

Course Descriptions

The following abbreviations after certain course descriptions indicate the semester in which those courses are usually offered:

F = Fall **Sp = Spring** **S = Summer**

"On Demand" will indicate courses offered only when there is sufficient demand to justify scheduling the course.

Cl. Lab Clinic/Sem.
Hrs. Hrs. WorkCredit
Exp. Hrs.
Hrs.

ACA - Academic Related

ACA 090 Study Skills 3 0 0 3

Prerequisite: *None* Corequisite: *None*

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. Students scoring into ENG 080, Writing Fundamentals, or RED 080, Introduction to College Reading, must also complete ACA 090, College Study Skills before registering for ENG 111, Expository Writing. (F., Sp., S.)

ACA 111 College Student Success 1 0 0 1

Prerequisite: *None* Corequisite: *None*

This course introduces the college's physical, academic, and social environment and promotes the personal development essential for success. Topics include campus facilities and resources; policies, procedures, and programs; study skills; and life management issues such as health, self-esteem, motivation, goal-setting, diversity, and communication. Upon completion, students should be able to function effectively within the college environment to meet their educational objectives. *This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

ACA 122 College Transfer 1 0 0 1

Prerequisite: *None* Corequisite: *None*

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

ACC - Accounting

ACC 115 College Accounting 3 2 0 4

Prerequisite: *None* Corequisite: *None*

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. (F.)

ACC 120 Prin Of Financial Accounting 3 2 0 4

Prerequisite: *MAT 060 and RED 090* Corequisite: *None*

This course introduces business decision-making accounting information systems. Emphasis is placed on analyzing, summarizing, reporting, and interpreting financial information. Upon completion, students should be able to prepare financial statements, understand the role of financial information in decision-making and address ethical considerations. *This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

ACC 121 Prin of Managerial Accounting 3 2 0 4

Prerequisite: *ACC 120* Corequisite: *None*

This course includes a greater emphasis on managerial and cost accounting skills. Emphasis is placed on managerial accounting concepts for external and internal analysis, reporting and decision-making. Upon completion, students should be able to analyze and interpret transactions relating to managerial concepts including product-costing systems. *This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

ACC 129 Individual Income Taxes 2 2 0 3

Prerequisite: *None* Corequisite: *None*

This course introduces the relevant laws governing individual income taxation. Topics include tax law, electronic research and methodologies, and the use of technology for preparation of individual tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various individual tax forms. *This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

ACC 130 Business Income Taxes 2 2 0 3

Prerequisite: *ACC 120 and ACC 129* Corequisite: *None*

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

ACC 140 Payroll Accounting 1 2 0 2

Prerequisite: *ACC 115 or ACC 120* Corequisite: *None*

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

ACC 150 Acct Software Application 1 2 0 2

Prerequisite: *ACC 115 or ACC 120* Corequisite: *None*

This course introduces microcomputer applications related to accounting systems. Topics include general ledger, accounts receivable,

accounts payable, inventory, payroll, and correcting, adjusting, and closing entries. Upon completion, students should be able to use a computer accounting package to solve accounting problems. *This course is also available through the Virtual Learning Community (VLC).* (F.)

ACC 220 Intermediate Accounting I 3 2 0 4

Prerequisite: *ACC 120 (C or better) and ACC 121 (C or better)*

Corequisite: *None*

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 an extensive analyses 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. *This course is also available through the Virtual Training Community (VLC).* (F.)

ACC 221 Intermediate Acct II 3 2 0 4

Prerequisite: *ACC 220*

Corequisite: *None*

This course is a continuation of ACC 220. Emphasis is placed on special problems which may include leases, bonds, investments, ratio analyses, present value applications, accounting changes, and corrections. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered. (Sp.)

ACC 227 Practices in Accounting 3 0 0 3

Prerequisite: *ACC 220*

Corequisite: *None*

This course provides an advanced in-depth study of selected topics in accounting using case studies and individual and group problem solving. Topics include cash flow, financial statement analysis, individual and group problem solving, practical approaches to dealing with clients, ethics, and critical thinking. Upon completion, students should be able to demonstrate competent analytical skills and effective communication of their analysis in written and/or oral presentations. (Sp.)

ACC 240 Gov & Not-for-Profit Acct 3 0 0 3

Prerequisite: *ACC 121*

Corequisite: *None*

This course introduces principles and procedures applicable to governmental and not-for-profit organizations. Emphasis is placed on various budgetary accounting procedures and fund accounting. Upon completion, students should be able to demonstrate an understanding of the principles involved and display an analytical problem-solving ability for the topics covered. (F.)

ACC 268 Info Sys & Intrl Ctrls 3 0 0 3

Prerequisite: *ACC 121*

Corequisite: *None*

This course covers the design and operation of accounting information systems, with emphasis placed upon transaction cycles and the necessary controls for reliable data. Topics include accounting procedures; authorizing, documentation, and monitoring; flowcharting, data flow diagrams, and scheduling; and some auditing concepts. Upon completion, students should be able to demonstrate an analytical problem-solving ability and to communicate effectively their analysis in written or oral presentations. (Sp.)

ACM - Animal Care and Management

ACM 111 Health Care for Animal 3 0 0 3

Prerequisite: *None*

Corequisite: *None*

This course introduces the basic techniques of routine health care

and emergency medical care of animals. Topics include handling of sick and injured animals, recognition of symptoms, and general health care concerns for animals. Upon completion, students should be able to recognize and discuss health needs and problems of a wide variety of animals. (Sp.)

AGR - Agriculture

AGR 110 Agricultural Economics 3 0 0 3

Prerequisite: *None*

Corequisite: *None*

This course provides an introduction to basic economic principles in agriculture. Topics include supply and demand, the role of agriculture in the economy, economic systems, and micro- and macroeconomics. Upon completion, students should be able to explain economic systems, interpret supply and demand curves, and complete cost and revenue production schedules. (F., Sp.)

AGR 131 Market Garden Lab 0 6 0 2

Prerequisite: *None*

Corequisite: *None*

This course provides familiarization with basic gardening techniques by performing practical hands-on exercises required for sustainable production. Emphasis is placed on irrigation, planting, fertilizing, pest control, equipment operation, harvest and post-harvest, and season extension. Upon completion, students should be able to satisfactorily perform various practices essential to maintaining the sustainable market garden. (S.)

AGR 140 Agricultural Chemicals 2 2 0 3

Prerequisite: *None*

Corequisite: *None*

This course covers all aspects of agricultural chemicals. Topics include safety, environmental effects, federal and state laws, pesticide classification, sprayer calibration, and licensing. Upon completion, students should be able to calibrate a sprayer, give proper pesticide recommendations, and demonstrate safe handling of pesticides. (F., Sp., S.)

AGR 150 Ag-O-Metrics 3 0 0 3

Prerequisite: *None*

Corequisite: *None*

This course introduces basic calculations for agricultural applications. Topics include the metric system, land measurement, feed efficiency, rate of gain, chemical calibration, and payroll. Upon completion, students should be able to perform calculations that pertain to agricultural production. (F., Sp.)

AGR 170 Soil Science 2 2 0 3

Prerequisite: *None*

Corequisite: *None*

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. (Sp.)

AGR 210 Agricultural Accounting 1 4 0 3

Prerequisite: *None*

Corequisite: *None*

This course covers the basic principles and practices of accounting and bookkeeping as they relate to the agricultural industry. Topics include general accounting terminology, data entry practices, and analysis of records for tax purposes. Upon completion, students should be able to complete a basic record book and analyze records for tax purposes. (F.)

AGR 212 Farm Business Management 3 0 0 3

Prerequisite: *None*

Corequisite: *None*

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. (Sp.)

AGR 213 Ag Law & Finance 3 0 0 3
Prerequisite: *None* Corequisite: *None*

This course covers the basic laws and financial aspects affecting agriculture. Topics include environmental laws, labor laws, contractual business operations, assets, liabilities, net worth, and funding sources. Upon completion, students should be able to complete loan application procedures and explain basic laws affecting the agricultural industry. (F.)

AGR 214 Agricultural Marketing 3 0 0 3
Prerequisite: *None* Corequisite: *None*

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. (Sp.)

AGR 262 Weed ID & Control 2 3 0 3
Prerequisite: *None* Corequisite: *None*

This course introduces the annual and perennial weeds of economic importance in the southeast. Topics include the life cycles, flowering habits, identification, and control of various weeds in the southeast. Upon completion, students should be able to identify selected weeds and recommend methods of control. (Sp.)

AHR - Air Conditioning, Heating, and Refrigeration

AHR 110 Intro to Refrigeration 2 6 0 5
Prerequisite: *None* Corequisite: *None*

This course introduces the basic refrigeration process used in mechanical refrigeration and air conditioning systems. Topics include terminology, safety, and identification and function of components; refrigeration cycle; and tools and instrumentation used in mechanical refrigeration systems. Upon completion, students should be able to identify refrigeration systems and components, explain the refrigeration process, and use the tools and instrumentation of the trade. (F.)

AHR 111 HVACR Electricity 2 2 0 3
Prerequisite: *None* Corequisite: *None*

This course introduces electricity as it applies to HVACR equipment. Emphasis is placed on power sources, interaction of electrical components, wiring of simple circuits, and the use of electrical test equipment. Upon completion, students should be able to demonstrate good wiring practices and the ability to read simple wiring diagrams. (F.)

AHR 112 Heating Technology 2 4 0 4
Prerequisite: *None* Corequisite: *None*

This course covers the fundamentals of heating including oil, gas, and electric heating systems. Topics include safety, tools and instrumentation, system operating characteristics, installation techniques, efficiency testing, electrical power, and control systems. Upon completion, students should be able to explain the basic oil, gas, and electrical heating systems and describe the major components of a heating system. (Sp.)

AHR 113 Comfort Cooling 2 4 0 4
Prerequisite: *None* Corequisite: *None*

This course covers the installation procedures, system operations, and maintenance of residential and light commercial comfort cooling systems. Topics include terminology, component operation, and testing and repair of equipment used to control and produce assured comfort levels. Upon completion, students should be able to use psychometrics, manufacturer specifications, and test instruments to determine proper system operation. (F.)

AHR 114 Heat Pump Technology 2 4 0 4
Prerequisite: *AHR 110 or AHR 113* Corequisite: *None*

This course covers the principles of air source and water source heat pumps. Emphasis is placed on safety, modes of operation, defrost systems, refrigerant charging, and system performance. Upon completion, students should be able to understand and analyze system performance and perform routine service procedures. (Sp.)

AHR 130 HVAC Controls 2 2 0 3
Prerequisite: *AHR 111 or ELC 111* Corequisite: *None*

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

AHR 160 Refrigerant Certification 1 0 0 1
Prerequisite: *None* Corequisite: *None*

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

AHR 211 Residential System Design 2 2 0 3
Prerequisite: *None* Corequisite: *None*

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

ANS - Animal Science

ANS 110 Animal Science 3 0 0 3
Prerequisite: *None* Corequisite: *None*

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. (F.)

ANS 115 Animal Feeds & Nutrition 2 2 0 3
Prerequisite: *None* Corequisite: *None*

This course covers the fundamentals of animal feeding and nutrition. Topics include nutrient requirements, digestion, feed formulation, and classification. Upon completion, students should be able to demonstrate a knowledge of nutritional requirements and feeding practices of farm animals. (F.)

ANS 120 Beef Production 2 2 0 3
 Prerequisite: *None* Corequisite: *None*
 This course provides an introduction to the beef cattle industry. Topics include reproduction, cattle management, marketing, anatomy and physiology, and pasture management. Upon completion, students should be able to demonstrate a basic understanding of beef cattle production practices and the economic impact of the beef cattle industry in North Carolina. (Sp.)

ANS 130 Poultry Production 2 2 0 3
 Prerequisite: *None* Corequisite: *None*
 This course provides an introduction to the poultry industry. Topics include anatomy and physiology, reproduction, incubation, and husbandry. Upon completion, students should be able to demonstrate a basic understanding of poultry production and the economic impact of the poultry industry in North Carolina. (F.)

ANS 140 Swine Production 2 2 0 3
 Prerequisite: *None* Corequisite: *None*
 This course provides an introduction to the swine industry. Topics include basic skills for breeding, farrowing, nursery, and grower/finisher. Upon completion, students should be able to demonstrate a basic understanding of swine production practices and the economic impact of the swine industry in North Carolina. (Sp.)

ANS 141 Swine Herd Management 2 0 0 2
 Prerequisite: *ANS 140* Corequisite: *None*
 This course is designed to expand topics covered in ANS 140. Emphasis is placed on management techniques as they relate to breeding, farrowing, nursery, and grower/finisher. Upon completion, students should be able to analyze and respond to management and production problems as they occur on the farm. (F.)

ANS 150 Animal Health Management 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course introduces animal diseases and health management. Topics include identification, prevention, control, and treatment of diseases. Upon completion, students should be able to recognize disease symptoms, recommend treatments, identify preventive steps, and develop biosecurity procedures. (Sp.)

ANS 160 Animal Waste Management 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course introduces proper animal waste management. Emphasis is placed on waste management practices, environmental laws and issues relating to animal waste, soil and water conservation, and dead animal disposal. Upon completion, students should be able to calculate proper application rates, apply best management practices, and identify methods of animal waste collection, storage, and utilization. (Sp.)

ANS 170 Sheep & Goat Production 2 2 0 3
 Prerequisite: *None* Corequisite: *None*
 This course provides an introduction to sheep and goat production. Topics include reproduction, marketing, and production practices specific to each species. Upon completion, students should be able to demonstrate a basic understanding of sheep and goat production practices and the economic impact of each. (Sp.)

ANS 180 Equine Production 3 2 0 4
 Prerequisite: *None* Corequisite: *None*
 This course provides an introduction to the production of horses. Top-

ics include anatomy and physiology, reproduction, genetics, selection, and basic management practices. Upon completion, students should be able to demonstrate a basic understanding of the production and management of horses. (Sp.)

ANS 210 Livestock Prod Issues 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course explores areas associated with livestock production. Emphasis is placed on monthly work schedules; qualities of a successful manager; and recruiting, motivating, and retaining employees. Upon completion, students should be able to prepare a livestock management program, write a resume, complete an interview, and identify ways to improve community relations. (Sp.)

ANS 213 Animal Reproduction 2 2 0 3
 Prerequisite: *None* Corequisite: *None*
 This course covers principles of reproductive physiology and their practical farm applications. Emphasis is placed on cattle and swine reproduction. Upon completion, students should be able to recognize reproductive anatomy, describe hormone function, and be able to breed animals naturally and artificially. (F.)

ANS 230 Poultry Management 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course is designed to expand topics covered in ANS 130. Emphasis is placed on management techniques as they relate to brooding, growing, and housing poultry and the environmental needs of various types of poultry. Upon completion, students should be able to analyze and respond to management and production problems as they occur. (F., Sp.)

ANT - Anthropology

ANT 210 General Anthropology 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course introduces the physical, archaeological, linguistic, and ethnological fields of anthropology. Topics include human origins, genetic variations, archaeology, linguistics, primatology, and contemporary cultures. Upon completion, students should be able to demonstrate an understanding of the four major fields of anthropology. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC).* (On Demand)

ART - Art

ART 111 Art Appreciation 3 0 0 3
 Prerequisite: *RED 090* Corequisite: *None*
 This course introduces the origins and historical development of art. Emphasis is placed on the relationship of design principles to various art forms including but not limited to sculpture, painting, and architecture. Upon completion, students should be able to identify and analyze a variety of artistic styles, periods, and media. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

ART 114 Art History Survey I 3 0 0 3
 Prerequisite: *RED 090* Corequisite: *None*
 This course covers the development of art forms from ancient times to

the Renaissance. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).* (F.)

ART 115 Art History Survey II 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

This course covers the development of art forms from the Renaissance to the present. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).* (Sp.)

ART 121 Design I 0 6 0 3

Prerequisite: *None* Corequisite: *None*

This course introduces the elements and principles of design as applied to two-dimensional art. Emphasis is placed on the structural elements, the principles of visual organization, and the theories of color mixing and interaction. Upon completion, students should be able to understand and use critical and analytical approaches as they apply to two-dimensional visual art. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F.)

ART 122 Design II 0 6 0 3

Prerequisite: *ART 121 (C or better) or IPO* Corequisite: *None*

This course introduces basic studio problems in three-dimensional visual design. Emphasis is placed on the structural elements and organizational principles as applied to mass and space. Upon completion, students should be able to apply three-dimensional design concepts. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (Sp.)

ART 131 Drawing I 0 6 0 3

Prerequisite: *None* Corequisite: *None*

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

ART 132 Drawing II 0 6 0 3

Prerequisite: *ART 131 (C or better) or IPO* Corequisite: *None*

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

AST - Astronomy

AST 111 Descriptive Astronomy 3 0 0 3

Prerequisite: *MAT 070 and RED 090* Corequisite: *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.* (On Demand)

AST 111A Descriptive Astronomy Lab 0 2 0 1

Prerequisite: *MAT 070 and RED 090* Corequisite: *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.* (On Demand)

ATR - Automation and Robotics

ATR 280 Robotic Fundamentals 3 2 0 4

Prerequisite: *None* Corequisite: *None*

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. (Sp.)

AUB - Autobody

AUB 111 Painting & Refinishing I 2 6 0 4

Prerequisite: *None* Corequisite: *None*

This course introduces the proper procedures for using automotive refinishing equipment and materials in surface preparation and application. Topics include federal, state, and local regulations, personal safety, refinishing equipment and materials, surface preparation, masking, application techniques, and other related topics. Upon completion, students should be able to identify and use proper equipment and materials in refinishing following accepted industry standards. (F.)



AUB 112 Painting & Refinishing II 2 6 0 4Prerequisite: *AUB 111*Corequisite: *None*

This course covers advanced painting techniques and technologies with an emphasis on identifying problems encountered by the refinishing technician. Topics include materials application, color matching, correction of refinishing problems, and other related topics. Upon completion, students should be able to perform spot, panel, and overall refinishing repairs and identify and correct refinish problems. (Sp.)

AUB 114 Special Finishes 1 2 0 2Prerequisite: *AUB 111*Corequisite: *None*

This course introduces multistage finishes, custom painting, and protective coatings. Topics include base coats, advanced intermediate coats, clear coats, and other related topics. Upon completion, students should be able to identify and apply specialized finishes based on accepted industry standards. (S.)

AUB 121 Non-Structural Damage I 1 4 0 3Prerequisite: *None*Corequisite: *None*

This course introduces safety, tools, and the basic fundamentals of body repair. Topics include shop safety, damage analysis, tools and equipment, repair techniques, materials selection, materials usage, and other related topics. Upon completion, students should be able to identify and repair minor direct and indirect damage including removal/repairing/ replacing of body panels to accepted standards. (F.)

AUB 122 Non-Structural Damage II 2 6 0 4Prerequisite: *None*Corequisite: *None*

This course covers safety, tools, and advanced body repair. Topics include shop safety, damage analysis, tools and equipment, advanced repair techniques, materials selection, materials usage, movable glass, and other related topics. Upon completion, students should be able to identify and repair or replace direct and indirect damage to accepted standards including movable glass and hardware. (Sp.)

AUB 131 Structural Damage I 2 4 0 4Prerequisite: *None*Corequisite: *None*

This course introduces safety, equipment, structural damage analysis, and damage repairs. Topics include shop safety, design and construction, structural analysis and measurement, equipment, structural glass, repair techniques, and other related topics. Upon completion, students should be able to analyze and perform repairs to a vehicle which has received light/moderate structural damage. (F.)

AUB 132 Structural Damage II 2 6 0 4Prerequisite: *AUB 131*Corequisite: *None*

This course provides an in-depth study of structural damage analysis and repairs to vehicles that have received moderate to heavy structural damage. Topics include shop safety, structural analysis and measurement, equipment, structural glass, advanced repair techniques, structural component replacement and alignment, and other related topics. Upon completion, students should be able to analyze and perform repairs according to industry standards. (Sp.)

AUB 134 Autobody MIG Welding 1 4 0 3Prerequisite: *None*Corequisite: *None*

This course covers the terms and procedures for welding the various metals found in today's autobody repair industry with an emphasis on personal/environmental safety. Topics include safety and precautionary measures, setup/operation of MIG equipment, metal identification

methods, types of welds/joints, techniques, inspection methods, and other related topics. Upon completion, students should be able to demonstrate a basic knowledge of welding operations and safety procedures according to industry standards. (F.)

AUB 136 Plastics & Adhesives 1 4 0 3Prerequisite: *None*Corequisite: *None*

This course covers safety, plastic and adhesive identification, and the various repair methods of automotive plastic components. Topics include safety, identification, preparation, material selection, and the various repair procedures including refinishing. Upon completion, students should be able to identify, remove, repair, and/or replace automotive plastic components in accordance with industry standards. (S.)

AUB 141 Mech & Elec Components I 2 2 0 3Prerequisite: *None*Corequisite: *None*

This course covers the basic principles of automotive mechanical and electrical components. Topics include personal and environmental safety and suspension and steering, electrical, brake, heating and air-conditioning, cooling, drive train, and restraint systems. Upon completion, students should be able to identify system components and perform basic system diagnostic checks and /or repairs according to industry standards. (S.)

AUB 150 Automotive Detailing 1 3 0 2Prerequisite: *None*Corequisite: *None*

This course covers the methods and procedures used in automotive detailing facilities. Topics include safety, engine, interior and trunk compartment detailing, buffing/polishing exterior surfaces, and cleaning and reconditioning exterior trim, fabrics, and surfaces. Upon completion, students should be able to improve the overall appearance of a vehicle. (S.)

AUB 160 Body Shop Operations 1 0 0 1Prerequisite: *None*Corequisite: *None*

This course introduces the day-to-day operations of autobody repair facilities. Topics include work habits and ethics, customer relations, equipment types, materials cost and control, policies and procedures, shop safety and liabilities, and other related topics. Upon completion, students should be able to understand the general operating policies and procedures associated with an autobody repair facility. (F.)

AUB 162 Autobody Estimating 1 2 0 2Prerequisite: *None*Corequisite: *None*

This course provides a comprehensive study of autobody estimating. Topics include collision damage analysis, industry regulations, flat-rate and estimated time, and collision estimating manuals. Upon completion, students should be able to prepare and interpret a damage report. (S.)

AUT - Automotive**AUT 110 Intro to Auto Technology** 2 2 0 3Prerequisite: *None*Corequisite: *None*

This course covers workplace safety, hazardous material and environmental regulations, use of hand tools, service information resources, basic concepts, systems, and terms of automotive technology. Topics include familiarization with vehicle systems along with identification and proper use of various automotive hand and power tools. Upon completion, students should be able to describe safety and environmental procedures, terms associated with automobiles, identify and use basic tools and shop equipment. (F.)

AUT 114 Safety Emissions

1 2 0 2

Prerequisite: *None*Corequisite: *None*

This course covers the laws, procedures, and specifications needed to perform a North Carolina State Safety and Emissions inspection. Topics include brake, steering and suspension, lighting, horn, windshield wiper, tire, mirrors, and emission control devices inspection. Upon completion, students should be able to perform complete and thorough North Carolina State Safety and Emissions inspections. (F.)

AUT 116 Engine Repair

2 3 0 3

Prerequisite: *None*Corequisite: *None*

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

AUT 116A Engine Repair Lab

0 3 0 1

Prerequisite: *None*Corequisite: *AUT 116*

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

AUT 131 Drive Trains

2 3 0 3

Prerequisite: *None*Corequisite: *None*

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. (Sp.)

AUT 141 Suspension & Steering Sys

2 3 0 3

Prerequisite: *None*Corequisite: *None*

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. (Sp.)

AUT 141A Susp & Steering Sys Lab

0 3 0 1

Prerequisite: *None*Corequisite: *AUT 141*

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

AUT 151 Brake Systems

2 3 0 3

Prerequisite: *None*Corequisite: *None*

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. (Sp.)

AUT 151A Brake Systems Lab

2 3 0 3

Prerequisite: *None*Corequisite: *AUT 151*

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

AUT 161 Basic Auto Electricity

4 3 0 5

Prerequisite: *None*Corequisite: *None*

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

AUT 163 Adv Auto Electricity

2 3 0 3

Prerequisite: *AUT 161*Corequisite: *None*

This course covers electronic theory, wiring diagrams, test equipment, and diagnosis, repair, and replacement of electronics, lighting, gauges, horn, wiper, accessories, and body modules. Topics include networking and module communication, circuit construction, wiring diagrams, circuit testing, and troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair wiring, lighting, gauges, accessories, modules, and electronic concerns. (Sp.)

AUT 171 Auto Climate Control

2 4 0 4

Prerequisite: *None*Corequisite: *None*

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. (S.)

AUT 181 Engine Performance 1

2 3 0 3

Prerequisite: *None*Corequisite: *None*

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

AUT 183 Engine Performance 2 2 6 0 4
 Prerequisite: *AUT 181* Corequisite: *None*
 This course covers study of the electronic engine control systems, the diagnostic process used to locate engine performance concerns, and procedures used to restore normal operation. Topics will include currently used fuels and fuel systems, exhaust gas analysis, emission control components and systems, OBD II (on-board diagnostics) and inter-related electrical/electronic systems. Upon completion, students should be able to diagnose and repair complex engine performance concerns using appropriate test equipment and service information. (F.)

AUT 212 Auto Shop Management 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course covers the principals of management essential to decision-making, communication, authority, and leadership. Topics include shop supervision, shop organization, customer relations, cost effectiveness and work place ethics. Upon completion, students should be able to describe basic automotive shop operation from a management standpoint. (F.)

AUT 221 Auto Transm/Transaxles 2 3 0 3
 Prerequisite: *None* Corequisite: *None*
 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, diagnose and repair automatic drive trains. (Sp.)

AUT 221A Auto Transm/Transaxles Lab 0 3 0 1
 Prerequisite: *None* Corequisite: *AUT 221*
 This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include 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 diagnose and repair automatic drive trains. (Sp.)

AUT 231 Man Trains/Axles/DrTrains 2 3 0 3
 Prerequisite: *None* Corequisite: *None*
 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, diagnose and repair manual drive trains. (F.)

AUT 231A Man Trains/Axles/DrTrains Lab 2 3 0 3
 Prerequisite: *None* Corequisite: *AUT 231*
 This course is an optional lab for the program that needs to meet NATEF hour standards but does not have a co-op component in the program. Topics include manual drive train diagnosis, service and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to diagnose and repair manual drive trains. (F.)

AUT 281 Adv Engine Performance 2 2 0 3
 Prerequisite: *None* Corequisite: *None*
 This course utilizes service information and specialized test equipment to diagnose and repair power train control systems. Topics include computerized ignition, fuel and emission systems, related diagnostic tools

and equipment, data communication networks, and service information. Upon completion, students should be able to perform diagnosis and repair. (Sp.)

AUT 283 Adv Auto Electronics 2 2 0 3
 Prerequisite: *AUT 161* Corequisite: *None*
 This course covers advanced electronic systems on automobiles. Topics include microcontrollers, on-board communications, telematics, hybrid systems, navigation, collision avoidance, and electronic accessories. Upon completion, students should be able to diagnose electronic systems using appropriate service information, procedures, and equipment and remove/replace/reprogram controllers, sensors, and actuators. (S.)

AVI - Aviation

AVI 110 Aviation Maint - General 10 15 0 15
 Prerequisite: *None* Corequisite: *None*
 This course introduces general subjects related to all aspects of aircraft maintenance. Topics include mechanic privileges/limitations; math and physics/basic electricity; aircraft drawings; maintenance forms; fluid lines/fittings; weight and balance; corrosion control; and ground operations. Upon completion, students should be prepared to pass the FAA knowledge, oral, and practical exams for the general portion of the mechanic's certificate with either the airframe or powerplant ratings. (F.)

AVI 120 Airframe Maintenance I 6 18 0 12
 Prerequisite: *AVI 110* Corequisite: *None*
 This course covers airframe structures, systems, and components with an emphasis on the different types of aircraft construction and repair methods. Topics include aircraft non-metallic (composite), sheet metal, and wood structures; welding; covering and finishes (dope and fabric); assembly and rigging; and communication and navigation systems. Students should gain the knowledge and skills in these areas to prepare them for the airframe rating for the FAA mechanic's certificate. (Sp.)

AVI 130 Airframe Maintenance II 6 9 0 9
 Prerequisite: *AVI 110* Corequisite: *None*
 This course deals entirely with airframe systems and components. Topics include aircraft electrical, hydraulic, pneumatic, landing gear, position, warning, and fuel systems. Upon completion of the course, the student should be prepared to pass the applicable portions of the knowledge, oral, and practical tests of the airframe rating for the FAA mechanic's certificate. (S.)

AVI 230 Airframe Maintenance III 4 9 0 7
 Prerequisite: *AVI 110* Corequisite: *None*
 In this final course of the airframe series, the emphasis is on systems and components, culminating with the airframe inspection portion of the course. In addition to the inspection aspects, instrument, cabin environmental control, fire protection, and ice and rain control systems are covered. The student should be prepared to take the applicable portions of the written, oral, and practical examination for the airframe rating on the FAA mechanic's certificate. (F.)

AVI 240 Powerplant Maintenance I 3 9 0 6
 Prerequisite: *AVI 110* Corequisite: *None*
 This first course in the powerplant series covers theoretical and practical aspects of the two major types of aircraft propulsion systems, piston and jet engines. Auxiliary power units are also covered, including their relationship to the systems they operate. Upon completion, the student

should be knowledge of aircraft engines to include maintenance and operation at the level required by the FFA to qualify for a powerplant rating on a mechanic's certificate. (F.)

AVI 250 Powerplant Maintenance II 10 15 0 15

Prerequisite: *AVI 110* Corequisite: *None*

This course emphasizes engine systems and components. Topics include engine instruments and fire protection, electrical, lubrication, fuel, ignition, starting, and fuel metering systems. Students completing this course should be capable of passing appropriate portions of the FAA knowledge, oral, and practical tests for the powerplant rating. (Sp.)

AVI 260 Powerplant Maintenance III 5 12 0 9

Prerequisite: *AVI 110* Corequisite: *None*

This final course in the powerplant series covers engine systems and components; propellers and unducted fans; and induction, airflow, cooling, exhaust, and reverser systems. The course culminates with engine inspections. The student should be prepared to pass the applicable portions of the knowledge, oral, and practical exams for the powerplant rating at the completion of this course. (S.)

BIO - Biology

BIO 106 Intro to Anat/Phys/Micro 2 2 0 3

Prerequisite: *None* Corequisite: *None*

This course covers the fundamental and principle concepts of human anatomy and physiology and microbiology. Topics include an introduction to the structure and function of cells, tissues, and human organ systems, and an overview of microbiology, epidemiology, and control of microorganisms. Upon completion, students should be able to identify structures and functions of the human body and describe microorganisms and their significance in health and disease. (F.)

BIO 110 Principles of Biology 3 3 0 4

Prerequisite: *RED 090* Corequisite: *None*

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 requirements in natural sciences/mathematics.* (F, Sp., S.)

BIO 111 General Biology I 3 3 0 4

Prerequisite: *RED 090* Corequisite: *None*

This course introduces the principles and concepts of biology. Emphasis is placed on basic biological chemistry, cell structure and function, metabolism and energy transformation, genetics, evolution, classification, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

BIO 112 General Biology II 3 3 0 4

Prerequisite: *BIO 111* Corequisite: *None*

This course is a continuation of BIO 111. Emphasis is placed on organisms, biodiversity, plant and animal systems, ecology, and other related topics. Upon completion, students should be able to demonstrate

comprehension of life at the organismal and ecological levels. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

BIO 130 Introductory Zoology 3 3 0 4

Prerequisite: *BIO 110 or BIO 111* Corequisite: *None*

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 sciences/mathematics.* (On Demand)

BIO 140 Environmental Biology 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

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. This course is also available through the Virtual Learning Community (VLC).* (Sp., On Demand)

BIO 140A Environmental Biology Lab 0 3 0 1

Prerequisite: *RED 090* Corequisite: *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.* (Sp, On Demand)

BIO 160 Introductory Life Science 2 2 0 3

Prerequisite: *RED 090* Corequisite: *None*

This course introduces scientific and biological concepts. Topics include basic chemistry, cell structure and function, cell division, basic genetic concepts, anatomical terminology, and metric-English measurements and conversions. Upon completion, students should be able to demonstrate an understanding of basic chemistry, cell biology, genetic concepts; anatomical terminology; and metric-English measurements and conversions. (F.)

BIO 161 Intro to Human Biology 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

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. (S.)

BIO 163 Basic Anat & Physiology 4 2 0 5Prerequisite: *RED 090* Corequisite: *None*

This course provides a basic study of the structure and function of the human body. Topics include a basic study of the body systems as well as an introduction to homeostasis, cells, tissues, nutrition, acid-base balance, and electrolytes. Upon completion, students should be able to demonstrate a basic understanding of the fundamental principles of anatomy and physiology and their interrelationships. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., On Demand)

BIO 165 Anatomy and Physiology I 3 3 0 4Prerequisite: *RED 090* Corequisite: *None*

This course is the first of a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

BIO 166 Anatomy and Physiology II 3 3 0 4Prerequisite: *BIO 165* Corequisite: *None*

This course is the second in a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and the interrelationships of all body systems. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).* (Sp., S.)

BIO 175 General Microbiology 2 2 0 3Prerequisite: *BIO 110 or BIO 111 or BIO 163 or BIO 165*Corequisite: *None*

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

BIO 250 Genetics 3 3 0 4Prerequisite: *BIO 112* Corequisite: *None*

This course covers principles of procaryotic and eucaryotic cell genetics. Emphasis is placed on the molecular basis of heredity, chromosome, structure, patterns of Mendelian and non-Medelian inheritance, evolution, and biotechnological applications. Upon completion, students should be able to recognize and describe genetic phenomena and demonstrate knowledge of important genetic principles. *This course has been approved to satisfy the Comprehensive Articulation*

Agreement for transferability as a premajor and/or elective course requirement. (F.)

BIO 275 Microbiology 3 3 0 4Prerequisite: *BIO 110 or BIO 112 or BIO 163 or BIO 165*Corequisite: *None*

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 for transferability as a pre-major and/or elective course requirement.* (S., On Demand)

BIO 280 Biotechnology 2 3 0 3Prerequisite: *BIO 111 or CHM 151* Corequisite: *None*

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 for transferability as a premajor and/or elective course requirement.* (On Demand)

BPR - Blueprint Reading**BPR 111 Blueprint Reading** 1 2 0 2Prerequisite: *None* Corequisite: *None*

This course introduces the basic principles of blueprint reading. Topics include line types, orthographic projections, dimensioning methods, and notes. Upon completion, students should be able to interpret basic blueprints and visualize the features of a part. *This course is also available through the Virtual Learning Community (VLC).* (F.)

BPR 121 Blueprint Reading: Mech 1 2 0 2Prerequisite: *BPR 111* Corequisite: *None*

This course covers the interpretation of intermediate blueprints. Topics include tolerancing, auxiliary views, sectional views, and assembly drawings. Upon completion, students should be able to read and interpret a mechanical working drawing. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

BPR 135 Schematics & Diagrams 2 0 0 2Prerequisite: *None* Corequisite: *None*

This course introduces schematics and diagrams used in a variety of occupations. Topics include interpretation of wiring diagrams, assembly drawings, exploded views, sectional drawings, and service manuals, specifications, and charts. Upon completion, students should be able to research and locate components and assemblies denoting factory specifications and requirements from service and repair manuals. (F.)

BTC - Biotechnology**BTC 150 Bioethics** 3 0 0 3Prerequisite: *None* Corequisite: *None*

This course introduces the current ethics issues surrounding the biotechnology industries. Topics will include risk assessment, the relationships between science, technology, and society, and the effects of

new biotechnology products upon the natural world. Upon completion, students should be able to demonstrate knowledge and critical thinking skills in decision-making related to bioethical issues. (F.)

BTC 181 Basic Lab Techniques 3 3 0 4

Prerequisite: *None* Corequisite: *None*

This course introduces the basic skills and knowledge necessary in a biological or chemical laboratory. Emphasis is placed on good manufacturing practices, safety, solution preparation, and equipment operation and maintenance following standard operating procedures. Upon completion, students should be able to prepare and perform basic laboratory procedures using labware, solutions, and equipment according to prescribed protocols. (This course is offered at Pitt Community College.) (Sp.)

BTC 250 Principles of Genetics 3 0 0 3

Prerequisite: *BIO 111* Corequisite: *None*

This course covers the basic principles of genetics. Topics will include Mendelian inheritance, gene mapping, molecular genetics, regulation of gene expression, population genetics, quantitative genetics, and the genetics of cancer. Upon completion, students should be able to demonstrate a broad understanding of genetics and the principles of heredity. (This course is offered at Pitt Community College.) (F.)

BTC 270 Recombinant DNA Tech 3 3 0 4

Prerequisite: *BTC 250 and BTC 181* Corequisite: *None*

This course covers basic methods in biotechnology for the manipulation of nucleic acids. Emphasis is placed on topics concerning techniques used in recombinant DNA technology, including PCR, restriction digests, mapping, cloning, and forensics. Upon completion, students should have an understanding of the theory, practice, and application of recombinant DNA techniques. (This course is offered at Pitt Community College.) (Sp.)

BTC 281 Bioprocess Techniques 2 6 0 4

Prerequisite: *BTC 181* Corequisite: *None*

This course covers processes used in the production of biomolecules. Emphasis is placed on the production, characterization, and purification of biological products using fermentation, centrifugation, filtration, electrophoresis, and other techniques used in industry. Upon completion, students should be able to produce biological products using the various methods of bioprocessing. (This course is offered at Pitt Community College.) (F.)

BTC 285 Cell Culture 2 3 0 3

Prerequisite: *BIO 175 or BIO 275* Corequisite: *None*

This course introduces the theory and practices required to successfully initiate and maintain plant and animal cell cultures. Topics include aseptic techniques, the growth environment, routine maintenance of cell cultures, specialized culture techniques, and various applications. Upon completion, students should be able to demonstrate the knowledge and skills required to grow, maintain, and manipulate cells in culture. (This course is offered at Pitt Community College.) (F.)

BTC 286 Immunological Techniques 3 3 0 4

Prerequisite: *BTC 285* Corequisite: *None*

This course covers the principles and practices of modern immunology, including the interactions between the various cellular and chemical components of the immune response. Topics include antigens, humoral immunity, cellular immunity, complement, immunological assays, and hybridoma use and production. Upon completion, students should be

able to discuss the immune response, perform immunological assays, and make monoclonal antibody-producing hybridomas. (This course is offered at Pitt Community College.) (Sp.)

BTC 288 Biotech Lab Experience 0 6 0 2

Prerequisite: *BIO 250 or BTC 270 and BTC 281, BTC 285 or BTC 286* Corequisite: *None*

This course provides an opportunity to pursue an individual laboratory project in biotechnology. Emphasis is placed on developing, performing, and maintaining records of a project in a specific area of interest. Upon completion, students should be able to complete the project with accurate records and demonstrate an understanding of the process. (This course is offered at Pitt Community College.) (Sp.)

BUS - Business

BUS 110 Introduction to Business 3 0 0 3

Prerequisite: *None* Corequisite: *None*

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 for transferability as a pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).* (F.)

BUS 115 Business Law I 3 0 0 3

Prerequisite: *None* Corequisite: *None*

This course introduces the ethics and legal framework of business. Emphasis is placed on contracts, negotiable instruments, Uniform Commercial Code, and the working of the court systems. Upon completion, students should be able to apply ethical issues and laws covered to selected business decision-making situations. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

BUS 116 Business Law II 3 0 0 3

Prerequisite: *BUS 115* Corequisite: *None*

This course continues the study of ethics and business law. Emphasis is placed on bailments, sales, risk-bearing, forms of business ownership, and copyrights. Upon completion, students should be able to apply ethical issues and laws covered to selected business decision-making situations. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

BUS 121 Business Math 2 2 0 3

Prerequisite: *MAT 060 or appropriate placement test score* Corequisite: *None*

This course covers fundamental mathematical operations and their application to business problems. Topics include payroll, pricing, interest and discount, commission, taxes, and other pertinent uses of mathematics in the field of business. Upon completion, students should be able to apply mathematical concepts to business. *This course is also available through the Virtual Learning Community (VLC).* (This course is offered at Pitt Community College.) (Sp.)

BUS 125 Personal Finance 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 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. (Sp.)

BUS 135 Principles of Supervision 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course introduces the basic responsibilities and duties of the supervisor and his/her relationship to higher-level supervisors, subordinates, and associates. Emphasis is placed on effective utilization of the work force and understanding the role of the supervisor. Upon completion, students should be able to apply supervisory principles in the work place. *This course is also available through the Virtual Learning Community (VLC).* (F.)

BUS 137 Principles of Management 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course is designed to be an overview of the major functions of management. Emphasis is placed on planning, organizing, controlling, directing, and communicating. Upon completion, students should be able to work as contributing members of a team utilizing these functions of management. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

BUS 151 People Skills 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 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. (F.)

BUS 153 Human Resource Management 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course introduces the functions of personnel/human resource management within an organization. Topics include equal opportunity and the legal environment, recruitment and selection, performance appraisal, employee development, compensation planning, and employee relations. Upon completion, students should be able to anticipate and resolve human resource concerns. *This course is also available through the Virtual Learning Community (VLC).* (This course is offered at Pitt Community College.) (F.)

BUS 230 Small Business Management 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course introduces the challenges of entrepreneurship including the startup and operation of a small business. Topics include market research techniques, feasibility studies, site analysis, financing alternatives, and managerial decision making. Upon completion, students should be able to develop a small business plan. *This course is also available through the Virtual Learning Community (VLC).* (On Demand)

BUS 239 Bus Applications Seminar 1 2 0 2
 Prerequisite: *ACC 120, BUS 115, BUS 137, MKT 120, and either ECO 151, or ECO 251, or ECO 252*
 Corequisite: *None*
 This course is designed as a capstone course for Business Administration majors. Emphasis is placed on decision making in the areas of management, marketing, production, purchasing, and finance. Upon completion, students should be able to apply the techniques, processes, and vital professional skills needed in the work place. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

BUS 240 Business Ethics 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 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. (F., Sp.)

BUS 260 Business Communication 3 0 0 3
 Prerequisite: *ENG 111* Corequisite: *None*
 This course is designed to develop skills in writing business communications. Emphasis is placed on business reports, correspondence, and professional presentations. Upon completion, students should be able to communicate effectively in the work place. *This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

CHI - Chinese

CHI 111 Elementary Chinese I 3 0 0 3
 Prerequisites: *None* Corequisite: *CHI 181*
 This course introduces the fundamental elements of the Chinese 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 Chinese and demonstrate cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.* (On Demand)

CHI 112 Elementary Chinese II 3 0 0 3
 Prerequisites: *CHI 111* Corequisite: *CHI 182*
 This course includes the basic fundamentals of the Chinese language within a cultural context of the Chinese people and its history. 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 Chinese and demonstrate further cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.* (On Demand)

CHI 181 Chinese Lab I 0 2 0 1
 Prerequisites: *None* Corequisite: *None*
 This course provides an opportunity to enhance acquisition of the fundamental elements of the Chinese language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Chinese

and demonstrate cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.* (On Demand)

CHI 182 Chinese Lab II 0 2 0 1

Prerequisites: CHI 181 Corequisite: None

This course provides an opportunity to enhance acquisition of the fundamental elements of the Chinese language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Chinese and demonstrate cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.* (On Demand)

CHM - Chemistry

CHM 090 Chemistry Concepts 4 0 0 4

Prerequisite: *None* Corequisite: *None*

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. (On Demand)

CHM 121 Foundations of Chemistry 3 0 0 3

Prerequisite: *None* Corequisite: *None*

This course is designed for those who have no previous high school chemistry or a grade of C or less in high school chemistry. Topics include matter, structure of the atom, nomenclature, chemical equations, bonding and reactions; mathematical topics include measurements, scientific notation, and stoichiometry. Upon completion, students should be able to demonstrate an understanding of chemical concepts and an ability to solve related problems in subsequent chemistry courses. (On Demand)

CHM 121A Foundations of Chem Lab 0 2 0 1

Prerequisite: *None* Corequisite: *CHM 121*

This course is a laboratory for CHM 121. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 121. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 121. (On Demand)

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

Prerequisite: *None* Corequisite: *None*

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 for transferability as a pre-major and/or elective course requirement.* (F., On Demand)

CHM 130A Gen, Org, & Biochem Lab 0 2 0 1

Prerequisite: *None* Corequisite: *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. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., On Demand)

CHM 131 Introduction to Chemistry 3 0 0 3

Prerequisite: *None* Corequisite: *None*

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. This course is also available through the Virtual Learning Community (VLC).* (F., On Demand)

CHM 131A Introduction to Chemistry Lab 0 3 0 1

Prerequisite: *None* Corequisite: *CHM 131*

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

CHM 132 Organic and Biochemistry 3 3 0 4

Prerequisites: *CHM 131 and CHM 131A or CHM 151*

Corequisite: *None*

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

CHM 151 General Chemistry I 3 3 0 4

Prerequisite: *None* Corequisite: *None*

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

CHM 152 General Chemistry II 3 3 0 4
 Prerequisite: *CHM 151* Corequisite: *None*
 This course provides a continuation of the study of the fundamental principles and laws of chemistry. Topics include kinetics, equilibrium, ionic and redox equations, acid-base theory, electrochemistry, thermodynamics, introduction to nuclear and organic chemistry, and 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. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.* (F., Sp., S.)

CHM 251 Organic Chemistry I 3 3 0 4
 Prerequisite: *CHM 152* Corequisite: *None*
 This course provides a systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of hydrocarbons, alkyl halides, alcohols, and ethers; further topics include isomerization, stereochemistry, and spectroscopy. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of covered organic topics as needed in CHM 252. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (Sp.)

CHM 252 Organic Chemistry II 3 3 0 4
 Prerequisite: *CHM 251* Corequisite: *None*
 This course provides a 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 the 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 for transferability as a pre-major and/or elective course requirement.* (Sp.)

CIS - Information Systems

CIS 070 Fundamentals of Computing 0 2 0 1
 Prerequisite: *None* Corequisite: *None*
 This course covers fundamental functions and operations of the computer. Topics include identification of components, overview of operating systems, and other basic computer operations. Upon completion, students should be able to operate computers, access files, print documents, and perform basic application operations. (F., Sp.)

CIS 110 Introduction to Computers 2 2 0 3
 Prerequisite: *CIS 070 or CTS 080, RED 080* Corequisite: *None*
 This course introduces computer concepts, including fundamental functions and operations of the computer. Topics include identification of hardware components, basic computer operations, security issues, and use of software applications. Upon completion, students should be able to demonstrate an understanding of the role and function of computers and use the computer to solve problems. *This course has been approved to satisfy the Comprehensive articulation agreement general education core requirement in natural science/mathematics (Quantitative Option).* *This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

CIS 111 Basic PC Literacy 1 2 0 2
 Prerequisite: *CIS 070 or CTS 080* Corequisite: *None*
 This course provides an 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. *This course is not approved as a transfer course in the Comprehensive Articulation Agreement and cannot be used to meet degree requirements by students in AA and AS programs requiring CIS 110.* *This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

CIS 115 Intro to Prog & Logic 2 3 0 3
 Prerequisite: *CIS 070 or CTS 080, MAT 070, RED 080* Corequisite: *None*
 This course introduces computer programming and problem solving in a structured program logic environment. Topics include language syntax, data types, program organization, problem solving methods, algorithm design, and logic control structures. Upon completion, students should be able to manage files with operating system commands, use top-down algorithm design, and implement algorithmic solutions in a programming language. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics (Quantitative Option).* *This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

CIS 165 Desktop Publishing I 2 2 0 3
 Prerequisite: *CIS 110 or CIS 111 or OST 136*
 Corequisite: *None*
 This course provides an introduction to desktop publishing software capabilities. Emphasis is placed on efficient use of a page layout software package to create, design, and print publications; hardware/software compatibility; and integration of specialized peripherals. Upon completion, students should be able to prepare publications given design specifications. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

CJC - Criminal Justice

CJC 100 Basic Law Enforcement Trn 9 30 0 19
 Prerequisite: *None* Corequisite: *None*
 This course covers the basic skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Topics are divided into general units of study: legal, patrol duties, law enforcement communications, investigations, practical application and sheriff-specific. Upon successful completion, the student will be able to demonstrate competence in the topics and areas required for the state comprehensive certification examination. This is a certificate-level course. (F., Sp.)

CJC 111 Intro to Criminal Justice 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course introduces the components and processes of the criminal justice system. Topics include history, structure, functions, and philosophy of the criminal justice system and their relationship to life in our society. Upon completion, students should be able to define and describe the major system components and their interrelationships and evaluate career options. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* *This course is also available through the Virtual Learning Community (VLC).* (F., S.)

CJC 112 Criminology

3 0 0 3

Prerequisite: *RED 090*Corequisite: *None*

This course introduces deviant behavior as it relates to criminal activity. Topics include theories of crime causation; statistical analysis of criminal behavior; past, present, and future social control initiatives; and other related topics. Upon completion, students should be able to explain and discuss various theories of crime causation and societal response. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

CJC 113 Juvenile Justice

3 0 0 3

Prerequisite: *None*Corequisite: *None*

This course covers the juvenile justice system and related juvenile issues. Topics include an overview of the juvenile justice system, treatment and prevention programs, special areas and laws unique to juveniles, and other related topics. Upon completion, students should be able to identify/discuss juvenile court structure/procedures, function and jurisdiction of juvenile agencies, processing/detention of juveniles, and case disposition. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

CJC 114 Investigative Photography

1 2 0 2

Prerequisite: *None*Corequisite: *None*

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

CJC 120 Interviews/Interrogations

1 2 0 2

Prerequisite: *None*Corequisite: *None*

This course covers basic and special techniques employed in criminal justice interviews and interrogations. Emphasis is placed on the interview/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. (F.)

CJC 121 Law Enforcement Operations

3 0 0 3

Prerequisite: *None*Corequisite: *None*

This course introduces fundamental law enforcement operations. Topics include the contemporary evolution of law enforcement operations and related issues. Upon completion, students should be able to explain theories, practices, and issues related to law enforcement operations. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).* (F.)

CJC 131 Criminal Law

3 0 0 3

Prerequisite: *None*Corequisite: *None*

This course covers the history/evolution/principles and contemporary applications of criminal law. Topics include sources of substantive law, classification of crimes, parties to crime, elements of crimes, matters of criminal responsibility, and other related topics. Upon completion, students should be able to discuss the sources of law and identify, interpret, and apply the appropriate statutes/elements. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

CJC 132 Court Procedure & Evidence

3 0 0 3

Prerequisite: *None*Corequisite: *None*

This course covers judicial structure/process/procedure from incident to disposition, kinds and degrees of evidence, and the rules governing admissibility of evidence in court. Topics include consideration of state and federal courts, arrest, search and seizure laws, exclusionary and statutory rules of evidence, and other related issues. Upon completion, students should be able to identify and discuss procedures necessary to establish a lawful arrest/search, proper judicial procedures, and the admissibility of evidence. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

CJC 141 Corrections

3 0 0 3

Prerequisite: *None*Corequisite: *None*

This course covers the history, major philosophies, components, and current practices and problems of the field of corrections. Topics include historical evolution, functions of the various components, alternatives to incarceration, treatment programs, inmate control, and other related topics. Upon completion, students should be able to explain the various components, processes, and functions of the correctional system. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).* (F.)

CJC 144 Crime Scene Processing

2 3 0 3

Prerequisite: *None*Corequisite: *None*

This course introduces the theories and practices of crime scene processing and investigating. Topics include legal considerations at the crime scene, processing indoor and outdoor scenes, recording, note taking, collection and preservation of evidence and submission to the crime laboratory. Upon completion, the student should be able to evaluate and search various crime scenes and demonstrate the appropriate techniques. *This course is a unique concentration requirement in the Latent Evidence concentration in the Criminal Justice Technology Program.* (F.)

CJC 146 Trace Evidence

2 3 0 3

Prerequisite: *None*Corequisite: *None*

This course provides a study of trace evidence as it relates to forensic science. Topics include collection, packaging, and preservation of trace evidence from crime scenes such as bombings, fires and other scenes. Upon completion, students should be able to demonstrate the fundamental concepts of trace evidence collection, preservation and submission to the crime laboratory. *This course is a unique concentration requirement in the Latent Evidence concentration in the Criminal Justice Technology Program.* (Sp.)

CJC 160 Terrorism: Underlying Issues

3 0 0 3

Prerequisite: *RED 090*Corequisite: *None*

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 considerations 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. (F.)

CJC 170 Critical Incident Mgt for Public Safety 3 0 0 3
Prerequisite: *None* Corequisite: *None*
This course prepares the student to specialize in the direct response, operations, and management of critical incidents. Emphasis is placed upon the theoretical and applied models to understand and manage disasters, terrorism, and school/work place violence. Upon completion, the student should be able to identify and discuss managerial techniques, legal issues, and response procedures to critical incidents. (F.)

CJC 212 Ethics & Comm Relations 3 0 0 3
Prerequisite: *None* Corequisite: *None*
This course covers ethical considerations and accepted standards applicable to criminal justice organizations and professionals. Topics include ethical systems; social change, values, and norms; cultural diversity; citizen involvement in criminal justice issues; and other related topics. Upon completion, students should be able to apply ethical considerations to the decision-making process in identifiable criminal justice situations. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

CJC 213 Substance Abuse 3 0 0 3
Prerequisite: *None* Corequisite: *None*
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. (F.)

CJC 215 Organization & Administration 3 0 0 3
Prerequisite: *None* Corequisite: *None*
This course introduces the components and functions of organization and administration as it applies to the agencies of the criminal justice system. Topics include operations/functions of organizations; recruiting, training, and retention of personnel; funding and budgeting; communications; span of control and discretion; and other related topics. Upon completion, students should be able to identify and discuss the basic components and functions of a criminal justice organization and its administrative operations. (F.)

CJC 221 Investigative Principles 3 2 0 4
Prerequisite: *None* Corequisite: *None*
This course introduces the theories and fundamentals of the investigative process. Topics include crime scene/incident processing, information gathering techniques, collection/preservation of evidence, preparation of appropriate reports, court presentations, and other related topics. Upon completion, students should be able to identify, explain, and demonstrate the techniques of the investigative process, report preparation, and courtroom presentation. *This is also available through the Virtual Learning Community (VLC).* (Sp.)

CJC 225 Crisis Intervention 3 0 0 3
Prerequisite: *RED 090* Corequisite: *None*
This course introduces critical incident intervention and management techniques as they apply to operational criminal justice practitioners. Emphasis is placed on the victim/offender situation as well as job-related high stress, dangerous, or problem-solving citizen contacts. Upon completion, students should be able to provide insightful analysis of emotional, violent, drug-induced, and other critical and/or stressful incidents that require field analysis and/or resolution. (F.)

CJC 231 Constitutional Law 3 0 0 3
Prerequisite: *None* Corequisite: *None*
The course covers the impact of the Constitution of the United States and its amendments on the criminal justice system. Topics include the structure of the Constitution and its amendments, court decisions pertinent to contemporary criminal justice issues, and other related topics. Upon completion, students should be able to identify/discuss the basic structure of the United States Constitution and the rights/procedures as interpreted by the courts. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

CJC 245 Friction Ridge Analysis 2 3 0 3
Prerequisite: *None* Corequisite: *None*
This course introduces the basic elements of fingerprint technology and techniques applicable to the criminal justice field. Topics include the history and meaning of fingerprints, pattern types and classification, filing sequence, searching and referencing. Upon completion, students should be able to discuss and demonstrate the fundamental techniques of basic fingerprint technology. *This course is a unique concentration requirement in the Latent Evidence concentration in the Criminal Justice Technology Program.* (F.)

CJC 246 Adv Friction Ridge Analysis 2 3 0 3
Prerequisite: *CJC 245* Corequisite: *None*
This course introduces the theories and processes of advanced friction ridge analysis. Topics include evaluation of friction ridges, chart preparation, comparative analysis for valued determination rendering proper identification, chemical enhancement and AFIS preparation and usage. Upon completion, students must show an understanding of proper procedures for friction ridge analysis through written testing and practical exercises. *This course is a unique concentration requirement in the Latent Evidence concentration in the Criminal Justice Technology Program.* (F.)

CJC 250 Forensic Biology I 2 2 0 3
Prerequisite: *None* Corequisite: *None*
This course covers important biological principles that are applied in the crime laboratory. Topics include forensic toxicology, forensic serology, microscopy, and DNA typing analysis, with an overview of organic and inorganic analysis. Upon completion students should be able to articulate how a crime laboratory process physical evidence submitted by law enforcement agencies. (Sp.)

CJC 251 Forensic Chemistry I 3 2 0 4
Prerequisite: *None* Corequisite: *None*
This course provides a study of the fundamental concepts of chemistry as it relates to forensic science. Topics include physical and chemical properties of substances, metric measurements, chemical changes, elements, compounds, gases, and atomic structure. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of forensic chemistry. (F.)

COE - Cooperative Education

COE 110 World of Work 1 0 0 1
Prerequisite: *None* Corequisite: *None*
This course covers basic knowledge necessary for gaining and maintaining employment. Topics include job search skills, work ethic, meeting employer expectations, workplace safety, and human relations. Upon completion, students should be able to successfully make the transition from school to work. (F., Sp., S.)

COE 111 Co-op Work Experience I 0 0 10 1
 Prerequisite: *None* Corequisite: *None*
 This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. *This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

COE 112 Co-op Work Experience I 0 0 20 2
 Prerequisite: *None* Corequisite: *None*
 This course provides work experience with a college approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. (F., Sp., S.)

COE 114 Co-op Work Experience I 0 0 40 4
 Prerequisite: *None* Corequisite: *None*
 This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. (F., Sp., S.)

COE 115 Work Exp Seminar I 1 0 0 1
 Prerequisite: *None*
 Corequisite: *COE 111 or COE 112 or COE 113 or COE 114*
 This course description is available in individual departments. (F., Sp., S.)

COE 121 Co-op Work Experience II 0 0 10 1
 Prerequisite: *None* Corequisite: *None*
 This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. (F., Sp., S.)

COE 122 Co-op Work Experience II 0 0 20 2
 Prerequisite: *None* Corequisite: *None*
 This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. (F., Sp., S.)

COE 124 Co-op Work Experience II 0 0 40 4
 Prerequisite: *None* Corequisite: *None*
 This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. (F., Sp., S.)

COE 125 Work Experience Seminar II 1 0 0 1
 Prerequisite: *COE 115* Corequisite: *COE 121*
 This course description is available in individual departments. (F., Sp., S.)

COE 131 Co-op Work Experience III 0 0 10 1
 Prerequisite: *None* Corequisite: *None*
 This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. (F., Sp., S.)

COE 132 Co-op Work Experience III 0 0 20 2
 Prerequisite: *None* Corequisite: *None*
 This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. (F., Sp., S.)

COE 134 Co-op Work Experience III 0 0 40 4
 Prerequisite: *None* Corequisite: *None*
 This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. (F., Sp., S.)

COE 211 Co-op Work Experience IV 0 0 10 1
 Prerequisite: *None* Corequisite: *None*
 This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. (F., Sp., S.)

COE 212 Co-op Work Experience IV 0 0 20 2
 Prerequisite: *None* Corequisite: *None*
 This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. (F., Sp., S.)

COE 221 Co-op Work Experience V 0 0 10 1
 Prerequisite: *None* Corequisite: *None*
 This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. (F., Sp., S.)

COE 231 Co-op Work Experience VI 0 0 10 1Prerequisite: *None*Corequisite: *None*

This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. (F., Sp., S.)

COM - Communication**COM 110 Introduction to Communication** 3 0 0 3Prerequisite: *None*Corequisite: *None*

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 (substitute). This course is also available through the Virtual Learning Community (VLC).* (On Demand)

COM 231 Public Speaking 3 0 0 3Prerequisite: *ENG 111*Corequisite: *None*

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 (substitute). This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

COS - Cosmetology**COS 111 Cosmetology Concepts I** 4 0 0 4Prerequisite: *None*Corequisite: *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. (F., Sp.)

COS 112 Salon I 0 24 0 8Prerequisite: *None*Corequisite: *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. (F., Sp.)

COS 113 Cosmetology Concepts II 4 0 0 4Prerequisite: *None*Corequisite: *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. (F., Sp., S.)

COS 114 Salon II 0 24 0 8Prerequisite: *None*Corequisite: *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. (F., Sp., S.)

COS 115 Cosmetology Concepts III 4 0 0 4Prerequisite: *None*Corequisite: *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. (F., Sp., S.)

COS 116 Salon III 0 12 0 4Prerequisite: *None*Corequisite: *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. (F., Sp., S.)

COS 117 Cosmetology Concepts IV 2 0 0 2Prerequisite: *None*Corequisite: *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. (F., Sp., S.)

COS 118 Salon IV 0 21 0 7Prerequisite: *None*Corequisite: *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. (F., Sp., S.)

COS 250 Computerized Salon Ops 1 0 0 1Prerequisite: *None*Corequisite: *None*

This course introduces computer and salon software. Emphasis is placed on various computer and salon software applications. Upon completion, students should be able to utilize computer skills and software applications in the salon setting. (On Demand)

CSC - Computer Science

CSC 151 JAVA Programming 2 3 0 3
Prerequisite: *CIS 070, or CTS 080* Corequisite: *None*
MAT 070, RED 080

This course introduces computer programming using the JAVA programming language with object-oriented programming principles. Emphasis is placed on even-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. *This course has been approved to satisfy the comprehensive Articulation agreement for transferability as a premajor and/or elective course requirement.* (On Demand)

CTS - Computer Information Technology

CTS 080 Computing Fundamentals 2 3 0 3
Prerequisite: *None* Corequisite: *None*

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

CTS 118 IS Professional Comm 2 0 0 2
Prerequisite: *None* Corequisite: *None*

This course prepares the information systems professional to communicate with corporate personnel from management to end-users. Topics include information systems cost justification tools, awareness of personal hierarchy of needs, addressing these needs, and discussing technical issues with non-technical personnel. Upon completion, students should be able to communicate information systems issues to technical and non-technical personnel. (This course is offered at Wake Technical Community College) (F.)

CTS 120 Hardware/Software Support 2 3 0 3
Prerequisite: *CIS 110 or CIS 111 or CIS 115* Corequisite: *None*

This course covers the basic hardware of a personal computer, including installation, operations and interactions with software. Topics include component identification, memory-system, peripheral installation and configuration, preventive maintenance, hardware diagnostics/repair, installation and optimization of system software, commercial programs, system configuration, and device-drivers. Upon completion, students should be able to select appropriate computer equipment and software, upgrade/maintain existing equipment and software, and troubleshoot/repair non-functioning personal computers. (Sp.)

CTS 130 Spreadsheet 2 2 0 3
Prerequisite: *CIS 110 or CIS 111* Corequisite: *None*
or OST 137 and MAT 060

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. (Sp.)

CTS 230 Advanced Spreadsheet 2 2 0 3
Prerequisite: *CTS 130* Corequisite: *None*

This course covers advanced spreadsheet design and development. Topics include advanced functions and statistics, charting, macros, databases, and linking. Upon completion, students should be able

to demonstrate competence in designing complex spreadsheets. (F.)

CTS 285 Systems Analysis & Design 3 0 0 3
Prerequisite: *CIS 115* Corequisite: *None*

This course introduces established and evolving methodologies for the analysis, design, and development of an information system. Emphasis is placed on system characteristics, managing projects, prototyping, CASE/OOM tools, and systems development life cycle phases. Upon completion, students should be able to analyze a problem and design an appropriate solution using a combination of tools and techniques. (F.)

CTS 287 Emerging Technologies 3 0 0 3
Prerequisite: *None* Corequisite: *None*

This course introduces emerging information technologies. Emphasis is placed on evolving technologies and trends in business and industry. Upon completion, students should be able to articulate an understanding of the current trends and issues in emerging technologies for information systems. (This course is offered at Wake Technical Community College) (Sp.)

CTS 289 System Support Project 1 4 0 3
Prerequisite: *CTS 285* Corequisite: *None*

This course provides an opportunity to complete a significant support project with minimal instructor assistance. Emphasis is placed on written and oral communication skills, project definition, documentation, installation, testing, presentation, and user training. Upon completion, students should be able to complete a project from the definition phase through implementation. (Sp.)

DBA - Database Management

DBA 110 Database Concepts 2 3 0 3
Prerequisite: *CIS 070 or CTS 080*
and MAT 060 Corequisite: *None*

This course introduces database design and creation using a DBMS product. Emphasis is placed on data dictionaries, normalization, data integrity, data modeling, and creation of simple tables, queries, reports, and forms. Upon completion, students should be able to design and implement normalized database structures by creating simple database tables, queries, reports, and forms. (Sp.)

DBA 115 Database Applications 2 2 0 3
Prerequisite: *DBA 110* Corequisite: *None*

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

DDF - Design Drafting

DDF 211 Design Process I 1 6 0 4
Prerequisite: *DFT 112 and DFT 152* Corequisite: *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. (S.)

DDF 212 Design Process II 1 6 0 4
Prerequisite: *DDF 211* Corequisite: *None*

This course stresses the integration of various design practices. Em-

phasis is placed on the creation of an original design. Upon completion, students should be able to apply engineering graphics and design procedures to a design project. (F.)

DDF 213 Design Process III 1 6 0 4

Prerequisite: *DDF 212* Corequisite: *MEC 250*

This course provides an opportunity to produce a complete design project. Topics include materials, production means, analysis, documentation, calculations, and specifications. Upon completion, students should be able to produce a completed design project. (Sp.)

DDF 214 Tool Design 2 4 0 4

Prerequisite: *DDF 212* Corequisite: *None*

This course introduces the principles of tool design. Topics including gaging, die work, and cost analysis using available catalogs and studies using manufacturing processes. Upon completion, students should be able to use catalogs to identify vendors and prepare working drawings for tooling. (Sp.)

DDT- Developmental Disabilities

DDT 110 Developmental Disabilities 3 0 0 3

Prerequisite: *None* Corequisite: *None*

This course identifies the characteristics and causes of various disabilities. Topics include history of service provision, human rights, legislation and litigation, advocacy, and accessing support services. Upon completion, students should be able to demonstrate an understanding of current and historical developmental disability definitions and support systems used throughout the life span. (On Demand)

DEN - Dental

DEN 100 Basic Orofacial Anatomy 2 0 0 2

Prerequisite: *None* Corequisite: *DEN 101*

This course provides a basic introduction to the structures of the head, neck, and oral cavity. Topics include tooth morphology, head and neck anatomy, histology, and embryology. Upon completion, students should be able to demonstrate knowledge of normal structures and development and how they relate to the practice of dental assisting. (F.)

DEN 101 Preclinical Procedures 4 6 0 7

Prerequisite: *None* Corequisite: *DEN 100, DEN 111, DEN 102*

This course provides instruction in procedures for the clinical dental assistant as specified by the North Carolina Dental Practice Act. Emphasis is placed on orientation to the profession, infection control techniques, instruments, related expanded functions, and diagnostic, operative, and specialty procedures. Upon completion, students should be able to demonstrate proficiency in clinical dental assisting procedures. (F.)

DEN 102 Dental Materials 3 4 0 5

Prerequisite: *None* Corequisite: *None*

This course provides instruction in identification, properties, evaluation of quality, principles, and procedures related to manipulation and storage of operative and specialty dental materials. Emphasis is placed on the understanding and safe application of materials used in the dental office and laboratory. Upon completion, students should be able to demonstrate proficiency in the laboratory and clinical application of routinely used dental materials. (F.)

DEN 103 Dental Sciences 2 0 0 2

Prerequisite: *None* Corequisite: *DEN 106*

This course is a study of oral pathology, pharmacology, and dental office emergencies. Topics include oral pathological conditions, dental therapeutics, and management of emergency situations. Upon completion, students should be able to recognize abnormal oral conditions, identify classifications, describe actions and effects of commonly prescribed drugs, and respond to medical emergencies. (Sp.)

DEN 104 Dental Health Education 2 2 0 3

Prerequisite: *None* Corequisite: *None*

This course covers the study of preventive dentistry to prepare dental assisting students for the role of dental health educator. Topics include etiology of dental diseases, preventive procedures, and patient education theory and practice. Upon completion, students should be able to demonstrate proficiency in patient counseling and oral health instruction in private practice or public health settings. (Sp.)

DEN 105 Practice Management 2 0 0 2

Prerequisite: *None* Corequisite: *DEN 106*

This course provides a study of principles and procedures related to management of the dental practice. Emphasis is placed on maintaining clinical and financial records, patient scheduling, and supply and inventory control. Upon completion, students should be able to demonstrate fundamental skills in dental practice management. (Sp.)

DEN 106 Clinical Practice I 1 0 12 5

Prerequisite: *BIO 106, DEN 101 and DEN 111*

Corequisite: *DEN 103, DEN 104, DEN 105, and DEN 112*

This course is designed to provide experience assisting in a clinical setting. Emphasis is placed on the application of principles and procedures of four-handed dentistry and laboratory and clinical support functions. Upon completion, students should be able to utilize classroom theory and laboratory and clinical skills in a dental setting. (Sp.)

DEN 107 Clinical Practice II 1 0 12 5

Prerequisite: *DEN 106* Corequisite: *None*

This course is designed to increase the level of proficiency in assisting in a clinical setting. Emphasis is placed on the application of principles and procedures of four-handed dentistry and laboratory and clinical support functions. Upon completion, students should be able to combine theoretical and ethical principles necessary to perform entry-level skills including functions delegable to a DA II. (S.)

DEN 110 Orofacial Anatomy 2 2 0 3

Prerequisite: *None* Corequisite: *DEN 121*

This course introduces the structures of the head, neck, and oral cavity. Topics include tooth morphology, head and neck anatomy, histology, and embryology. Upon completion, students should be able to relate the identification of normal structures and development to the practice of dental assisting and dental hygiene. (F.)

DEN 111 Infection/Hazard Control 2 0 0 2

Prerequisite: *None* Corequisite: *DEN 101 or DEN 121*

This course introduces the infection and hazard control procedures necessary for the safe practice of dentistry. Topics include 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, infec-

tion control procedures, biohazard management, OSHA standards, and applicable North Carolina laws. (F.)

DEN 112 Dental Radiography 2 3 0 3

Prerequisite: *None*

Corequisite: *DEN 106, DEN 100 or DEN 110 and DEN 111*

This course provides a comprehensive view of the principles and procedures of radiology as they apply to dentistry. Topics include techniques in exposing, processing, and evaluating radiographs, as well as radiation safety, quality assurance, and legal issues. Upon completion, students should be able to demonstrate proficiency in the production of diagnostically acceptable radiographs using appropriate safety precautions. (F., Sp.)

DEN 120 Dental Hyg Preclinic Lec 2 0 0 2

Prerequisite: *None*

Corequisite: *DEN 121*

This course introduces preoperative and clinical dental hygiene concepts. Emphasis is placed on the assessment phase of patient care as well as the theory of basic dental hygiene instrumentation. Upon completion, students should be able to collect and evaluate patient data at a basic level and demonstrate knowledge of dental hygiene instrumentation. (F.)

DEN 121 Dental Hygiene Precl Lab 0 6 0 2

Prerequisite: *None*

Corequisite: *DEN 120*

This course provides the opportunity to perform clinical dental hygiene procedures discussed in DEN 120. Emphasis is placed on clinical skills in patient assessment and instrumentation techniques. Upon completion, students should be able to demonstrate the ability to perform specific preclinical procedures. (F.)

DEN 123 Nutrition/Dental Health 2 0 0 2

Prerequisite: *CHM 130, CHM 130A*

Corequisite: *DEN 131*

This course introduces basic principles of nutrition with emphasis on nutritional requirements and their application to individual patient needs. Topics include the study of the food pyramid, nutrient functions, Recommended Daily Allowances, and related psychological principles. Upon completion, students should be able to recommend and counsel individuals on their food intake as related to their dental health. (Sp.)

DEN 124 Periodontology 2 0 0 2

Prerequisite: *DEN 110*

Corequisite: *DEN 131*

This course provides an in-depth study of the periodontium, periodontal pathology, periodontal monitoring, and the principles of periodontal therapy. Topics include periodontal anatomy and a study of the etiology, classification, and treatment modalities of periodontal diseases. Upon completion, students should be able to describe, compare, and contrast techniques involved in periodontal/maintenance therapy, as well as patient care management. (Sp.)

DEN 130 Dental Hygiene Theory I 2 0 0 2

Prerequisite: *DEN 120*

Corequisite: *DEN 131*

This course is a continuation of the didactic dental hygiene concepts necessary for providing an oral prophylaxis. Topics include deposits/removal, instrument sharpening, patient education, fluorides, planning for dental hygiene treatment, charting, and clinical records and procedures. Upon completion, students should be able to demonstrate knowledge needed to complete a thorough oral prophylaxis. (Sp.)

DEN 131 Dental Hygiene Clinic I 0 0 9 3

Prerequisite: *DEN 121*

Corequisite: *DEN 130*

This course continues skill development in providing an oral prophylaxis. Emphasis is placed on treatment of the recall patients with gingivitis or light deposits. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment. (Sp.)

DEN 140 Dental Hygiene Theory II 1 0 0 1

Prerequisite: *DEN 130*

Corequisite: *DEN 141*

This course provides a continuation of the development, theory, and practice of patient care. Topics include modification of treatment for special needs patients, advanced radiographic interpretation, and ergonomics. Upon completion, students should be able to differentiate necessary treatment modifications, effective ergonomic principles, and radiographic abnormalities. (S.)

DEN 141 Dental Hygiene Clinic II 0 0 6 2

Prerequisite: *DEN 131*

Corequisite: *DEN 140*

This course continues skill development in providing an oral prophylaxis. Emphasis is placed on treatment of patients with early periodontal disease and subgingival deposits. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment. (S.)

DEN 220 Dental Hygiene Theory III 2 0 0 2

Prerequisite: *DEN 140*

Corequisite: *DEN 221*

This course provides a continuation in developing the theories and practices of patient care. Topics include periodontal debridement, pain control, subgingival irrigation, air polishing, and case presentations. Upon completion, students should be able to demonstrate knowledge of methods of treatment and management of periodontally compromised patients. (F.)

DEN 221 Dental Hygiene Clinic III 0 0 12 4

Prerequisite: *DEN 141*

Corequisite: *DEN 220*

This course continues skill development in providing an oral prophylaxis. Emphasis is placed on treatment of patients with moderate to advanced periodontal involvement and moderate deposits. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment. (F.)

DEN 222 General & Oral Pathology 2 0 0 2

Prerequisite: *BIO 165*

Corequisite: *DEN 221*

This course provides a general knowledge of oral pathological manifestations associated with selected systemic and oral diseases. Topics include developmental and degenerative diseases, selected microbial diseases, specific and nonspecific immune and inflammatory responses with emphasis on recognizing abnormalities. Upon completion, students should be able to differentiate between normal and abnormal tissues and refer unusual findings to the dentist for diagnosis. (F.)

DEN 223 Dental Pharmacology 2 0 0 2

Prerequisite: *CHM 130, CHM 130A*

Corequisite: *BIO 165, DEN 131*

This course provides basic drug terminology, general principles of drug actions, dosages, routes of administration, adverse reactions, and basic principles of anesthesiology. Emphasis is placed on knowledge of drugs in overall understanding of patient histories and health status. Upon completion, students should be able to recognize that each patient's general health or drug usage may require modification of the treatment procedures. (Sp.)

DEN 224 Materials and Procedures 1 3 0 2
 Prerequisite: *DEN 111* Corequisite: *DEN 221*
 This course introduces the physical properties of materials and related procedures used in dentistry. Topics include restorative and preventive materials, fabrication of casts and appliances, and chairside functions of the dental hygienist. Upon completion, students should be able to demonstrate proficiency in the laboratory and/or clinical application of routinely used dental materials and chairside functions. (F.)

DEN 230 Dental Hygiene Theory IV 1 0 0 1
 Prerequisite: *DEN 220* Corequisite: *DEN 231*
 This course provides an opportunity to increase knowledge of the profession. Emphasis is placed on dental specialties and completion of a case presentation. Upon completion, students should be able to demonstrate knowledge of various disciplines of dentistry and principles of case presentations. (Sp.)

DEN 231 Dental Hygiene Clinic IV 0 0 12 4
 Prerequisite: *DEN 221* Corequisite: *DEN 230*
 This course continues skill development in providing an oral prophylaxis. Emphasis is placed on periodontal maintenance and on treating patients with moderate to advanced/refractory periodontal disease. Upon completion, students should be able to assess these patients' needs and complete the necessary dental hygiene treatment. (Sp.)

DEN 232 Community Dental Health 2 0 3 3
 Prerequisite: *None* Corequisite: *DEN 231*
 This course provides a study of the principles and methods used in assessing, planning, implementing, and evaluating community dental health programs. Topics include epidemiology, research methodology, biostatistics, preventive dental care, dental health education, program planning, and financing and utilization of dental services. Upon completion, students should be able to assess, plan, implement, and evaluate a community dental health program. (Sp.)

DEN 233 Professional Development 2 0 0 2
 Prerequisite: *None* Corequisite: *DEN 231*
 This course includes professional development, ethics, and jurisprudence with applications to practice management. Topics include conflict management, state laws, resumes, interviews, and legal liabilities as health care professionals. Upon completion, students should be able to demonstrate the ability to practice dental hygiene within established ethical standards and state laws. (Sp.)

DFT - Drafting

DFT 111 Technical Drafting I 1 3 0 2
 Prerequisite: *None* Corequisite: *None*
 This course introduces basic drafting skills, equipment, and applications. Topics include sketching, measurements, lettering, dimensioning, geometric construction, orthographic projections and pictorial drawings, sections, and auxiliary views. Upon completion, students should be able to understand and apply basic drawing principles and practices. (F.)

DFT 112 Technical Drafting II 1 3 0 2
 Prerequisite: *DFT 111 and DFT 151* Corequisite: *None*
 This course provides for advanced drafting practices and procedures. Topics include detailed working drawings, hardware, fits and tolerances, assembly and sub-assembly, geometric dimensioning and tolerancing, intersections, and developments. Upon completion, students should be able to produce detailed working drawings. (Sp.)

DFT 151 CAD I 2 3 0 3
 Prerequisite: *CIS 070* Corequisite: *None*
 This course introduces CAD software as a drawing tool. Topics include drawing, editing, file management, and plotting. Upon completion, students should be able to produce and plot a CAD drawing. (F., Sp.)

DFT 152 CAD II 2 3 0 3
 Prerequisite: *DFT 151* Corequisite: *None*
 This course introduces extended CAD applications. Emphasis is placed upon intermediate applications of CAD skills. Upon completion, students should be able to use extended CAD applications to generate and manage drawings. (Sp.)

DRA - Drama/Theatre

DRA 111 Theatre Appreciation 3 0 0 3
 Prerequisite: *RED 090* Corequisite: *None*
 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.* (F.)

DRA 120 Voice for Performance 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course provides guided practice in the proper production of speech for the theatre. Emphasis is placed on improving speech, including breathing, articulation, pronunciation, and other vocal variables. Upon completion, students should be able to demonstrate effective theatrical speech. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F. - Odd Year)

DRA 126 Storytelling 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course introduces the art of storytelling and the oral traditions of folk literature. Topics include the history of storytelling, its value and purpose, techniques of the storyteller, and methods of collecting verbal art. Upon completion, students should be able to present and discuss critically stories from the world's repertory of traditional lore. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.* (Sp.)

DRA 130 Acting I 0 6 0 3
 Prerequisite: *None* Corequisite: *None*
 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.* (Sp.)

DRA 131 Acting II 0 6 0 3
 Prerequisite: *DRA 130* Corequisite: *None*
 This course provides additional hands-on practice in the actor's craft. Emphasis is placed on further analysis, characterization, growth, and training for acting competence. 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.* (On Demand)

DRA 140 Stagecraft I 0 6 0 3
Prerequisite: *None* Corequisite: *None*

This course introduces the theory and basic construction of stage scenery and properties. Topics include stage carpentry, scene painting, stage electrics, properties, and backstage organization. Upon completion, students should be able to pursue vocational and vocational roles in technical theatre. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

DRA 145 Stage Make-up 1 2 0 2
Prerequisite: *None* Corequisite: *None*

This course covers the research, design, selection of materials, and application of stage make-up, prosthetics, wigs, and hairpieces. Emphasis is placed on the development of techniques, style, and presentation of the finished make-up. Upon completion, students should be able to create and apply make-up, prosthetics, and hairpieces. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

DRA 170 Play Production I 0 9 0 3
Prerequisite: *None* Corequisite: *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 pre-major and/or elective course requirement.* (On Demand)

DRA 171 Play Production II 0 9 0 3
Prerequisite: *DRA 170* Corequisite: *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 pre-major and/or elective course requirement.* (On Demand)

DRA 211 Theatre History I 3 0 0 3
Prerequisite: *None* Corequisite: *None*

This course covers the development of theatre from its origin to the closing of the British theatre in 1642. The history, aesthetics, and representative dramatic literature of the period. Upon completion, students should be able to trace the evolution of theatre and recognize the styles and types of world drama. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.* (F.)

DRA 260 Directing 0 6 0 3
Prerequisite: *DRA 130* Corequisite: *DRA 140*
This course provides an analysis and application of the techniques of

theatrical directing. Topics include script selection, analysis, casting, rehearsal planning, blocking, stage business, tempo, and technical considerations. Upon completion, students should be able to plan, execute, and critically discuss a student-directed production. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (Sp.)

ECO - Economics

ECO 251 Prin of Microeconomics 3 0 0 3
Prerequisite: *ENG 090, MAT 060, RED 090* Corequisite: *None*

This course introduces economic analysis of individual, business, and industry 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. This course is also available through the Virtual Learning Community (VLC).* (On Demand)

ECO 252 Prin of Macroeconomics 3 0 0 3
Prerequisite: *ENG 090, MAT 060, RED 090* Corequisite: *None*

This course introduces economic analysis of aggregate employment, income, and prices. Topics include major schools of economic thought; aggregate supply and demand; economic measures, fluctuations, and growth; money and banking; stabilization techniques; and international trade. Upon completion, students should be able to evaluate national economic components, conditions, and alternatives for achieving socioeconomic goals. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

EDU - Education

EDU 114 Intro to Family Childcare 3 0 0 3
Prerequisite: *EDU 080, MAT 060 and RED 080* Corequisite: *None*

This course introduces the student to family child care home environments with emphasis on standards and developmentally effective approaches for supporting diverse children and families. Topics include standards for quality, curriculum for multiple age groups, authentic assessment methods, business practices, building positive family and community partnerships, and professionalism. Upon completion, students should be able to design a family child care handbook that reflects a healthy, respectful, supportive, and stimulating learning environment. (Sp.)

EDU 118 Princ & Prac of Inst Asst 3 0 0 3
Prerequisite: *ENG 080, RED 080* Corequisite: *None*

This course covers the instructional assistant'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 role of the instructional assistant, demonstrate positive communication skills, and discuss educational philosophy. (F.)

EDU 119 Intro to Early Child Educ 4 0 0 4Prerequisite: *None* Corequisite: *None*

This course covers the foundations of the education profession, the diverse educational settings for young children, professionalism and planning developmentally appropriate programs for all children. Topics include historical foundations, program types, career options, professionalism and creating inclusive environments and curriculum responsive to the needs of all children and families. Upon completion, students should be able to design career plans and develop schedules, environments and activity plans appropriate for all children. *This course is also available through the Virtual Learning Community (VLC).* (F.)

EDU 131 Child, Family, & Commun 3 0 0 3Prerequisite: *ENG 080 and RED 080* Corequisite: *None*

This course covers the development of partnerships between culturally and linguistically diverse families, children, schools and communities. Emphasis is placed on developing skills and identifying benefits for establishing, supporting, and maintaining respectful, collaborative relationships between diverse families, programs/schools, and community agencies/resources. Upon completion, students should be able to explain appropriate relationships between families, educators, and professionals that enhance development and educational experiences of all children. *This course is also available through the Virtual Learning Community (VLC).* (F.)

EDU 144 Child Development I 3 0 0 3Prerequisite: *ENG 080 and RED 080* Corequisite: *None*

This course covers the theories of child development, developmental sequences, and factors that influence children's development, from conception through pre-school for all children. Emphasis is placed on sequences in physical/motor, social, emotional, cognitive, and language development and the multiple influences on development and learning of the whole child. Upon completion, students should be able to identify typical and atypical developmental characteristics, plan experiences to enhance development, and describe appropriate interaction techniques and environments. *This course is also available through the Virtual Learning Community (VLC).* (F.)

EDU 145 Child Development II 3 0 0 3Prerequisite: *ENG 080 and RED 080* Corequisite: *None*

This course includes the theories of child development, needs, milestones, and factors that influence development, from preschool through middle childhood. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

EDU 146 Child Guidance 3 0 0 3Prerequisite: *ENG 080 and RED 080* Corequisite: *None*

This course introduces principles and practical techniques including the design of learning environments for providing developmentally appropriate guidance for all children, including those at risk. Emphasis is placed on observation skills, cultural influences, underlying causes of behavior, appropriate expectations, development of self control and the role of communication and guidance. Upon completion, students should be able to demonstrate direct/indirect strategies for preventing

problem behaviors, teaching appropriate/acceptable behaviors, negotiation, setting limits and recognizing at risk behaviors. *This course is also available through the Virtual Learning Community (VLC).* (Sp., S.)

EDU 151 Creative Activities 3 0 0 3Prerequisite: *ENG 080 and RED 080* Corequisite: *EDU151A*

This course covers planning, creation and adaptation of developmentally supportive learning environments with attention to curriculum, interactions, teaching practices and learning materials. Emphasis is placed on creating and adapting integrated, meaningful, challenging and engaging developmentally supportive learning experiences in art, music, movement and dramatics for all children. Upon completion, students should be able to create, adapt, implement and evaluate developmentally supportive learning materials, experiences and environments. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

EDU 151A Creative Activities 3 0 0 3Prerequisite: *ENG 080 and RED 080* Corequisite: *EDU 151*

This course provides a laboratory component to complement EDU 151. Emphasis is placed on practical experiences that enhance concepts introduced in the classroom. Upon completion, students should be able to demonstrate a practical understanding of the development and implementation of appropriate creative activities. (Sp.)

EDU 153 Health, Safety & Nutrit 3 0 0 3Prerequisite: *ENG 080 and RED 080* Corequisite: *None*

This course covers 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, safe learning environments, and adhere to state regulations. *This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

EDU 162 Observ & Assess in ECE 3 0 0 3Prerequisite: *ENG 080 and RED 080* Corequisite: *None*

This course introduces the research, benefits, goals, and ethical considerations associated with observation and assessment in Early Childhood environments. Emphasis is placed on the implementation of multiple observation/assessment strategies including anecdotal records, event samples, rating scales, and portfolios to create appropriate learning experiences. Upon completion, students should be able to practice responsible assessment and use assessments to enhance programming and collaboration for children and families. (F.)

EDU 163 Classroom Mgt & Instruct 3 0 0 3Prerequisite: *ENG 080 and RED 080* Corequisite: *None*

This course covers management and instructional techniques with school-age populations. Topics include classroom management and organization, teaching strategies, individual student differences and learning styles, and developmentally appropriate classroom guidance techniques. Upon completion, students should be able to utilize developmentally appropriate behavior management and instructional strategies that enhance the teaching/learning process and promote students' academic success. (Sp.)

EDU 184 Early Child Intro Pract 1 3 0 2Prerequisite: *ENG 080, RED 080 and EDU 119* Corequisite: *None*

This course introduces students to early childhood settings and apply-

ing skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on observing children and assisting in the implementation of developmentally appropriate activities/environments for all children; and modeling reflective/professional practices. Upon completion, students should be able to demonstrate developmentally appropriate interactions with children and ethical/professional behaviors as indicated by assignments and onsite faculty visits. (Sp.)

EDU 216 Foundations of Education 4 0 0 4

Prerequisite: *ENG 090 and RED 090* Corequisite: *None*

This course introduces the American educational system and the teaching profession. Topics include historical and philosophical foundations of education, contemporary educational, structural, legal, and financial issues, and experiences 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 at select institutions only. *This course is also available through the Virtual Learning Community (VLC).* (On Demand)

EDU 221 Children with Exceptional 3 0 0 3

Prerequisite: *ENG 090, RED 090,* Corequisite: *None*
EDU 144 and EDU 145

This course introduces children with exceptionalities, their families, support services, inclusive/diverse settings, and educational/family plans based on the foundations of child development. Emphasis is placed on the characteristics of exceptionalities, observation and assessment of children, strategies for adapting the learning environment, and identification of community resources. Upon completion, students should be able to recognize diverse abilities, describe the referral process, and depict collaboration with families/professionals to plan/implement, and promote best practice. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement at select institutions only. This course is also available through the Virtual Learning Community (VLC).* (S.)

EDU 222 Learn w/ Behav Disord 3 0 0 3

Prerequisite: *ENG 090, RED 090,* Corequisite: *None*
EDU 144 and EDU 145

This course provides a comprehensive study of learners with behavioral disorders encompassing characteristics, assessments, placement alternatives, inclusion and family interventions. Topics include legislation, appropriate management interventions, and placement options for children with behavior disorders. Upon completion, students should be able to identify, develop, and utilize positive behavior support systems. Class Lab Credit *Combined Course Library September 23, 2008* EDU - 22 (F., Sp.)

EDU 223 Specific Learning Disab 3 0 0 3

Prerequisite: *ENG 090, RED 090,* Corequisite: *None*
EDU 144 and EDU 145

This course provides a comprehensive study of characteristics, alternative assessments, teaching strategies, placement options, inclusion, and family intervention for children with specific learning disabilities. Topics include causes, assessment instruments, learning strategies, and collaborative/inclusion methods for children with specific learning disabilities. Upon completion, students should be able to assist in iden-

tifying, assessing, and providing educational interventions for children with specific learning disabilities and their families. (Sp.)

EDU 234 Infants, Toddlers, and Twos 3 0 0 3

Prerequisite: *ENG 090, RED 090* Corequisite: *None*
and EDU 119

This course covers the unique needs and rapid changes that occur in the first three years of life and the inter-related factors that influence development. Emphasis is placed on recognizing and supporting developmental milestones through purposeful strategies, responsive care routines and identifying elements of quality, inclusive early care and education. Upon completion, students should be able to demonstrate respectful relationships that provide a foundation for healthy infant/toddler/twos development, plan/select activities/materials, and partner with diverse families. (Sp.)

EDU 235 School-Age Development and Program 3 0 0 3

Prerequisite: *ENG 090 and RED 090* Corequisite: *None*

This course includes developmentally appropriate practices in group settings for school-age children. Emphasis is placed on principles of development, environmental planning, and positive guidance techniques. Upon completion, students should be able to discuss developmental principles for all children ages five to twelve and plan and implement developmentally-appropriate activities. (Sp.)

EDU 247 Sensory & Physical Disab 3 0 0 3

Prerequisite: *ENG 090, RED 090, EDU 144* Corequisite: *None*
and EDU 145

This course covers characteristics, intervention strategies, assistive technologies, and inclusive practices for children with sensory and physical disabilities. Topics include inclusive placement options, utilization of support services, other health impairments and family involvement for children with sensory and physical disabilities. Upon completion, students should be able to identify and utilize intervention strategies and service delivery options for those specific disabilities. (Sp.)

EDU 248 Developmental Delays 3 0 0 3

Prerequisite: *ENG 090, RED 090,* Corequisite: *None*
EDU 144 and EDU 145

This course covers the causes and assessment of developmental delays and individualized instruction and curriculum for children with developmental delays. Emphasis is placed on definition, characteristics, assessment, educational strategies, inclusion, family involvement, and services for children with developmental delays. Upon completion, students should be able to identify, assess, and plan educational intervention strategies for children with developmental delays and their families. (Sp.)

EDU 251 Exploration Activities 3 0 0 3

Prerequisite: *ENG 090 and RED 090* Corequisite: *None*

This course covers discovery experiences in science, math, and social studies. Emphasis is placed on developing concepts for each area and encouraging young children to explore, discover, and construct concepts. Upon completion, students should be able to discuss the discovery approach to teaching, explain major concepts in each area, and plan appropriate experiences for children. (F.)

EDU 254 Music & Move for Child 1 2 0 2
 Prerequisite: *ENG 090 and RED 090* Corequisite: *None*
 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. (F.)

EDU 256 Inst Strat/Social Studies 2 2 0 3
 Prerequisite: *ENG 090 and RED 090* Corequisite: *None*
 This course covers objectives, content, materials, and instructional approaches to social studies. Topics include the integration of history, geography, economics, and government materials; research/study techniques; and critical thinking. Upon completion, students should be able to assess, plan, implement, and evaluate developmentally appropriate experiences as it relates to the NC Standard Course of Study. (Sp.)

EDU 257 Inst Strat/Math 2 2 0 3
 Prerequisite: *ENG 090, RED 090 and MAT 060* Corequisite: *None*
 This course covers concepts, activities, methods, and materials for teaching mathematics in elementary through middle school grades. Topics include individual instruction, developmental skill building, manipulatives, problem solving, critical thinking and numerical concepts. Upon completion, students should be able to assess, plan, implement and evaluate developmentally appropriate math experiences relating to the NC Standard Course of Study. (F.)

EDU 258 Inst Strategies/Science 2 2 0 3
 Prerequisite: *ENG 090 and RED 090* Corequisite: *None*
 This course covers objectives, content, materials, and instructional approaches to natural sciences for elementary through middle grades. Topics include classroom and laboratory science experiences, research/study techniques, and critical thinking. Upon completion, students should be able to assess/plan/implement/evaluate developmentally appropriate learning experiences in science as related to the North Carolina Standard Course of Study. (Sp.)

EDU 259 Curriculum Planning 3 0 0 3
 Prerequisite: *ENG 090, RED 090 and EDU 119* Corequisite: *None*
 This course is designed to focus on curriculum planning for three to five year olds. Topics include philosophy, curriculum models, indoor and outdoor environments, scheduling, authentic assessment, and planning developmentally appropriate experiences. Upon completion, students should be able to evaluate children's development, critique curriculum, plan for individual and group needs, and assess and create quality environments. (Sp.)

EDU 261 Early Childhood Admin I 3 0 0 3
 Prerequisite: *ENG 090 and RED 090* Corequisite: *EDU 119*
 This course introduces principles of basic programming and staffing, budgeting/financial management and marketing, and rules and regulations of diverse early childhood programs. Topics include program structure and philosophy, standards of NC child care programs, finance, funding resources, and staff and organizational management. Upon completion, students should be able to develop components of program/personnel handbooks, a program budget, and demonstrate knowledge of fundamental marketing strategies and NC standards. *This course is also available through the Virtual Learning Community (VLC).* (F.)

EDU 262 Early Childhood Admin II 3 0 0 3
 Prerequisite: *ENG 090, RED 090 and EDU 261* Corequisite: *None*
 This course focuses on advocacy/leadership, public relations/community outreach and program quality/evaluation for diverse early childhood programs. Topics include program evaluation/accreditation, involvement in early childhood professional organizations, leadership/mentoring, family, volunteer and community involvement and early childhood advocacy. Upon completion, students should be able to define and evaluate all components of early childhood programs, develop strategies for advocacy and integrate community into programs. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

EDU 271 Educational Technology 2 2 0 3
 Prerequisite: *CIS 110, ENG 090 and RED 090* Corequisite: *None*
 This course introduces the use of technology to enhance teaching and learning in all educational settings. Topics include technology concepts, instructional strategies, materials and adaptive technology for children with exceptionalities, facilitation of assessment/evaluation, and ethical issues surrounding the use of technology. Upon completion, students should be able to apply technology enhanced instructional strategies, use a variety of technology resources and demonstrate appropriate technology skills in educational environments. (F.)

EDU 280 Language & Literacy Exp 3 0 0 3
 Prerequisite: *ENG 090 and RED 090* Corequisite: *EDU 280A*
 This course is designed to expand students' understanding of children's language and literacy development and provides strategies for enhancing language/literacy experiences in an enriched environment. Topics include selection of diverse literature and interactive media, the integration of literacy concepts throughout the curriculum, appropriate observations/assessments and inclusive practices. Upon completion, students should be able to select, plan, implement and evaluate developmentally appropriate and diverse language/literacy experiences. *This course is also available through the Virtual Learning Community (VLC).* (F.)

EDU 280A Literacy Exp Lab 0 2 0 1
 Prerequisite: *ENG 090 and RED 090* Corequisite: *EDU 280*
 This course provides a laboratory component to complement EDU 280. Emphasis is placed on practical experiences that enhance concepts introduced in the classroom. Upon completion, students should be able to demonstrate a practical understanding of the development and implementation of appropriate early literacy experiences. (F.)

EDU 281 Instruc Strat/Read & Writ 2 2 0 3
 Prerequisite: *ENG 090 and RED 090* Corequisite: *None*
 This course covers concepts, resources, and methods for teaching reading and writing to elementary through middle-grade children. Topics include the importance of literacy, learning styles, skills assessment, various reading and writing approaches and instructional strategies. Upon completion, students should be able to assess, plan, implement and evaluate school-age literacy experiences as related to the North Carolina Standard Course of Study. *This course is also available through the Virtual Learning Community (VLC).* (F.)

EDU 282 Early Childhood Lit 3 0 0 3
 Prerequisite: *ENG 090 and RED 090* Corequisite: *None*
 This course covers the history, selection, and integration of literature and

language in the early childhood curriculum. Topics include the history and selection of developmentally appropriate children's literature and the use of books and other media to enhance language and literacy in the classroom. Upon completion, students should be able to select appropriate books for storytelling, reading aloud, puppetry, flannel board use, and other techniques. (Sp.)

EDU 284 Early Child Capstone Prac 1 9 0 4
Prerequisite: *ENG 090, RED 090,* Corequisite: *None*
EDU 119, EDU 144, EDU 145,
EDU 146 and EDU 151

This course is designed to allow students to apply skills in a three star (minimum) or NAEYC accredited or equivalent, quality early childhood environment. Emphasis is placed on designing, implementing and evaluating developmentally appropriate activities and environments for all children; supporting/involving families; and modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and ethical/professional behaviors as indicated by assignments and onsite faculty visits. (Sp.)

EDU 285 Internship Exp-School Age 1 9 0 4
Prerequisite: *ENG 090, RED 090,* Corequisite: *None*
EDU 144, EDU 145, EDU 118, EDU 163

This course is designed to allow students to apply skills in a quality public or private school environment. Emphasis is placed on designing, implementing and evaluating developmentally appropriate activities and environments for all children; supporting/involving families; and modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate lesson plans/assessments, appropriate guidance techniques, ethical/professional behaviors as indicated by assignments and onsite faculty visits. (Sp.)

EDU 287 Leadership/Early Child Ed 3 0 0 3
Prerequisite: *ENG 090, RED 090, EDU 119, EDU 131,*
EDU 144 and EDU 145 Corequisite: *None*

This course is designed to facilitate and guide the development of early childhood professionals preparing for leadership roles in improving community early childhood services. Topics include principles of social change, characteristics of effective leaders, techniques of action research, childcare funding mechanisms, quality initiatives, and key issues in early care. Upon completion, students should be able to identify key issues; develop strategic plans; establish relationships with community leaders; and identify opportunities and barriers for advocacy. (Sp.)

EDU 289 Adv Issues/School Age 2 0 0 2
Prerequisite: *ENG 090 and RED 090* Corequisite: *None*

This course covers advanced topics and issues that relate to school-age programs. Emphasis is placed on current advocacy issues, emerging technology, professional growth, ethics, and organizations for providers/teachers working with school-age populations. Upon completion, students should be able to list, discuss, and explain advanced current topics and issues surrounding school-aged populations. (F.)

EGR - Engineering

EGR 110 Intro to Engineering Tech 1 2 0 2
Prerequisite: *None* Corequisite: *None*

This course introduces general topics relevant to engineering technology. Topics include career assessment, professional ethics, critical thinking and problem solving, usage of college resources for study and

research, and using tools for engineering computations. Upon completion, students should be able to choose a career option in engineering technology and utilize college resources to meet their educational goals. *This course is available through the Virtual Learning Community (VLC).* (F.)

ELC - Electricity

ELC 116 Telecom Cabling 3 0 0 2
Prerequisite: *CIS 070* Corequisite: *None*

This course introduces the theory and practical application of both copper and fiber cabling for telecom systems. Topics include transmission theory, noise, standards, cable types and systems, connectors, physical layer components, installation, and ground/shielding techniques. Upon completion, students should be able to choose the correct cable, install, test, and troubleshoot cabling for telecom. (On Demand)

ELC 120 Intro to Wiring 2 2 0 3
Prerequisite: *None* Corequisite: *None*

This course is an introduction to wiring concepts for non-electricians. Topics include safety, tools, materials, techniques and terminology associated with electrical wiring. Upon completion, students should be able to use and/or identify wiring tools, materials and procedures at an introductory level. (Sp.)

ELC 125 Diagrams and Schematics 1 2 0 2
Prerequisite: *None* Corequisite: *None*

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. (F.)

ELC 127 Software for Technicians 1 3 0 2
Prerequisite: *None* Corequisite: *None*

This course introduces computer software which one can be used to solve electrical/electronics problems. Topics include electrical/electronics calculations and applications. Upon completion, students should be able to utilize a personal computer for electrical/electronics related applications. (F.)

ELC 128 Intro to PLC 2 3 0 3
Prerequisite: *None* Corequisite: *None*

This course introduces the programmable logic controller (PLC) and its associated applications. Topics include ladder logic diagrams, input/output modules, power supplies, surge protection, selection/installation of controllers, and interfacing of controllers with equipment. Upon completion, students should be able to install PLCs and create simple programs. *This course is also available through the Virtual Learning Community (VLC).* (F.)

ELC 131 DC/AC Circuit Analysis 4 3 0 5
Prerequisite: *None* Corequisite: *None*

This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation software, and interpret circuit schematics; design, construct, verify, and analyze DC/AC circuits; and properly use test equipment. (F.)

ELC 233 Energy Management 2 2 0 3Prerequisite: *None*Corequisite: *None*

This course covers energy management principles and techniques typical of those found in industry and commercial facilities, including load control and peak demand reduction systems. Topics include load and peak demand calculations, load shedding, load balance and power factor, priority scheduling, remote sensing and control, and supplementary/alternative energy sources. Upon completion, students should be able to determine energy management parameters, calculate demand and energy use, propose energy management procedures, and implement alternative energy sources. (Sp.)

ELN - Electronics**ELN 133 Digital Electronics** 3 3 0 4Prerequisite: *None*Corequisite: *None*

This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, MSI and LSI circuits, AD/DA conversion, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

ELN 137 Electr Devices & Circuits 4 3 0 5Prerequisite: *None*Corequisite: *None*

This course covers diodes, transistors, linear integrated circuits, and IC voltage regulators. Topics include power supplies, switching circuits, amplifiers, oscillators, active filters, and other related topics. Upon completion, students should be able to analyze and troubleshoot circuits using schematic diagrams, appropriate test equipment, and manufacturer's data sheets. (Sp.)

ELN 231 Industrial Controls 2 3 0 3Prerequisite: *None*Corequisite: *None*

This course introduces the fundamental concepts of control of rotating machinery and associated peripheral devices. Topics include rotating machine theory, ladder logic, electromechanical and solid state relays, motor controls, pilot devices, three-phase power systems, and other related topics. Upon completion, students should be able to interpret schematics and demonstrate an understanding of electromechanical and electronic control of rotating machinery. (F.)

ENG - English**ENG 080 Writing Foundations** 3 2 0 4Prerequisite: *Appropriate score on placement test (AW = 23-35, COMPASS = 1-23)*Corequisite: *None*

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. Students scoring into ENG 080 must also complete ACA 090 Study Skills, before registering for ENG 111, Expository Writing. (F., Sp., S.)

ENG 090 Composition Strategies 3 0 0 3Prerequisites: *ENG 080 (C or better) or appropriate score on placement test (AW = 36-43, COMPASS = 24-70)*Corequisite: *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. (F., Sp., S.)

ENG 090A Comp Strategies Lab 0 2 0 1Prerequisite: *ENG 080 (C or better) or appropriate score on placement test (AW = 36-43, COMPASS - 24-70)*Corequisite: *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. (F., Sp., S.)

ENG 102 Applied Communications II 3 0 0 3Prerequisite: *None*Corequisite: *None*

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. (F)

ENG 111 Expository Writing 3 0 0 3Prerequisite: *ENG 090 (C or better) or appropriate score on placement test (AW = 44+, COMPASS = 71+) and RED 090 (C or better) or appropriate score on placement test (AR = 42+, COMPASS = 80+)*Corequisite: *None*

This course is the required first course in a series of two designed to develop the ability to produce clear expository prose. Emphasis is placed on the writing process including audience analysis, topic selection, thesis support and development, editing, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition. This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

ENG 113 Literature-Based Research 3 0 0 3Prerequisite: *ENG 111 (C or better)*Corequisite: *None*

This course, the second in a series of two, expands the concepts developed in ENG 111 by focusing on writing that involves literature-based research and documentation. Emphasis is placed on critical reading and thinking and the analysis and interpretation of prose, poetry, and drama: plot, characterization, theme, cultural context, etc. Upon completion, students should be able to construct mechanically-sound, documented essays and research papers that analyze and respond to literary works. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition. This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

ENG 114 Prof Research & Reporting 3 0 0 3Prerequisite: *ENG 111 (C or better)*Corequisite: *None*

This course, the second in a series of two, is designed to teach professional communication skills. Emphasis is placed on research, listening, critical reading and thinking, analysis, interpretation, and design used

in oral and written presentations. Upon completion, students should be able to work individually and collaboratively to produce well-designed business and professional written and oral presentations. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition. This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

ENG 125 Creative Writing I 3 0 0 3

Prerequisite: *ENG 111 (C or better)* Corequisite: *None*

This course is designed to provide students with the opportunity to practice the art of creative writing. Emphasis is placed on fiction, writing, 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 premajor and/or elective course requirement.* (On Demand)

ENG 126 Creative Writing II 3 0 0 3

Prerequisite: *ENG 125* Corequisite: *None*

This course is designed as a workshop approach for advancing imaginative and literary skills. Emphasis is placed on the discussion of style, techniques, and challenges for first publications. Upon completion, students should be able to submit a piece of their writing for publication. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.* (On Demand)

ENG 231 American Literature I 3 0 0 3

Prerequisite: *ENG 113 or ENG 114 (C or better)*

Corequisite: *None*

This course covers selected works in American literature from its beginnings to 1865. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been designated as writing-intensive. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).* (F., S.)

ENG 232 American Literature II 3 0 0 3

Prerequisite: *ENG 113 or ENG 114 (C or better)*

Corequisite: *None*

This course covers selected works in American literature from 1865 to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. *This course has been designated as writing-intensive. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).* (Sp.)

ENG 241 British Literature I 3 0 0 3

Prerequisite: *ENG 113 or ENG 114 (C or better)*

Corequisite: *None*

This course covers selected works in British literature from its beginnings to the Romantic Period. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and

drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been designated as writing-intensive. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).* (F.)

ENG 242 British Literature II 3 0 0 3

Prerequisite: *ENG 113 or ENG 114 (C or better)*

Corequisite: *None*

This course covers selected works in British literature from the Romantic Period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been designated as writing-intensive. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).* (Sp.)

ENG 261 World Literature I 3 0 0 3

Prerequisite: *ENG 113 or ENG 114 (C or better)*

Corequisite: *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 designated as writing-intensive. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).* (On Demand)

ENG 262 World Literature II 3 0 0 3

Prerequisite: *ENG 113 or ENG 114 (C or better)*

Corequisite: *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 designated as writing-intensive. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.* (On Demand)

ENG 273 African-American Literature 3 0 0 3

Prerequisite: *ENG 113 or ENG 114 (C or better)*

Corequisite: *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 designated as writing-intensive. *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).* (On Demand)

EPT - Emergency Preparedness**EPT 120 Sociology of Disaster** 3 0 0 3Prerequisite: *None*Corequisite: *None*

This course is designed to overview sociological disaster research, disaster systems, and alternative research approaches. Topics include human and organizational behaviors, long term disaster impact on communities, disaster warning, and evacuation considerations. Upon completion, students should be able to assess and predict the impact of disaster-related human behavior. (F.)

EPT 150 Incident Management 3 0 0 3Prerequisite: *None*Corequisite: *None*

This course covers the fully integrated incident management system for EMS response to high impact incidents. Topics include mass casualty incidents, terrorists events, communications, training, triage, law and fire incident command. Upon completion, students should be able to implement and operate within the National Incident Management System. (Sp.)

EPT 210 Response & Recovery 3 0 0 3Prerequisite: *None*Corequisite: *None*

This course covers the basic concepts and operational procedures and authorities involved in responding to major disasters. Topics include Federal, State, and local roles and responsibilities in major disaster recovery work with an emphasis on governmental coordination. Upon completion, students should be able to implement a disaster plan and assess the needs of those involved in a major disaster. (F.)

EPT 220 Terrorism and Emer. Mgt. 3 0 0 3Prerequisite: *None*Corequisite: *None*

This course is covers preparing for, responding to and safely mitigating terrorism incidents. Topics include the history of terrorism, scene hazards, evidence preservation, risk assessment, roles and responsibilities, explosive recognition, and terrorism planning. Upon completion, students should be able to recognize the threat of terrorism and operate within the emergency management framework at a terrorism incident. (Sp.)

EPT 275 Emergency OPS Center Mgt 3 0 0 3Prerequisite: *None*Corequisite: *None*

This course provides students with the knowledge and skills to effectively manage and operate an EOC during crisis situations. Topics include properly locating and designing an EOC, staffing, training and briefing EOC personnel, and how to operate an EOC. Upon completion, students should be able to demonstrate how to set up and operate an effective emergency operations center. (Sp.)

FIP - Fire Protection**FIP 128 Detection & Investigation** 3 0 0 3Prerequisite: *None*Corequisite: *None*

This course covers procedures for determining the origin and cause of accidental and incendiary fires. Topics include collection and preservation of evidence, detection and determination of accelerants, courtroom procedure and testimony, and documentation of the fire scene. Upon completion, students should be able to conduct a competent fire investigation and present those findings to appropriate officials or equivalent, meeting NFPA 1021. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

FIP 176 HazMat: Operations 4 0 0 4Prerequisite: *None*Corequisite: *None*

This course is designed to increase first responder awareness of the type, nature, physiological effects of, and defensive techniques for mitigation of HazMat incidents. Topics include recognition, identification, regulations and standards, zoning, resource usage, defensive operations, and other related topics. Upon completion, students should be able to recognize and identify the presence of hazardous materials and use proper defensive techniques for incident mitigation. (S.)

FIP 236 Emergency Management 3 0 0 3Prerequisite: *None*Corequisite: *None*

This course covers the four phases of emergency management: mitigation, preparedness, response, and recovery. Topics include organizing for emergency management, coordinating for community resources, public sector liability, and the roles of government agencies at all levels. Upon completion, students should be able to demonstrate a knowledge of comprehensive emergency management and the integrated emergency management system. (Sp.)

FIP 256 Municipal Public Relations 3 0 0 3Prerequisite: *None*Corequisite: *None*

This course is a general survey of municipal public relations and their effect on the governmental process. Topics include principles of public relations, press releases, press conferences, public information officers, image surveys, and the effects of perceived service on fire protection delivery. Upon completion, students should be able to manage the public relations functions of a fire service organization, which meet elements of NFPA 1021 for Fire Officer I and II. (Sp.)

FIP 276 Managing Fire Services 3 0 0 3Prerequisite: *None*Corequisite: *None*

This course provides an overview of fire department operative services. Topics include finance, staffing, equipment, code enforcement, management information, specialized services, legal issues, planning, and other related topics. Upon completion, students should be able to understand concepts and apply fire department management and operations principles, meeting NFPA 1021. (F.)

FOR - Forest Management**FOR 121 Dendrology** 2 6 0 4Prerequisite: *None*Corequisite: *None*

This course covers field identification, classifications, uses, and nomenclature of trees. Emphasis is placed on silvics, characteristics, commercial importance, and wildlife benefits of trees. Upon completion, students should be able to identify trees and understand their uses. (F.)

FOR 131 Forest Measurements 2 3 0 3Prerequisite: *None*Corequisite: *None*

This course introduces basic land and tree measurement equipment and mapping techniques. Emphasis is placed on developing skills for land, tree, and log measurements. Upon completion, students should be able to accurately use land and tree measurement equipment. (Sp.)

FOR 161 Safety & Woodsmanship 1 3 0 2Prerequisite: *None*Corequisite: *None*

This course introduces potential life threatening or serious injury situations that may occur during outdoor activities and basic orienteering. Topics include injuries by mechanical equipment, plants, animals, and climatic conditions and the proper treatment for each situation. Upon

completion, students should be able to respond to emergency situations which may occur in a forest environment. (F.)

FOR 171 Intro to Forest Resources 3 0 0 3

Prerequisite: *None* Corequisite: *None*

This course introduces the relationships within the forest and its various uses. Emphasis is placed on forest history, ecology, protection, management, policies, and practices. Upon completion, students should be able to discuss the relationship of the forest and its use to the welfare of mankind. (F.)

FOR 173 Soils & Hydrology 2 3 0 3

Prerequisite: *None* Corequisite: *None*

This course covers concepts of soils and water including physical and chemical soil properties. Emphasis is placed on soil sampling, identification, plant-site relationships, water movement, and properties. Upon completion, students should be able to relate soil and water characteristics to forest growth and water quality. (Sp.)

FOR 175 Wildlife/Environ Studies 2 3 0 3

Prerequisite: *None* Corequisite: *None*

This course provides an overview of wildlife and environmental issues pertaining to the ecological, social, and economic aspects of forestry. Topics include wildlife management, wetland delineation, endangered species detection, protection, landowner rights, liabilities, regulations, and law. Upon completion, students should be able to demonstrate a knowledge of how wildlife and environmental issues affect forestry in the United States. (F.)

FOR 212 Forest Surv & Aerial Ine 2 3 0 3

Prerequisite: *None* Corequisite: *None*

This course covers the basic concepts of plane surveying and aerial photo interpretation. Emphasis is placed on boundary location and acreage determination both on the ground and through aerial photographs. Upon completion, students should be able to use basic surveying equipment and aerial photographs for forest land measurements. (Sp.)

FOR 215 Intro to GIS/GPS 1 4 0 3

Prerequisite: *None* Corequisite: *None*

This course introduces geographic information systems and global positioning devices. Emphasis is placed on the use of existing hardware and software to create and update computer generated maps. Upon completion, students should be able to understand the uses and limitations of GIS and GPS devices in forestry applications. (S.)

FOR 225 Silvics & Silviculture 3 3 0 4

Prerequisite: *None* Corequisite: *None*

This course covers the establishment, development, care, and harvesting of forest stands. Emphasis is placed on the application of various techniques used to control stand establishment, composition, and growth. Upon completion, students should be able to understand and apply appropriate forest stand improvement techniques. (S.)

FOR 232 Forest Mensuration 2 6 0 4

Prerequisite: *FOR 131* Corequisite: *None*

This course provides applications of previously covered measurement techniques to the volume estimation and valuation of forest stands. Emphasis is placed on applications of various timber cruising methods. Upon completion, students should be able to determine the size, volume, and quality of forest stands. (S.)

FOR 241 Forest Fire Management 2 3 0 3

Prerequisite: *None* Corequisite: *None*

This course covers the nature of wildfire and the uses of prescribed burning in a forest or urban interface setting. Topics include prevention, detection, suppression, causes, and the ecological and economic effects of fire. Upon completion, students should be able to use fire as a management tool and participate in the suppression of wildfire. (Sp.)

FOR 243 Insects/Diseases 2 3 0 3

Prerequisite: *None* Corequisite: *None*

This course provides information on forest insects, diseases, and related control methods. Topics include insect and disease classification, herbicides, pesticides, and promoting forest health through sound silviculture practices. Upon completion, students should be able to identify the most common forest insects and diseases and recommend biological, cultural, silvicultural, and chemical controls. (S.)

FOR 273 Forest Mgt Issues 0 6 0 2

Prerequisite: *FOR 225 and FOR 232* Corequisite: *None*

This course is designed as a capstone course in the application of land management and procurement skills. Emphasis is placed on formulating a comprehensive land management plan, including a complete timber cruise. Upon completion, students should be able to locate timber tracts and identify timber, water, wildlife, and recreation options for the landowner. (Sp.)

FOR 285 Logging & Marketing 2 3 0 3

Prerequisite: *None* Corequisite: *None*

This course covers logging systems commonly used in the Southeast. Emphasis is placed on roading, matching equipment to job requirements, safety, legal requirements, and primary manufacturing of forest products. Upon completion, students should be able to supervise a logging operation. (F.)

FRE - French

FRE 111 Elementary French I 3 0 0 3

Prerequisite: *None* Corequisite: *FRE 181*

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

FRE 112 Elementary French II 3 0 0 3

Prerequisite: *FRE 111* Corequisite: *FRE 182*

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

FRE 181 French Lab 1 0 2 0 1
 Prerequisite: *None* Corequisite: *None*
 This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written French and demonstrate cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

FRE 182 French Lab 2 0 2 0 1
 Prerequisite: *FRE 181* Corequisite: *None*
 This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written French and demonstrate cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

FRE 211 Intermediate French I 3 0 0 3
 Prerequisite: *FRE 112* Corequisite: *None*
 This course provides a review and expansion of the essential skills of the French 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.* (On Demand)

FRE 212 Intermediate French II 3 0 0 3
 Prerequisite: *FRE 211* Corequisite: *None*
 This course is a continuation of FRE 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.* (On Demand)

FRE 281 French Lab 3 0 2 0 1
 Prerequisite: *FRE 182* Corequisite: *None*
 This course provides an opportunity to enhance the review and expansion of the essential skills of the French language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. 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 for transferability as a pre-major and/or elective course requirement.* (On Demand)

FRE 282 French Lab 4 0 2 0 1
 Prerequisite: *FRE 281* Corequisite: *None*
 This course provides an opportunity to enhance the review and expansion of the essential skills of the French language. Emphasis is placed on the continuing study of authentic and representative literary and cultural

texts through the use of supplementary learning media and materials. 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 for transferability as a pre-major and/or elective course requirement.* (On Demand)

FWL - Fish and Wildlife

FWL 142 Wildlife Management 2 3 0 3
 Prerequisite: *None* Corequisite: *None*
 This course introduces the principles of wildlife management, including basic concepts, terminology, and techniques important to wildlife managers. Topics include a review of the history of wildlife management, ecological principles, an introduction to wildlife habitat requirements, and population dynamics. Upon completion, students should be able to understand and discuss the life history, management techniques, and habitat requirements of North American species. (Sp.)

GRD - Graphic Design

GRD 121 Drawing Fundamentals I 1 3 0 2
 Prerequisite: *None* Corequisite: *None*
 This course increases observation skills using basic drawing techniques and media in graphic design. Emphasis is placed on developing the use of graphic design principles, media applications, spatial considerations, drawing styles, and approaches. Upon completion, students should be able to show competence and proficiency in finished works. (This course is offered at Wake Technical Community College) (F.)

GEO - Geography

GEO 111 World Regional Geography 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course introduces the regional concept which emphasizes the spatial association of people and their environment. Emphasis is placed on the physical, cultural, and economic systems that interact to produce the distinct regions of the earth. Upon completion, students should be able to describe variations in physical and cultural features of a region and demonstrate an understanding of their functional relationships. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC).* (On Demand)

GRO - Gerontology

GRO 120 Gerontology 3 0 0 3
 Prerequisite: *PSY 150* Corequisite: *None*
 This course covers the psychological, social, and physical aspects of aging. Emphasis is placed on the factors that promote mental and physical well-being. Upon completion, students should be able to recognize the aging process and its psychological, social, and physical aspects. (Sp. or On Demand)

HEA - Health

HEA 110 Personal Health/Wellness 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course provides an introduction to basic personal health and wellness. Emphasis is placed on current health issues such as nutrition, mental health, and fitness. Upon completion, students should be able

to demonstrate an understanding of the factors necessary to the maintenance of health and wellness. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

HEA 112 First Aid & CPR 1 2 0 2

Prerequisite: *None* Corequisite: *None*

This course introduces the basics of emergency first aid treatment. Topics include rescue breathing, CPR, first aid for choking and bleeding, and other first aid procedures. Upon completion, students should be able to demonstrate skills in providing emergency care for the sick and injured until medical help can be obtained. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp., S.)

HIS - History

HIS 111 World Civilizations I 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

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

HIS 112 World Civilizations II 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

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

HIS 116 Current World Problems 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

This course covers current world events from an historical perspective. Topics include regional problems as well as international concerns. Upon completion, students should be able to analyze significant current world problems from an historical perspective. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

HIS 121 Western Civilization I 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

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. This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

HIS 122 Western Civilization II 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

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. This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

HIS 131 American History I 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

This course is a survey of American history from pre-history through the Civil War era. Topics include the migrations to the Americas, the colonial and revolutionary periods, the development of the Republic, and the Civil War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early American history. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

HIS 132 American History II 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

This course is a survey of American history from the Civil War era to the present. Topics include industrialization, immigration, the Great Depression, the major American wars, the Cold War, and social conflict. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in American history since the Civil War. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

HIS 162 Women and History 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

This course surveys the experience of women in historical perspective. Topics include the experiences and contributions of women in culture, politics, economics, science, and religion. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural contributions of women in history. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

HIS 221 African-American History 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

This course covers African-American history from the Colonial period to the present. Topics include African origins, the slave trade, the Civil War, Reconstruction, the Jim Crow era, the civil rights movement, and contributions of African Americans. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the history of African Americans. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

HIS 226 The Civil War 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course examines the social, political, economic, and ideological forces that led to the Civil War and Reconstruction. Topics include regional conflicts and sectionalism, dissolution of the Union, military campaigns, and the War's socioeconomic, and cultural developments in the United States during the era of Civil War. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.* (On Demand)

HIS 228 History of the South 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course covers the origin and development of the South as a distinct region of the United States. Emphasis is placed on Southern identity and its basis in cultural, social, economic, and political developments during the 19th and 20th centuries. Upon completion, students should be able to identify and analyze the major cultural, social, economic, and political developments in the South. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.* (On Demand)

HIS 236 North Carolina History 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course is a study of geographical, political, economic, and social conditions existing in North Carolina from America's discovery to the present. Topics include native and immigrant backgrounds; colonial, antebellum, and Reconstruction periods; party politics; race relations; and the transition from an agrarian to an industrial economy. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in North Carolina. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

HOR - Horticulture

HOR 150 Intro to Horticulture 2 0 0 2
 Prerequisite: *None* Corequisite: *None*
 This course covers the history, development, and basic techniques of horticulture. Topics include propagation techniques, planting procedures, watering and fertility, plant growth, pest and disease control, and garden design and history. Upon completion, students should be able to demonstrate an understanding of the basic principles of horticulture. (S.)

HSE - Human Services

HSE 110 Intro to Human Services 2 2 0 3
 Prerequisite: *None* Corequisite: *None*
 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. *This course is also available through the Virtual Learning Community (VLC).* (F. or On Demand)

HSE 112 Group Process I 1 2 0 2
 Prerequisite: *None* Corequisite: *None*
 This course introduces interpersonal concepts and group dynam-

ics. 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. (F. or On Demand)

HSE 123 Interviewing Techniques 2 2 0 3
 Prerequisite: *None* Corequisite: *None*
 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. (Sp. or On Demand)

HSE 125 Counseling 2 2 0 3
 Prerequisite: *None* Corequisite: *None*
 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. (F. or On Demand)

HSE 210 Human Services Issues 2 0 0 2
 Prerequisite: *None* Corequisite: *None*
 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. *This course is also available through the Virtual Learning Community (VLC).* (F. or On Demand)

HSE 225 Crisis Intervention 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 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. (F. or On Demand)

HUM - Humanities

HUM 110 Technology and Society 3 0 0 3
 Prerequisite: *RED 090* Corequisite: *None*
 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. This course is also available through the Virtual Learning Community (VLC).* (On Demand)

HUM 115 Critical Thinking 3 0 0 3
 Prerequisite: *RED 090 and ENG 090* Corequisite: *None*
 This course introduces the use of critical thinking skills in the context of human conflict. Emphasis is placed on 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).* (On Demand)

HUM 120 Cultural Studies 3 0 0 3

Prerequisite: *None* Corequisite: *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.* (Sp.)

HUM 121 The Nature of America 3 0 0 3

Prerequisite: *None* Corequisite: *None*

This course provides an interdisciplinary survey of the American cultural, social, and political experience. Emphasis is placed on the multicultural character of American society, distinctive qualities of various regions, and the American political system. Upon completion, students should be able to analyze significant cultural, social, and political aspects of American life. This course has been designated as writing-intensive. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.* (F.)

HUM 122 Southern Culture 3 0 0 3

Prerequisite: *None* Corequisite: *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. This course is also available through the Virtual Learning Community (VLC).* (On Demand)

HUM 130 Myth in Human Culture 3 0 0 3

Prerequisite: *None* Corequisite: *None*

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

HUM 211 Humanities I 3 0 0 3

Prerequisite: *ENG 111* Corequisite: *None*

This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind's answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from ancient through early modern times. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied.

This course has been designated as writing-intensive. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.* (Sp.)

HYD - Hydraulics

HYD 110 Hydraulics/Pneumatics I 2 3 0 3

Prerequisite: *MAT 070 (C or better) or appropriate scores on placement tests* Corequisite: *None*

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

HYD 121 Hydraulics/Pneumatics II 1 3 0 2

Prerequisite: *HYD 110* Corequisite: *None*

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, application, operation, and maintenance of fluid power components and systems. (Sp.)

ISC - Industrial Safety

ISC 112 Industrial Safety 2 0 0 2

Prerequisite: *None* Corequisite: *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).* (F., Sp.)

ISC 121 Environment Health & Safety 3 0 0 3

Prerequisite: *None* Corequisite: *None*

This course covers workplace environmental health and safety concepts. Emphasis is placed on managing the implementation and enforcement of environmental health and safety regulations and on preventing accidents, injuries, and illnesses. Upon completion, students should be able to demonstrate an understanding of basic concepts of environmental health and safety issues. (F., Sp.)

ISC 128 Industrial Leadership 2 0 0 2

Prerequisite: *None* Corequisite: *None*

This course introduces principles and techniques for managers in modern industry. Topics include leadership traits, management principles and processes, managing conflict, group dynamics, team building, counseling, motivation, and communication. Upon completion, students should be able to understand and apply leadership and management principles in work situations. (On Demand)

ISC 130 Introduction to Quality Control 3 0 0 3

Prerequisite: *None* Corequisite: *None*

This course introduces the philosophies, principles, and techniques of managing quality. Topics include the functions, responsibilities, structures, costs, reports, personnel, and vendor-customer relationships associated with quality control and management. Upon completion, students should be able to demonstrate an understanding of quality control and management. (On Demand)

ISC 131 Quality Management 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 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. (On Demand)

ISC 132 Manufacturing Quality Control 5 0 0 3
 Prerequisite: *MAT 070, RED 090* Corequisite: *None*
 This course introduces quality concepts and techniques used in industry. Topics include elementary statistics and probability, process control, process capability, and quality improvement tools. Upon completion, students should be able to demonstrate an understanding of the concepts and principles of quality and apply them to the work environment. (F., Sp.)

ISC 210 Prod and Operational Planning 3 0 0 3
 Prerequisite: *RED 090 and MAT 070* Corequisite: *None*
 This course includes the fundamentals of operations and production planning, forecasting, and scheduling. Topics include demand management, production planning and control, scheduling, and budgeting. Upon completion, students should be able to demonstrate an understanding of the concepts and techniques involved in operations and production planning. *This course is a unique concentration requirement of the Operations Management concentration in the Business Administration program.* (F., Sp.)

ISC 221 Statistical Qual Control 3 0 0 3
 Prerequisite: *MAT 070* Corequisite: *None*
 This course covers the principles and techniques of statistical process control for the improvement of productivity. Emphasis is placed on basic statistics for quality control, organization and procedures for efficient quality control including inspections, process control, and tests of significance. Upon completion, students should be able to apply statistical principles and techniques to enhance production. (F., Sp.)

ISC 222 Project Planning/Control 1 2 0 2
 Prerequisite: *None* Corequisite: *None*
 This course covers how to plan, schedule and control projects typical in manufacturing and services industries. Topics include fundamental project management concepts and hands-on computer application experience with process flow charting and PERT/CPM project managers. Upon completion, students should be able to plan, schedule and control projects using state-of-the-art computer application programs. (F., Sp.)

JPN- Japanese

JPN 111 Elementary Japanese I 3 0 0 3
 Prerequisites: *None* Corequisite: *JPN 181*
 This course introduces the basic fundamentals of the Japanese language within a cultural context of the Japanese people and its history. Emphasis is placed on the basic skills in speaking, reading, writing, and comprehension of spoken language. Upon completion, students should be able to have a communicative competence in speaking, listening comprehension, reading, and writing at a beginning level with attention to cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.* (On Demand)

JPN 112 Elementary Japanese II 3 0 0 3
 Prerequisites: *JPN 111* Corequisite: *JPN 182*
 This course continues the basic fundamentals of the Japanese language within a cultural context of the Japanese people and its history. Emphasis is placed on the basic skills in speaking, reading, writing, and comprehension of spoken language. Upon completion, students should be able to have a communicative competence in speaking, listening comprehension, reading, and writing at a beginning level with attention to cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.* (On Demand)

JPN 181 Japanese Lab I 0 2 0 1
 Prerequisites: *None* Corequisite: *None*
 This course provides an opportunity to enhance acquisition of the fundamental elements of the Japanese language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Japanese and demonstrate cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.* (On Demand)

JPN 182 Japanese Lab II 0 2 0 1
 Prerequisites: *JPN 181* Corequisite: *None*
 This course provides an opportunity to enhance acquisition of the fundamental elements of the Japanese language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Japanese and demonstrate cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.* (On Demand)

JOU - Journalism

JOU 110 Intro to Journalism 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course presents a study of journalistic news, feature, and sports writing. Emphasis is placed on basic news writing techniques and on related legal and ethical issues. Upon completion, students should be able to gather, write, and edit news, feature, and sports articles. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

JOU 111 Publication Workshop I 1 3 0 2
 Prerequisite: *JOU 110* Corequisite: *None*
 This course introduces the basic techniques of producing a publication. Emphasis is placed on writing, editing, layout, design, and printing. Upon completion, students should be able to demonstrate competence in the various phases of publication production. (F., Sp.)

JOU 112 Publication Workshop II 1 3 0 2
 Prerequisite: *JOU 111* Corequisite: *None*
 This course is a continuation of the basic techniques of producing a publication. Emphasis is placed on writing, editing, layout, design, and

printing. Upon completion, students should be able to demonstrate competence in the various phases of publication production. (F., Sp.)

MAC - Machining

MAC 111 Machining Technology I 2 12 0 6

Prerequisite: *None* Corequisite: *None*

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

MAC 112 Machining Technology II 2 12 0 6

Prerequisite: *MAC 111* Corequisite: *None*

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

MAC 113 Machining Technology III 2 12 0 6

Prerequisite: *MAC 112* Corequisite: *None*

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

MAC 114 Intro to Metrology 2 0 0 2

Prerequisite: *None* Corequisite: *None*

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

MAC 122 CNC Turning 1 3 0 2

Prerequisite: *None* Corequisite: *None*

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

MAC 124 CNC Milling 1 3 0 2

Prerequisite: *None* Corequisite: *None*

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

MAC 151 Machining Calculations 1 2 0 2

Prerequisite: *None* Corequisite: *None*

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

MAC 214 Machining Technology IV 2 12 0 6

Prerequisite: *MAC 112 and MAC 113* Corequisite: *None*

This course provides advanced applications and practical experience in the manufacturing of complex parts. Emphasis is placed on inspection, gaging, and the utilization of machine tools. Upon completion, students should be able to manufacture complex assemblies to specifications. (Sp.)

MAC 222 Advanced CNC Turning 1 3 0 2

Prerequisite: *MAC 122* Corequisite: *None*

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

MAC 224 Advanced CNC Milling 1 3 0 2

Prerequisite: *MAC 124* Corequisite: *None*

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

MAC 247 Production Tooling 2 0 0 2

Prerequisite: *MAC 111* Corequisite: *None*

This course provides advanced study in tooling currently utilized in the production of metal parts. Emphasis is placed on the proper use of tooling used on CNC and other production machine tools. Upon completion, students should be able to choose proper tool grades based on manufacturing requirements and troubleshoot carbide tooling problems. (Sp.)

MAT- Mathematics

MAT 050 Basic Math Skills 3 2 0 4

Prerequisite: *None* Corequisite: *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. (F., Sp.)

MAT 060 Essential Mathematics 3 2 0 4

Prerequisite: *MAT 050 or appropriate scores on placement tests.* Corequisite: *None*

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

MAT 070 Introductory Algebra 3 2 0 4

Prerequisite: *MAT 060 (C or better) or appropriate scores on placement tests* Corequisite: *RED 080*

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. *This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

MAT 080 Intermediate Algebra 3 2 0 4

Prerequisite: *MAT 070 (C or better)* or Corequisite: *RED 080 appropriate scores on placement tests*

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. (F., Sp., S.)

MAT 101 Applied Mathematics I 2 2 0 3

Prerequisite: *MAT 060 (C or better)* or Corequisite: *None appropriate scores on placement tests*

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. (Sp.)

MAT 110 Mathematical Measurement 2 2 0 3

Prerequisite: *MAT 070 (C or better)* or Corequisite: *None appropriate scores on placement tests*

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. (F., Sp., S.)

MAT 115 Mathematical Models 2 2 0 3

Prerequisite: *MAT 070 (C or better)* or Corequisite: *None appropriate scores on placement tests*

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, 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. *This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

MAT 120 Geometry and Trigonometry 2 2 0 3

Prerequisite: *MAT 070 (C or better)* Corequisite: *None or appropriate scores on placement tests*

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. (F., Sp.)

MAT 121 Algebra/Trigonometry I 2 2 0 3

Prerequisite: *MAT 070 (C or better)* Corequisite: *None or appropriate scores on placement tests*

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, radical, exponential, and logarithmic functions; descriptive statistics; right triangle trigonometry; 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. (On Demand)

MAT 122 Algebra/Trigonometry II 2 2 0 3

Prerequisite: *MAT 121* Corequisite: *None*

This course extends the concepts covered in MAT 121 to include additional topics in algebra, function analysis, trigonometry, and systems of equations. Topics include translation and scaling of functions, Sine Law, Cosine Law, complex numbers, vectors, statistics, and systems of equations. Upon completion, students should be able to demonstrate an understanding of the use of technology to solve problems and to analyze and communicate results. (On Demand)

MAT 140 Survey of Mathematics 3 0 0 3

Prerequisite: *MAT 070 (C or better)* Corequisite: *None or appropriate scores on placement tests*

This course provides an introduction in a non-technical setting to selected topics in mathematics. Topics 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. This course is also available through the Virtual Learning Community (VLC).* (F.)

MAT 141 Mathematical Concepts I 3 0 0 3

Prerequisite: *MAT 080 (C or better)* Corequisite: *None or appropriate scores on placement tests*

This course is the first of a two course sequence that develops a deeper understanding and appreciation of the basic concepts of mathematics. Emphasis is placed on sets, logic, number bases, elementary number theory, introductory algebra, measurement including metrics, and problem solving. Upon completion, students should be able to communicate orally and in writing these basic mathematical concepts. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirements in natural sciences/mathematics.* (F., Sp., S.)

MAT 151 Statistics I 3 0 0 3

Prerequisite: *MAT 080 (C or better)* Corequisite: *None or appropriate scores on placement tests*

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 (Quantitative Option). This course is also available through the Virtual Learning Community (VLC). (F., Sp., S.)

MAT 155 Statistical Analysis 3 0 0 3
Prerequisite: *MAT 080 or MAT 090* Corequisite: *None*
or appropriate placement scores

This course is an introduction to descriptive and inferential statistics. Topics include sampling, distributions, plotting data, central tendency, dispersion, Central Limits Theorem, confidence intervals, hypotheses testing, correlations, regressions, and multinomial experiments. Upon completion, students should be able to describe data and test inferences about populations using sample data. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics (Quantitative Option).* (This course is offered at Pitt Community College.) (Sp.)

MAT 161 College Algebra 3 0 0 3
Prerequisite: *MAT 080 (C or better)* Corequisite: *None*
or appropriate scores on placement tests

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 Associate in Arts degrees. This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

MAT 171 Precalculus Algebra 3 0 0 3
Prerequisite: *MAT 080 (C or better) or appropriate scores on placement tests (Students taking MAT 171 must take MAT 172 for precalculus credit)*

Corequisite: *None*

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.* (F., Sp., S.)

MAT 171A Precalculus Algebra Lab 0 2 0 1
Prerequisite: *MAT 080* Corequisite: *MAT 171*

This is course a laboratory for MAT 171. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.* (On Demand)

MAT 172 Precalculus Trigonometry 3 0 0 3
Prerequisite: *MAT 171 (C or better)* Corequisite: *None*
or appropriate scores on placement tests

This is the second of two courses designed to emphasize topics which

are fundamental to the study of calculus. Emphasis is placed on properties and applications of transcendental functions and their graphs, right and oblique triangle trigonometry, conic sections, vectors, and polar coordinates. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.* (F., Sp., S.)

MAT 172A Precalculus Trig Lab 0 2 0 1
Prerequisite: *MAT 171* Corequisite: *MAT 172*

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

MAT 263 Brief Calculus 3 0 0 3
Prerequisite: *MAT 161 or MAT 171* Corequisite: *None*
(C or better) or appropriate scores on placement tests

This course is designed for students needing only 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.* (F., On Demand)

MAT 271 Calculus I 3 2 0 4
Prerequisite: *MAT 172 (C or better)* Corequisite: *None*
or appropriate scores on placement tests

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.* (F., Sp., S.)

MAT 272 Calculus II 3 2 0 4
Prerequisite: *MAT 271 (C or better)* Corequisite: *None*

This course provides a rigorous treatment of integration and is the second calculus course in a three-course sequence. Topics include applications of definite integrals, techniques of integration, indeterminate forms, improper integrals, infinite series, conic sections, parametric equations, polar coordinates, and differential equations. Upon completion, students should be able to use integration and approximation techniques to solve application problems. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.* (Sp., S.)

MAT 273 Calculus III 3 2 0 4
Prerequisite: *MAT 272 (C or better)* Corequisite: *None*

This course covers the calculus of several variables and is third calculus course in a three-course sequence. Topics include functions of

several variables, partial derivatives, multiple integrals, solid analytical geometry, vector-valued functions, and line and surface integrals. 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.* (F.)

MAT 285 Differential Equations 3 0 0 3

Prerequisite: *MAT 272 (C or better)* Corequisite: *None*

This course provides an introduction to ordinary differential equations with an emphasis on applications. Topics include first-order, linear higher-order, and systems of differential equations; numerical methods; series solutions; eigenvalues and eigenvectors; Laplace transforms; and Fourier series. Upon completion, students should be able to use differential equations to model physical phenomena, solve the equations, and use the solutions to analyze the phenomena. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (Sp.)

MEC - Mechanical

MEC 111 Machine Processes I 1 4 0 3

Prerequisite: *None* Corequisite: *None*

This course introduces shop safety, hand tools, machine processes, measuring instruments, and the operation of machine shop equipment. Topics include use and care of tools, safety, measuring tools, and the basic setup and operation of common machine tools. Upon completion, students should be able to safely machine simple parts to specified tolerances. (Sp.)

MEC 141 Intro Mfg Processes 2 2 0 3

Prerequisite: *None* Corequisite: *None*

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. (F.)

MEC 231 Comp-Aided Manufact I 1 4 0 3

Prerequisite: *None* Corequisite: *None*

This course introduces computer-aided design/manufacturing (CAD/CAM) applications and concepts. Topics include software, program-

ming, data transfer and verification, and equipment setup. Upon completion, students should be able to produce parts using CAD/CAM applications. (F.)

MEC 232 Comp-Aided Manufact II 1 4 0 3

Prerequisite: *MEC 231* Corequisite: *None*

This course provides an in-depth study of CAM applications and concepts. Emphasis is placed on the manufacturing of complex parts using computer-aided manufacturing software. Upon completion, students should be able to manufacture complex parts using CAM software. (Sp.)

MEC 250 Statics & Strength of Mat 4 3 0 5

Prerequisite: *None* Corequisite: *None*

This course covers the concepts and principles of statics and stress analysis. Topics include systems of forces on structures in equilibrium and analysis of stresses and strains on these components. Upon completion, students should be able to analyze forces and the results of stresses and strains on structural components. (Sp.)

MED - Medical Assisting

MED 110 Orientation to Med Assist 1 0 0 1

Prerequisite: *None* Corequisite: *None*

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. (F.)

MED 118 Medical Law and Ethics 2 0 0 2

Prerequisite: *None* Corequisite: *None*

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

MED 121 Medical Terminology I 3 0 0 3

Prerequisite: *None* Corequisite: *None*

This course introduces prefixes, suffixes, and word roots used in the language of medicine. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and 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. *This course is also available through the Virtual Learning Community (VLC).* (F.)

MED 122 Medical Terminology II 3 0 0 3

Prerequisite: *MED 121* Corequisite: *None*

This course is the second in a series of medical terminology courses. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and 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. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)



MED 130 Admin Office Proc I 1 2 0 2
 Prerequisite: None Corequisite: *None*
 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. (Sp.)

MED 131 Admin Office Proc II 1 2 0 2
 Prerequisite: *None* Corequisite: *None*
 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. (F.)

MED 134 Medical Transcription 2 2 0 3
 Prerequisite: *MED 121* Corequisite: *None*
 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. (Sp.)

MED 140 Exam Room Procedures I 3 4 0 5
 Prerequisite: *MED 122* Corequisite: *None*
 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. (S.)

MED 150 Laboratory Procedures I 3 4 0 5
 Prerequisite: *MED 122* Corequisite: *None*
 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. (S.)

MED 232 Medical Insurance Coding 1 3 0 2
 Prerequisite: *None* Corequisite: *None*
 This course is designed to develop coding skills. 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. (Sp., S.)

MED 240 Exam Room Procedures II 3 4 0 5
 Prerequisite: *MED 140* Corequisite: *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. (F.)

MED 250 Laboratory Procedures II 3 4 0 5
 Prerequisite: *MED 150* Corequisite: *None*
 This course is designed to expand and build on skills presented in MED 150. Emphasis is placed on increasing proficiency in laboratory skills

used in the medical setting. Upon completion, students should be able to demonstrate enhanced competence in selected medical laboratory procedures. (F.)

MED 260 MED Clinical Externship 0 0 15 5
 Prerequisite: *None* Corequisite: *None*
 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. (Sp.)

MED 264 Med Assisting Overview 2 0 0 2
 Prerequisite: *None* Corequisite: *MED 260*
 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. (Sp.)

MED 272 Drug Therapy 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 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. (F.)

MKT - Marketing & Retailing

MKT 120 Principles of Marketing 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course introduces principles and problems of marketing goods and services. Topics include promotion, placement, and pricing strategies for products. Upon completion, students should be able to apply marketing principles in organizational decision making. *This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

MKT 122 Visual Merchandising 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course introduces basic layout design and commercial display in retail and service organizations. Topics include an analysis of display as a visual merchandising medium and an examination of the principles and applications of display and design. Upon completion, students should be able to plan, build, and evaluate designs and displays. (Sp.)

MKT 123 Fundamentals of Selling 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course is designed to emphasize the necessity of selling skills in a modern business environment. Emphasis is placed on sales techniques involved in various types of selling situations. Upon completion, students should be able to demonstrate an understanding of the techniques covered. *This course is also available through the Virtual Learning Community (VLC).* (F.)

MKT 125 Buying and Merchandising 3 0 0 3
 Prerequisite: *None* Corequisite: *None*
 This course includes an analysis of the organization for buying-what,

when and how to buy-and the principles of effective inventory and stock control. Topics include organization for buying, analysis of buyers' responsibilities, pricing, inventory control, planning, cost effectiveness, and vendor relationships. Upon completion, students should be able to demonstrate an understanding of the concepts covered through application. (Sp.)

MKT 220 Advertising and Sales Promotion

3 0 0 3

Prerequisite: *None*Corequisite: *None*

This course covers the elements of advertising and sales promotion in the business environment. Topics include advertising and sales promotion appeals, selection of media, use of advertising and sales promotion as a marketing tool, and means of testing effectiveness. Upon completion, students should be able to demonstrate an understanding of the concepts covered through application. *This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

MKT 225 Marketing Research

3 0 0 3

Prerequisite: *MKT 120*Corequisite: *None*

This course provides information for decision making by providing guidance in developing, analyzing, and using data. Emphasis is placed on marketing research as a tool in decision making. Upon completion, students should be able to design and conduct a marketing research project and interpret the results. *This course is a unique concentration requirement of the Marketing and Retailing concentration in the Business Administration program. This course is also available through the Virtual Learning Community (VLC).* (F.)

MKT 226 Retail Applications

3 0 0 3

Prerequisite: *None*Corequisite: *None*

This course is designed to develop occupational competence through participation in case studies, group work, and simulations. Emphasis is placed on all aspects of store ownership and operation, including securing financial backing and a sufficient market share. Upon completion, students should be able to demonstrate an understanding of concepts covered through application. *This course is a unique concentration requirement of the Marketing and Retailing concentration in the Business Administration program. This course is also available through the Virtual Learning Community (VLC).* (Sp.)

MNT - Maintenance

MNT 110 Intro to Maint Procedures

1 3 0 2

Prerequisite: *None*Corequisite: *None*

This course covers basic maintenance fundamentals for power transmission equipment. Topics include equipment inspection, lubrication, alignment, and other scheduled maintenance procedures. Upon completion, students should be able to demonstrate knowledge of accepted maintenance procedures and practices according to current industry standards. (S.)

MNT 165 Mechanical Industrial Sys

1 3 0 2

Prerequisite: *None*Corequisite: *None*

This course covers mechanical components used in industrial machine operation. Emphasis is placed on mechanical drives, belts, gears, couplings, electrical drives, and other related topics. Upon completion, students should be able to demonstrate an understanding of industrial machines and be able to maintain this equipment. (S.)

MUS - Music

MUS 110 Music Appreciation

3 0 0 3

Prerequisite: *RED 090*Corequisite: *None*

This course is a basic survey of the music of the Western world. Emphasis is placed on the elements of music, terminology, composers, form, and style within a historical perspective. Upon completion, students should be able to demonstrate skills in basic listening and understanding of the art of music. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC).* (F., Sp., S.)

MUS 111 Fundamentals of Music

3 0 0 3

Prerequisite: *None*Corequisite: *None*

This course is an introductory course for students with little or no music background. Emphasis is placed on music notation, rhythmic patterns, scales, key signatures, intervals, and chords. Upon completion, students should be able to demonstrate an understanding of the rudiments of music. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp., S.)

MUS 121 Music Theory I

3 2 0 4

Prerequisite: *MUS 111*Corequisite: *None*

This course provides an in-depth introduction to melody, rhythm, and harmony. Emphasis is placed on fundamental melodic, rhythmic, and harmonic analysis, introduction to part writing, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F.)

MUS 122 Music Theory II

3 2 0 4

Prerequisite: *MUS 121*Corequisite: *None*

This course is a continuation of studies begun in MUS 121. Emphasis is placed on advanced melodic, rhythmic, and harmonic analysis and continued studies in part-writing, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (Sp.)

MUS 131 Chorus I

0 2 0 1

Prerequisite: *None*Corequisite: *None*

This course provides an opportunity to gain experience singing in a chorus. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 132 Chorus II

0 2 0 1

Prerequisite: *MUS 131*Corequisite: *None*

This course provides a continuation of studies begun in MUS 131. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in

choral singing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 133 Band I 0 2 0 1

Prerequisite: *Band Experience* Corequisite: *None*

This course provides an opportunity for those who play a band instrument to gain experience playing in an ensemble. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 134 Band II 0 2 0 1

Prerequisite: *MUS 133* Corequisite: *None*

This course is a continuation of MUS 133. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 141 Ensemble I 0 2 0 1

Prerequisite: *None* Corequisite: *None*

This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 142 Ensemble II 0 2 0 1

Prerequisite: *MUS 141* Corequisite: *None*

This course is a continuation of MUS 141. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 151 Class Music I 0 2 0 1

Prerequisite: *None* Corequisite: *None*

This course provides group instruction in skills and techniques of the particular instrument or voice for those with little or no previous experience. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 152 Class Music II 0 2 0 1

Prerequisite: *MUS 151* Corequisite: *None*

This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate

literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 161 Applied Music I 1 2 0 2

Prerequisite: *None* Corequisite: *None*

This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 162 Applied Music II 1 2 0 2

Prerequisite: *MUS 161* Corequisite: *None*

This course is a continuation of MUS 161. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 212 American Musical Theatre 3 0 0 3

Prerequisite: *None* Corequisite: *None*

This course covers the origins and development of the musical from *Show Boat* to the present. Emphasis is placed on the investigation of the structure of the musical and its components through listening and analysis. 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 for transferability as a pre-major and/or elective course requirement.* (Sp.)

MUS 217 Elementary Conducting 1 2 0 2

Prerequisite: *MUS 111* Corequisite: *None*

This course introduces the basic patterns and skills for conducting instrumental and vocal groups. Emphasis is placed on conducting beat patterns, expressive gestures, fermatas, accents, tempos, and rehearsal techniques. Upon completion, students should be able to demonstrate the above skills by conducting vocal and/or instrumental groups. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

MUS 221 Music Theory III 3 2 0 4

Prerequisite: *MUS 122* Corequisite: *None*

This course is a continuation of MUS 122. Emphasis is placed on altered and chromatic harmony, common practice era compositional techniques and forms, and continued studies in part-writing, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F.)

MUS 222 Music Theory IV 3 2 0 4
 Prerequisite: *MUS 221* Corequisite: *None*
 This course is a continuation of studies begun in MUS 221. Emphasis is placed on continued study of common practice era compositional techniques and forms, 20th century practices, ear-training, and sight-singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (Sp.)

MUS 231 Chorus III 0 2 0 1
 Prerequisite: *MUS 132* Corequisite: *None*
 This course is a continuation of MUS 132. Emphasis is placed on vocal techniques and the study and performance of a variety of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 232 Chorus IV 0 2 0 1
 Prerequisite: *MUS 231* Corequisite: *None*
 This course is a continuation of MUS 231. Emphasis is placed on vocal techniques and the study of styles and periods of choral literature. Upon completion, students should be able to demonstrate skills needed to participate in choral singing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 233 Band III 0 2 0 1
 Prerequisite: *MUS 134* Corequisite: *None*
 This course is a continuation of MUS 134. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 234 Band IV 0 2 0 1
 Prerequisite: *MUS 233* Corequisite: *None*
 This course is a continuation of MUS 233. Emphasis is placed on band techniques and the study and performance of a variety of styles and periods of band literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 241 Ensemble III 0 2 0 1
 Prerequisite: *MUS 142* Corequisite: *None*
 This course is a continuation of MUS 142. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 242 Ensemble IV 0 2 0 1
 Prerequisite: *MUS 241* Corequisite: *None*
 This course is a continuation of MUS 241. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 251 Class Music III 0 2 0 1
 Prerequisite: *MUS 152* Corequisite: *None*
 This course is a continuation of MUS 152. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 252 Class Music IV 0 2 0 1
 Prerequisite: *MUS 251* Corequisite: *None*
 This course is a continuation of MUS 251. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 261 Applied Music III 1 2 0 2
 Prerequisite: *MUS 162* Corequisite: *None*
 This course is a continuation of MUS 162. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

MUS 262 Applied Music IV 1 2 0 2
 Prerequisite: *MUS 261* Corequisite: *None*
 This course is a continuation of MUS 261. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

NET - Networking Technology

NET 113 Home Automation Systems 2 2 0 3
 Prerequisite: *None* Corequisite: *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. (F., Sp.)

NET 125 Networking Basics 1 4 0 3Prerequisite: *CIS 070 or CTS 080, and RED 080*Corequisite: *None*

This course introduces the networking field. Emphasis is placed on network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, students should be able to perform tasks related to networking mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols. (F., On Demand)

NET 126 Routing Basics 1 4 0 3Prerequisite: *NET 125*Corequisite: *None*

This course focuses on initial router configuration, router software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Emphasis will be placed on the fundamentals of router configuration, managing router software, routing protocol, and access lists. Upon completion, students should have an understanding of routers and their role in WANs, router configuration, routing protocols, TCP/IP, troubleshooting, and ACLs. (Sp., On Demand)

NET 225 Routing and Switching I 1 4 0 3Prerequisite: *NET 126*Corequisite: *None*

This course focuses on advanced IP addressing techniques, intermediate routing protocols, command-line interface configuration of switches, Ethernet switching, VLANs, STP, and VTP. Emphasis will be placed on application and demonstration of skills acquired in pre-requisite courses. Upon completion, students should be able to perform tasks related to VLSM, routing protocols, switching concepts and configuration, STP, VLANs, and VTP. (F., On Demand)

NET 226 Adv. Routing and Switching II 1 4 0 3Prerequisite: *NET 225*Corequisite: *None*

This course introduces WAN theory and design, WAN technology, PPP, Frame Relay, ISDN, and additional case studies. Topics include network congestion problems, TCP/IP transport and network layer protocols, advanced routing and switching configuration, ISDN protocols, PPP encapsulation operations on a router. Upon completion, students should be able to provide solutions for network routing problems, identify ISDN protocols, channels, and function groups, describe the Spanning Tree protocol. (Sp., On Demand)

NET 289 Networking Project 1 4 0 3Prerequisite: *None*Corequisite: *NET 226*

This course provides an opportunity to complete a significant networking project from the design phase through implementation with minimal instructor support. Emphasis is placed on project definition, documentation, installation, testing, presentation, and training. Upon completion, students should be able to complete a project from the definition phase through implementation. (Sp.)

NOS - Network Operating Systems**NOS 110 Operating System Concepts** 2 3 0 3Prerequisite: *CIS 070 or CTS 080, and RED 080*Corequisite: *None*

This course introduces students to a broad range of operating system concepts, including installation and maintenance. Emphasis is placed on operating system concepts, management, maintenance, and resources required. Upon completion of this course, students will have an

understanding of OS concepts, installation, management, maintenance, using a variety of operating systems. (F.)

NOS 120 Linux/UNIX Single User 2 2 0 3Prerequisite: *NOS 110*Corequisite: *None*

This course develops the necessary skills for students to develop both GUI and command line skills for using and customizing a Linux workstation. Topics include Linux file system and access permissions, GNOME Interface, VI editor, X Window System expression pattern matching, I/O redirection, network and printing utilities. Upon completion, students should be able to customize and use Linux systems for command line requirements and desktop productivity roles. (Sp., On Demand)

NOS 130 Windows Single User 2 2 0 3Prerequisite: *NOS 110*Corequisite: *None*

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

NOS 230 Windows Admin I 2 2 0 3Prerequisite: *NOS 130*Corequisite: *None*

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

NOS 231 Windows Admin II 2 2 0 3Prerequisite: *NOS 230*Corequisite: *None*

This course covers implementing, managing, and maintaining a Windows Server network infrastructure. Topics include implementing, managing, and maintaining IP addressing, name resolution, network security, routing and remote access, and managing a network infrastructure. Upon completion, students should be able to manage and maintain a Windows Server environment. (Sp.)

NUR - Nursing**NUR 101 Practical Nursing I** 7 6 6 11Prerequisite: *Admission to PN Program*Corequisite: *None*

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

NUR 102 Practical Nursing II 8 0 12 12Prerequisite: *NUR 101 and BIO 163*Corequisite: *None*

This course includes more advanced concepts as related to the practical nurse's caregiver and discipline-specific roles. Emphasis is placed on the nursing process, delegation, cost effectiveness, legal/ethical/professional issues, and wellness/illness patterns. Upon completion, students should be able to begin participating in the nursing process to promote/maintain/restore optimum health for diverse clients throughout the life span. (Sp.)

NUR 103 Practical Nursing III 6 0 12 10Prerequisite: *NUR 102, NUR 117 and PSY 150*Corequisite: *None*

This course focuses on use of nursing/related concepts by practical nurses as providers of care/members of discipline in collaboration with health team members. Emphasis is placed on the nursing process, wellness/illness patterns, entry-level issues, accountability, advocacy, professional development, evolving technology, and changing health care delivery systems. Upon completion, students should be able to use the nursing process to promote/maintain/restore optimum health for diverse clients throughout the life span. (S.)

NUR 115 Fundamentals of Nursing 2 3 6 5Prerequisite: *Admission to ADN Program* Corequisite: *None*

This course introduces concepts basic to beginning nursing practice. Emphasis is placed on the application of the nursing process to provide and manage care as a member of the discipline of nursing. Upon completion, students should be able to demonstrate beginning competence in caring for individuals with common alterations of health. (F.)

NUR 117 Pharmacology 1 3 0 2Prerequisite: *NUR 101 or permission of instructor*Corequisite: *None*

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

NUR 125 Maternal-Child Nursing 5 3 6 8Prerequisite: *NUR 115, NUR 185 and PSY 241**or permission of instructor* Corequisite: *None*

This course introduces nursing concepts related to the delivery of nursing care for the expanding family. Emphasis is placed on utilizing the nursing process as a framework for managing/providing nursing care to individuals and families along the wellness-illness continuum. Upon completion, students should be able to utilize the nursing process to deliver nursing care to mothers, infants, children, and families. (F.)

NUR 133 Nursing Assessment 2 3 0 3Prerequisite: *Admission to ADN Program or permission of instructor* Corequisite: *None*

This course provides theory and application experience for performing nursing assessment of individuals across the life span. Emphasis is placed on interviewing and physical assessment techniques and documentation of findings appropriate for nursing. Upon completion, students should be able to complete a health history and perform a noninvasive physical assessment. (F.)

NUR 135 Adult Nursing I 5 3 9 9Prerequisite: *NUR 115, NUR 133, BIO 165 and MAT 110*Corequisite: *None*

This course introduces concepts related to the nursing care of individuals experiencing acute and chronic alterations in health. Emphasis is placed on utilizing the nursing process as a framework for providing and managing nursing care to individuals along the wellness-illness continuum. Upon completion, students should be able to apply the nursing process to individuals experiencing acute and chronic alterations in health. (Sp.)

NUR 185 Mental Health Nursing 3 0 6 5Prerequisite: *NUR 115, NUR 135, BIO 166 and PSY 150*Corequisite: *None*

This course includes concepts related to the nursing care of individuals experiencing alterations in social and psychological functioning. Emphasis is placed on utilizing the nursing process to provide and manage nursing care for individuals with common psychiatric disorders or mental health needs. Upon completion, students should be able to apply psychosocial theories in the nursing care of individuals with psychiatric/mental health needs. (S.)

NUR 188 Nursing in the Community 1 0 6 3Prerequisite: *NUR 185*Corequisite: *None*

This course is designed to introduce basic concepts and practices of community-based nursing. Emphasis is based on roles and functions of nurses as members of interdisciplinary teams in the community and utilization of the nursing process to meet the needs or problems of individuals and groups in the community. Upon completion, students should be able to provide nursing care to individuals and/or groups in community-based settings. (F.)

NUR 235 Adult Nursing II 4 3 15 10Prerequisite: *NUR 125, NUR 135 and NUR 188*Corequisite: *None*

This course provides expanded concepts related to nursing care for individuals experiencing common complex alterations in health. Emphasis is placed on the nurse's role as a member of a multidisciplinary team and as a manager of care for a group of individuals. Upon completion, students should be able to provide comprehensive nursing care for groups of individuals with common complex alterations in health. (Sp.)

OMT - Operations Management**OMT 110 Intro to Operations Mgt** 3 0 0 3Prerequisite: *RED 090*Corequisite: *None*

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. (F., Sp.)

OMT 112 Material Management 3 0 0 3Prerequisite: *None*Corequisite: *None*

This course covers the basic principles of materials management. Emphasis is placed on the planning, procurement, movement, and storage of materials. Upon completion, students should be able to demonstrate an understanding of the concepts and techniques related to materials management. *This course is a unique concentration requirement of the Operations Management concentration in the Business Administration program.* (F., Sp.)

OMT 260 Issues in Operations Mgt 3 0 0 3Prerequisite: *ISC 121, ISC 210, OMT 112, and ISC 130, ISC 131, ISC 132, or ISC 221*Corequisite: *None*

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

This course is a unique concentration requirement of the Operations Management concentration in the Business Administration program. (F., Sp.)

OST - Office Systems Technology

OST 131 Keyboarding 1 2 0 2

Prerequisite: *None* Corequisite: *None*

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

OST 132 Keyboard Skill Building 1 2 0 2

Prerequisite: *None* Corequisite: *None*

This course is designed to increase speed and improve accuracy in keyboarding. 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. (F.)

OST 134 Text Entry & Formatting 2 2 0 3

Prerequisite: *None* Corequisite: *None*

This course is designed to provide skills needed to increase speed, improve accuracy, and format documents. Topics include letters, memos, tables, and business reports. Upon completion, students should be able to produce documents and key timed writings at speeds commensurate with employability. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

OST 136 Word Processing 2 2 0 3

Prerequisite: *None* Corequisite: *None*

This course is designed to introduce word processing concepts and applications. Topics include preparation of a variety of documents and mastery of specialized software functions. Upon completion, students should be able to work effectively in a computerized word processing environment. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

OST 137 Office Software Applicat 2 2 0 3

Prerequisite: *CIS 110* Corequisite: *None*

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

OST 138 Advanced Software Appl 2 2 0 3

Prerequisite: *OST 137 or CIS 111 or CIS 110* Corequisite: *None*

This course is designed to improve the 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. *This course is also available through the Virtual Learning Community (VLC).* (F.)

OST 148 Med Coding Billing & Insu 3 0 0 3

Prerequisite: *None* Corequisite: *None*

This course introduces fundamentals of medical coding, billing, and insurance. Emphasis is placed on the medical billing cycle to include third party payers, coding concepts, and form preparation. Upon completion, students should be able to explain the life cycle of and accurately complete a medical insurance claim. *This course is also available through the Virtual Learning Community (VLC).* (F.)

OST 149 Med Legal Issues 3 0 0 3

Prerequisite: *None* Corequisite: *None*

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

OST 164 Text Editing Applications 3 0 0 3

Prerequisite: *ENG 080 (C or better) or Placement Score of (AW=36+, COMPASS = 24+)* Corequisite: *None*

This course provides a comprehensive study of editing skills needed in the workplace. Emphasis is placed on grammar, punctuation, sentence structure, proofreading, and editing. Upon completion, students should be able to use reference materials to compose and edit text. *This course is also available through the Virtual Learning Community (VLC).* (F., Sp.)

OST 181 Intro to Office Systems 2 2 0 3

Prerequisite: *None* Corequisite: *None*

This course introduces the skills and abilities needed in today's office. Topics include effectively interacting with co-workers and the public, processing simple financial and informational documents, and performing functions typical of today's offices. Upon completion, students should be able to display skills and decision-making abilities essential for functioning in the total office context. (F.)

OST 184 Records Management 2 2 0 3

Prerequisite: *None* Corequisite: *None*

This course includes the creation, maintenance, protection, security, and disposition of records stored in a variety of media forms. Topics include alphabetic, geographic, subject, and numeric filing methods. Upon completion, students should be able to set up and maintain a records management system. *This course is also available through the Virtual Learning Community (VLC).* (Sp.)

OST 201 Medical Transcription I 3 2 0 4

Prerequisite: *OST 136 and OST 164 (C or better)*

Corequisite: *MED 122 or OST 142*

This course introduces dictating equipment and typical medical dictation. Emphasis is placed on efficient use of equipment, dictionaries, PDRs, and other reference materials. Upon completion, students should be able to efficiently operate dictating equipment and to accurately transcribe a variety of medical documents in a specified time. (Sp.)

OST 202 Medical Transcription II 3 2 0 4

Prerequisite: *OST 201 (C or better)* Corequisite: *None*

This course provides additional practice in transcribing documents from various medical specialties. Emphasis is placed on increasing transcription speed and accuracy and understanding medical procedures and

terminology. Upon completion, students should be able to accurately transcribe a variety of medical documents in a specified time. (S.)

OST 223 Admin Office Transcription I 1 2 0 2
Prerequisite: *OST 164 (C or better)*; Corequisite: *None and OST 134 or OST 136*

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. (F.)

OST 236 Adv Word/Information Proc 2 2 0 3
Prerequisite: *OST 136* Corequisite: *None*

This course develops proficiency in the utilization of advanced word/information processing functions. Emphasis is placed on advanced word processing features. Upon completion, students should be able to produce a variety of complex business documents. *This course is also available through the Virtual Learning Community (VLC).*

OST 241 Med Ofc Transcription I 1 2 0 2
Prerequisite: *MED 121 or OST 141* Corequisite: *None and OST 164 (C or better)*

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. (F.)

OST 243 Med Office Simulation 2 2 0 3
Prerequisite: *OST 148 and Keyboarding Proficiency* Corequisite: *None*

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

OST 244 Med Document Production 1 2 0 2
Prerequisite: *OST 134* Corequisite: *None*

This course provides production-level skill development in processing medical documents. Emphasis is placed on producing mailable documents through the use of medical-related materials. Upon completion, students should be able to perform competently in preparing accurate, correctly formatted, and usable documents. (On Demand)

OST 247 CPT Coding in the Med Off 1 2 0 2
Prerequisite: *MED 122 or OST 142* Corequisite: *None*

This course provides in-depth coverage of procedural coding. Emphasis is placed on CPT and HCPCS rules for Medicare billing. Upon completion, students should be able to properly code procedures and services performed by physicians in ambulatory settings. (Sp.)

OST 248 Diagnostic Coding 1 2 0 2
Prerequisite: *MED 122 or OST 142* Corequisite: *None*

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. (S.)

OST 284 Emerging Technologies 1 2 0 2
Prerequisite: *Keyboarding Proficiency and CIS 110* Corequisite: *None*

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

OST 286 Professional Development 3 0 0 3
Prerequisite: *None* Corequisite: *None*

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

OST 289 Admin Office Management 2 2 0 3
Prerequisite: *OST 164 and either OST 134 or OST 136* Corequisite: *None*

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

PBT - Phlebotomy

PBT 100 Phlebotomy Technology 5 2 0 6
Prerequisite: *None* Corequisite: *PBT 101*

This course provides instruction in the skills needed for the proper collection of blood and other specimens used for diagnostic testing. Emphasis is placed on ethics, legalities, medical terminology, safety and universal precautions, health care delivery systems, patient relations, anatomy and physiology, and specimen collection. Upon completion, students should be able to demonstrate competence in the theoretical comprehension of phlebotomy techniques. (Sp.)

PBT 101 Phlebotomy Practicum 0 0 9 3
Prerequisite: *None* Corequisite: *PBT 100*

This course provides supervised experience in the performance of venipuncture and microcollection techniques in a clinical facility. Emphasis is placed on patient interaction and application of universal precautions, proper collection techniques, special procedures, specimen handling, and data management. Upon completion, students should be able to safely perform procedures necessary for specimen collections on patients in various health care settings. (Sp.)

PCI - Process Control Instrumentation

PCI 162 Instrumentation Controls 2 3 0 3
Prerequisite: *None* Corequisite: *None*

This course surveys industrial process control instrumentation concepts, devices, and systems. Topics include process control devices and process control applications associated with industrial instrumentation. Upon completion, students should be able to demonstrate a basic understanding of the various industrial process control and instrumentation systems. (S.)

PCI 264 Process Control with PLCs 3 3 0 4Prerequisite: *None*Corequisite: *None*

This course introduces automatic process control implemented with PLC technology. Topics include interfacing and controlling advanced control loops and devices using various PLC-based systems. Upon completion, students should be able to demonstrate an understanding of advanced applications of process control and instrumentation systems with PLC-based devices. (Sp.)

PED - Physical Education**PED 110 Fit and Well for Life** 1 2 0 2Prerequisite: *None*Corequisite: *None*

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

PED 113 Aerobics I 0 3 0 1Prerequisite: *None*Corequisite: *None*

This course introduces a program of cardiovascular fitness involving continuous, rhythmic exercise. Emphasis is placed on developing cardiovascular efficiency, strength, and flexibility and on safety precautions. Upon completion, students should be able to select and implement a rhythmic aerobic exercise program. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp.)

PED 117 Weight Training I 0 3 0 1Prerequisite: *None*Corequisite: *None*

This course introduces the basics of weight training. Emphasis is placed on developing muscular strength, muscular endurance, and muscle tone. Upon completion, students should be able to establish and implement a personal weight training program. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F., Sp., S.)

PED 120 Walking for Fitness 0 3 0 1Prerequisite: *None*Corequisite: *None*

This course introduces fitness through walking. Emphasis is placed on stretching, conditioning exercises, proper clothing, fluid needs, and injury prevention. Upon completion, students should be able to participate in a recreational walking program. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

PED 121 Walk, Jog, Run 0 3 0 1Prerequisite: *None*Corequisite: *None*

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

PED 128 Golf-Beginning 0 2 0 1Prerequisite: *None*Corequisite: *None*

This course emphasizes the fundamentals of golf. Topics include the proper grips, stance, alignment, swings for the short and long game, putting, and the rules and etiquette of golf. Upon completion, students should be able to perform the basic golf shots and demonstrate a knowledge of the rules and etiquette of golf. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

PED 130 Tennis-Beginning 0 2 0 1Prerequisite: *None*Corequisite: *None*

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

PED 131 Tennis-Intermediate 0 2 0 1Prerequisite: *PED 130*Corequisite: *None*

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

PED 132 Racquetball-Beginning 0 2 0 1Prerequisite: *None*Corequisite: *None*

This course introduces the fundamentals of racquetball. Emphasis is placed on rules, fundamentals, and strategies of beginning racquetball. Upon completion, students should be able to play recreational racquetball. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

PED 139 Bowling-Beginning 0 2 0 1Prerequisite: *None*Corequisite: *None*

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

PED 148 Softball 0 2 0 1Prerequisite: *None*Corequisite: *None*

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.* (On Demand)

PED 152 Swimming-Beginning 0 2 0 1Prerequisite: *None*Corequisite: *None*

This course is designed for non-swimmers and beginners. Emphasis is placed on developing confidence in the water, learning water safety, acquiring skills in floating, and learning elementary strokes. Upon

completion, students should be able to demonstrate safety skills and be able to tread water, back float, and use the crawl stroke for 20 yards. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F.)

PHI - Philosophy

PHI 215 Philosophical Issues 3 0 0 3

Prerequisite: *ENG 111* Corequisite: *None*

This course introduces fundamental issues in philosophy considering the views of classical and contemporary philosophers. Emphasis is placed on knowledge and belief, appearance and reality, determination and free will, faith and reason, and justice and inequality. Upon completion, students should be able to identify, analyze, and critique the philosophical components of an issue. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.* (On Demand)

PHI 240 Introduction to Ethics 3 0 0 3

Prerequisite: *ENG 111* Corequisite: *None*

This course introduces theories about the nature and foundations of moral judgements 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. This course is also available through the Virtual Learning Community (VLC).* (Sp.)

PHY - Physics

PHY 131 Physics-Mechanics 3 2 0 4

Prerequisite: *MAT 121 or MAT 161 and RED 090* Corequisite: *None*

This algebra/trigonometry-based course introduces fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, vectors, motion, forces, Newton's laws of motion, work, energy, power, momentum, and properties of matter. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields. (On Demand)

PHY 151 College Physics I 3 2 0 4

Prerequisite: *MAT 161 or MAT 171 and RED 090* Corequisite: *None*

This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.* (F., On Demand)

PHY 152 College Physics II 3 2 0 4

Prerequisite: *PHY 151* Corequisite: *None*

This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.* (Sp., On Demand)

PHY 251 General Physics I 3 3 0 4

Prerequisite: *MAT 271 and RED 090* Corequisite: *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.* (F.)

PHY 252 General Physics II 3 3 0 4

Prerequisite: *MAT 272 and PHY 251* Corequisite: *None*

This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.* (Sp.)

POL - Political Science

POL 120 American Government 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

This course is a study of the origins, development, structure, and functions of American national government. Topics include the constitutional framework, federalism, the three branches of government including the bureaucracy, civil rights and liberties, political participation and behavior, and policy formation. Upon completion, students should be able to demonstrate an understanding of the basic concepts and participatory processes of the American political system. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC).* (On Demand)

POL 130 State & Local Government 3 0 0 3

Prerequisite: *None* Corequisite: *None*

This course includes state and local political institutions and practices in the context of American federalism. Emphasis is placed on procedural and policy differences as well as political issues in state, regional,

and local governments of North Carolina. Upon completion, students should be able to identify and discuss various problems associated with intergovernmental politics and their effect on the community and the individual. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

PSY - Psychology

PSY 101 Applied Psychology 3 0 0 3
Prerequisite: *None* Corequisite: *None*

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. (On Demand)

PSY 141 Psych of Death and Dying 3 0 0 3
Prerequisite: *None* Corequisite: *None*

This course presents psychological perspectives on death and dying. Topics include the culturally diverse aspects of death and the grieving process, adjustment mechanisms, interventions, and the psychological and ethical dimensions of death and dying. Upon completion, students should be able to demonstrate an understanding of the psychosocial aspects of death and dying. (On Demand)

PSY 150 General Psychology 3 0 0 3
Prerequisite: *RED 090* Corequisite: *None*

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

PSY 183 Psychology of Addiction 3 0 0 3
Prerequisite: *None* Corequisite: *None*

This course covers historical and theoretical perspectives on addictive behavior and the genetic, familial, and sociocultural influences on addiction. Topics include addictions to eating, gambling, alcohol, drugs, relationships, work, and sex. Upon completion, students should be able to demonstrate a knowledge of the theories of addiction and the factors underlying addictive behaviors. (On Demand)

PSY 237 Social Psychology 3 0 0 3
Prerequisite: *PSY 150 or SOC 210* Corequisite: *None*

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.* (On Demand)

PSY 241 Developmental Psych 3 0 0 3
Prerequisite: *PSY 150* Corequisite: *None*

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

PSY 263 Educational Psychology 3 0 0 3
Prerequisite: *PSY 150* Corequisite: *None*

This course examines the application of psychological theories and principles to the educational process and setting. Topics include learning and cognitive theories, achievement motivation, teaching and learning styles, teacher and learner roles, assessment, and developmental issues. Upon completion, students should be able to demonstrate an understanding of the application of psychological theory to educational practice. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (F.)

PSY 265 Behavioral Modification 3 0 0 3
Prerequisite: *PSY 150* Corequisite: *None*

This course is an applied study of factors influencing human behavior and strategies for behavioral change. Emphasis is placed on cognitive-behavioral theory, behavioral assessment, practical applications of conditioning techniques, and maintenance of adaptive behavior patterns. Upon completion, students should be able to implement basic learning principles to effect behavioral changes in self and others. (Sp.)

PSY 281 Abnormal Psychology 3 0 0 3
Prerequisite: *PSY 150* Corequisite: *None*

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

RED - Reading

RED 080 Intro to College Reading 3 2 0 4
Prerequisite: *Appropriate score on placement test*

(AR = 35 or below, COMPASS = 60 or below)

Corequisite: *None*

This course introduces effective reading and inferential thinking skills in preparation for RED 090. Emphasis is placed on vocabulary, comprehension, and reading strategies. Upon completion, students should be able to determine main ideas and supporting details, recognize basic patterns of organization, draw conclusions, and understand vocabulary in context. Students scoring into RED 080 must also complete ACA 090 College Study Skills before registering for ENG 111, Expository Writing. (F., Sp., S.)

RED 090 Improved College Reading 3 2 0 4

Prerequisite: *RED 080 or appropriate score on placement test (AR = 36-41, COMPASS = 61-79)* Corequisite: *None*
 This course is designed to improve reading and critical thinking skills. Topics include vocabulary enhancement; extracting implied meaning; analyzing author's purpose, tone, and style; and drawing conclusions and responding to written material. Upon completion, students should be able to comprehend and analyze college-level reading material. (F., Sp., S.)

REL - Religion**REL 110 World Religions** 3 0 0 3

Prerequisite: *None* Corequisite: *None*
 This course introduces the world's major religious traditions. Topics include Primal religions, Hinduism, Buddhism, Islam Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. This course is available through the Virtual Learning Community (VLC).* (On Demand)

REL 211 Intro to Old Testament 3 0 0 3

Prerequisite: *None* Corequisite: *None*
 This course is a survey of the literature of the Hebrews with readings from the law, prophets, and other writings. Emphasis is placed on the use of literary, historical, archeological, and cultural analysis. Upon completion, students should be able to use the tools of critical analysis to read and understand Old Testament literature. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.* (F.)

REL 212 Intro to New Testament 3 0 0 3

Prerequisite: *None* Corequisite: *None*
 This course is a survey of the literature of first-century Christianity with readings from the gospels, Acts, and the Pauline and pastoral letters. Topics include the literary structure, audience, and religious perspective of the writings, as well as the historical and cultural context of the early Christian community. Upon completion, students should be able to use the tools of critical analysis to read and understand New Testament literature. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.* (Sp.)

REL 221 Religion in America 3 0 0 3

Prerequisite: *None* Corequisite: *None*
 This course is an examination of religious beliefs and practice in the United States. Emphasis is placed on mainstream religious traditions and non-traditional religious movements from the Colonial period to the present. Upon completion, students should be able to recognize and appreciate the diversity of religious traditions in America. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.* (On Demand)

SAB - Substance Abuse**SAB 110 Substance Abuse Overview** 3 0 0 3

Prerequisite: *None* Corequisite: *None*
 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 preventative measures. Upon completion, students should be able to demonstrate knowledge of the etiology of drug abuse, addiction, prevention, and treatment. (F., or On Demand)

SAB 120 Intake and Assessment 3 0 0 3

Prerequisite: *None* Corequisite: *None*
 This course develops processes for establishment of client rapport, elicitation of client information on which therapeutic activities are based, and stimulation of client introspection. Topics include diagnostic criteria, functions of counseling, nonverbal behavior, collaterals and significant others, dual diagnosis, client strengths and weakness, uncooperative clients, and crisis interventions. Upon completion, students should be able to establish communication with clients, recognize disorders, obtain information for counseling, and terminate the counseling process. (Sp., or On Demand)

SAB 125 SAB Case Management 2 2 0 3

Prerequisite: *SAB 120* Corequisite: *None*
 This course provides case management activities, including record keeping, recovery issues, community resources, and continuum of care. Emphasis is placed on establishing a systematic approach to monitor the treatment plan and maintain quality of life. Upon completion, students should be able to assist clients in the continuum of care as an ongoing recovery process and develop agency networking. (F., or On Demand)

SAB 135 Addictive Process 3 0 0 3

Prerequisite: *PSY 150* Corequisite: *None*
 This course explores the physical, emotional, psychological, and cultural aspects of the addictive process. Emphasis is placed on addictions to food, sex, alcohol, drugs, work, gambling, and relationships. Upon completion, students should be able to identify the effects, prevention strategies, and treatment methods associated with addictive disorders. (S., or On Demand)

SAB 210 Sub Abuse Counseling 2 2 0 3

Prerequisite: *None* Corequisite: *None*
 This course provides theory and skills acquisition by utilizing intervention strategies designed to obtain therapeutic information, support recovery, and prevent relapse. Topics include counseling individuals and dysfunctional families, screening instruments, counseling techniques and approaches, recovery and relapse, and special populations. Upon completion, students should be able to discuss issues critical to recovery, identify intervention models, and initiate a procedure culminating in cognitive/behavioral change. (F., or On Demand)

SAB 240 SAB Issues in Client Serv 3 0 0 3

Prerequisite: *Successful completion of 12 SHC in the SAB Concentration* Corequisite: *None*
 This course introduces systems of professional standards, values, and issues in substance abuse counseling. Topics include confidentiality, assessment of personal values, professional responsibilities, competencies, and ethics relative to multicultural counseling and research. Upon completion, students should be able to understand and discuss multiple

ethical issues applicable to counseling and apply various decision-making models to current issues. (Sp., or On Demand)

SEC - Information Systems Security

SEC 110 Security Concepts 3 0 0 3

Prerequisite: *None* Corequisite: *None*

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

SEC 150 Secure Communications 2 2 0 3

Prerequisite: *SEC 110 and NET 110 or NET 125*

Corequisite: *None*

This course provides an overview of current technologies used to provide secure transport of information across networks. Topics include data integrity through encryption, Virtual Private Networks, SSL, SSH, and IPsec. Upon completion, students should be able to implement secure data transmission technologies. (Sp.)

SEC 160 Secure Admin I 2 2 0 3

Prerequisite: *SEC 110 and NET 110 or NET 125*

Corequisite: *None*

This course provides an overview of security administration and fundamentals of designing security architectures. Topics include networking technologies, TCP/IP concepts, protocols, network traffic analysis, monitoring, and security best practices. Upon completion, students should be able to identify normal network traffic using network analysis tools and design basic security defenses. (Sp.)

SEC 210 Intrusion Detection 2 2 0 3

Prerequisite: *SEC 160* Corequisite: *None*

This course introduces the student to intrusion detection methods in use today. Topics include the types of intrusion detection products, traffic analysis, and planning and placement of intrusion detection solutions. Upon completion, students should be able to plan and implement intrusion detection solution for networks and host based systems. (F.)

SEC 220 Defense-In-Depth 2 2 0 3

Prerequisite: *None* Corequisite: *SEC 160*

This course introduces students to the concepts of defense in-depth, a security industry best practice. Topics include firewalls, backup systems, redundant systems, disaster recovery, and incident handling. Upon completion, students should be able to plan effective information security defenses, backup systems, and disaster recovery procedures. This course is restricted to the Information Systems Security, the Information Systems Security/Operating Systems, and the Information Systems Security/Security Hardware curriculums. (Sp.)

SEC 289 Security Capstone Project 1 4 0 3

Prerequisite: *SEC 220* Corequisite: *None*

This course provides the student the opportunity to put into practice all the skills learned to this point. Emphasis is placed on security policy, process planning, procedure definition, business continuity, and systems security architecture. Upon completion, students should be able to design and implement comprehensive information security

architecture from the planning and design phase through implementation. This course is restricted to the Information Systems Security, the Information Systems Security/Operating Systems, and the Information Systems Security/Security Hardware curriculums. (Sp.)

SGD - Simulation and Game Development

SGD 111 Introduction to SGD 2 3 0 3

Prerequisites: *CIS 070 or CTS 080* Corequisite: *None*

This course provides students with an introduction to simulation and game development. Topics include setting, storytelling, narrative, character design, interface design, game play, internal economy, core mechanics, game genres, AI, the psychology of game design and professionalism. Upon completion, students should be able to demonstrate knowledge of the major aspects of simulation and game design and development. (F.)

SGD 112 SGD Design 2 3 0 3

Prerequisites: *CIS 070 or CTS 080* Corequisite: *None*

This course introduces the fundamentals of simulation and game design. Topics include industry standards and design elements for simulations and games. Upon completion, students should be able to design simple simulations and/or games. (Sp.)

SGD 114 3D Modeling 2 3 0 3

Prerequisites: *CIS 070 or CTS 080* Corequisite: *None*

This course introduces the tools required to create three dimensional (3D) models. Emphasis is placed on exploring tools used to create 3D models. Upon completion, students should be able to create and animate 3D models using 3D modeling tools. (Sp.)

SGD 116 Graphic Design Tools 2 2 0 3

Prerequisites: *None* Corequisites: *None*

This course introduces students to computer-based graphic design tools and their use within the context of simulation and game design. Topics include texture creation, map creation, and introduction to advanced level graphic design techniques. Upon completion, students should be able to competently use and explain industry-standard graphic design software. (F.)

SGD 117 Art for Games 2 3 0 3

Prerequisites: *None* Corequisites: *None*

This course introduces students to the basic principles of art and how they apply to simulations and games. Emphasis is placed on learning to develop industry quality concept art for characters and other assets, as well as techniques needed to create such art. Upon completion, students should be able to create their own industry standard concept art for use in SGD projects. (F.)

SOC - Sociology

SOC 210 Introduction to Sociology 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

This course introduces the scientific study of human society, culture, and social interactions. Topics include socialization, research methods, diversity and inequality, cooperation and conflict, social change, social institutions, and organizations. Upon completion, students should be able to demonstrate knowledge of sociological concepts as they apply to the interplay among individuals, groups, and societies. *This course has been approved to satisfy the Comprehensive Articulation*

Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC). (F., Sp., S.)

SOC 213 Sociology of the Family 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

This course covers the institution of the family and other intimate relationships. Emphasis is placed on mate selection, gender roles, sexuality, communication, power and conflict, parenthood, diverse lifestyles, divorce and remarriage, and economic issues. Upon completion, students should be able to analyze the family as a social institution and the social forces which influence its development and change. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is also available through the Virtual Learning Community (VLC). (F., Sp.)*

SOC 220 Social Problems 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

This course provides an in-depth study of current social problems. Emphasis is placed on causes, consequences, and possible solutions to problems associated with families, schools, workplaces, communities, and the environment. Upon completion, students should be able to recognize, define, analyze, and propose solutions to these problems. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences. This course is available through the Virtual Learning Community (VLC). (F., Sp.)*

SOC 225 Social Diversity 3 0 0 3

Prerequisite: *RED 090* Corequisite: *None*

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. (On Demand)*

SOC 230 Race and Ethnic Relations 3 0 0 3

Prerequisite: *None* Corequisite: *None*

This course includes an examination of the various aspects of race and ethnicity and how these lead to different experiences, opportunities, problems, and contributions. Topics include prejudice, discrimination, perceptions, myths, stereotypes, and intergroup relationships. Upon completion, students should be able to identify and analyze relationships among racial and ethnic groups within the larger society. *This course has been approved to satisfy the Comprehensive Articulation agreement general education core requirement in social/behavioral sciences. (F.)*

SOC 242 Sociology of Deviance 3 0 0 3

Prerequisite: *None* Corequisite: *None*

This course provides an overview of deviant behavior and the processes involved in its definition, causation, prevention, control, and treatment. Topics include theories of causation, social control, delinquency, victimization, criminality, the criminal justice system, punishment, rehabilitation, and restitution. Upon completion, students should be able to identify and analyze issues surrounding the nature and development

of social responses to deviance. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. (On Demand)*

SPA - Spanish

SPA 111 Elementary Spanish I 3 0 0 3

Prerequisite: *None* Corequisite: *SPA 181*

This course introduces the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. This course is also available through the Virtual Learning Community (VLC). (F.)*

SPA 112 Elementary Spanish II 3 0 0 3

Prerequisite: *SPA 111* Corequisite: *SPA 182*

This course is a continuation of SPA 111 focusing on the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate further cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts. (Sp.)*

SPA 120 Spanish for the Workplace 3 0 0 3

Prerequisite: *None* Corequisite: *None*

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

SPA 181 Spanish Lab 1 0 2 0 1

Prerequisite: *None* Corequisite: *None*

This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. (F.)*

SPA 182 Spanish Lab 2 0 2 0 1

Prerequisite: *SPA 181* Corequisite: *None*

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

to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. (Sp.)

SPA 211 Intermediate Spanish I 3 0 0 3
Prerequisite: SPA 112 Corequisite: None

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.* (On Demand)

SPA 212 Intermediate Spanish II 3 0 0 3
Prerequisite: SPA 211 Corequisite: None

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.* (On Demand)

SPA 281 Spanish Lab 3 0 2 0 1
Prerequisite: SPA 182 Corequisite: None

This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

SPA 282 Spanish Lab 4 0 2 0 1
Prerequisite: SPA 281 Corequisite: None

This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.* (On Demand)

TRF - Turfgrass Management

TRF 110 Intro Turfgrass Cult & ID 3 2 0 4
Prerequisite: None Corequisite: None

This course provides an in-depth study of turfgrass. Topics include principles of reproduction, growth development, species characteristics, establishment and maintenance of golf courses and sports fields, and lawn applications. Upon completion, students should be able to identify turfgrass species through characteristics and reproductive stages and develop an establishment and maintenance plan for high quality turf areas. (Sp.)

TRF 120 Turfgrass Irrigat & Design 2 4 0 4
Prerequisite: None Corequisite: None

This course covers the basic techniques involved in the design, layout, installation, and use of turfgrass irrigation systems. Topics include types of irrigation systems, components of the systems, materials available for use, and economic considerations. Upon completion, students should be able to complete a functional design for a turfgrass irrigation system. (Sp.)

TRF 152 Landscape Maintenance 2 2 0 3
Prerequisites: None Corequisite: None

This course introduces the tasks of landscape maintenance. Emphasis is placed on lawns, shrubs, trees, flowers, and ground covers. Upon completion, students should be able to maintain a landscape area on a year-round schedule. (F.)

TRF 210 Turfgrass Eqmt Mgmt 1 4 0 3
Prerequisite: None Corequisite: None

This course covers the operation and maintenance of specialized turfgrass management equipment. Topics include small engine use and repair; operation, maintenance, and repair of turfgrass management equipment; organization of shop areas; and safety considerations. Upon completion, students should be able to operate and maintain turfgrass management equipment. (F.)

TRF 230 Turfgrass Mgmt Apps 1 2 0 2
Prerequisite: None Corequisite: None

This course introduces specific sports field design, installation, and maintenance. Topics include natural grass croquet courts and baseball, soccer, and football fields. Upon completion, students should be able to perform specific tasks in layout, field marking, and preparing for tournament play. (Sp.)

TRF 240 Turfgrass Pest Control 2 2 0 3
Prerequisite: None Corequisite: None

This course covers detection and identification of turfgrass pests with emphasis on methods of control or eradication. Topics include weeds, insects, diseases, and nematodes identification with an understanding of pesticides used, application procedures, and costs involved in control programs. Upon completion, students should be able to identify turfgrass pests, select the proper pesticide, develop pest control programs, and/or use integrated pest management. (Sp.)

TRF 260 Adv Turfgrass Mgmt 3 2 0 4
Prerequisite: TRF 110 Corequisite: None

This course covers the principles and practices involved in turfgrass management. Topics include choosing the best management practice in mowing, pest control, fertilization, irrigation, traffic control, air control, budgeting, and materials procurement. Upon completion, students should be able to demonstrate knowledge of the principles covered and select and apply the best practices in turfgrass management. (Sp.)

WEB - Web Technologies

WEB 110 Internet/Web Fundamentals 2 2 0 3
Prerequisite: None Corequisite: None

This course introduces basic markup language, various navigational tools and services of the Internet. Topics include creating web pages, using internet protocols, search engines, file compression/decompression, FTP, email, listservers, and other related topics. Upon completion, students should be able to deploy a website created with basic markup

language, retrieve/decompress files, email, FTP, and utilize other internet tools. (This course is offered at Pitt Community College) (F.)

WEB 140 Web Development Tools 2 2 0 3

Prerequisite: *CIS 070 or CTS 080, and RED 080*

Corequisite: *None*

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. (Sp.)

WLD - Welding

WLD 110 Cutting Processes 1 3 0 2

Prerequisite: *None*

Corequisite: *None*

This course introduces oxy-fuel and plasma-arc cutting systems. Topics include safety, proper equipment setup, and operation of oxy-fuel and plasma-arc cutting equipment with emphasis on straight line, curve and bevel cutting. Upon completion, students should be able to oxy-fuel and plasma-arc cut metals of varying thickness. (F.)

WLD 112 Basic Welding Processes 1 3 0 2

Prerequisite: *None*

Corequisite: *None*

This course introduces basic welding and cutting. Emphasis is placed on beads applied with gases, mild steel fillers, and electrodes and the capillary action of solder. Upon completion, students should be able to set up welding and oxy-fuel equipment and perform welding, brazing, and soldering processes. (Sp., F.)

WLD 115 SMAW (Stick) Plate 2 9 0 5

Prerequisite: *None*

Corequisite: *None*

This course introduces the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, students should be able to perform SMAW fillet and groove welds on carbon plate with prescribed electrodes. (F.)

WLD 116 SMAW (Stick) Plate/Pipe 1 9 0 4

Prerequisite: *WLD 115*

Corequisite: *None*

This course is designed to enhance skills with the shielded metal arc (stick) welding process. Emphasis is placed on advancing manipulative skills with SMAW electrodes on varying joint geometry. Upon comple-



tion, students should be able to perform groove welds on carbon steel with prescribed electrodes in the flat, horizontal, vertical, and overhead positions. (Sp.)

WLD 121 GMAW (MIG) FCAW/Plate 2 6 0 4

Prerequisite: *None*

Corequisite: *None*

This course introduces metal arc welding and flux core arc welding processes. Topics include equipment setup and fillet and groove welds with emphasis on application of GMAW and FCAW electrodes on carbon steel plate. Upon completion, students should be able to perform fillet welds on carbon steel with prescribed electrodes in the flat, horizontal, and overhead positions. (F., Sp.)

WLD 122 GMAW (MIG) Plate/Pipe 1 6 0 3

Prerequisite: *WLD 121*

Corequisite: *None*

This course is designed to enhance skills with the gas metal arc (MIG) welding process. Emphasis is placed on advancing skills with the GMAW process making groove welds on carbon steel plate and pipe in various positions. Upon completion, students should be able to perform groove welds with prescribed electrodes on various joint geometry. (F., Sp.)

WLD 131 GTAW (TIG) Plate 2 6 0 4

Prerequisite: *None*

Corequisite: *None*

This course introduces the gas tungsten arc (TIG) welding process. Topics include correct selection of tungsten, polarity, gas, and proper filler rod with emphasis placed on safety, equipment setup, and welding techniques. Upon completion, students should be able to perform GTAW fillet and groove welds with various electrodes and filler materials. (F., Sp.)

WLD 132 GTAW (TIG) Plate/Pipe 1 6 0 3

Prerequisite: *WLD 131*

Corequisite: *None*

This course is designed to enhance skills with the gas tungsten arc (TIG) welding process. Topics include setup, joint preparation, and electrode selection with emphasis on manipulative skills in all welding positions on plate and pipe. Upon completion, students should be able to perform GTAW welds with prescribed electrodes and filler materials on various joint geometry. (On Demand)

WLD 141 Symbols & Specifications 2 2 0 3

Prerequisite: *None*

Corequisite: *None*

This course introduces the basic symbols and specifications used in welding. Emphasis is placed on interpretation of lines, notes, welding symbols, and specifications. Upon completion, students should be able to read and interpret symbols and specifications commonly used in welding. (Sp., S.)

WLD 212 Inert Gas Welding 1 3 0 2

Prerequisite: *None*

Corequisite: *None*

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. (Sp.)