELC 131 DC/AC Circuit Analysis 4-3-5
 Corequisites: MAT 121
 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 software, 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.
- ELC 132 Electrical Drawings 1-3-2
 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.
- ELC 140 Fund of DC/AC Circuit 5-6-7
 This course covers the principles of DC/AC circuit analysis as applied to electronics. Topics include atomic theory, circuit analysis, components, test equipment, troubleshooting techniques, schematics, diagrams, and other related topics. Upon completion, students should be able to interpret, construct, verify, analyze, and troubleshoot DC/AC circuits in a safe manner.
- ELC 144 OTDR Operation 1- 0-0-1
 Prerequisites: None
 Corequisites: None
 This course covers the use of the Optical Time Domain Reflectometer (OTDR), principles of operations, typical displays and signature interpretations. Topics include cable acceptance testing, splice loss testing, reflection, troubleshooting line breaks, and usage of the OTDR for fiber optics maintenance and restoration. Upon completion, students should be able to test for attenuation bandwidth and cable length, identify backscatter, connector loss, cable breaks and perform acceptance testing.
- ELC 213 Instrumentation 3-2-4
 Prerequisites: ELC 111, ELC 112, or ELC 131
 This course covers the fundamentals of instrumentation used in industry. Emphasis is placed on electric, electronic, and pneumatic instruments. Upon completion, students should be able to design, install, maintain, and calibrate instrumentation.
- ELC 228 PLC Applications 2-6-4
 Prerequisites: ELC 128
 This course continues the study of the programming and applications of programmable logic controllers. Emphasis is placed on advanced programming, networking, advanced I/O modules, reading and interpreting error codes, and troubleshooting. Upon completion, students should be able to program and troubleshoot programmable logic controllers.

This course covers semiconductor devices used in industrial applications. Topics include the basic theory, application, and operating characteristics of semiconductor devices (filters, rectifiers, FET, SCR, Diac, Triac, Op-amps, etc). Upon completion, students should be able to install and/or troubleshoot these devices for proper operation in an industrial electronic circuit.

ELN 231 Industrial Controls 2-3-3

Prerequisites: ELC 112, ELC 131, or ELC 140

This course introduces the fundamental concepts of solid-state 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 ladder diagrams and demonstrate an understanding of electromechanical and electronic control of rotating machinery.

ELN 232 Intro to Microprocessors 3-3-4

Prerequisites: ELN 133

This course introduces microprocessor architecture and microcomputer systems including memory and input/output interfacing. Topics include assembly language programming, bus architecture, bus cycle types, 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.

ELN 233 Microprocessor Systems 3-3-4

Prerequisites: ELN 232

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.

ELN 234 Communication Systems 3-3-4

Prerequisites: ELN 132 or ELN 140

This course introduces the fundamentals of electronic communication systems. Topics include the frequency spectrum, electrical noise, modulation techniques, characteristics of transmitters and receivers, and digital communications. Upon completion, students should be able to interpret analog and digital communication circuit diagrams, analyze transmitter and receiver circuits, and use appropriate communication test equipment.

ELN 236 Fiber Optics and Lasers 3-2-4

Prerequisites: ELN 234

This course introduces the fundamentals of fiber optics and lasers. Topics include the transmission of light; characteristics of fiber optic and lasers and their systems; fiber optic production; types of lasers; and laser safety. Upon completion, students should be able to understand fiber optic communications and basic laser fundamentals.

ELN 237 Local Area Networks 2-3-3

Prerequisites: CIS 110 or CIS 111

This course introduces the fundamentals of local area networks and their operation in business and computer environments. Topics include the characteristics of network topologies, system hardware (repeaters, bridges, routers, gateways), system configuration, and installation and administration of the LAN. Upon completion, students should be able to install, maintain, and manage a local area network.

ELN 238 Advanced LANs 2-3-3

Prerequisites: ELN 237

This course covers advanced concepts, tools, and techniques associated with servers, workstations, and overall local area network performance. Topics include network security and configuration, system performance and optimization, communication protocols and packet formats, troubleshooting techniques, multi-platform integration, and other related topics. Upon completion, students should be able to use advanced techniques to install, manage, and troubleshoot networks and optimize server and workstation performance.

ELN 240 Microprocessor Fund 3-3-4

Prerequisites: ELN 141

This course introduces microprocessor architecture and microcomputer systems. Topics include use of technical documentation, bus architecture, I/O and memory systems, and other related topics. Upon completion, students should be able to analyze and troubleshoot basic microprocessor circuits.

ELN 244 Computer Repair 3-6-5

Prerequisites: ELN 133 or ELN 141

This course covers the assembly, upgrading, and repair of microcomputers. Topics include logic test equipment, computer motherboards, storage devices, I/O devices, power supplies, and other peripherals. Upon completion, students should be able to assemble, upgrade, maintain, troubleshoot, and repair microcomputers.

ELN 246 Cert Elect Tech Prep 3-0-3

This course covers electronic principles, theories, and concepts. Emphasis is placed on those items covered in the Certified Electronic Technician examination. Upon completion, students should be able to demonstrate competence in electronics and be prepared for the Certified Electronic Technician examination.

ELN 247 Electronic App Project 1-3-2

Prerequisites: ELN 131 or ELN 140

This course provides a structured approach to an application-oriented electronics project. Emphasis is placed on selecting, planning, implementing, testing, and presenting an application-oriented project. Upon completion, students should be able to present and demonstrate an electronics application-oriented project.

ELN 275 Troubleshooting 1-2-2

Prerequisites: ELN 133 and either ELN 132 or ELN 140

This course covers techniques of analyzing and repairing failures in electronic equipment. Topics include safety, signal tracing, use of service manuals, and specific troubleshooting methods for analog, digital, and other electronics-based circuits and systems. Upon completion, students should be able to logically diagnose and isolate faults and perform necessary repairs to meet manufacturers' specifications.

ENGLISH C-L-SHC

ENG 080 Writing Foundations 3-2-4

This course introduces the writing process and stresses effective sentences. Emphasis is placed on applying the conventions of written English, reflecting standard usage and mechanics in structuring a variety of sentences. Upon completion, students should be able to write correct sentences and a unified, coherent paragraph. This course does not satisfy the developmental reading and writing prerequisite for ENG 111 or ENG 111A.

ENG 090 Composition Strategies 3-0-3

Corequisites: ENG 090A

This course provides practice in the writing process and stresses effective paragraphs. Emphasis is placed on learning and applying the conventions of standard written English in developing paragraphs within the essay. Upon completion, students should be able to compose a variety of paragraphs and a unified, coherent essay. This course satisfies the developmental writing requirement for ENG 111 and ENG 111A.

ENG 090A Comp Strategies Lab 0-2-1
Corequisites: ENG 090
This writing lab is designed to practice the skills introduced in ENG 090. Emphasis is placed on learning and applying the conventions of standard written English in developing paragraphs within the essay. Upon completion, students should be able to compose a variety of paragraphs and a unified, coherent essay.

ENG 102 Applied Communications II 3-0-3
Prerequisites: 65 CPT reading score and 74 CPT writing score, or 18 ACT score, or 450 verbal SAT score, or satisfactory completion of developmental requirements.
This course is designed to enhance writing and speaking skills for the workplace. Emphasis is placed on generating short writings such as job application documents, memoranda, and reports and developing interpersonal communication skills with employees and the public. Upon completion, students should be able to prepare effective, short, and job-related written and oral communications. The computer is used as a writing and design tool for this course. This is a diploma-level course.

ENG 110 Freshman Composition 3-0-3
Prerequisites: 65 CPT reading score and 86 CPT writing score, or 18 ACT score, or 450 verbal SAT score, or satisfactory completion of developmental requirements.
This course is the first course in a series of two designed to develop informative and business writing skills. Emphasis is placed on logical organization of writing, including effective introductions and conclusions, precise use of grammar, and appropriate selection and use of sources. Upon completion, students should be able to produce clear, concise, well-organized short papers. This course does not qualify for university transfer.

ENG 111 Expository Writing 3-0-3
Prerequisites: 80 CPT reading score and 86 CPT writing score, or 18 ACT score, or 450 verbal SAT score, or satisfactory completion of developmental requirements.
Corequisites: ENG 111A
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.

ENG 111A Expository Writing Lab 0-2-1
Prerequisites: 80 CPT reading and 86 CPT writing score, or 18 ACT score, or 450 verbal SAT score, or satisfactory completion of developmental requirements.
Corequisites: ENG 111
This writing laboratory is designed to apply the skills introduced in ENG 111. Emphasis is placed on the editing and revision components of the writing process. Upon completion, students should be able to apply those skills in the production of final drafts in ENG 111. The computer is used as a writing and design tool for this course.

ENG 112 Argument-Based Research 3-0-3
Prerequisite: ENG 111
This course, the second in a series of two, introduces research techniques, documentation styles, and argumentative strategies. Emphasis is placed on historical developments and their impact on the modern world through religion, politics, economics, and social developments. Upon completion, students should be able to compare and contrast western and non-western cultures. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.

- ENG 113 Literature-Based Research 3-0-3
 Prerequisites: ENG 111
 This course, the second in a series of two, expands the concepts developed in ENG 111 by focusing on writing that involves literature-based research and documentation. Emphasis is placed on critical reading and thinking and the analysis and interpretation of prose, poetry, and drama: plot, characterization, theme, cultural context, etc. Upon completion, students should be able to construct mechanically-sound, documented essays and research papers that analyze and respond to literary works. Students should be able to respond to literature orally in class discussions and in small group and individual presentations. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.
- ENG 114 Prof. Research & Reporting 3-0-3
 Prerequisites: ENG 111
 This course, the second in a series of two, is designed to teach professional communication skills. Emphasis is placed on research, listening, critical reading and thinking, analysis, interpretation, and design used in oral and written presentations. Upon completion, students should be able to work individually and collaboratively to produce well-designed business and professional written and oral presentations. The computer is used as a writing and design tool for this course. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.
- ENG 115 Oral Communication 3-0-3
 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.
- ENG 116 Technical Report Writing 3-0-3
 Prerequisites: ENG 110 or ENG 111
 This course, the second in a series of two, introduces layout and design of technical reports used in business and industry. Emphasis is placed on audience analysis, data collection and analysis, technical writing style and organization, oral presentation of technical data, and the appropriate use of graphics in written and oral presentations. Upon completion, students should be able to produce written and oral reports using a variety of technical communication models.
- ENG 125 Creative Writing I 3-0-3
 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. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.
- ENG 231 American Literature I 3-0-3
 Prerequisites: ENG 112, ENG 113, or ENG 114
 This course covers selected works in American literature from its beginnings to 1865. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

- ENG 232 American Literature II 3-0-3
 Prerequisites: ENG 112, ENG 113, or ENG 114
 This course covers selected works in American literature from 1865 to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.
- ENG 233 Major American Writers 3-0-3
 Prerequisites: ENG 112, ENG 113, or ENG 114
 This course provides an intensive study of the works of several major American authors. Emphasis is placed on American history, culture, and the literary merits. Upon completion, students should be able to interpret, analyze, and evaluate the works studied. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.
- ENG 241 British Literature I 3-0-3
 Prerequisites: ENG 112, ENG 113, or ENG 114
 This course covers selected works in British literature from its beginnings to the Romantic Period. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.
- ENG 242 British Literature II 3-0-3
 Prerequisites: ENG 112, ENG 113, or ENG 114
 This course covers selected works in British literature from the Romantic Period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.
- ENG 243 Major British Writers 3-0-3
 Prerequisites: ENG 112, ENG 113, or ENG 114
 This course provides an intensive study of the works of several major British authors. Emphasis is placed on British history, culture, and the literary merits. Upon completion, students should be able to interpret, analyze, and evaluate the works studied. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.
- ENG 261 World Literature I 3-0-3
 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. This course is also available through the Virtual Learning Community (VLC).
- ENG 262: World Literature II 3-0-3
 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.

ENG 273 African-American Literature 3-0-3

Prerequisites: ENG 112, ENG 113, or ENG 114

Corequisites: None

This course provides a survey of the development of African-American literature from its beginnings to the present. Emphasis is placed on historical and cultural context, themes, literary traditions, and backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and respond to selected texts. This course has been approved 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 (VLC).

FACILITY MAINTENANCE WORKER

C-L-SHC

FMW 100 Intro to Nat Elec Code 1-0-1

This course covers the use of the National Electrical Code. Topics include wiring methods, grounding, general areas of the NEC, and other related topics. Upon completion, students should be able to use the code effectively. This is a diploma-level course.

FMW 101 Basic NEC Problems 1-2-2

This course covers sections of the NEC related to calculations. Topics include branch circuits, sizes, wire, conduit, and house problems. Upon completion, students should be able to use the code to find wire and conduit sizes. This is a diploma-level course.

FMW 102 Practical Wiring I 2-6-4

This course covers the tools and materials commonly used in the electrical field. Emphasis is placed on mounting, installing, and wiring electrical fixtures common to residential and simple commercial installations. Upon completion, students should be able to properly install boxes, wires, and switches. This is a diploma-level course.

FMW 103 Practical Wiring II 2-6-4

Prerequisites: FMW 102

This course covers wiring and circuit layout and the actual building of mock-ups. Topics include using electrical blueprints, planning circuit layouts, and installing electrical equipment. Upon completion, students should be able to properly install electrical and related equipment. This is a diploma-level course.

FMW 104 Intro-Industrial Wiring 2-6-4

Prerequisites: FMW 102

This course covers blueprint reading and planning and repairing electrical wiring systems in industrial facilities. Emphasis is placed on reading electrical blueprints when repairing or replacing electrical material in an industrial facility. Upon completion, students should be able to properly repair an electrical system. This is a diploma-level course.

FMW 105 Basic Heating 2-2-3

This course covers the fundamentals of heating systems, including oil, gas, and electrical systems and heat pumps. Topics include safety precautions, tools, and materials needed to safely troubleshoot and repair heating systems. Upon completion, students should be able to explain and repair the major components of a heating system. This is a diploma-level course.

FMW 106 Domestic Air Conditioning 2-2-3

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

FOOD SERVICE

C-L-SHC

FST 100 Intro to Foodservice Indt 1-0-1

This course is designed to develop an understanding of the foodservice industry and its career paths. Emphasis is placed on employability skills and attitudes relating to career goals. Upon completion, students should be able to identify job opportunities, job requirements, and career paths in the foodservice industry. This course is restricted to the Foodservice Technology program and is approvable for offering only at designated Department of Correction facilities.

FST 101 Intro to Baking 1-4-3

This course introduces fundamental concepts, skills, and techniques in quantity baking. Topics include yeast and quick breads, cookies, cakes, and other baked goods. Upon completion, students should be able to prepare and evaluate baked products. This course is restricted to the Foodservice Technology program and is approvable for offering only at designated Department of Correction facilities.

FST 102 Basic Foodservice Skills 3-8-7

This course introduces the concepts, skills, and techniques for volume food production in an institutional setting. Emphasis is placed on development of skills in knife, tool, and equipment handling and applying principles of food preparation to produce varieties of food products. Upon completion, students should be able to demonstrate entry-level skills in a quantity foodservice operations. This course is restricted to the Foodservice Technology program and is approvable for offering only at designated Department of Correction facilities.

FST 103 Safety and Sanitation 2-2-3

This course provides practical experience with basic principles of safety and sanitation in the foodservice industry. Emphasis is placed on personal hygiene habits, safety regulations, and food handling practices (H.A.C.C.P.) that protect the health of the consumer. Upon completion, students should be able to demonstrate appropriate safety and sanitation practices required in the foodservice industry. This course is restricted to the Foodservice Technology program and is approvable for offering only at designated Department of Correction facilities.

FST 104 Foodservice Equipment 1-2-2

This course provides instruction in identification, effective use, and care of foodservice equipment. Emphasis is placed on operation, maintenance, and application of standard institutional equipment. Upon completion, students should be able to demonstrate safe and efficient use of standard institutional kitchen equipment. This course is restricted to the Foodservice Technology program and is approvable for offering only at designated Department of Correction facilities.

FST 105 Menu Planning 4-2-5

This course introduces the principles and functions of menu management for general and special populations. Emphasis is placed on building menus with regard to nutritional considerations and dietary needs. Upon completion, students should be able to develop and prepare menus to be used in a variety of dining settings. This course is restricted to the Foodservice Technology program and is approvable for offering only at designated Department of Correction facilities.

FST 106 Adv. Foodservice Skills 2-6-5

This course is designed to increase the student's level of proficiency in theory and application of foodservice skills in commercial kitchens. Emphasis is placed on the preparation and presentation of hot and cold foods. Upon completion, students should be able to plan, execute, and successfully serve entrees with

complementary side items. This course is restricted to the Foodservice Technology program and is approvable for offering only at designated Department of Correction facilities.

FST 107 Advanced Baking 1-4-3

This course provides advanced skills and techniques for preparing baked goods. Emphasis is placed on specialty breads, classical deserts, pastries, and decorative finishing. Upon completion, students should be able to produce and plate a variety of quality-baked items. This course is restricted to the Foodservice Technology program and is approvable for offering only at designated Department of Correction facilities.

FST 108 Cost Control 2-2-3

This course covers the control of primary costs in foodservice establishments. Topics include purchasing, receiving, storing, issuing, production, revenue, and inventory control with emphasis on food service software. Upon completion, students should be able to apply the necessary knowledge and skills required to manage primary costs for a foodservice establishment. This course is restricted to the foodservice technology program and is approvable for offering only at designated Department of Correction facilities.

GEOLOGY

C-L-SHC

GEL 111 Introductory Geology

3-2-4

This course introduces basic landforms and geological processes. Topics include rocks, minerals, volcanoes, fluvial processes, geological history, plate tectonics, glaciers, and coastal dynamics. Upon completion, students should be able to 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.

GEOGRAPHY

C-L-SHC

GEO 111 World Regional Geography

3-0-3

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.

GRAPHIC ARTS

GRA 151 Computer Graphics I 1-3-2

Prerequisite: None

This course introduces the use of hardware and software for production and design in graphic arts. Topics include graphical user interface and current industry uses such as design, layout, typography, illustration, and imaging for production. Upon completion, students should be able to understand and use the computer as a fundamental design and production tool.

HEALTH

C-L-SHC

HEA 110 Personal Health/Wellness

3-0-3

This course provides an introduction to basic personal health and wellness. Emphasis is placed on current health issues such as nutrition, mental health, and fitness. Upon completion, students should be able to demonstrate an understanding of the factors necessary to the maintenance of health and wellness. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective requirement.

HEA 111 First Aid & Safety 1-2-2
This course provides first aid and safety education. Emphasis is placed on safe attitudes, accident prevention, and response to accidents and injuries. Upon completion, students should be able to demonstrate proper first aid and safety skills.

HISTORY

HIS 111 World Civilizations I C-L-SHC
3-0-3
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 -0-3
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 115 Intro to Global History 3-0-3
Prerequisites: None
Corequisites: None
This course introduces the study of global history. Emphasis is placed on topics such as colonialism, industrialism, and nationalism. Upon completion, students should be able to analyze significant global historical issues. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

HIS 121 Western Civilization I 3-0-3
This course introduces western civilization from pre-history to the early modern era. Topics include ancient Greece, Rome, and Christian institutions of the Middle Ages and the emergence of national monarchies in western Europe. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early western civilization. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

HIS 122 Western Civilization II 3-0-3
This course introduces western civilization from the early modern era to the present. Topics include the religious wars, the Industrial Revolution, World Wars I and II, and the Cold War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern western civilization. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

HIS 131 American History I 3-0-3
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
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.

HORTICULTURE

HOR 130 Greenhouse Design 3-0-3
This course covers greenhouse facilities planning and equipment selection. Topics include types of greenhouses, location factors, materials, glazing selection, calculation of heating/cooling requirements, lighting, benches, and energy conservation. Upon completion, students should be able to demonstrate knowledge of material selection, facilities planning, equipment need selection, and appropriate calculations.

HOR 168 Plant Propagation 2-2-3
This course is a study of sexual and asexual reproduction of plants. Emphasis is placed on seed propagation, grafting, stem and root propagation, micro-propagation, and other propagation techniques. Upon completion, students should be able to successfully propagate ornamental plants.

HUMAN SERVICES

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

HSE 112 Group Process I 1-2-2
Prerequisites: Enrollment in the HSE program
This course introduces interpersonal concepts and group dynamics. Emphasis is placed on self-awareness facilitated by experiential learning in small groups with analysis of personal experiences and the behavior of others. Upon completion, students should be able to show competence in identifying and explaining how people are influenced by their interactions in group settings.

HSE 123 Interviewing Techniques 2-2-3
This course covers the purpose, structure, focus, and techniques employed in effective interviewing. Emphasis is placed on observing, attending, listening, responding, recording, and summarizing of personal histories with instructor supervision. Upon completion, students should be able to perform the basic interviewing skills needed to function in the helping relationship.

HSE 125 Counseling 2-2-3
Prerequisites: PSY 150
This course covers the major approaches to psychotherapy and counseling, including theory, characteristics, and techniques. Emphasis is placed on facilitation of self-exploration, problem solving, decision making, and personal growth. Upon completion, students should be able to understand various theories of counseling and demonstrate counseling techniques.

HSE 210 Human Services Issues 2-0-2
Prerequisites: Successful completion of 12 SHC in the HSE program
This course covers current issues and trends in the field of human services. Emphasis is placed on contemporary topics with relevance to special issues in a multi-faceted field. Upon completion, students should be able to integrate the knowledge, skills, and experiences gained in classroom and clinical experiences with emerging trends in the field.

HSE 225 Crisis Intervention 3-0-3

This course introduces the basic theories and principles of crisis intervention. Emphasis is placed on identifying and demonstrating appropriate and differential techniques for intervening in various crisis situations. Upon completion, students should be able to assess crisis situations and respond appropriately.

HUMANITIES

C-L-SHC

HUM 110 Technology and Society

3-0-3

This course considers technological change from historical, artistic, and philosophical perspectives and its effect on human needs and concerns. Emphasis is placed on the causes and consequences of technological change. Upon completion, students should be able to critically evaluate the implications of technology. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

HUM 115 Critical Thinking

3-0-3

Prerequisites: ENG 095 or RED 090 and ENG 090

Corequisites: None

This course introduces the use of critical thinking skills in the context of human conflict. Emphasis is placed on evaluating information, problem solving, approaching cross-cultural perspectives, and resolving controversies and dilemmas. Upon completion, students should be able to demonstrate orally and in writing the use of critical thinking skills in the analysis of appropriate texts. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. This course may meet the SACS humanities requirement for AAS degree programs. This course is also available through the Virtual Learning Community (VLC).

HUM 120 Cultural Studies

3-0-3

Prerequisites: None

Corequisites: None

This course introduces the distinctive features of a particular culture. Topics include art, history, music, literature, politics, philosophy, and religion. Upon completion, students should be able to appreciate the unique character of the study culture. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

HUM 122 Southern Culture

3-0-3

Prerequisites: None

Corequisites: None

This course explores the major qualities that make the South a distinct region. Topics include music, politics, literature, art, religion, race relations, and the role of social class in historical and contemporary contexts. Upon completion, students should be able to identify the characteristics that distinguish Southern culture. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

HUM 150 Amer. Women's Studies

3-0-3

This course provides an inter-disciplinary study of the history, literature, and social roles of American women from Colonial times to the present. Emphasis is placed on women's roles as reflected in American language usage, education, law, the workplace, and mainstream culture. Upon completion, students should be able to identify and analyze the roles of women as reflected in various cultural forms. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

HUM 160 Introduction to Film

2-2-3

This course introduces the fundamental elements of film artistry and production. Topics include film styles, history, and production techniques, as well as the social values reflected in film art. Upon completion, students should be able to critically analyze the elements covered in relation to selected films. This course

has been approved 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

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

HYDRAULICS

C-L-SHC

HYD 110 Hydraulics/Pneumatics I 2-3-3

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.

HYD 121 Hydraulics/Pneumatics II 1-3-2

Prerequisites: HYD 110

This course is a continuation of HYD 110 and provides further investigation into fluid power systems. Topics include advanced system components, troubleshooting, and other related topics. Upon completion, students should be able to demonstrate an understanding of the installation, operation, and maintenance of fluid power components and systems.

INTERNATIONAL BUSINESS

C-L-SHC

INT 110 International Business 3-0-3

This course provides an overview of the environment, concepts, and basic differences involved in international business. Topics include forms of foreign involvement, international trade theory, governmental influences on trade and strategies, international organizations, multinational corporations, personnel management, and international marketing. Upon completion, students should be able to describe the foundation of international business.

INDUSTRIAL SCIENCE

C-L-SHC

ISC 110 Workplace Safety 1-0-1

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. This course is also available through the Virtual Learning Community (VLC).

ISC 115	Construction Safety	2-0-2
<p>This course introduces the basic concepts of construction site safety. Topics include ladders, lifting, lock-out/tag-out, personal protective devices, scaffolds, and above/below ground work based on OSHA regulations. Upon completion, students should be able to demonstrate knowledge of applicable safety regulations and safely participate in construction projects.</p>		
ISC 121	Envir Health & Safety	3-0-3
<p>Prerequisites: None</p> <p>Corequisites: None</p> <p>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.</p>		
ISC 131	Quality Management	3-0-3
<p>This course provides a study and analysis of the aspects and implications of quality management that lead to customer satisfaction through continuous quality improvement. Topics include Total Quality Management, ISO 9000, organizing for quality, supplier/vendor relationships, and the role of leadership in quality management. Upon completion, students should be able to demonstrate an understanding of quality management concepts and techniques.</p>		
ISC 175	QA Fundamentals	1-0-1
<p>Prerequisites: None</p> <p>Corequisites: None</p> <p>This course is designed to increase fundamental knowledge in the philosophies, principles, and practice of quality in the work environment. Topics include the history and basics of quality, philosophies of quality, daily application of principles, and roles of quality professionals with emphasis on cGMP environment. Upon completion, students should be able to discuss quality fundamentals, components of quality systems, and identify standards and programs of quality.</p>		
ISC 210	Oper & Prod Planning	3-0-3
<p>Prerequisites: Completion of curriculum mathematics requirement</p> <p>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.</p>		
ISC 215	Job Analysis and Evaluation	3-0-3
<p>This course includes techniques necessary to gather facts about specific operations and responsibilities of the job, identify methods improvement, and facilitate performance evaluation. Emphasis is placed on what the job entails including mental abilities, job skills, and physical requirements, as well as job improvement and performance evaluation methods. Upon completion, students should be able to demonstrate an understanding of job analysis and evaluation methods.</p>		
ISC 221	Statistical Qual Control	3-0-3
<p>Prerequisites: Completion of curriculum mathematics requirement</p> <p>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.</p>		
ISC 278	cGMP Quality Systems	2-0-2

Prerequisites: None

Corequisites: None

This course focuses on the development, implementation, and on-going maintenance of a quality system in a cGMP environment. Topics

include the cGMP standard, components of cGMP quality systems, quality function roles and training, development of documentation such as SOPs, and system review procedures. Upon completion, the student should be able to identify the components of a quality system and develop a quality system manual utilizing the cGMP standard.

ISC 279 Auditing for cGMP 2-2-3

Prerequisites: COE*112

Corequisites: None

This course provides basic knowledge in internal audit planning, implementation, and reporting utilizing cGMP as the standard. Topics include auditing basics and types, phases of the audit process, regulatory requirements, auditing tools, auditor qualifications and skills, and behaviors while being audited. Upon completion, students should be able to identify the components of an audit program, develop a plan based on cGMP standards, and demonstrate reporting techniques.

ISC 280 Validation Fundamentals 1-2-2

Prerequisites: None

Corequisites: None

This course covers the fundamental concepts and components of a validation program in a cGMP environment. Emphasis is placed on FDA requirements concerning validation, types of validation, documentation, procedures, and the QA role. Upon completion, students should be able to discuss the purpose of validation, identify the steps in the validation process, and effectively utilize sample documentation.

INTERNET TECHNOLOGIES

ITN 110 Intro. To Web Graphics 2-2-3

This course is the first of two courses covering the creation of web graphics, addressing problems peculiar to WWW display using appropriate software. Topics include web graphics file types, type conversion, RGB color, the browser-safe palette, elementary special effects, image maps, and other related topics. Upon completion, students should be able to create graphics such as banners, buttons, backgrounds, and other graphics for Web pages.

ITN 120 Intro Internet Multimedia 2-2-3

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

ITN 130 Web Site Management 2-2-3

This course covers the issues involved in web site architecture. Topics include operating system directory structures, web site structural design, web site navigation, web site maintenance, backup and security. Upon completion, students should be able to design a web site directory plan optimized for navigation and ease of maintenance.

ITN 140 Web Development Tools 2-2-3

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

ITN 150 Internet Protocols 2-2-3
This course introduces the student to the application protocols used on the Internet. Topics include HTTP, Secure HTTP, TCP/IP, and related applications such as FTP, TELNET, and PING. Upon completion, students should be able to use the protocols as they pertain to the Internet as well as setup and maintain these protocols.

ITN 160 Principles of Web Design 2-2-3
Prerequisite: ITN 140
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.

ITN 170 Intro to Internet Databases 2-2-3
This is the first of two courses introducing the use of databases to store, retrieve and query data through HTML forms. Topics include database design for Internet database, use of ODBC-compliant databases. Upon completion, students should be able to create and maintain a database that will collect, query and report on data via an HTML form.

ITN 210 Advanced Web Graphics 2-2-3
Prerequisites: ITN 110
This course is the second of two courses covering web graphics. Topics include graphics acquisition using scanners and digital cameras, graphics optimization, use of masks, advanced special effects, GIF animation, and other related topics. Upon completion, students should be able to create graphics that are optimized for size and graphic file type, properly converted from digitized sources and create useful animated graphics.

ITN 220 Adv Internet Multimedia 2-2-3
Prerequisites: ITN 120
This is the second of two courses covering Internet multimedia. Topics include use of advanced Internet multimedia applications. Upon completion, students should be able to create interactive Internet multimedia presentations.

ITN 240 Internet Security 2-2-3
This course covers security issues related to Internet services. Topics include the operating system and Internet service security mechanisms. Upon completion, students should be able to implement security procedures for operating system level and server level alerts.

ITN 260 Intro to E-Commerce 2-2-3
This course introduces the concepts and tools to implement electronic commerce via the Internet. Topics include application and server software selection, security transactions, used and verification of credit cards, publishing of catalogs, and site administration. Upon completion, students should be able to set up a working e-commerce Internet web-site.

ITN 289 Internet Technologies Project 1-4-3
This course provides an opportunity to complete a significant Internet technologies 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 an Internet project from the definition phase through implementation.

JOURNALISM

JOU 113 Prin. of Comm. Journ. 3-0-3

Prerequisite: None

This course introduces the field of community journalism and other print media. Emphasis is placed on American mass media and the specific role and responsibility of community newspapers. Upon completion, students should be able to demonstrate knowledge of regulations, organizational structure, historical development, and ongoing operation of community newspapers and related industries.

JOU 120 Journalism/Theory & Production 2-2-3

Prerequisite: ENG 111

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.

JOU 214 Communications Law/Ethics 3-0-3

Prerequisite: None

This course introduces the judicial, legislative, and administrative policies pertinent to the ethical and legal operation of newspapers and other print media. Emphasis is placed upon First Amendment protection, libel, privacy, free press-fair trial, judicial controls, government regulations, copyright, and ethical standards and practices. Upon completion, students should have an understanding and appreciation of these issues and the ability to analyze the important legal and ethical issues involved.

JOU 215 News Gathering/Reporting 2-2-3

Prerequisite: ENG 111

This course introduces the basic techniques of news gathering and reporting. Emphasis is placed on gathering information through interviews, official documents, public opinion polls, news releases, and other electronic sources. Upon completion, students should be able to explain and demonstrate the various methods of research for news gathering and reporting.

JOU 216 Writing for Mass Media 2-2-3

Prerequisite: ENG 111

This course is an introduction of news writing for newspapers and other print media including the techniques of news gathering, reporting, and interviewing. Emphasis is placed on basic methods of gathering information, conducting interviews, organizing a story, writing leads, writing clear, concise copy and upon developing research skills. Upon completion, students should be able to write clear, concise, accurate, complete, balanced and readable news stories according to guidelines set by industry standards.

JOU 217 Feature/Editorial Writing 2-2-3

Prerequisite: ENG 111

This course covers the basics of persuasive writing for community newspapers and other print media. Emphasis is placed on writing features, reviews, and editorials, including audience analysis, appropriate language, effective supporting details, completeness, and accuracy. Upon completion, students will be able to write effective feature stories, reviews, and editorials.

JOU 218 Basic Photojournalism 2-2-3

Prerequisite: None

This course introduces the principles of techniques of photojournalism for use in print and other journalistic mass media. Emphasis is placed on standard and digital photography, shooting events or pre-planned photographs, image aesthetics/color theory, digital photo imaging methods, and evaluation of pictorial effects. Upon completion, students should be able to use standard and digital cameras and to employ digital image processing to create photojournalistic content.

JOU 219 News Editing 2-2-3

Prerequisite: ENG 111

This course provides a comprehensive study of editing skills needed for success in newspaper journalism and other print media. Emphasis is placed on grammar, punctuation, sentence structure, proofreading, editing, graphics, and pagination. Upon completion, students will be prepared to use standard journalism reference materials to compose and edit news copy.

LASERS AND OPTICS

C-L-SHC

LEO 111 Lasers and Applications

1-3-2

Corequisites: MAT 122

This course covers the basic principles of laser operations and applications with a particular emphasis on laser safety. Topics include the properties of laser light, laser components, laser beam characteristics, and laser safety. Upon completion, students should be able to make measurements of laser beam characteristics and conduct a safety audit and hazards analysis of a laser facility.

LEO 211 Photonics Technology

5-6-7

Prerequisites: LEO 111, ELN 132, and ELN 133

This course covers optical theory, optical equipment, optical components, and laser systems. Topics include generation and control of light using optical components such as lasers, lenses, mirrors, diffraction gratings, filters, and polarizer's. Upon completion, students should be able to construct, analyze, verify, and troubleshoot optical systems using appropriate techniques and equipment.

LEO 212 Photonics Applications

3-3-4

Corequisites: LEO 111

This course provides knowledge and skills related to emerging photonics applications in North Carolina industry. Topics include applications such as materials processing, bar code scanning, surgical applications, optical data storage, and optical computers. Upon completion, students should be able to describe and analyze the critical issues attendant to a variety of photonics applications.

LEO 221 PC Interface

3-3-4

Prerequisites: ELN 133

This course covers the interaction of hardware and software in PC-based control systems. Topics include programming, I/O circuits, A/D and D/A converters, communications, and other related applications. Upon completion, students should be able to construct, program, verify, analyze, and troubleshoot both hardware and software for a basic PC-interface.

LEO 222 Photonics Apps Project

1-3-2

Prerequisites: ELN 132 and LEO 211

This course provides a structured approach to an applications-oriented photonics project. Emphasis is placed on selecting, planning, implementing, testing, and presenting the project. Upon completion, students should be able to present and demonstrate their photonics project.

LEO 223 Fiber Optics

3-3-4

Prerequisites: ELN 132 and ELN 133

This course covers the principles of fiber optics, particularly as a communications transmission medium. Topics include digital communications systems, optical fibers, cables, splices, connectors, optical transmitters and receivers, installation techniques, component testing, and system testing. Upon completion, students should be able to splice and connectorize a fiber, make measurements of fiber optic systems, and test and troubleshoot fiber optic components and systems.

LEGAL EDUCATION

C-L-SHC

LEX 110 Intro to Paralegal Study

2-0-2

This course introduces the paralegal profession and the legal system, and an emphasis is placed on the role of professional and legal ethics. Topics include regulations, ethics, case analysis, legal reasoning, career opportunities, professional organizations, terminology and other related topics. Upon completion, students should be able to explain the role of a paralegal and identify the skills, knowledge, and ethics required of paralegals.

LEX 120 Legal Research/Writing I 2-2-3

This course introduces the techniques of legal research and writing. Emphasis is placed on locating, analyzing, applying, and updating sources of law; effective legal writing, including proper citation; and the use of electronic research methods. Upon completion, students should be able to perform legal research and writing assignments using techniques covered in the course.

LEX 121 Legal Research/Writing II 2-2-3

Prerequisites: LEX 120

This course covers advanced topics in legal research and writing. Topics include more complex legal issues and assignments involving preparation of legal memos, briefs, and other documents and the advanced use of electronic research methods. Upon completion, students should be able to perform legal research and writing assignments using techniques covered in the course.

LEX 130 Civil Injuries 3-0-3

This course covers traditional tort concepts and the evolving body of individual rights created by statute. Topics include intentional and non-intentional torts with emphasis on negligence, strict liability, civil rights, workplace and environmental liability, remedies, and damages. Upon completion, students should be able to recognize, explain, and evaluate elements of civil injuries and related defenses.

LEX 140 Civil Litigation I 3-0-3

This course introduces the structure of the legal system and the rules governing civil litigation. Topics include jurisdiction, state and federal rules of civil procedure and evidence. Upon completion, students should be able to assist an attorney in the preparation of pleadings and motions.

LEX 141 Civil Litigation II 2-2-3

Prerequisites: LEX 140

This course covers advanced topics in the civil litigation process. Topics include motions, discovery, and trial and appellate procedures. Upon completion, students should be able to assist an attorney in preparing and organizing documents for trial, settlement and post-trial practice.

LEX 150 Commercial Law I 2-2-3

This course covers legally enforceable agreements, forms of organization, and selected portions of the Uniform Commercial Code. Topics include drafting and enforcement of contracts, leases, and related documents and selection and implementation of business organization forms, sales, and commercial papers. Upon completion, students should be able to apply the elements of a contract, prepare various business documents, and understand the role of commercial paper.

LEX 160 Criminal Law & Procedure 2-2-3

This course introduces substantive criminal law and procedural rights of the accused. Topics include elements of state/federal crimes, defenses, constitutional issues, pre-trial and trial process, and other related topics. Upon completion, students should be able to explain elements of specific crimes and assist an attorney in preparing a criminal case.

LEX 170 Administrative Law 2-0-2

This course covers the scope, authority, and regulatory operations of various federal, state, and local administrative agencies. Topics include social security, worker's compensation, unemployment, zoning, and other related topics. Upon completion,

students should be able to research sources of administrative law, investigate, and assist in representation of clients before administrative agencies.

LEX 180 Case Analysis & Reasoning 1-2-2

Corequisites: LEX 120

This course covers the techniques of reading and applying legal opinions and the skills of case analysis. Emphasis is placed on the components of opinions and on types of legal writing. Upon completion, students should be able to read, analyze, and brief opinions and prepare legal memoranda, briefs, and other legal documents.

LEX 210 Real Property I 3-0-3

This course introduces the study of real property law. Topics include the distinction between real and personal property, various estates, mechanics of conveyance and encumbrance, recordation, special proceedings, and other related topics. Upon completion, students should be able to identify estates, forms of deeds, requirements for recording, and procedures to enforce rights to real property.

LEX 211 Real Property II 1-4-3

Prerequisites: LEX 210

This course continues the study of real property law relating to title examination and preparation of closing documents. Topics include use of courthouse and other public records in title examination and preparation of documents required in real estate transactions and closings. Upon completion, students should be able to plot/draft a description, perform complete title examination, draft closing documents including title insurance forms, and prepare disbursement reconciliation.

LEX 220 Corporate Law 2-0-2

This course covers the legal aspects of forming, operating, and maintaining a business. Emphasis is placed on the business corporation with additional coverage of sole proprietorships and partnerships. Upon completion, students should be able to draft basic partnership and corporate documents and file these documents as required.

LEX 240 Family Law \ 3-0-3

This course covers laws governing domestic relations. Topics include marriage, separation, divorce, child custody, support, property division, adoption, domestic violence, and other related topics. Upon completion, students should be able to interview clients, gather information, and draft documents related to family law.

LEX 250 Wills, Estates, & Trusts \2-2-3

This course covers various types of wills, trusts, probate, estate administration, and intestacy. Topics include types of wills and execution requirements, caveats and dissents, intestate succession, inventories and accountings, distribution and settlement, and other related topics. Upon completion, students should be able to draft simple wills, prepare estate forms, understand administration of estates including taxation, and explain terms regarding trusts.

LEX 260 Bankruptcy & Collections \2-0-2

This course provides an overview of the laws of bankruptcy and the rights of creditors and debtors. Topics include bankruptcy procedures and estate management, attachment, claim and delivery, repossession, foreclosure, collection, garnishment, and post-judgment collection procedure. Upon completion, students should be able to prepare and file bankruptcy forms, collection letters, statutory liens, and collection of judgments.

LEX 271 Law Office Writing 1-2-2

This course covers the basics of writing for the law office including the drafting of general correspondence, the briefing of cases, and the preparation of settlement brochures. Emphasis is placed on legal vocabulary in the context of letter writing, briefing judicial opinions, and the preparation of the settlement brochure. Upon

completion, students should be able to draft letters to clients, opposing counsel, government entities, and insurance companies and prepare the settlement brochure.

LEX 280 Ethics & Professionalism 2-0-2

This course reinforces legal ethics and the role of the paralegal in a professional work environment. Topics include a review of ethics, employment opportunities, and search techniques; paralegal certification; and other related topics. Upon completion, students should be able to understand the paralegal's role in the ethical practice of law.

LEX 291 Selected Topics in Awareness of American Legal System 0-2-1

This course provides an opportunity to explore areas of current interest in the American Legal System. Emphasis is placed on the American Legal System. Upon completion, the students should be able to demonstrate an understanding of the American Legal System.

LIBRARY AND INFORMATION TECHNOLOGY

C-L-SHC

LIB 110 Introduction to Libraries 3-0-3

This course includes the history and future of libraries, a survey of library types, and an overview of library organization, services, and community relationships. Emphasis is placed on societal roles of the library, literary and intellectual freedom, comparisons and contrasts of library types, and the roles of professional organizations. Upon completion, students should be able to discuss literacy and intellectual freedom, describe library organization and compare types of libraries, their materials, and services.

LIB 111 Lib. Info. Resources/Svcs 2-2-3

This course provides introductory skills for selecting and using general and specialized information resources in print and electronic formats and related copyright issues. Emphasis is placed on selection tools, print and electronic censorship, core collection materials in various disciplines, compiling bibliographies and interpreting and referring reference questions. Upon completion, students should be able to use numerous resources to answer directional and factual questions and to decide when to refer difficult reference questions.

LIB 112 Library Coll. Dev./Acq. 2-2-3

This course covers library collection development and acquisitions policies and procedures. Emphasis is placed on evaluating mission statements, needs assessment studies, purchasing materials using selection criteria and tools, and related collection development and acquisitions activities. Upon completion, students should be able to evaluate mission statements, conduct needs assessments using selected criteria, and complete related collection development and acquisitions activities.

LIB 113 Lib. Cataloging & Class. 2-2-3

This course covers standards and procedures for copy cataloging and types of classification systems. Emphasis is placed on selecting bibliographic records, maintaining and using authority records and the importance of the catalog to the library mission. Upon completion, students should be able to select the appropriate MARC record, search OCLC, and demonstrate an understanding of authority files.

LIB 114 Lib. Public Serv. Oper. 2-2-3

This course covers effective library operations, effective patron service, automated circulation systems, statistics and reports, reserves, and security. Emphasis is placed on public relations, problem solving, communication skills, circulation systems and policies, interlibrary loan procedures, shelving and display options. Upon completion, students should be able to deal with diverse patrons, conduct library orientations, compile reports from statistical data, initiate interlibrary loans, and prepare displays.

LIB 210 Electronic Lib. Databases 2-2-3

Prerequisites: LIB 111 and CIS 172

This course covers developing search strategies for using electronic resources in the humanities, social and behavioral sciences, physical and life sciences, and health-related fields. Emphasis is placed on the reference interview, teaching Boolean logic and other search strategies, retrieving and evaluating information, and citing it in APA/MLA style. Upon completion, students should be able to describe methods of information retrieval, use search strategies to teach basic research using databases, and cite resources appropriately.

LIB 211 Library Program Develop. 3-0-3

Prerequisites: LIB 114

This course covers the purposes of library programs and various methods used for program design, promotion, and delivery. Topics include serving special populations, through such activities as storytelling, book mobiles, puppets, book clubs, book reviews, reading aloud, workshops, and special collections. Upon completion, students should be able to promote special collections, prepare library programs, and demonstrate an understanding of the relationship between audience and program.

LIB 212 Lib. Services/Spec. Needs 3-0-3

This course covers basic information for serving library users with special needs. Emphasis is placed on ADA guidelines, the location and use of appropriate resources, and accessibility options. Upon completion, students should be able to access appropriate information about ADA guidelines, locate and use appropriate resources, and be aware of accessibility options.

LIB 213 Cataloging Nonprint Mat. 2-2-3

Prerequisites: LIB 113

This course continues the study and application of information cataloging practices. Emphasis is placed on cataloging information resources, updating bibliographic materials in databases, an overview of Dublin Core, and nonprint materials cataloging practices. Upon completion, students should be able to catalog nonprint and electronic resources.

LIB 214 Lib. Services/Children 3-0-3

This course covers the location, evaluation, acquisition, and presentation of children's materials in libraries. Emphasis is placed on locating, evaluating, acquiring, and presenting children's literature, video and audio materials, and web sites through programs, displays, talks and instruction. Upon completion, students should be able to locate, evaluate, acquire, and present a wide range of children's materials to library users.

MACHINING

C-L-SHC

MAC 111 Machining Technology I 2-12-6

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.

MAC 112 Machining Technology II 2-12-6

Prerequisites: MAC 111

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.

MAC 113 Machining Technology III 2-12-6

Prerequisites: MAC 112

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

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.

MAC 226 CNC EDM Machining 1-3-2

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

MAC 241 Jigs & Fixtures I 2-6-4

Prerequisites: MAC 112

This course introduces the application and use of jigs and fixtures. Emphasis is placed on design and manufacture of simple jigs and fixtures. Upon completion, students should be able to design and build simple jigs and fixtures.

MAC 243 Die Making I 2-6-4

Prerequisites: MAC 112

This course introduces the principles and applications of die making. Topics include types, construction, and application of dies. Upon completion, students should be able to design and build simple dies.

MAC 244 Die Making II 1-9-4

Prerequisites: MAC 243

This course provides continued study in the application and use of dies. Emphasis is placed on the design and manufacturing of complex dies. Upon completion, students should be able to design and build complex dies. This course is a unique concentration requirement of the Tool, Die, and Mold Making concentration in the Machining Technology program.

MAC 245 Mold Construction I 2-6-4

Prerequisites: MAC 112

This course introduces the principles of mold making. Topics include types, construction, and application of molds. Upon completion, students should be able to design and build simple molds.

MAC 246 Mold Construction II 1-9-4

Prerequisites: MAC 245

This course provides continued study in the application and use of molds. Emphasis is placed on design and manufacturing of complex molds. Upon completion, students should be able to design and build complex molds. This course is a unique concentration requirement of the Tool, Die, and Mold Making concentration in the Machining Technology program.

MASONRY

C-L-SHC

MAS 110 Masonry I 5-15-10

This course introduces the basic principles of construction with masonry units. Topics include history of the masonry field, safety practices, blueprint reading, and principles of laying masonry units to the line using tools, equipment, and materials. Upon completion, students should be able to demonstrate knowledge of safety practices, blueprint reading, and basic tool use; identify materials; operate machinery; and lay masonry units.

MAS 120 Masonry II 5-15-10
This course provides practical experience in cost estimating, foundations, bonding variations, expansion joints, wall ties, building codes, and other related topics. Emphasis is placed on material estimation, layout of footing, construction of walls, reinforcements, scaffolding, insulating, and building codes. Upon completion, students should be able to determine cost, plan sound building procedures, construct masonry projects, and apply building codes.

MAS 130 Masonry III 6-6-8
This course provides fundamentals and skills used in masonry construction. Emphasis is placed on building chimneys, fireplaces, columns, concrete masonry, and arches; using materials economically; satisfying needs and expectations; and proper work ethics. Upon completion, students should be able to build structures covered in the course, demonstrate increased speed and accuracy, and make smooth transitions between construction stages.

MAS 140 Intro to Masonry 1-2-2
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

MAT 050 Basic Math Skills C-L-SHC
3-2-4
Prerequisites: None
Corequisites: None
This course is designed to strengthen basic math skills. Topics include properties, rounding, estimating, comparing, converting, and computing whole numbers, fractions, and decimals. Upon completion, students should be able to perform basic computations and solve relevant mathematical problems.

MAT 060 Essential Mathematics 3-2-4
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 CPT arithmetic score of 57
Corequisites: RED 080 or ENG 085 or approved CPT English or reading scores
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 CPT arithmetic score of 57 and algebra score of 38
Corequisites: RED 080 or ENG 085 or approved CPT English or reading 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.

MAT 101 Applied Mathematics I 2-2-3
Prerequisites: CPT arithmetic score of 31, or ACT score of 18, or SAT mathematics score of 450, or successful completion of developmental requirements
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.

MAT 110 Mathematical Measurement 2-2-3
Prerequisites: CPT arithmetic score of 57 and algebra score of 38, or ACT score of 18, or SAT mathematics score of 450, or successful completion of developmental requirements
This course provides an activity-based approach to utilizing, interpreting, and communicating data in a variety of measurement systems. Topics include accuracy, precision, conversion, and estimation within metric, apothecary, and avoirdupois systems; ratio and proportion; measures of central tendency and dispersion; and charting of data. Upon completion, students should be able to apply proper techniques to gathering, recording, manipulating, analyzing, and communicating data.

MAT 115 Mathematical Models 2-2-3
Prerequisites: CPT arithmetic score of 57 and algebra score of 38, or ACT score of 18, or SAT mathematics score of 450, or successful completion of developmental requirements
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 groups, probability, sampling techniques, scatter plots, and modeling. Upon completion, students should be able to solve practical problems, reason and communicate with mathematics, and work confidently, collaboratively, and independently.

MAT 120 Geometry and Trigonometry 2-2-3
Prerequisites: CPT arithmetic score of 57 and algebra score of 38, or ACT score of 18, or SAT mathematics score of 450, or successful completion of developmental requirements
This course introduces the concepts of plane 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, right triangle trigonometry, and oblique triangles. Upon completion, students should be able to solve applied problems both independently and collaboratively using technology.

MAT 121 Algebra/Trigonometry I 2-2-3
Prerequisites: CPT arithmetic score of 57 and algebra score of 38, or ACT score of 18, or SAT mathematics score of 450, or successful completion of developmental requirements
This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include simplification, evaluation, and solving of algebraic and radical functions; complex numbers; right triangle trigonometry; systems of equations; and the use of technology. Upon completion, students should be able to demonstrate an understanding of the use of mathematics and technology to solve problems and analyze and communicate results.

MAT 122 Algebra/Trigonometry II 2-2-3
Prerequisites: MAT 121
This course extends the concepts covered in MAT 121 to include additional topics in algebra, function analysis, and trigonometry. Topics include exponential and logarithmic functions, translation and scaling of functions, Sine Law, Cosine Law, vectors and statistics. Upon completion, students should be able to demonstrate an understanding of the use of technology to solve problems and to analyze and communicate results.

MAT 140 Survey of Mathematics 3-0-3
Prerequisites: CPT arithmetic score of 57 and algebra score of 38, or ACT score of 18, or SAT mathematics score of 450, or successful completion of developmental requirements
This course provides an introduction in a non-technical setting to selected topics in mathematics. Topics may include, but are not limited to, sets, logic, probability, statistics, matrices, mathematical systems, geometry, topology, mathematics of finance, and modeling. Upon completion, students should be able to understand a variety of mathematical applications, think logically, and be able to work collaboratively and independently. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

MAT 151 Statistics I 3-0-3
Prerequisites: CPT arithmetic score of 57 and algebra score of 70, or ACT score of 18, or SAT mathematics score of 450, or successful completion of developmental requirements
This course provides a project-based approach to the study of basic probability, descriptive and inferential statistics, and decision making. Emphasis is placed on measures of central tendency and dispersion, correlation, regression, discrete and continuous probability distributions, quality control, population parameter estimation, and hypothesis testing. Upon completion, students should be able to describe important characteristics of a set of data and draw inferences about a population from sample data. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

MAT 161 College Algebra 3-0-3
Prerequisites: CPT arithmetic score of 57 and algebra score of 70, or ACT score of 18, or SAT mathematics score of 450, or successful completion of developmental requirements
This course provides an integrated technological approach to algebraic topics used in problem solving. Emphasis is placed on applications involving equations and inequalities; polynomial, rational, exponential and logarithmic functions; and graphing and data analysis/modeling. 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 for the Associate in Arts Degree.

MAT 162 College Trigonometry 3-0-3
Prerequisites: MAT 161
This course provides an integrated technological approach to trigonometric applications used in problem solving. Emphasis is placed on applications involving 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 for the Associate in Arts Degree.

MAT 171 Precalculus Algebra 3-0-3
Prerequisites: MAT 080 or MAT 090
This is the first of two courses designed to emphasize topics, which are fundamental to the study of calculus. Emphasis is placed on equations and inequalities, functions, (linear, polynomial, rational), systems of equations and inequalities, and parametric equations. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and predictions. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

MAT 172 Precalculus Trigonometry 3-0-3
Prerequisites: MAT 171
This is the second of two courses designed to emphasize topics which are fundamental to the study of calculus. Emphasis is placed on properties and applications of transcendental functions and their graphs,

right and oblique triangle trigonometry, conic sections, and vectors, and polar coordinates. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

MAT 175 Precalculus 4-0-4

Prerequisites: MAT 161 or permission of instructor

This course provides an intense study of the topics which are fundamental to the study of calculus. Emphasis is placed on functions and their graphs with special attention to polynomial, rational, exponential, logarithmic and trigonometric functions, and analytic trigonometry. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

MAT 210 Logic 3-0-3

Prerequisites: MAT 161

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 exercises. Upon completion, students should be able to analyze data based on formal logic or ordinary language discourse. exponential and logarithmic functions. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MAT 263 Brief Calculus 3-0-3

Prerequisites: MAT 161

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 an 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 requirement in natural sciences/mathematics.

MAT 271 Calculus I 3-2-4

Prerequisites: MAT 172 or MAT 175

This course covers in depth the differential calculus portion of a three-course calculus sequence. Topics include limits, continuity, derivatives, and integrals of algebraic and transcendental functions of one variable, with applications. Upon completion, students should be able to apply differentiation and integration techniques to algebraic and transcendental functions. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

MAT 272 Calculus II 3-2-4

Prerequisites: MAT 271

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.

MAT 273 Calculus III 3-2-4

Prerequisites: MAT 272

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. 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.

MAT 280 Linear Algebra 3-0-3

Prerequisites: MAT 271

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 theoretical concepts and appropriate use of linear algebra models to solve application problems. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MAT 285 Differential Equations 3-0-3

Prerequisites: MAT 272

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. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

Motorcycle Mechanics

C-L-SHC

MCM 101 Intro to Motorcycle Mech 3-8-7

This course covers the proper nomenclature of parts and components of motorcycles, ATVs, and personal watercraft. Topics include theory of operation, differences of operation, preventive maintenance, and operating principles involved in servicing and repairing motorcycles, ATVs, and personal watercraft. Upon completion, students should be able to perform basic inspection, diagnosis, repair, and/or adjustment of motorcycles, ATVs, and personal watercraft. This is a diploma-level course.

MCM 102 Motorcycle Engines 2-9-5

This course covers the construction and operation of components in internal combustion engines used in modern motorcycles. Topics include two- and four-cycle engines, power trains, and final drive systems. Upon completion, students should be able to disassemble, inspect, measure, reassemble, and operationally test two- and four-cycle motorcycle engines. This is a diploma-level course.

MCM 103 Motorcycle Elect Systems 2-8-6

This course introduces starting, ignition, charging, and electrical accessory systems and their components and how they function in modern motorcycles. Topics include wiring diagrams, batteries, AC generators, rectifiers, voltage regulators, and diodes as well as points-coil, capacitor discharge, and electronic ignition systems. Upon completion, students should be able to diagnose and repair various starting, ignition, charging, and electrical accessory systems. This is a diploma-level course.

MCM 104 Motorcycle Fuel Systems 2-6-5

This course introduces various types of fuels and fuel systems used in motorcycle internal combustion engines. Emphasis is placed on the theory and principles of carburetion and fuel injection. Upon completion, students should be able to service, disassemble, inspect, reassemble, and adjust to manufacturers' specifications the components of various fuel systems. This is a diploma-level course.

MCM 105 Motorcycle Chassis 1-6-3
 This course covers chassis adjustments, components, and types and uses of frames and suspensions. Emphasis is placed on proper and safe use of tools and equipment in servicing and maintaining motorcycle chassis. Upon completion, students should be able to service and repair motorcycle chassis systems and suspension components. This is a diploma-level course.

MCM 106 Troubleshooting 2-6-4
 This course covers shop procedures for fast and accurate diagnosis of problems in the electrical, mechanical, and fuel systems of motorcycles. Emphasis is placed on developing a logical sequence of diagnostic procedures. Upon completion, students should be able to diagnose problems in the electrical, mechanical, and fuel systems of motorcycles. This is a diploma-level course.

Mechanical

C-L-SHC

MEC 110 Intro to CAD/CAM 1-2-2
 This course introduces CAD/CAM. Emphasis is placed on transferring part geometry from CAD to CAM for the development of a CNC-ready program. Upon completion, students should be able to use CAD/CAM software to produce a CNC program.

MEC 111 Machine Processes I 1-4-3
 This course introduces safety, hand tools, machine processes, measuring instruments, and the operation of machine shop equipment. Topics include safety, measuring tools, and the basic setup and operation of lathes, milling machines, drill presses, and saws. Upon completion, students should be able to manufacture a simple part to a specified tolerance.

MEC 130 Mechanisms 2-2-3
 This course introduces the purpose and action of various mechanical devices. Topics include cams, cables, gear trains, differentials, screws, belts, pulleys, shafts, levers, lubricants, and other devices used to transmit or control signals. Upon completion, students should be able to analyze, maintain, and troubleshoot the components of mechanical systems.

MEC 141 Intro Mfg Processes 2-2-3
 This course covers the properties and characteristics of manufacturing materials and the processes used to form them. Emphasis is placed on manufacturing materials, heat-treating processes, and manufacturing processes. Upon completion, students should be able to identify physical characteristics of materials and describe processes used to manufacture a part.

MEC 161 Manufacturing Processes I 3-0-3
 Prerequisites: None
 Corequisites: None
 This course provides the fundamental principles of value-added processing of materials into usable forms for the customer. Topics include material properties and traditional and non-traditional manufacturing processes. Upon completion, students should be able to specify appropriate manufacturing processing for common engineering materials.

MEC 231 Comp-Aided Manufact I 1-4-3
 This course introduces computer-aided manufacturing (CAM) applications and concepts. Emphasis is placed on developing/defining part geometry and the processing of information needed to manufacture parts. Upon completion, students should be able to demonstrate skills in defining part geometry, program development, and code generation using CAM software.

MEC 232 Comp-Aided Manufact. II 1-4-3

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.

MEC 250 Static's & Strength of Mathematics 4-3-5

Prerequisites: PHY 131 or PHY 151

This course covers the concepts and principles of static's 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.

Medical Assisting

C-L-SHC

MED 110 Orientation to Med Assist 1-0-1

This course covers the history of medicine and the role of the medical assistant in the health care setting. Emphasis is placed on professionalism, communication, attitude, behaviors, and duties in the medical environment. Upon completion, students should be able to project a positive attitude and promote the profession of medical assisting.

MED 116 Introduction to A & P 3-2-4

This course introduces basic anatomy and physiology. Emphasis is placed on the relationship between body structure and function and the procedures common to health care. Upon completion, students should be able to identify body system components and functions relating this knowledge to the delivery of health care.

MED 118 Medical Law and Ethics 2-0-2

This course covers legal relationships of physicians and patients, contractual agreements, professional liability, malpractice, medical practice acts, informed consent, and bioethical issues. Emphasis is placed on legal terms, professional attitudes, and the principles and basic concepts of ethics and laws involved in providing medical services. Upon completion, students should be able to meet the legal and ethical responsibilities of a multi-skilled health professional.

MED 121 Medical Terminology I 3-0-3

This course introduces prefixes, suffixes, and word roots used in the language of medicine. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. Upon completion, students should be able to 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

This course is the second in a series of medical terminology courses. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. Upon completion, students should be able to pronounce, spell, and define medical terms as related to selected body systems and their pathological disorders.

MED 130 Admin Office Proc I 1-2-2

Prerequisites: Enrollment in the Medical Assisting program or permission of instructor, CPT arithmetic score of 57 (MAT 060)

This course introduces medical office administrative procedures. Topics include appointment processing, written and oral communications, medical records, patient orientation, and safety. Upon completion, students should be able to perform basic administrative skills within the medical environment.

MED 131 Admin Office Proc II 1-2-2

Prerequisites: MED 130

This course provides medical office procedures in both economic and management skills. Topics include physical plant maintenance, equipment and supplies, liability coverage, medical economics, and introductory insurance procedures. Upon completion, students should be able to manage the economics of the medical office and supervise personnel.

MED 134 Medical Transcription 2-2-3

Prerequisites: MED 121, MED 122, CIS 111

This course provides the basic knowledge, understanding, and skills required to complete medical reports and transcribe medical dictation. Emphasis is placed on correct punctuation, capitalization, and spelling. Upon completion, students should be able to demonstrate competence in medical transcription.

MED 138 Infection/Hazard Control 2-0-0-2

This course introduces the student to infection and hazard control procedures necessary for the healthcare worker. Topics include introduction to Microbiology, Practical Infection Control, Sterilization and Monitoring, Chemical Disinfectants, Aseptic Technique, Infectious Diseases, OSHA Standards, and Applicable North Carolina Laws. Upon completion, students should be able to: understand infectious diseases, disease transmission, infection control procedures, biohazard management, OSHA Standards, and applicable North Carolina laws.

MED 140 Exam Room Procedures I 3-4-5

Prerequisites: Enrollment in the Medical Assisting program CIS 111, MAT 110, MED 110, MED 116, MED 118, MED 121, MED 130, MED 138

This course provides instruction in clinical examining room procedures. Topics include asepsis, infection control, assisting with exams and treatment, patient education, preparation and administration of medications, EKG, vital signs, and medical emergencies. Upon completion, students should be able to demonstrate competence in exam room procedures.

MED 150 Laboratory Procedures I 3-4-5

Prerequisites: Enrollment in the Medical Assisting program CIS 111, MAT 110, MED 110, MED 116, MED 118, MED 121, MED 130, MED 138

This course provides instruction in basic lab techniques used by the medical assistant. Topics include lab safety, quality control, collecting and processing specimens, performing selective tests, phlebotomy, screening and follow-up of test results, and OSHA/CLIA regulations. Upon completion, students should be able to perform basic lab tests/skills based on course topics.

MED 230 Admin Office Proc III 1-2-0-2

Prerequisites: MED 131, MED 134, MED 260 or CMA certification, BIO 163, ENG 111, PSY 110 and CIS 111

This course provides advanced medical office administrative procedures. Emphasis is placed on management skills including personnel supervision, practice management, public relations, and insurance coding. Upon completion, students should be able to exhibit advanced managerial medical assisting skills.

MED 232 Medical Insurance Coding 1-3-2

Prerequisite: MED 122, Med 131

This course is designed to develop coding skills introduced in MED 131. Emphasis is placed on advanced diagnostic and procedural coding in the outpatient facility. Upon completion, students should be able to demonstrate proficiency in coding for reimbursement.

MED 240 Exam Room Procedures II 3- 4-0-5

Prerequisites: MED*140

Corequisites: None

This course is designed to expand and build upon skills presented in MED 140. Emphasis is placed on advanced exam room procedures. Upon completion students should be able to demonstrate enhanced competence in selected exam room procedures.

MED 260 MED Clinical Externship 0-15-5
Prerequisites: Enrollment in the Medical Assisting Program; Adult, Infant, and Child CPR Certification for Healthcare Providers; CIS 111, MAT 110, MED 110, MED 116, MED 118, MED 122, MED 130, MED 138, Eng 110 or ENG 111/111A, MED 140, MED 150, PSY 110
Corequisites: MED 240
This course provides the opportunity to apply clinical, laboratory, and administrative skills in a medical facility. Emphasis is placed on enhancing competence in clinical and administrative skills necessary for comprehensive patient care and strengthening professional communications and interactions. Upon completion, students should be able to function as an entry-level health care professional. The student will not receive any monetary compensation for this externship.

MED 264 Med Assisting Overview 2-0-2
Prerequisite: MED 134, MED 260 or CMA certification, BIO 163, ENG 111, PSY 110 and CIS 111
This course provides an overview of the complete medical assisting curriculum. Emphasis is placed on all facets of medical assisting pertinent to administrative, laboratory, and clinical procedures performed in the medical environment. Upon completion, students should be able to demonstrate competence in the areas covered on the national certification examination for medical assistants.

MED 270 Symptomatology 2-2-3
Prerequisite: MED 134, MED 260 or CMA certification, BIO 163, ENG 111, PSY 110 and CIS 111, or special permission of instructor
This course covers the study of disease symptoms and the appropriate actions taken by medical assistants in a medical facility in relation to these symptoms. Emphasis is placed on interviewing skills and appropriate triage, preparing patients for procedures, and screening test results. Upon completion, students should be able to recognize how certain symptoms relate to specific diseases, recognize emergency situations, and take appropriate actions.

MED 272 Drug Therapy 3-0-3
Prerequisite: MED 134, MED 260 or CMA certification, BIO 163, ENG 111, PSY 110 and CIS 111, or special permission of instructor
This course focuses on major drug groups, including their side effects, interactions, methods of administration, and proper documentation. Emphasis is placed on the theory of drug administration. Upon completion, students should be able to identify, spell, recognize side effects of, and document the most commonly used medications in a physician's office.

MED 274 Diet Therapy/Nutrition 3-0-3
Prerequisite: , MED 134, MED 260, or CMA certification, BIO 163, ENG 111, PSY 110 and CIS 111, or special permission of instructor
This course introduces the basic principles of nutrition as they relate to health and disease. Topics include basic nutrients, physiology, dietary deficiencies, weight management, and therapeutic nutrition in wellness and disease. Upon completion, students should be able to interpret clinical and dietary data and provide patient counseling and education.

MED 276 Patient Education 1-2-2
Prerequisite: MED 134, MED 260, or CMA certification, BIO 163, ENG 111, PSY 110 and CIS 111, or special permission of instructor
This course is designed to provide communication skills, basic education principles, and knowledge of available community resources and to apply this knowledge to the clinical setting. Emphasis is placed on identifying appropriate community resources, developing patient education materials, and perfecting written

and oral communication skills. Upon completion, students should be able to instruct, communicate effectively, and act as a liaison between the patient and community agencies.

Marketing

C-L-SHC

MKT 120

Principles of Marketing

3-0-3

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 121

Retailing

3-0-3

This course examines the role of retailing in the economy. Topics include the development of present retail structure, functions performed, effective operations, and managerial problems resulting from current economic and social trends. Upon completion, students should be able to demonstrate an understanding of the basic principles of retailing.

MKT 122

Visual Merchandising

3-0-3

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

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. This course is a unique concentration requirement of the Marketing and Retailing concentration in the Business Administration program.

MKT 125

Buying and Merchandising

3-0-3

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.

MKT 220

Adv. and Sales Promotion

3-0-3

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. This course is a unique concentration requirement of the Marketing and Retailing concentration in the Business Administration program.

MKT 221

Consumer Behavior

3-0-3

This course is designed to describe consumer behavior as applied to the exchange processes involved in acquiring, consuming, and disposing of goods and services. Topics include an analysis of basic and environmental determinants of consumer behavior with emphasis on the decision-making process. Upon completion, students should be able to analyze concepts related to the study of the individual consumer.

MKT 223

Customer Service

3-0-3

This course stresses the importance of customer relations in the business world. Emphasis is placed on learning how to respond to complex customer requirements and to efficiently handle stressful situations. Upon completion, students should be able to demonstrate the ability to handle customer relations.

MKT 225 Marketing Research 3-0-3

Prerequisites: MKT 120

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.

MKT 227 Marketing Applications 3-0-3

This course extends the study of diverse marketing strategies. Emphasis is placed on case studies and small-group projects involving research or planning. Upon completion, students should be able to effectively participate in the formulation of a marketing strategy. This course is a unique concentration requirement of the Marketing and Retailing concentration in the Business Administration program.

MAINTENANCE

C-L-SHC

MNT 110 Intro to Maint Procedures 1-3-2

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.

MNT 111 Maintenance Practices 2-2-3

Prerequisites: MNT 110

This course provides in-depth theory and practical applications relating to predictive and preventive maintenance programs. Emphasis is placed on equipment failure, maintenance management software, and techniques such as vibration and infrared analysis. Upon completion, students should be able to demonstrate an understanding of modern analytical and documentation methods.

MNT 191 Sel. Topics in Troubleshooting 0-3-1

This course provides an opportunity to explore areas of current interest in troubleshooting. Emphasis is placed on troubleshooting. Upon completion, students should be able to demonstrate an understanding of troubleshooting.

MNT 230 Pumps & Piping Systems 1-3-2

This course covers pump installation and maintenance and related valves and piping systems. Topics include various types of pump systems and their associated valves, piping requirements, and other related topics. Upon completion, students should be able to select and install pump and piping systems and demonstrate proper maintenance and troubleshooting procedures.

MNT 240 Indust Equip Troubleshoot 1-3-2

Prerequisites: ELC 112 or ELC 131

This course covers the various service procedures, tools, instruments, and equipment necessary to analyze and repair typical industrial equipment. Emphasis is placed on electro-mechanical and fluid power equipment troubleshooting and repair, including common techniques and procedures. Upon completion, students should be able to troubleshoot and repair industrial equipment.

MUSIC

C-L-SHC

MUS 110 Music Appreciation 3-0-3
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.

MUS 112 Introduction to Jazz 3-0-3
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 general education core requirement in humanities/fine arts.

NURSING ASSISTANT

C-L-CI-SHC

NAS 101 Nursing Assistant I 3-2-3-5
Prerequisites: High school diploma or GED
This course introduces basic nursing skills required to provide personal care for patients, residents, or clients in a health care setting. Topics include communications, safety, patients' rights, personal care, vital signs, elimination, nutrition, emergencies, rehabilitation, and mental health. Upon completion, students should be able to demonstrate skills necessary to qualify as a Nursing Assistant I with the North Carolina Nurse Aide I Registry. This is a certificate-level course.

NAS 102 Nursing Assistant II 3-2-6-6
Prerequisites: High school diploma or GED and currently listed as NA I with State of North Carolina
This course provides training in selected advanced nursing assistant procedures. Emphasis is placed on sterile techniques, respiratory procedures, catheterizations, wound and trach care, irrigations, and ostomy care. Upon completion, students should be able to demonstrate skills necessary to qualify as a Nursing Assistant II with the North Carolina Board of Nursing. This is a certificate-level course.

NAS 103 Home Health Care 2-0-0-2
Prerequisites: High school diploma or GED
This course covers basic health issues that affect clients in the home setting. Emphasis is placed on home safety, recognizing significant changes in the client's condition, family dynamics, and use of home health care equipment. Upon completion, students should be able to identify care for clients at home. This is a certificate-level course.

NAS 104 Home Health Clinical 0-0-3-1
Prerequisites: High School Diploma or GED
This course provides supervised experience in the home and/or simulated laboratory with emphasis on the application of basic nursing skills. Emphasis is placed on the transfer of knowledge and skills from institutional settings to home environments. Upon completion, students should be able to safely and efficiently provide delegated basic care to clients in the home. This is a certificate-level course.

NAS 105 Life Span Changes 2-0-0-2
Prerequisites: High school diploma or GED
This course covers growth and development in relation to the human body throughout the life span. Topics include restorative care, safety, nutrition, and the physical, mental, and social aspects of the aging process. Upon completion, students should be able to understand the changes that occur throughout the life span. This is a certificate-level course.

NAS 106 Geriatrics 2-0-3-3

Prerequisites: High school diploma or GED

This course is designed to cover health issues that affect the aging client. Emphasis is placed on social, physical, and psychological problems experienced by elderly people. Upon completion, students should be able to understand and provide care for the aging population. This is a certificate-level course.

NETWORKING TECHNOLOGY

C-L-SHC

NET 101 Home Automation Systems

1-2-0-2

Prerequisites: None

Corequisites: None

This course covers installation, integration, and troubleshooting of entertainment, comfort, security, and networking sub-systems for the automated home. Topics include an overview of residential sub-systems, structured wiring, systems integration, and introduction to networking, safety, troubleshooting, and customer service. Upon completion, students should be able to install, configure and maintain an integrated home automation system.

NET 110 Data Comm/Networking

2-2-3

This course introduces data communication and networking. Topics include telecommunication standards, protocols, equipment, network topologies, communication software, LANs, WANs, the Internet, and network operating systems. Upon completion, students should be able to demonstrate understanding of the fundamentals of telecommunication and networking.

NET 113 Home Automation Systems

2 -2- 3

Prerequisites: None

Corequisites: None

This course covers the design, installation, testing, troubleshooting, and customer service of a fully automated home. Emphasis is placed on a structured wiring system that integrates the home phone, TV, home theater, audio, video, computer network, lighting, security systems, and automation systems into a pre-wired, remote controlled system. Upon completion, students should be able to design, install, and maintain home automation systems.

NET 120 Network Install/Admin I

2-2-3

Prerequisites: NET 110

This course covers the installation and administration of network hardware and system software. Topics include network topologies, various network operating systems, server and workstation installation and configuration, printer services, and connectivity options. Upon completion, students should be able to perform basic installation and administration of departmental networks.

NET 125 Routing and Switching I

1-4-3

Prerequisite: NET 110 or CIS 173

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 and Switching II

1-4-3

Prerequisite: NET 125

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 192	Selected Topics – Basic Networking	0-4-2
<p>This course provides training in local and wide area networking services. Topics include instruction in networking, site preparation, registration, and utilization of on-line educational services and research tools. Upon completion, students should be able to develop and utilize basic educational networking and technology services needed within an organization.</p>		
NET 193	Selected Topics– Intermediate Networking	2-2-3
<p>This course introduces networking topics at the Intermediate level. Topics include instruction in networking, site preparation, registration, and utilization of on-line educational services and research tools. Upon completion, students should be able to develop and utilize educational networking and technology services needed within an organization.</p>		
NET 225	Adv. Router and Switching I	1-4-3
<p>Prerequisite: NET 126</p> <p>This course introduces advanced router configuration, 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.</p>		
NET 226	Adv. Routing and Switching II	1-4-3
<p>Prerequisite: NET 225</p> <p>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 and 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, describe the Spanning Tree protocol.</p>		
NET 260	Internet Dev & Support	3-0-3
<p>Prerequisites: NET 110 or NET 115 or CIS 282</p> <p>This course covers issues relating to the development and implementation of Internet related tools and services. Topics include Internet organization, site registration, e-mail servers, Web servers, Web page development, legal issues, firewalls, multimedia, TCP/IP, service providers, FTP, list servers, and gateways. Upon completion, students should be able to develop and support the Internet services needed within an organization.</p>		
NET 292	Selected Topics – Advanced Networking	1-2-2
<p>This course provides advanced training in local and wide area networking services. Topics include advanced site preparation and utilization of on-line educational technology services and research tools. Upon completion, students should be able to develop and utilize advanced Internet and technology services needed within an organization.</p>		
NET 293	Selected Topics – Advanced Networking	1-4-3
<p>This course is a continuation of NET 292. Topics include advanced site preparation and utilization of on-line educational technology services and research tools. Upon completion, students should be able to develop and utilize advanced Internet and technology services needed within an organization.</p>		
<p>NURSING</p>		
NUR 101	Practical Nursing I	C-L-CI-SHC 7-6-6-11
<p>Prerequisites: Admission to the Practical Nursing Program</p> <p>Corequisites: BIO 165, PSY 110</p>		

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. Theoretical concepts are augmented by laboratory and clinical experiences. This is a diploma-level course.

NUR 102	Practical Nursing II	8-0-12-12
NUR 102A	Practical Nursing II	(6)-(0)-(6)-(8)
NUR 102B	Practical Nursing II	(2)-(0)-(6)-(4)

Prerequisites: BIO 165, PSY 110, NUR 101

Corequisites: BIO 166

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. Theoretical concepts are augmented by clinical experiences focusing on adult clients with alterations in functional health patterns. This is a diploma-level course.

NUR 103	Practical Nursing III	6-0-12-10
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Prerequisites: BIO 166 and NUR 102

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. Theoretical concepts are augmented by clinical experiences focusing on the child-bearing and child-rearing family. This is a diploma-level course.

NUR 105	Integrated LPN Refresher	8-6-6-12
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Prerequisite: Admission to the LPN Refresher Certificate Program

This refresher course is designed to provide a 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.

NUR 110	Nursing I	5-3-6-8
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Prerequisites: Admission to the Associate Degree Program

Corequisites: BIO 165, PSY 150, ENG 111, ENG 111A

This course introduces concepts basic to beginning nursing practice. Emphasis is placed on introducing the nurse's role as provider of care, manager of care, and member of the discipline of nursing. Upon completion, students should be able to demonstrate beginning competence in caring for individuals with common alterations in health.

NUR 120	Nursing II	5-3-6-8
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Prerequisites: NUR 110, BIO 165, PSY 150, ENG 111, ENG 111A

Corequisites: BIO 166, PSY 241

This course provides an expanded knowledge base for delivering nursing care to individuals of various ages. Emphasis is placed on developing the nurse's role as provider of care, manager of care, and member of the discipline of nursing. Upon completion, students should be able to participate in the delivery of nursing care for individuals with common alterations in health. Theoretical concepts and clinical experiences focus on use of the nursing process to deliver nursing care to mothers, infants, children, and families.

NUR 130	Nursing III	4-3-6-7
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Prerequisites: Admission to the Associate Degree Program, NUR 120 or NUR 189, BIO 166, PSY 241
Corequisites: CIS 111

This course provides an expanded knowledge base for delivering nursing care to individuals of various ages. Emphasis is placed on expanding the nurse's role as provider of care, manager of care, and member of the discipline of nursing. Upon completion, students should be able to deliver nursing care to individuals with common alterations in health. Theoretical concepts and clinical experiences focus on use of nursing process.

NUR 189 Nursing Transition 1-3-0-2

Prerequisite: Licensure as a licensed practical nurse in the state of North Carolina or a state within the multi-state compact or special permission of the instructor

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.

NUR 210 Nursing IV 5-3-12-10

Prerequisites: NUR 130, CIS 111, BIO 166, PSY 241, ENG 111, ENG 111A

Corequisites: ENG 113, SOC 210

This course provides an expanded knowledge base for delivering nursing care to individuals of various ages. Emphasis is placed on using collaboration as a provider of care, manager of care, and member of the discipline of nursing. Upon completion, students should be able to modify nursing care for individuals with common alterations in health. Theoretical concepts and clinical experiences in NUR 210 focus on the use of nursing process in acute care, rehabilitation, and home health care settings.

NUR 220 Nursing V 4-3-15-10

Prerequisites: NUR 210, ENG 113, SOC 210

Corequisites: Humanities elective

This course provides an expanded knowledge base for delivering nursing care to individuals of various ages. Emphasis is placed on the nurse's role as an independent provider and manager of care for a group of individuals and member of a multidisciplinary team. Upon completion, students should be able to provide comprehensive nursing care to a group of individuals with common complex health alterations. Theoretical concepts and clinical experiences in NUR 220 focus on use of the nursing process and application of psychosocial, leadership, and management skills in caring for individuals/groups.

OPERATIONS MANAGEMENT

C-L-SHC

OMT 110 Intro to Operations Mgmt 3-0-3

This course provides an overview of the operations management field. Topics include production and operations planning, materials management, environmental health and safety, and quality management. Upon completion, students should be able to demonstrate an understanding of the operations management functions.

OMT 112 Materials Management 3-0-3

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.

OMT 122 Envir Qual Laws & Enforce 3-0-3

This course is a study of local, state, and federal legislation concerning environmental quality, use of resources, and enforcement procedures. Emphasis is placed on identification of environmental standards concerned with polluting sources such as industry, agriculture, municipalities, and individuals. Upon

completion, students should be able to demonstrate an understanding of legislation relating to protection of the environment and methods of ensuring compliance.

OMT 156 Problem-Solving Skills 3-0-3

This course provides a foundation for creating constructive relationships and presents the processes behind problem solving for groups and individuals. Emphasis is placed on building constructive relationships, confronting issues, winning support, and the basic processes of problem solving. Upon completion, students should be able to enhance relationships with others and apply a systematic approach to problem solving.

OMT 160 Ethical Issues in Op Mgmt 3-0-3

This course focuses on a wide variety of ethical issues in operations management. Emphasis is placed on distinguishing between legal and illegal actions as well as ethical and non-ethical actions. Upon completion, students should be able to demonstrate critical thinking skills to evaluate ethical situations.

OMT 218 Dev Team Performance 3-0-3

This course provides a foundation for enhancing team effectiveness and performance. Topics include clarification of team responsibilities, techniques for keeping the team on course, being a team player, and playing a vital role in team decisions. Upon completion, students should be able to understand the advantage of teamwork in a workplace environment and understand their role in being an effective team member.

OMT 260 Issues in Operations Mgt. 3-0-3

Prerequisites: ISC 121, ISC 210, OMT 112, and ISC 130, ISC 131, ISC 132, or ISC 221

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

C-L-SHC

OST 131 Keyboarding 1-2-2

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.

OST 132 Keyboard Skill Building 1-2-2

Prerequisites: OST 131 or equivalent

This course provides accuracy- and speed-building drills. Emphasis is placed on diagnostic tests to identify accuracy and speed deficiencies followed by corrective drills. Upon completion, students should be able to keyboard rhythmically with greater accuracy and speed.

OST 134 Text Entry & Formatting 2-2-3

Prerequisites: OST 131 or equivalent

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.

OST 135 Adv Text Entry & Format 3-2-4

Prerequisite: OST 134

This course is designed to incorporate computer application skills in the generation of office documents. Emphasis is placed on the production of letters, manuscripts, business forms, tabulation, legal documents,

and newsletters. Upon completion, students should be able to make independent decisions regarding planning, style, and method of presentation.

OST 136 Word Processing 1-2-2

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.

OST 137 Office Software Applications 1-2-2

Prerequisites: OST 131 or equivalent

This course introduces the concepts and functions of software that meets the changing needs of the community. Emphasis is placed on the terminology and use of software through a hands on approach. Upon completion, students should be able to use software in a business environment.

OST 138 Advanced Software Appl 2-2-3

Prerequisite: OST 137

This course develops proficiency in the utilization of software applications used in business offices through a hands-on approach. Emphasis is placed on in-depth usage of software to create a variety of documents applicable to current business environments. Upon completion, students should be able to master the skills required to design documents that can be customized using the latest software applications.

OST 141 Med Terms I-Med Office 3-0-3

This course uses a language-structure approach to present the terminology and vocabulary that will be encountered in medical office settings. Topics include word parts that relate to systemic components, conditions, pathology, and disorder remediation in approximately one-half of the systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms. This course will cover terminology related to the following body systems: integumentary, genitourinary, digestive, musculoskeletal, cardiovascular, pulmonary, endocrine, female reproductive, ears, eyes, nervous, and immune.

OST 142 Med Terms II-Med Office 3-0-3

Prerequisites: OST 141

This course is a continuation of OST 141 and continues the study, using a language-structure approach, of medical office terminology and vocabulary. Topics include word parts that relate to systemic components, conditions, pathology, and disorder remediation in the remaining systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms. This course will cover terminology related to the body systems with emphasis on laboratory examinations, laboratory and pathology tests and procedures, and body systems diseases.

OST 148 Med Coding Billing & Insur. 3-0-3

Prerequisite/Corequisite: OST 141

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.

OST 149 Med Legal Issues 3-0-3

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.

- OST 162 Executive Terminology 3-0-3
This course is designed to increase and improve proficiency in word usage. Topics include root words, prefixes, suffixes, homonyms, synonyms, and specialized vocabularies. Upon completion, students should be able to use acquired vocabulary skills in the global workplace.
- OST 164 Text Editing Applications 3-0-3
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.
- OST 184 Records Management 1-2-2
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.
- OST 223 Machine Transcription I 1-2-2
Prerequisites: OST 134, OST 136, and OST 164
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.
- OST 233 Office Publications Design 2-2-3
Prerequisite: OST 136
This course provides entry-level skills in using software with desktop publishing capabilities. Topics include principles of page layout, desktop publishing terminology and applications, and legal and ethical considerations of software use. Upon completion, students should be able to design and produce professional business documents and publications.
- OST 236 Adv Word/Information Proc 2-2-3
Prerequisites: OST 136
This course develops proficiency in the utilization of advanced word/information processing functions. Topics include tables, graphics, macros, sorting, document assembly, merging, and newspaper and brochure columns. Upon completion, students should be able to produce a variety of complex business documents.
- OST 241 Med Ofc Transcription I 1-2-2
Prerequisites: MED 121 or OST 141
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 specialties.
- OST 242 Med Ofc Transcription II 1-2-2
Prerequisites: OST 241
This course continues building machine transcription techniques as applied to medical documents. Emphasis is placed on accurate transcription, proofreading, and use of reference materials as well as continued proofreading/ editing skills and vocabulary building. Upon completion, students should be able to perform competently in preparing accurate and usable transcripts of voice recordings in the covered specialties.
- OST 248 Diagnostic Coding 1-2-2
Prerequisite: OST 142
This course provides an in-depth study of diagnostic coding for the medical office. Emphasis is placed on ICD-9-CM codes used on superbills and other encounter forms. Upon completion, students should be able to apply the principles of diagnostic coding in the physician's office.

OST 289 Office Systems Mgmt. 2-2-3
 Prerequisites: OST 164 and either OST 134 or 136.
 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.

OST 292 Selected Topics in Current Medical Office Practices 1-3-2
 Corequisite: OST 141
 This course provides an opportunity to explore current medical office practices. Emphasis is placed on terminology related to basic anatomy and physiology imaging, pharmacology, laboratory and pathology tests, and surgical procedures. Upon completion, students should be able to demonstrate an understanding of current medical procedures and treatments.

OST 293 Selected Topics in Advanced Medical Office Practices 3-0-3
 Prerequisites: OST 292
 This course is a continuation of OST 292. Emphasis is placed on advanced anatomy and physiology with continuing studies in imaging, pharmacology, laboratory and pathology tests, and surgical procedures. Upon completion, students should be able to demonstrate an understanding of current medical procedures and treatments at the advanced level.

PROFESSIONAL CRAFTS: CLAY

C-L-SHC

PCC 110 I ntro to Pottery 3-15-8
 This course introduces pottery making for potters, including clay preparation, wheel throwing and trimming, surface decoration, and glazing and firing techniques. Topics include clay bodies, and the mixing process, potter's wheel basics, glazing, kiln loading and firing, and safety issues. Upon completion, students should be able to prepare clay; center and throw basic forms; trim, mix, and apply basic glazes; and load and fire bisque kilns.

PCC 111 Functional Pottery I 3-15-8
 This course covers the important elements of designing and producing utilitarian pottery, including wall thickness, balance and proportion, surface decoration, and glazing and firing techniques. Topics include bowls, mugs, plates, casseroles, stemware, and bottles, with emphasis on safe glazing and supervised firing. Upon completion, students should be able to produce a variety of functional pots, apply a glaze, and load and assist firing a kiln.

PCC 112 History of Pottery 1-0-1
 This course examines the historical development of ceramics and the contributions made by specific cultures or countries. Topics include potters from early societies, including the Mediterranean countries, China, Cyprus, and Crete with emphasis on design, technique, and firing methods. Upon completion, students should be able to identify numerous historical pottery types, discuss the societies, which produced them, and demonstrate knowledge of their production methods.

PCC 113 Contemporary Pottery 1-0-1
 This course surveys numerous 19th- and 20th-century potters and artists who have contributed to the contemporary ceramics movement. Topics include artists such as Leach, Cardew, and Hamada and the important design and technical contributions these potters have made to the ceramics movement. Upon completion, students should be able to identify numerous contemporary potters and their work.

PCC 116 Pottery Tool Making 1-3-2

This course covers design concepts and construction techniques for building simple personal studio equipment, including wedging tables, extruders, and kiln furniture. Emphasis is placed on skills and safe use of hand tools, design fundamentals, selection of needed materials, and construction methods. Upon completion, students should be able to identify appropriate projects, select materials and tools, obtain materials, and construct several small and one major project.

PCC 118 Clay: Special Study 0-4-2

This course provides a format in which to explore personal interests in clay with instructor supervision. Emphasis is placed on student proposals and student-instructor-developed contractual agreements specifying goals, deadlines, and evaluation criteria. Upon completion, students should be able to complete clay works as specified in student-instructor-designed contractual agreements.

PCC 119 Clay Design: Spec Study 0-4-2

This course provides a format in which to explore personal interests in clay design with instructor supervision. Emphasis is placed on student proposals and student-instructor-developed contractual agreements specifying goals, deadlines, and evaluation criteria. Upon completion, students should be able to complete clay design projects as specified in student-instructor-designed contractual agreements.

PCC 125 Clay Casting 1-3-2

Prerequisites: PCC 110

This course introduces the different ways of shaping ceramic items, leading to the use of plaster molds and process of "slipcasting." Topics include model and mold-making, block and case mastermold, gypsum, resins, clay selection, mineral additives, flocculation, thixotrophy, deflocculation, rheology, specific gravity, and casting rates. Upon completion, students should be able to cast in molds, remove, de-seam and clean greenware, maintain molds, and layout studios.

PCC 132 Glaze Formulation 1-3-2

This course provides an in-depth study of glazes used on pottery. Emphasis is placed on performing glaze tests, analyzing glazes, mixing a variety of glazes, and correcting glaze faults. Upon completion, students should be able to demonstrate an understanding of glaze chemical qualities and formulate new glazes.

PCC 241 Kiln Design/Construction 1-3-2

This course covers basic concepts of kiln design and construction. Topics include construction materials, heat sources, kiln furniture, and site selection. Upon completion, students should be able to design and construct a kiln prototype.

PROFESSIONAL CRAFTS: DESIGN

C-L-SHC

PCD 110 Intro to Craft Design 1-3-2

This course introduces the basic principles, elements, vocabulary, and process of two-dimensional design within the context of professionally produced crafts. Emphasis is placed on general design concepts and vocabulary, conceptual thinking, design process application, and observational skills. Upon completion, students should be able to demonstrate enhanced observational skills and a working knowledge of design vocabulary, concepts, and processes.

PCD 111 Advanced Craft Design 1-3-2

Prerequisites: PCD 110

This course explores the conceptual process of design as applied to the three-dimensional form. Emphasis is placed on solving three-dimensional design problems which are material, function, site, or client specific. Upon completion, students should be able to apply an enhanced understanding of the relationship between design concept, process, and product in three-dimensional form.

PCD 211 Prof Craft Design 1-3-2

Prerequisites: PCD 110

This course covers the development of customer- or site-influenced design and the development and design of craft marketing promotional materials. Topics include customer-guided, site-specific, and other design influences and development and design of logos, hang tags, web sites, brochures, and related promotional materials. Upon completion, students should be able to design within site, customer, or other limitations and complete a design package for their personal marketing needs.

PROFESSIONAL CRAFTS: SCULPTURE

C-L-SHC

PCS 112 Beginning Welding for Artists 1-4-3

This course is an introduction to the proper equipment and tools of the metal shop and welding methods for the artist. Topics include welding, cutting, forging, fabricating and finishing, and studio safety. Upon completion, students will be able to demonstrate efficient and safe use of metal shop tools and equipment.

PCS 110 Intro to Metal Sculpture 2-9-5

Prerequisites: PCS 112

This course introduces the process and design of metal sculpture for the craftsman. Topics include design of metal sculpture, their layout, construction, finishing, and studio safety. Upon completion, students should be able to demonstrate the ability to design and construct metal sculptures.

PCS 114 Advanced Metal Sculpture 2-9-5

Prerequisite: PCS 110

This course is designed to introduce advanced techniques of metal sculpture. Topics include forging, fabricating, and casting, with emphasis placed on the design and construction of artistic sculpture. Upon completion, students will demonstrate advanced skills in the techniques of welding, forging, and casting metal sculpture.

PCS 210 Intro to Clay Sculpture 1-9-4

Prerequisites: PCC 110

This course introduces the techniques of sculpture, including figures, animals, and portraits, and the tools and equipment needed. Topics include the artistic concepts of form, rhythm, flow, movement, color and its relation to light. Upon completion, students should be able to form well-designed sculptures demonstrating the artistic concepts as applied to decorative ceramics.

PHYSICAL EDUCATION

C-L-SHC

PED 110 Fit and Well for Life 1-2-2

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

PED 113 Aerobics I 0-3-1

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. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective requirement.

PED 114 Aerobics II 0-3-1

- PED 139 Bowling-Beginning 0-2-1
This course introduces the fundamentals of bowling. Emphasis is placed on ball selection, grips, stance, and delivery along with rules and etiquette. Upon completion, students should be able to participate in recreational bowling. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective requirement.
- PED 143 Volleyball-Beginning 0-2-1
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. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective requirement.
- PED 145 Basketball-Beginning 0-2-1
This course covers the fundamentals of basketball. Emphasis is placed on skill development, knowledge of the rules, and basic game strategy. Upon completion, students should be able to participate in recreational basketball. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective requirement.
- PED 148 Softball 0-2-1
This course introduces the fundamental skills and rules of softball. Emphasis is placed on proper techniques and strategies for playing softball. Upon completion, students should be able to participate in recreational softball. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.
- PED 149 Flag Football 0-2-1
This course introduces the fundamentals and rules of flag football. Emphasis is placed on proper techniques and strategies for playing in game situations. Upon completion, students should be able to participate in recreational flag football. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.
- PED 152 Swimming-Beginning 0-2-1
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. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.
- PED 155 Water Aerobics 0-3-1
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. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.
- PED 160 Canoeing-Basic 0-2-1
Prerequisites: PED 152
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. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.
- PED 254 Coaching Basketball 1-2-2

This course introduces the theory and methods of coaching basketball. Emphasis is placed on rules, game strategies, and selected techniques of coaching basketball. Upon completion, students should be able to demonstrate competent coaching skills in basketball. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

PHILOSOPHY

C-L-SHC

PHI 210 History of Philosophy

3-0-3

Prerequisites: ENG 111

This course introduces fundamental philosophical issues through an historical perspective. Emphasis is placed on such figures as Plato, Aristotle, Lao-Tzu, Confucius, Augustine, Aquinas, Descartes, Locke, Kant, Wollstonecraft, Nietzsche, and Sartre. Upon completion, students should be able to identify and distinguish among the key positions of the philosophers studied. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

PHI 230 Introduction to Logic

3-0-3

Prerequisites: ENG 111

This course introduces basic concepts and techniques for distinguishing between good and bad reasoning. Emphasis is placed on deduction, induction, validity, soundness, syllogisms, truth functions, predicate logic, analogical inference, common fallacies, and scientific methods. Upon completion, students should be able to analyze arguments, distinguish between deductive and inductive arguments, test validity, and appraise inductive reasoning. 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

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

C-L-SHC

PHY 110 Conceptual Physics

3-0-3

Prerequisites: None

Corequisites: None

This course provides a conceptually-based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles studied. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

PHY 110A Conceptual Physics Lab

0-2-1

Prerequisites: None

Corequisites: PHY 110

This course is a laboratory for PHY 110. Emphasis is placed on laboratory experiences that enhance materials presented in PHY 110. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in PHY 110. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

PHY 131 Physics-Mechanics

3-2-4

Prerequisites: MAT 121 or MAT 161

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 133 Physics-Sound & Light 3-2-4

Prerequisites: PHY 131

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, wave motion, sound, light, and modern physics. 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 161 or MAT 171 or MAT 175

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

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

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.

PLUMBING

PLU 111 Intro to Basic Plumbing C-L-SHC
1-3-2
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.

PLU 130 Plumbing Systems 3-9-6
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.

PLU 140 Intro to Plumbing Codes 1-2-2
This course covers plumbing industry codes and regulations. Emphasis is placed on North Carolina regulations and the minimum requirements for plumbing materials and design. Upon completion, students should be able to research and interpret North Carolina plumbing codes.

POWER MECHANICS

PME 101 Small Engine Repair I C-L-SHC
1-15-6
This course covers the rebuilding of small, air-cooled, single-cylinder engines under fifteen cubic inch displacement. Emphasis is placed on complete engine rebuilding, including all internal engine components, following safe shop procedures. Upon completion, students should be able to safely disassemble, repair, and reassemble small engines according to industry standards. This is a diploma-level course.

PME 103 Small Engine Carburetion 1-9-4
This course is an in-depth study of carburetion principles, design, and application. Emphasis is placed on developing a working knowledge of the carburetor systems used on small engines. Upon completion, students should be able to safely disassemble, rebuild, install, and test carburetors and fuel systems. This is a diploma-level course.

PME 106 Small Engine Transmissions 2-6-4
This course covers the knowledge and skills needed to repair small engine transmissions, transaxles, and right-angle drive systems. Topics include schematics, gears, shafts, bearings, shifter forks, axles, lubrication, and safety procedures. Upon completion, students should be able to safely service, repair, or rebuild manual transmission, transaxles, and right-angle drive systems to industry standards. This is a diploma-level course.

POLITICAL SCIENCE

POL 120 American Government C-L-SHC
3-0-3
This course is a study of the origins, development, structure, and functions of American national government. Topics include the constitutional framework, federalism, the three branches of government including the bureaucracy, civil rights and liberties, political participation and behavior, and policy formation. Upon completion, students should be able to demonstrate an understanding of the basic concepts and participatory processes of the American political system. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

POL 130 State & Local Government 3-0-3
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. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective requirement.

POL 210 Comparative Government 3-0-3

This course provides a cross-national perspective on the government and politics of contemporary nations such as Great Britain, France, Germany, and Russia. Topics include each country's historical uniqueness, key institutions, attitudes and ideologies, patterns of interaction, and current political problems. Upon completion, students should be able to identify and compare various nations' governmental structures, processes, ideologies, and capacity to resolve major problems. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

POL 220 International Relations 3-0-3

This course provides a study of the effects of ideologies, trade, armaments, and alliances on relations among nation-states. Emphasis is placed on regional and global cooperation and conflict, economic development, trade, non-governmental organizations, and international institutions such as the World Court and UN. Upon completion, students should be able to identify and discuss major international relationships, institutions, and problems. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

PSYCHOLOGY

C-L-SHC

PSY 101 Applied Psychology 3-0-3

This course introduces the basic principles of psychology as they apply to daily life. Topics include perception, emotions, motivation, adjustment, behavior management, communication, and related topics that promote growth and development on the job and in one's personal life. Upon completion, students should be able to apply the principles learned in this class to everyday living. This course is intended for certificate and diploma programs.

PSY 102 Human Relations 2-0-2

This course covers the skills necessary to handle human relationships effectively. Topics include self-understanding, interpersonal communication, group dynamics, leadership skills, diversity, time and stress management, and conflict resolution with emphasis on work relationships. Upon completion, students should be able to demonstrate improved personal and interpersonal effectiveness. This course is intended for certificate and diploma programs.

PSY 110 Life Span Development 3-0-3

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 115 Stress Management 2-0-2

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

PSY 118 Interpersonal Psychology 3-0-3

This course introduces the basic principles of psychology as they relate to personal and professional development. Emphasis is placed on personality traits, communication/leadership styles, effective problem solving, and cultural diversity as they apply to personal and work environments. Upon completion, students

should be able to demonstrate an understanding of these principles of psychology as they apply to personal and professional development.

PSY 150 General Psychology 3-0-3

This course provides an overview of the scientific study of human behavior. Topics include history, methodology, biopsychology, sensation, perception, learning, motivation, cognition, abnormal behavior, personality theory, social psychology, and other relevant topics. Upon completion, students should be able to demonstrate a basic knowledge of the science of psychology. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

PSY 234 Organizational Psychology 3-0-3

Prerequisites: PSY 150

This course introduces the field of industrial and organizational psychology. Topics include employee motivation, organizational structure, leadership, selection and training, conflict resolution, communication, job satisfaction, and other related influences on performance. Upon completion, students should be able to demonstrate a basic understanding of organizational dynamics and behaviors in the work place.

PSY 237 Social Psychology 3-0-3

Prerequisites: PSY 150 or SOC 210

This course introduces the study of individual behavior within social contexts. Topics include affiliation, attitude formation and change, conformity, altruism, aggression, attribution, interpersonal attraction, and group behavior. Upon completion, students should be able to demonstrate an understanding of the basic principles of social influences on behavior. 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

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 246 Adolescent Psychology 3-0-3

Prerequisites: PSY 150

This course provides an overview of the behavior patterns, life changes, and social issues that accompany the developmental stage of adolescence. Topics include developmental theories; physical, cognitive and psychosocial growth; transitions to young adulthood; and socio-cultural factors that influence adolescent roles in home, school and community. Upon completion, students should be able to identify typical and atypical adolescent behavior patterns as well as appropriate strategies for interacting with adolescents. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective requirement.

PSY 281 Abnormal Psychology 3-0-3

Prerequisites: PSY 150

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.

PHARMACEUTICAL TECHNOLOGY

C-L-SHC
3-0-3

PTC 110 Industrial Environment

This course introduces the pharmaceutical industry, including a broad overview of work in this field. Emphasis is placed on good manufacturing practices (GMP), work conduct, company organization, job expectations, personal safety, hygiene, and company rules and regulations. Upon completion, students should be able to follow good manufacturing practice regulations and inspect a pharmaceutical manufacturing facility for compliance with GMP.

READING

C-L-SHC
3-2-4

RED 080 Intro to College Reading

Prerequisites: RED 070 or ENG 075

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 or ENG 111A.

3-2-4

RED 090 Improved College Reading

Prerequisites: RED 080 or ENG 085

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 or ENG 111A.

RELIGION

C-L-SHC
3-0-3

REL 110 World Religions

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.

3-0-3

REL 211 Intro to Old Testament

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.

3-0-3

REL 212 Intro to New Testament

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.

SUBSTANCE ABUSE

C-L-SHC
3-0-3

SAB 110 Substance Abuse Overview

This course provides an overview of the core concepts in substance abuse and dependence. Topics include the history of drug use/abuse, effects on societal members, treatment of addiction, and preventive measures. Upon completion, students should be able to demonstrate knowledge of the etiology of drug abuse, addiction, prevention, and treatment.

SOCIOLOGY

C-L-SHC

SOC 210 Intro to Sociology 3-0-3

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

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

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.

SOC 225 Social Diversity 3-0-3

This course provides a comparison of diverse roles, interests, opportunities, contributions, and experiences in social life. Topics include race, ethnicity, gender, sexual orientation, class, and religion. Upon completion, students should be able to analyze how cultural and ethnic differences evolve and how they affect personality development, values, and tolerance. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

SOC 232 Social Context of Aging 3-0-3

This course provides an overview of the social implications of the aging process. Emphasis is placed on the roles of older adults within families, work and economics, politics, religion, education, and health care. Upon completion, students should be able to identify and analyze changing perceptions, diverse lifestyles, and social and cultural realities of older adults. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

SOC 240 Social Psychology 3-0-3

This course examines the influence of culture and social groups on individual behavior and personality. Emphasis is placed on the process of socialization, communication, conformity, deviance, interpersonal attraction, intimacy, race and ethnicity, small group experiences, and social movements. Upon completion, students should be able to identify and analyze cultural and social forces that influence the individual in a society. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

SPANISH

SPA 110 Introduction to Spanish 2-0-2
 This course provides an introduction to understanding, speaking, reading, and writing Spanish. Emphasis is placed on pronunciation, parts of speech, communicative phrases, culture, and skills for language acquisition. Upon completion, students should be able to identify and apply basic grammar concepts, display cultural awareness, and communicate in simple phrases in Spanish.

SPA 111 Elementary Spanish I 3-0-3
 This course introduces the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness. This course has been approved 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
 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
 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, students should be able to communicate at a functional level with native speakers and demonstrate cultural sensitivity.

SPA 121 Spanish Language and Culture 3-0-3
 This course is designed to provide an understanding of everyday Spanish language and to promote cultural awareness. Emphasis is placed on providing a balanced foundation in listening, speaking, reading, writing, and understanding Hispanic languages and cultures. Upon completion, students should be able to communicate in elementary Spanish, to research and experience various cultural resources, and to function in a multicultural society. This course does not qualify for university transfer.

SPA 211 Intermediate Spanish I 3-0-3
 Prerequisites: SPA 112
 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.

SPA 212 Intermediate Spanish II 3-0-3
 Prerequisites: SPA 211
 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.

TELEPHONY

C-L-SHC

TEL 100 Telecom Basic Electricity

3-0-3

This course covers DC and AC theory with specific emphasis on the specialized needs of telecommunications personnel. Emphasis is placed on electron theory, conductors, insulators, Ohm's Law, capacitance, and inductance as it relates to small gauge, twisted-pair copper wire. Upon completion, students should be able to understand trouble symptoms and correct faults on the telephone physical plant network. This is a diploma or certificate-level course.

TEL 101 Conductor Connections

0-2-1

This course introduces and demonstrates the many methods of connecting copper conductors used in the telecommunications industry. Topics include screw-type, punch-down, wire wrap, solder, and pressure connections, as well as correct lead skinning, dressing, and safety. Upon completion, students should be able to correctly terminate a wide variety of connection types commonly used throughout the telecommunications industry. This is a diploma or certificate-level course.

TEL 102 Pole Climbing

0-2-1

This course covers basic skills in pole climbing and working aloft. Emphasis is placed on safety, climbing techniques, maintenance of climbing gear, working aloft, and potential hazards. Upon completion, students should be able to safely climb and work aloft. This is a diploma or certificate-level course.

TEL 104 CATV I & R: Distribution

0-2-1

This course provides training in the fundamentals of the CATV distribution system, including home and business installations. Emphasis is placed on plant construction, subscriber terminal installation, cabling, wiring, separation and clearance, proper grounding procedures, and safety. Upon completion, students should be able to install, test, and correct faults on the CATV distribution system, including home and business installations. This is a diploma or certificate-level course.

TEL 105 Fiber Optics: OSP

0-2-1

This course covers splicing and maintaining aerial or buried, single mode, loose-tube buffered fiber optic cable. Emphasis is placed on hands-on cleaving, fusion splicing, and maintaining aerial or buried, single mode, loose-tube buffered fiber optic cable. Upon completion, students should be able to locate faults and splice, test, and return fibers to service. This is a diploma or certificate-level course.

TEL 106 Fiber Optics: LAN

0-2-1

This course covers installing, splicing, and maintaining fiber optic cables, connectors, and patch panels in local area networks. Emphasis is placed on installing ST type connectors and level meter and OTDR testing of fiber optic local area networks. Upon completion, students should be able to install and maintain fiber optic local area networks. This is a diploma or certificate-level course.

TEL 108 Comdial Key Systems

0-2-1

This course covers programming and maintaining Comdial 616X and 816X Key Systems. Emphasis is placed on programming new systems and moves and changes in working systems. Upon completion, students should be able to install new systems, complete the initial programming, and perform routine moves and changes. This is a diploma or certificate-level course.

TEL 109 T-1 Span Line Maintenance

0-2-1

This course provides training in design, construction, turn-up testing, troubleshooting, and maintenance of T-1 span lines. Emphasis is placed on method of transmission, troubleshooting, testing, and repair of T-1 span lines. Upon completion, students should be able to install, test, and repair T-1 span lines. This is a diploma or certificate-level course.

TEL 200	LAN: Copper	0-2-1
<p>This course covers local area network protocols, transmission methods, and installation and testing procedures. Emphasis is placed on EIA/TIA standards relative to the installer/technician. Upon completion, students should be able to install LAN copper cables, wiring, and connectors within industry standards. This is a diploma or certificate-level course.</p>		
TEL 201	Station I & R	1-2-2
<p>This course covers the fundamentals of trouble-free telephone installation from aerial and buried cable in homes and businesses. Emphasis is placed on drop-wire attachments, station protection, and wire runs, as well as methods for testing and checking stations for customer satisfaction. Upon completion, students should be able to correctly install, test, and repair telephone stations and wiring up to entry into the cable plant. This is a diploma or certificate-level course.</p>		
TEL 202	Cable Splicing	1-2-2
<p>This course covers the cable color-code, splicing methods, and closures used throughout the telephone industry. Emphasis is placed on cable color-code, engineering drawings, proper splicing methods, and cable closures. Upon completion, students should be able to perform the basic functions of a cable splicer and meet telephone industry standards. This is a diploma or certificate-level course.</p>		
TEL 203	Cable Fault Location	0-2-1
<p>This course covers identifying fault types and using test equipment to locate the faults in aerial and underground cable. Emphasis is placed on identifying fault types and correct uses of various types of test equipment to precisely locate the fault. Upon completion, students should be able to identify fault type, properly use test equipment, and locate the fault within inches. This is a diploma or certificate-level course.</p>		
TEL 204	Transmission Fundamentals	2-0-2
<p>This course covers the basic concepts of point-to-point voice and data transmission in both inside and outside telecommunications plant facilities. Topics include test equipment, impedance matching, line characteristics, loading, impedance compensation, bridge taps, tie trunks, echo, singing point, and via net loss. Upon completion, students should be able to maintain facilities to provide fault-free voice and data transmission within the telecommunications network. This is a diploma or certificate-level course.</p>		
TEL 205	Digital CO Administration	1-2-2
<p>This course covers data modifications in DMS-10 digital central office switches from remote or on-site locations. Emphasis is placed on normal day-to-day data modification procedures to support customer-originated service orders, including any required hardware changes. Upon completion, students should be able to successfully perform any software or hardware modifications involved in normal daily operations of the DMS-10 digital switch. This is a diploma or certificate-level course.</p>		
TEL 206	Installer Level 1 Cabling	1-2-2
<p>This course covers structured premises cabling at the apprentice level. Emphasis is placed on apprentice level knowledge of standards and codes for telecommunications industry and proper structured premises cabling techniques. Upon completion, students should be able to pass the BICSI apprentice level certification examination and install LAN systems.</p>		
TEL 207	Installer Level 2 Cabling	1-2-2
<p>Prerequisites: Apprentice Level Knowledge with 2 - 5 years experience This course covers structured premises cabling at the installer level. Emphasis is placed on installer level knowledge of standards and codes for the telecommunications industry and proper structured premises cabling techniques. Upon completion, students should be able to pass the BICSI installer level certification examination and install LAN systems.</p>		
TEL 208	Technician Level Cabling	1-2-2

parasite through fecal, urine, skin, and blood exams. Upon completion, students should be able to identify common parasites and discuss life-cycles, treatment and prevention strategies, and public health aspects of veterinary parasitology.

VET 125 Veterinary Diseases I 2-0-2

Prerequisites: VET 120

This course introduces basic immunology, fundamentals of disease processes including inflammation, and common infectious diseases of animals and their prevention through immunization. Topics include fundamental disease processes, principles of medical therapy, immunologic processes, infections and zoonotic diseases of domestic animals, and prevention of disease. Upon completion, students should be able to describe basic disease and immunological processes, recognize infections and zoonotic diseases, and discuss prevention strategies.

VET 126 Veterinary Diseases II 1-3-2

Prerequisites: VET 125

This course is a continuation of VET 125 and includes the study of basic disease processes and fundamentals of pathology. Topics include histopathology, pathologic changes associated with common diseases of animals, necropsy procedures, and specimen handling. Upon completion, students should be able to describe basic pathologic changes associated with disease, recognize histopathologic changes, and properly perform collection and submission of necropsy specimens.

VET 131 Vet Lab Techniques I 2-3-3

Prerequisites: VET 120, VET 123

Corequisites: VET 133

This course includes the fundamental study of hematology, hemostasis, and urinalysis. Emphasis is placed on basic hematology and urinalysis techniques, manual skill development, instrumentation, quality control, and applications to veterinary science. Upon completion, students should be able to perform manual and automated CBCs, hemostatic assays, and complete urinalyses and maintain laboratory equipment and quality control.

VET 133 VET Clinical Practice I 2-3-3

Prerequisites: VET 120, VET 123

Corequisites: VET 131

This course introduces basic practices and techniques of the veterinary clinic and biomedical research fields for dogs, cats, and laboratory animals. Topics include physical exam, husbandry, housing, sanitation, restraint and handling, administration of medications, anesthesia and euthanasia techniques, grooming, and dentistry. Upon completion, students should be able to properly restrain, medicate, examine, groom, and maintain each of the species studied.

VET 137 Vet Office Practices 1-3-2

Prerequisites: VET 131, VET 133, Enrollment in Veterinary Medical Technology program

This course is designed to teach basic administrative techniques, client communication skills, and regulations pertaining to veterinary medicine. Topics include record keeping, telephone techniques, professional liability, office procedures, state and national regulatory laws, human relations, and animal welfare. Upon completion, students should be able to demonstrate effective communication techniques, office procedures, and knowledge of regulatory laws and issues relating to animal welfare.

VET 211 Vet Lab Techniques II 2-3-3

Prerequisites: VET 131

Corequisites: VET 213

This course covers advanced hematology, serology, immunology, and clinical chemistry. Topics include advanced hematologic, serologic, and immunologic test procedures: manual and automated clinical chemistry procedures: laboratory safety: and quality control. Upon completion, students should be able to collect, prepare, and analyze serum and plasma samples and outline quality control and safety procedures.

VET 212 Vet Lab Techniques III 2-3-3

Prerequisites: VET 211

Corequisites: VET 214

This course introduces the basic principles of microbiology, histology, and cytology. Emphasis is placed on collection of microbiological samples for culture and sensitivity and collection and preparation of samples for histological and cytological examination. Upon completion, students should be able to perform microbiological culture and sensitivity and evaluate cytology and histology specimens.

VET 213 VET Clinical Practice II 1-9-4

Prerequisites: VET 133

Corequisites: VET 211

This course covers basic radiography, anesthesia techniques, dentistry, sample collection and handling, surgical assistance and instrumentation, sterile techniques, and patient record keeping. Topics include basic radiography, injectable and gas anesthesia, dentistry, instrument identification and care, sterile surgical technique, specimen collection and processing, and maintenance of patient records. Upon completion, students should be able to take and process radiographs, administer and monitor anesthesia, assist in surgical procedures, collect specimens, and maintain surgical records.

VET 214 VET Clinical Practice III 1-9-4

Prerequisites: VET 213

Corequisites: VET 212

This course covers advanced anesthetic techniques, special radiographic techniques, advanced dentistry, sample collection and processing, bandaging, and emergency and critical care procedures. Topics include induction and maintenance of anesthesia, radiographic contrast studies, advanced dentistry, external coaptation, intensive care procedures, and advanced sample collection techniques. Upon completion, students should be able to demonstrate proficiency in sample collection, radiology, anesthesia, critical care and emergency procedures, and dentistry.

VET 215 Veterinary Pharmacology 3-0-3

Prerequisites: CHM 130 and CHM 130A

Corequisites: VET 213

This course introduces drugs and other substances utilized in veterinary medicine. Emphasis is placed on drug classification and methods of action, administration, effects and side effects, storing and handling of drugs, and dosage calculations. Upon completion, students should be able to properly calculate and administer medications, recognize adverse reactions, and maintain pharmaceutical inventory and administration records.

VET 217 Large Animal Clin Pract 2-3-3

Prerequisites: VET 120, VET 125

Corequisites: VET 214

This course covers topics relevant to the medical and surgical techniques for the common domestic large animal species. Topics include physical exam, restraint, sample collection, bandaging, emergency treatment, surgical and obstetrical procedures and instruments, herd health, and lameness topics. Upon completion, students should be able to safely perform restraint, examination, and sample collection; assist surgical, obstetrical, and emergency procedures; and discuss herd health.

VET 237 Animal Nutrition 3-0-3

Prerequisites: CHM 130, CHM 130A, Enrollment in Veterinary Medical Technology program

This course covers the principles of nutrition and their application to feeding practices of domestic, farm, and companion animals. Topics include basic nutrients and nutritional needs of individual species, proximate analysis, interpretation of food and feed labels, types of animal foods, and ration formulation. Upon completion, students should be able to select appropriate diets for animals in various stages of health and disease, analyze nutrition labels, and identify foods.

WELDING

C-L-SHC

WLD 110 Cutting Processes

1-3-2

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.

WLD 112 Basic Welding Processes

1-3-2

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.

WLD 115 SMAW (Stick) Plate

2-9-5

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.

WLD 116 SMAW (Stick) Plate/Pipe

1-9-4

Prerequisites: WLD 115

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.

WLD 121 GMAW (MIG) FCAW/Plate

2-6-4

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.

WLD 131 GTAW (TIG) Plate

2-6-4

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.

WLD 141 Symbols & Specifications

2-2-3

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.

WLD 151 Fabrication I

2-6-4

Prerequisites: WLD 110, WLD 115, WLD 116, and WLD 131

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.

WLD 212 Inert Gas Welding 1-3-2

Prerequisites: WLD 112

This course introduces inert gas-shielded welding methods (MIG/TIG). Topics include correct selection of consumable and non-consumable electrodes, equipment setup, safety, and welding techniques. Upon completion, students should be able to perform inert gas welding in flat, horizontal, and overhead positions.

WLD 262 Inspection & Testing 2-2-3

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.