Nash COMMUNITY COLLEGE

Course Descriptions

To enroll in college transfer courses except PED and HEA 112, students must meet the admission requirement in one of the three areas of reading, mathematics, or English.

The letters A, B, or C following a course number denote that these courses are offered in sequential parts. All parts must be completed to satisfy the course requirements.

Appearing in parenthesis after each course title are the semesters the course is most often scheduled. "Intermittently" means semester scheduling varies. Nash Community College reserves the right to alter semesters when courses are offered in accordance with curriculum sequences and need. Appearing opposite each course title are either three numerals which represent hours per week required for class, laboratory, and credit hours; or, four numerals which represent hours per week required for class, laboratory, clinical or work experience, and credit hours. All courses offered by Nash Community College are web-enhanced.

ACA 122 College Transfer Success (Fall, Spring, Summer) 0 2 1
Prerequisites: None
Corequisites: 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 policies and 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 for transfer under the CAA and ICAA as a premajor and/or elective course.
Competencies:

1. Develop a strategic plan for completing community college academic goals, including certificates, diplomas, and/or associate degrees.
2. Develop a strategic plan for transferring to a university and preparing for a new career.
3. Identify the rights and responsibilities of transfer students under the Comprehensive Articulation Agreement (CAA), including Universal General Education Transfer Component (UGETC) designated courses, the Transfer Assured Admissions Policy (TAAP), the CAA appeals process and university tuition surcharge.
4. Evaluate learning strategies, including note-taking, test-taking, information processing, time management, and memorization techniques, and identify strategies for improvement.

5. Identify essential college resources, including financial aid, advising, registration, tutoring, library services, computer labs, and counseling services and recognize the importance of these resources on student success.
6. Identify essential college policies and procedures, including academic integrity such as avoiding plagiarism; calculating a GPA, and maintaining satisfactory academic progress for financial aid eligibility and/or good academic standing.

ACC 110 Ten-Key Skills (Fall) 0 2 1

Prerequisites: None
Corequisites: None
This course is designed to enable mastery of the "touch system" on a ten-key device. Emphasis is placed on the "touch system" on a ten-key device. Upon completion, students should be able to use the "touch system" on a ten-key device in making computations necessary in accounting.

ACC 120 Principles of Financial Accounting (Fall, Spring, Summer) 3 2 4

Prerequisites: None
Corequisites: None
This course introduces business decision-making using accounting information systems. Emphasis is placed on analyzing, summarizing, reporting, and interpreting financial information. Upon completion, students should be able to prepare financial statements, under- stand the role of financial information in decision-making and address ethical considerations. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement.

ACC 121 Principles of Managerial Accounting (Fall, Spring, Summer) 3 2 4

Prerequisites: ACC 120
Corequisites: None
This course includes a greater emphasis on managerial and cost accounting skills. Emphasis is placed on managerial accounting concepts for external and internal analysis, reporting and decision-making. Upon completion, students should be able to analyze and interpret transactions relating to managerial concepts including product-costing systems. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement.

ACC 131 Federal Income Taxes (Fall) 2 2 3
Prerequisites: None
Corequisites: None
This course provides an overview of federal income taxes for individuals, partnerships, and corporations. Topics include tax law, electronic research and methodologies and the use of technology for the preparation of individual and business tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax laws, and complete federal tax returns for individuals, partnerships, and corporations.

ACC 140 Payroll Accounting (Spring) 1 3 2
Prerequisites: ACC 115 or ACC 120
Corequisites: 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 pre- pare accounting entries using appropriate technology.

ACC 150 Accounting Software Applications (Fall) 1 3 2
Prerequisites: ACC 115 or ACC 120
Corequisites: 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 software package to solve accounting problems.

ACC 180 Practices in Bookkeeping (Spring) 3 0 3
Prerequisites: ACC 120
Corequisites: None
This course provides advanced instruction in bookkeeping and record-keeping functions. Emphasis is placed on mastering adjusting entries, correction of errors, depreciation, pay- roll, and inventory. Upon completion, students should be able to conduct all key book- keeping functions for small businesses.

ACC 220 Intermediate Accounting I (Fall) 3 2 4
Prerequisites: ACC 120
Corequisites: None

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

ACC 221 Intermediate Accounting II (Spring) 3 2 4

Prerequisites: ACC 120

Corequisites: None

This course is a continuation of ACC 220. Emphasis is placed on special problems which may include leases, bonds, investments, ratio analysis, 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.

AHR 110 Introduction to Refrigeration (Fall) 2 6 5

Prerequisites: None

Corequisites: 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.

AHR 112 Heating Technology (Spring) 2 4 4

Prerequisites: None

Corequisites: 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.

ANT 210 General Anthropology (Intermittently) 3 0 3

Prerequisites: None

Corequisites: None

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

students should be able to demonstrate an understanding of the four major fields of anthropology. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/Behavioral Sciences.

ANT 220 Cultural Anthropology (Intermittently) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the nature of human culture. Emphasis is placed on cultural theory, methods of fieldwork, and cross-cultural comparisons in the areas of ethnology, language, and the cultural past. Upon completion, students should be able to demonstrate an understanding of basic cultural processes and how cultural data are collected and analyzed. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/Behavioral Sciences.

ART 111 Art Appreciation (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the origins and historical development of art. Emphasis is placed on the relationship of design principles to various art forms including but not limited to sculpture, painting, and architecture. Upon completion, students should be able to identify and analyze a variety of artistic styles, periods, and media. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts. This is a Universal General Education Transfer Component (UGETC) course.

ART 114 Art History Survey I (Fall) 3 0 3
Prerequisites: None
Corequisites: 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 for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in humanities/fine arts. This is a Universal General Education Transfer Component (UGETC) course.

ART 115 Art History Survey II (Spring) 3 0 3
Prerequisites: None
Corequisites: 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 for transfer under Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/ Fine Arts. This is a Universal General Education Transfer Component (UGETC) course.

AST 111 Descriptive Astronomy (Fall) 3 0 3
Prerequisites: None
Corequisites: AST111A
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 for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

AST 111A Descriptive Astronomy Lab (Fall) 0 2 1
Prerequisites: None
Corequisites: AST111
This course is a laboratory to accompany AST 111. Emphasis is placed on laboratory experiences that 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 for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

AST 151 General Astronomy I (Intermittently) 3 0 3
Prerequisites: None
Corequisites: AST 151A
This course introduces the science of modern astronomy with a concentration on the solar system. Emphasis is placed on the history and physics of astronomy and an introduction to the solar system, including the planets, comets and meteors. Upon completion, students should be able to demonstrate a general understanding of the solar system. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

AST 151A General Astronomy I Lab (Intermittently) 0 2 1
Prerequisites: None
Corequisites: AST 151

This course is a laboratory to accompany AST 151. Emphasis is placed on laboratory experiences which enhance the materials presented in AST 151 and which provide practical experience. Upon completion, students should be able to demonstrate a general understanding of the solar system. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

ATR 280 Robotic Fundamentals (Fall) 3 2 4
Prerequisites: None
Corequisites: 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.

ATR 280AB Robotic Fundamentals-AB (Fall) 1 2 2
Prerequisites: None
Corequisites: None
The first of two parts of ATR 280.

ATR 280BB Robotic Fundamentals-BB (Spring) 2 0 2
Prerequisites: ATR 280AB
Corequisites: None
A continuation of ATR 280AB and final part of ATR 280.

ATR 281 Automated Manufacturing (Spring) 3 2 4
Prerequisites: ATR 280
Corequisites: None
This course introduces the concepts and principles of automation in the manufacturing environment. Emphasis is placed on the devices used in hard and flexible automated systems, including the study of inputs, outputs, and control system integration. Upon completion, students should be able to plan, design, and implement automation to support manufacturing process.

AUT 113 Automotive Servicing I (Fall) 0 6 2
Prerequisites: AUT 116, AUT 141, and AUT 151
Corequisites: None
This course is a lab used as an alternative to co-op placement. Emphasis is placed on shop operations, troubleshooting, testing, adjusting, repairing, and replacing components using appropriate test equipment and service information. Upon

completion, students should be able to perform a variety of automotive repairs using proper service procedures and to operate appropriate equipment.

AUT 114 Safety and Emissions (Spring) 1 2 2
Prerequisites: None
Corequisites: AUT 114A
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.

AUT 114A Safety and Emissions Lab (Spring) 0 2 1
Prerequisites: None
Corequisites: AUT 114
This course is an optional lab that allows students to enhance their understanding of North Carolina State Emissions Inspection failures. Topics include evaporative, positive crankcase ventilation, exhaust gas recirculation and exhaust emissions systems operation, including catalytic converter failure diagnosis. Upon completion, students should be able to employ diagnostic strategies to repair vehicle emissions failures resulting from North Carolina State Emissions inspection.

AUT 116 Engine Repair (Fall) 2 3 3
Prerequisites: None
Corequisites: TRN 110
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.

AUT 141 Suspension and Steering Systems (Spring) 2 3 3
Prerequisites: None
Corequisites: AUT 141A
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 steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels.

AUT 141A Suspension and Steering Lab (Spring) 0 3 1
Prerequisites: None
Corequisites: AUT 141
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels.

AUT 151 Brake Systems (Spring) 2 3 3
Prerequisites: None
Corequisites: AUT 151A
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.

AUT 151A Brakes Systems Lab (Spring) 0 3 1
Prerequisites: None
Corequisites: AUT 151
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include drum and disc brakes involving hydraulic, vacuum-boost, hydra-boost, electrically powered boost, and anti-lock, parking brake systems and emerging brake systems technologies. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems.

AUT 163 Advanced Auto Electricity (Summer) 2 3 3
Prerequisites: TRN 120
Corequisites: 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.

AUT 163A Advanced Auto Electricity Lab **3 0 1**

Prerequisites: TRN 120

Corequisites: AUT 163

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 networking and module communication, circuit construction, wiring diagrams, circuit testing, troubleshooting and emerging electrical/electronic systems technologies. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair wiring, lighting, gauges, accessories, modules, and electronic concerns.

AUT 181 Engine Performance I (Spring) **2 3 3**

Prerequisites: AUT 116

Corequisites: 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 drivability problems using appropriate test equipment/ service information.

AUT 181A Engine Performance Lab **0 3 1**

Prerequisites: AUT 116

Corequisites: AUT 181

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

AUT 183 Engine Performance II (Fall) **2 6 4**

Prerequisites: AUT 181

Corequisites: 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.

AUT 212 Auto Shop Management (Summer) 3 0 3
Prerequisites: None
Corequisites: 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.

AUT 213 Automotive Servicing II (Spring) 1 3 2
Prerequisites: AUT 113
Corequisites: None
This course is a lab used as an alternative to co-op placement. Emphasis is placed on shop operations, troubleshooting, testing, adjusting, repairing, and replacing components using appropriate test equipment and service information. Upon completion, students should be able to perform a variety of automotive repairs using proper service procedures and to operate appropriate equipment.

AUT 221 Auto Transmissions/Transaxles (Fall) 2 3 3
Prerequisites: None
Corequisites: 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 re- pair automatic drive trains.

AUT 231 Manual Transmissions/Axles/Drive Trains (Spring) 2 3 3
Prerequisites: None
Corequisites: 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.

AUT 281 Advanced Engine Performance (Spring) 2 2 3
Prerequisites: AUT 183
Corequisites: 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.

BIO 110 Principles of Biology (Fall, Spring, Summer) 3 3 4
Prerequisites: None
Corequisites: None
This course provides a survey of fundamental biological principles for non-science majors. Emphasis is placed on basic chemistry, cell biology, metabolism, genetics, 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 every- day life. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

BIO 111 General Biology I (Fall, Spring, Summer) 3 3 4
Prerequisites: None
Corequisites: None
This course introduces the principles and concepts of biology. Emphasis is placed on basic biological chemistry, molecular and cellular biology, metabolism and energy transformation, genetics, evolution, 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 for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

BIO 112 General Biology II (Fall, Spring, Summer) 3 3 4
Prerequisites: BIO 111
Corequisites: None
This course is a continuation of BIO 111. Emphasis is placed on organisms, evolution, 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 for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

BIO 143 Field Biology Minicourse (Intermittently) 1 2 2
Prerequisites: None
Corequisites: None
This course introduces the biological and physical components of a field environment. Emphasis is placed on a local field environment with extended field trips to other areas. Upon completion, students should be able to demonstrate an understanding of the biological and physical components of the specific biological environment. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

BIO 146 Regional Natural History (Intermittently) 3 3 4
Prerequisites: None
Corequisites: None
This course is an interdisciplinary and historical analysis of the natural resources of the region. Emphasis is placed on geology, climate, forest systems, watersheds, water resources, and fish and wildlife resources of the region. Upon completion, students should be able to demonstrate comprehension of the natural history and the integration of the natural resources of the region. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

BIO 150 Genetics in Human Affairs (Intermittently) 3 0 3
Prerequisites: BIO 110 or BIO 111
Corequisites: None
This course describes the importance of genetics in everyday life. Topics include the role of genetics in human development, birth defects, cancer, and chemical exposure, and cur- rent issues including genetic engineering and fertilization methods. Upon completion, students should be able to understand the relationship of genetics to society today and its possible influence on our future. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

BIO 155 Nutrition (Intermittently) 3 0 3
Prerequisites: None
Corequisites: None
This course covers the biochemistry of foods and nutrients with consideration of the physiological effects of specialized diets for specific biological needs. Topics include cultural, religious, and economic factors that influence a person's acceptance of food, as well as nutrient requirements of the various life stages. Upon completion, students should be able to identify the functions and sources of nutrients, the mechanisms of digestion and the nutritional requirements of all age

groups. This course has been approved for transfer under the CAA and ICAA as a premajor and /or elective course requirement.

BIO 163 Basic Anatomy & Physiology (Fall, Spring, Summer)

4 2 5

Prerequisites: None
Corequisites: None
This course provides a basic study of the structure and function of the human body. Topics include a basic study of the body systems as well as an introduction to homeostasis, cells,
tissues, nutrition, acid-base balance, and electrolytes. Upon completion students should be able to demonstrate a basic understanding of the fundamental principles of anatomy and physiology and their interrelationships. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

BIO 168 Anatomy and Physiology I (Fall, Spring, Summer)

3 3 4

Prerequisites: None
Corequisites: None
This course provides a comprehensive study of the anatomy and physiology of the human body. Topics include body organization, homeostasis, cytology, histology, and the in- tegumentary, skeletal, muscular, nervous, and special senses. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

BIO 169 Anatomy and Physiology II (Fall, Spring, Summer)

3 3 4

Prerequisites: BIO 168
Corequisites: None
This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems as well as metabolism, nutrition, acid- base balance, and fluid and electrolyte balance. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

BIO 175 General Microbiology (Fall, Spring, Summer) 2 2 3
Prerequisites: BIO 110 or BIO 111 or BIO 163 or BIO 168
Corequisites: None
This course covers the principles of microbiology with emphasis on microorganisms and human disease. Topics include an overview of microbiology and aspects of medical micro- biology, identification and control of pathogens, disease transmission, host resistance, and immunity. Upon completion, students should be able to demonstrate knowledge of micro- organisms and the disease process as well as aseptic and sterile techniques. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

BIO 250 Genetics (Fall) 3 3 4
Prerequisites: BIO 112
Corequisites: None
This course covers principles of prokaryotic and eukaryotic cell genetics. Emphasis is placed on the molecular basis of heredity, chromosome structure, patterns of Mendelian and non- Mendelian 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 for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

BIO 275 Microbiology (Fall, Spring) 3 3 4
Prerequisites: BIO 110 or BIO 111 or BIO 163 or BIO 168
Corequisites: 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 for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

BIO 280 Biotechnology (Spring) 2 3 3
Prerequisites: BIO 111 or CHM 131 or CHM 151
Corequisites: 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 for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

BPR 111 Print Reading (Fall) **1 2 2**
Prerequisites: None
Corequisites: None
This course introduces the basic principles of print reading. Topics include line types, ortho- graphic projections, dimensioning methods, and notes. Upon completion, students should be able to interpret basic prints and visualize the features of a part.

BPT 110 Intro to Broadcasting (Fall) **3 0 3**
Prerequisites: None
Corequisites: None
This course introduces the field of broadcasting and other electronic media. Emphasis is placed on the history, development, and current status of radio, television, and related industries. Upon completion, students should be able to demonstrate knowledge of regulations, organizational structure, revenue sources, historical development, and on-going operation of broadcasting and related industries.

BPT 111 Broadcast Law & Ethics (Fall) **3 0 3**
Prerequisites: DRE 097 or ENG 002 Tier 1
Corequisites: None
This course covers judicial, legislative, and administrative policies pertinent to the ethical and legal operation of broadcast and other electronic media organizations. Emphasis is placed on legal and ethical issues including First Amendment protection, FCC regulations, copyright, and libel laws. Upon completion, students should be able to demonstrate an understanding of the historical significance and modern-day application of important broadcast laws and policies.

BPT 112 Broadcast Writing (Spring) **3 2 4**
Prerequisites: DRE 097 or ENG 002 Tier 1
Corequisites: None
This course introduces proper copy and script writing techniques and formats for radio, television, and other electronic media. Emphasis is placed on creating effective scripts for programs and promotional materials, including commercial and public radio service announcements for a specific target audience. Upon completion, students should be able to understand and write copy and scripts according to standard industry formats.

BPT 113 Broadcast Sales (Spring) **3 0 3**
Prerequisites: None
Corequisites: None

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

BPT 131 Audio/Radio Production I (Fall, alternates with video) 2 6 4

Prerequisites: None
Corequisites: None
This course covers the creation, development, production, and presentation of audio programming elements for broadcast and/or other electronic media applications. Emphasis is placed on the proper operation of professional audio equipment and the study of basic physical behavior and perceptual effects of sound. Upon completion, students should be able to correctly operate audio recording and playback equipment and demonstrate an understanding of the basic components of sound.

BPT 132 Audio/Radio Production II (Spring, alternates with video) 2 6 4

Prerequisites: BPT 131
Corequisites: None
This course cover the use of advanced audio production techniques in broadcast and/or other electronic media applications. Topics include basic audio signal processing equipment and analog and digital professional audio recording and playback equipment. Upon completion, students should be able to optimize the use of professional audio equipment in the production of effective audio programming.

BPT 135 Radio Performance I (Spring, alternates with TV) 0 6 2

Prerequisites: None
Corequisites: None
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.

BPT 231 Video/TV Production I (Fall, alternates with audio) 2 6 4

Prerequisites: None
Corequisites: None

This course covers the language of film/video, shot composition, set design, lighting, production planning, scripting, editing, and operation of video and television production equipment. Emphasis is placed on mastering the body of knowledge and techniques followed in producing all forms of video and television production. Upon completion, students should be able to produce basic video and television productions in a team environment.

BPT 232 Video/TV Production II (Spring, alternates with audio) 2 6 4

Prerequisites: None
Corequisites: None
This course covers advanced video and television production. Emphasis is placed on field production, post-production, digital video effects, graphics, and multi-camera productions. Upon completion, students should be able to create productions that optimize the use of studio, field, and post-production equipment.

BPT 235 TV Performance I (Fall, alternate year of radio) 0 6 2

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

BPT 250 Institutional Video (Spring, alternate year of radio) 2 3 3

Prerequisites: BPT 231
Corequisites: None
This course covers development and production of non-broadcast video productions for clients. Emphasis is placed on satisfying client objectives, including interviewing, research, site surveying, script review, photography, and post-production. Upon completion, students should be able to plan, write, shoot, and edit an institutional video designed to meet a client's objectives.

BPT 285 Broadcast Prod Capstone (Spring) 1 6 3

Prerequisites: BPT 132 or BPT 232
Corequisites: None
This course provides an opportunity to complete a broadcast production from the design phase through implementation with minimal instructor support. Emphasis is placed on planning/budgets, production, post-production and distribution. Upon completion, students should be able to plan, produce and distribute a broadcast production.

BUS 110 Introduction to Business (Fall, Spring, Summer) 3 0 3
Prerequisites: None
Corequisites: 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 for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement.

BUS 115 Business Law I (Fall, Spring) 3 0 3
Prerequisites: DRE 097 or ENG 002 Tier 1
Corequisites: None
This course introduces the ethics and legal framework of business. Contracts, negotiable instruments, the law of sales, torts, crimes, constitutional law, the Uniform Commercial Code, and the court systems are examined. Upon completion the student should be able to identify legal and ethical issues that arise in business decisions and the laws that apply to them. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement.

BUS 137 Principles of Management (Fall, Spring) 3 0 3
Prerequisites: BUS 110
Corequisites: None
This course is designed to be an overview of the major functions of management. Emphasis is placed on planning, organizing, controlling, directing, and communicating. Upon completion, students should be able to work as contributing members of a team utilizing these functions of management. This course has been approved for transfer under the Comprehensive Articulation Agreement as a premajor and/or elective course requirement.

BUS 151 People Skills (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: 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, nondestructive, positive communication patterns.

BUS 225 Business Finance (Fall, Spring) 2 2 3
Prerequisites: ACC 120
Corequisites: None
This course provides an overview of business financial management. Emphasis is placed on financial statement analysis, time value of money, management of cash flow, risk and return, and sources of financing. Upon completion, students should be able to interpret and apply the principles of financial management.

BUS 238 Integrated Management (Spring) 3 0 3
Prerequisites: ACC 120, BUS 137, ECO 251 or ECO 252
Corequisites: None
This course provides a management simulation exercise in which students make critical managerial decisions based upon the situations that arise in operating competitive business enterprises. Topics include operations management, forecasting, budgeting, purchasing, facility layout, aggregate planning, and work improvement techniques. Upon completion, students should be able to perform the variety of analytical and decision-making requirements that will be faced in a business.

BUS 240 Business Ethics (Fall, Summer) 3 0 3
Prerequisites: None
Corequisites: 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.

BUS 260 Business Communication (Spring) 3 0 3
Prerequisites: ENG 111
Corequisites: None
This course is designed to develop skills in writing business communications. Emphasis is placed on business reports, correspondence, and professional presentations. Upon completion, students should be able to communicate effectively in the work place.

CET 111 Computer Upgrade/Repair I (Spring) 2 3 3
Prerequisites: EGR 125 or ELC 131
Corequisites: None
This course covers repairing, servicing, and upgrading computers and peripherals in preparation for industry certification. Topics include CPU/memory/bus

identification, disk sub- systems, hardware/software installation/configuration, common device drivers, data recovery, system maintenance, and other related topics. Upon completion, students should be able to safely repair and/or upgrade computer systems to perform within specifications.

CET 130 Computer Architecture (Summer) 2 3 2
Prerequisites: EGR-125
Corequisites: None
This course introduces the concepts, usage, internals and applications of operating systems used in engineering technology. Topics include resource management, shells, schedulers, file systems, networking, software considerations and other related topics. Upon completion, students should be able to choose and evaluate an operating system for engineering applications.

CET 211 Computer Upgrade/Repair II (Fall) 2 3 3
Prerequisites: CET 111
Corequisites: None
This course covers concepts of repair service, and upgrade of computers and peripherals in preparation for industry certification. Topics may include resolving resource conflicts and system bus specifications, configuration and troubleshooting peripherals, operating system configuration and optimization, and other related topics. Upon completion, students should be able to identify and resolve system conflicts and optimize system performance.

CET 245 Internet Servers 2 3 3
Prerequisites: ELN 237
Corequisites: None
This course covers the setup and management of Internet server hardware and software. Topics include TCP/IP, FTP, SMTP, and HTTP; installation and configuration of server software for web, FTP, DNS, mail, and other services. Upon completion, students should be able to set up and maintain Internet servers.

CET 251 Software Engineering Principles (Spring) 3 3 4
Prerequisites: CSC 143
Corequisites: None
This course introduces the methodology used to manage the development process for complex software systems. Topics include the software life cycle, resource allocation, team dynamics, design techniques, and tools that support these activities. Upon completion, students should be able to design and build robust software in a team setting.

CET 293 Selected Topics in Comp. Engineering Tech (Fall) 2 3 3
Prerequisites: CET Instructor Permission
Corequisites: None
This course provides an opportunity to explore areas or current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

CHM 130 General Organic & Biochemistry (Fall, Spring, Summer) 3 0 3
Prerequisites: None
Corequisites: CHM 130A
This course provides a survey of basic facts and principles of general, organic, and biochemistry. Topics include measurement, molecular structure, nuclear chemistry, solutions, acid-base chemistry, gas laws, and the structure, properties, and reactions of major organic and biological groups. Upon completion, students should be able to demonstrate an understanding of fundamental chemical concepts. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

CHM 130A General Organic & Biochemistry Lab (Fall, Spring, Summer) 0 2 1
Prerequisites: None
Corequisites: CHM 130
This course is a laboratory for CHM 130. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 130. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM
130. This course has been approved for transfer under the CAA and ICAA as a premajor and/ or elective course requirement.

CHM 151 General Chemistry I (Fall, Spring, Summer) 3 3 4
Prerequisites: None
Corequisites: 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 for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

CHM 152 General Chemistry II (Fall, Spring, Summer) 3 3 4
Prerequisites: CHM 151
Corequisites: 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 under- standing of chemical concepts as needed to pursue further study in chemistry and related professional fields. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

CHM 251 Organic Chemistry I (Fall) 3 3 4
Prerequisites: CHM 152
Corequisites: None
This course provides a systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of hydrocarbons, alkyl halides, alcohols, and ethers; further topics include isomerization, stereochemistry, and spectroscopy. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of covered organic topics as needed in CHM 252. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

CHM 252 Organic Chemistry II (Spring) 3 3 4
Prerequisites: CHM 251
Corequisites: None
This course provides continuation of the systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, re- actions, and mechanisms of aromatics, aldehydes, ketones, carboxylic acids and derivatives, amines and heterocyclics; multi-step synthesis will be emphasized. Upon completion, students should be able to demonstrate an understanding of organic concepts as needed to pursue further study in chemistry and related professional fields. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

CIS 110 Introduction to Computers (Fall, Spring, Summer) 2 2 3
Prerequisites: None
Corequisites: 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 is not intended for a computer novice; this course involves multiple concepts and is a fast-paced introduction to software applications. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Mathematics (Quantitative Option).

CIS 115 Introduction to Programming and Logic (Intermittently) 2 3 3

Prerequisites: DMA 040
Corequisites: None
This course introduces computer programming and problem solving in a structured pro- gram 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).

CJC 110 Basic Law Enforcement Training (Fall, Spring) 10 30 20

Prerequisites: Sponsorship letter required from a Public Law Enforcement Agency which must be maintained throughout the course.
Corequisites: None
This course covers the basic skills and knowledge needed for entry-level employment as a law enforcement officer in North Carolina. Topics include those mandated by North Carolina Administration Code as essential for functioning in law enforcement. Upon completion, the student should be able to demonstrate competence in the topics required for the state comprehensive certification examination.

CJC 111 Introduction to Criminal Justice (Fall, Spring) 3 0 3

Prerequisites: None
Corequisites: None
This course introduces the components and processes of the criminal justice system. Topics include history, structure, functions, and philosophy of the criminal justice system and their relationship to life in our society. Upon completion, students should be able to define and describe the major system components and their interrelationships and evaluate career options. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

CJC 112 Criminology (Fall, Spring, Summer) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces deviant behavior as it relates to criminal activity. Topics include theories of crime causation; statistical analysis of criminal behavior; past, present, and future social control initiatives; and other related topics. Upon completion, students should be able to explain and discuss various theories of crime causation and societal response. This course has been approved for transfer under the CAA and ICAA as a pre-major and/or elective course requirement.

CJC 113 Juvenile Justice (Fall) 3 0 3
Prerequisites: None
Corequisites: None
This course covers the juvenile justice system and related juvenile issues. Topics include an overview of the juvenile justice system, treatment and prevention programs, special areas and laws unique to juveniles, and other related topics. Upon completion, students should be able to identify/discuss juvenile court structure/ procedures, function and jurisdiction of juvenile agencies, processing/ detention of juveniles, and case disposition.

CJC 114 Investigative Photography (Fall) 1 2 2
Prerequisites: None
Corequisites: 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.

CJC 120 Interviews/Interrogations (Intermittently) 1 2 2
Prerequisites: None
Corequisites: None
This course covers basic and special techniques employed in criminal justice interviews and interrogations. Emphasis is placed on the interview/interrogation process, including interpretation of verbal and physical behavior and legal perspectives. Upon completion, students should be able to conduct interviews/ interrogations in a legal, efficient, and professional manner and obtain the truth from suspects, witnesses, and victims.

CJC 121 Law Enforcement Operations (Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces fundamental law enforcement operations. Topics include the con- temporary 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 for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

CJC 122 Community Policing (Fall, Spring, Summer) 3 0 3
Prerequisites: None
Corequisites: None
This course covers the historical, philosophical, and practical dimensions of community policing. Emphasis is placed on the empowerment of police and the community to find solutions to problems by forming partnerships. Upon completion, students should be able to define community policing, describe how community policing strategies solve problems, and compare community policing to traditional policing.

CJC 131 Criminal Law (Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course covers the history/evolution/principles and contemporary applications of criminal law. Topics include sources of substantive law, classification of crimes, parties to crime, elements of crimes, matters of criminal responsibility, and other related topics. Upon completion, students should be able to discuss the sources of law and identify, interpret, and apply the appropriate statutes/elements.

CJC 131AB Criminal Law 2 0 2
Prerequisites: None
Corequisites: None
The first of two parts of CJC 131.

CJC 131BB Criminal Law 1 0 1
Prerequisites: CJC 213AB
Corequisites: None
A continuation of CJC 131AB and the final part of CJC 131.

CJC 132 Court Procedure and Evidence (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course covers judicial structure/process/procedure from incident to disposition, kinds and degrees of evidence, and the rules governing admissibility of evidence in court. Topics include consideration of state and federal courts, arrest, search and seizure laws, exclusionary and statutory rules of evidence, and other related issues. Upon completion, students should be able to identify and discuss procedures necessary to establish a lawful arrest/ search, proper judicial procedures, and the admissibility of evidence.

CJC 141 Corrections (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course covers the history, major philosophies, components, and current practices and problems of the field of corrections. Topics include historical evolution, functions of the various components, alternatives to incarceration, treatment programs, inmate control, and other related topics. Upon completion, students should be able to explain the various components, processes, and functions of the correctional system. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

CJC 144 Crime Scene Processing (Fall) 2 3 3
Prerequisites: None
Corequisites: 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.

CJC 145 Crime Scene CAD (Fall, Spring) 2 3 3
Prerequisites: None
Corequisites: None
This course introduces the student to CAD software for crime scenes. Topics include drawing, editing, file management and drafting theory and practices. Upon completion, the students should be able to produce and plot a crime scene drawing.

CJC 146 Trace Evidence (Fall) 2 3 3
Prerequisites: None
Corequisites: 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.

CJC 151 Introduction to Loss Prevention (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the concepts and methods related to commercial and private security systems. Topics include the historical, philosophical, and legal basis of security, with emphasis on security surveys, risk analysis, and associated functions. Upon completion, students should be able to demonstrate and understand security systems, risk management, and the laws relative to loss prevention.

CJC 212 Ethics and Community Relations (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course covers ethical considerations and accepted standards applicable to criminal justice organizations and professionals. Topics include ethical systems; social change, values, and norms; cultural diversity; citizen involvement in criminal justice issues; and other related topics. Upon completion, students should be able to apply ethical considerations to the decision-making process in identifiable criminal justice situations. This course has been approved for transfer under the CAA and ICAA as a pre-major and/or elective course requirement.

CJC 213 Substance Abuse (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: 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.

CJC 213AB Substance Abuse AB (Fall) **2 0 2**
Prerequisites: None
Corequisites: None
The first of two parts of CJC 213.

CJC 213BB Substance Abuse BB (Spring) **1 0 1**
Prerequisites: CJC 213AB
Corequisites: None
A continuation of CJC 213AB and the final part of CJC 213.

CJC 214 Victimology (Fall, Spring, Summer) **3 0 3**
Prerequisites: None
Corequisites: None
This course introduces the study of victims. Emphasis is placed on roles/characteristics of victims, victim interaction with the criminal justice system and society, current victim assistance programs, and other related topics. Upon completion, students should be able to discuss and identify victims, the uniqueness of victims' roles, and current victim assistance programs.

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

CJC 221 Investigative Principles (Fall, Spring) **3 2 4**
Prerequisites: None
Corequisites: None
This course introduces the theories and fundamentals of the investigative process. Topics include crime scene/incident processing, Information-gathering techniques, collection/ preservation of evidence, preparation of appropriate reports, court presentations, and other related topics. Upon completion, students should be able to identify, explain, and demonstrate the techniques of the investigative process, report preparation, and court- room presentation.

CJC 222 Criminalistics (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course covers the functions of the forensic laboratory and its relationship to successful criminal investigation and prosecutions. Topics include advanced crime scene processing, investigative techniques, current forensic technologies, and other related topics. Upon completion, students should be able to identify and collect relevant evidence at simulated crime scenes and request appropriate laboratory analysis of submitted evidence.

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

CJC 231 Constitutional Law (Spring) 3 0 3
Prerequisites: None
Corequisites: None
This 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.

CJC 241 Community-Based Corrections (Intermittently) 3 0 3
Prerequisites: None
Corequisites: None
This course covers programs for convicted offenders that are used both as alternatives to incarceration and in post-incarceration situations. Topics include offenders, diversion, house arrest, restitution, community service, probation and parole, including both public and private participation, and other related topics. Upon completion, students should be able to identify/discuss the various programs from the perspective of the criminal justice professional, the offender, and the community.

CJC 245 Friction Ridge Analysis (Fall) 2 3 3

Prerequisites: None

Corequisites: 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, the 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.

CJC 246 Advanced Friction Ridge Analysis (Spring) 2 3 3

Prerequisites: CJC 245

Corequisites: None

This course introduces the theories and processes of advanced friction ridge analysis. Topics include evaluation of friction ridges, chart preparation, comparative analysis for values 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.

CJC 250 Forensic Biology I (Fall, Spring, Summer) 2 2 3

Prerequisites: None

Corequisites: 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 processes physical evidence submitted by law enforcement agencies.

CJC 251 Forensic Chemistry I (Spring) 3 2 4

Prerequisites: None

Corequisites: 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.

COM 110 Introduction to Communication (Fall, Spring) 3 0 3

Prerequisites: None

Corequisites: 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 for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Communication.

COM 120 Intro Interpersonal Communication (Fall, Spring) 3 0 3

Prerequisites: None

Corequisites: None

This course introduces the practices and principles of interpersonal communication in both dyadic and group settings. Emphasis is placed on the communication process, perception, listening, self-disclosure, speech apprehension, ethics, nonverbal communication, conflict, power, and dysfunctional communication relationships. Upon completion, students should be able to demonstrate interpersonal communication skills, apply basic principles of group discussion, and manage conflict in interpersonal communication situations. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Communication. This is a Universal General Education Transfer Component (UGETC) course.

COM 140 Intro Intercultural Communication (Intermittently) 3 0 3

Prerequisites: None

Corequisites: None

This course introduces techniques of cultural research, definitions, functions, characteristics, and impacts of cultural differences in public address. Emphasis is placed on how diverse backgrounds influence the communication act and how cultural perceptions and experiences determine how one sends and receives messages. Upon completion, students should be able to demonstrate an understanding of the principles and skills needed to be- come effective in communicating outside one's primary culture. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general elective course in Communication.

COM 231 Public Speaking (Fall, Spring) 3 0 3
Prerequisites: DRE 097 or ENG 002 Tier 1
Corequisites: 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 for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Communication. This is a Universal General Education Transfer Component (UGETC) course.

COS 111 Cosmetology Concepts I (Fall, Spring) 4 0 4
Prerequisites: None
Corequisites: COS 112
This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.

COS 111AB Cosmetology Concepts I-AB (Fall) 2 0 2
Prerequisites: None
Corequisites: COS 112AB The first of two parts of COS 111.

COS 111BB Cosmetology Concepts I-BB (Spring) 2 0 2
Prerequisites: COS 111AB
Corequisites: COS 112BB
A continuation of COS 111AB and final part of COS 111.

COS 112 Salon I (Fall, Spring) 0 24 8
Prerequisites: None
Corequisites: COS 111
This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.

COS 112AB Salon I-AB (Fall) 0 12 4
Prerequisites: None
Corequisites: COS 111AB The first of two parts of COS 112.

COS 112AB Salon I-BB (Fall, Spring) 0 12 4
Prerequisites: COS 112AB
Corequisites: COS 111BB
A continuation of COS 112AB and final part of COS 112.

COS 113 Cosmetology Concepts II (Fall, Spring) 4 0 4
Prerequisites: COS 111, COS 112
Corequisites: None
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, chemistry, manicuring, chemical restructuring, and hair coloring. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.

COS 113AB Cosmetology Concepts II-AB (Fall, Spring) 2 0 2
Prerequisites: COS 111, COS 112
Corequisites: None
The first of two parts of COS 113.

COS 113BB Cosmetology Concepts II-BB (Fall, Spring) 2 0 2
Prerequisites: COS 111, COS 112
Corequisites: None
A continuation of COS 113AB and final part of COS 113.

COS 114 Salon II (Fall, Spring) 0 24 8
Prerequisites: COS 111, COS 112
Corequisites: None
This course provides experience in a simulated salon setting. Topics include basic skin care, manicuring, nail application, scalp treatments, shampooing, rinsing, hair color, design, haircutting, chemical restructuring, pressing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.

COS 114AB Salon II-AB (Fall, Spring) 0 12 4
Prerequisites: COS 111, COS 112
Corequisites: None
The first of two parts of COS 114

COS 114BB Salon II-BB (Spring) 0 12 4
Prerequisites: COS 111, COS 112
Corequisites: None
A continuation of COS 114AB and final part of COS 114.

COS 115 Cosmetology Concepts III (Fall, Spring, Summer) 4 0 4
Prerequisites: COS 111, COS 112
Corequisites: None
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, salon management, salesmanship, skin care, electricity/light therapy, wigs, thermal hair styling, lash and brow tinting, superfluous hair removal, and other related topics. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.

COS 115AB Cosmetology Concepts III-AB (Fall, Spring) 2 0 2
Prerequisites: COS 111, COS 112
Corequisites: None
The first of two parts of COS 115.

COS 115BB Cosmetology Concepts III-BB (Spring) 2 0 2
Prerequisites: COS 111, COS 112
Corequisites: None
A continuation of COS 115AB and final part of COS 115.

COS 116 Salon III (Fall, Spring, Summer) 0 12 4
Prerequisites: COS 111, COS 112
Corequisites: None
This course provides comprehensive experience in a simulated salon setting. Emphasis is placed on intermediate-level of skin care, manicuring, scalp treatments, shampooing, hair color, design, haircutting, chemical restructuring, pressing, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.

COS 117 Cosmetology Concepts IV (Fall, Spring) 2 0 2
Prerequisites: COS 111, COS 112
Corequisites: None
This course covers advanced cosmetology concepts. Topics include chemistry and hair structure, advanced cutting and design, and an overview of all cosmetology concepts in preparation for the licensing examination. Upon completion, students should be able to demonstrate an understanding of these cosmetology concepts and meet program completion requirements.

COS 118 Salon IV (Fall, Spring)) 0 21 7
Prerequisites: COS 111, COS 112
Corequisites: None
This course provides advanced experience in a simulated salon setting. Emphasis is placed on efficient and competent delivery of all salon services in preparation

for the licensing examination and employment. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology Licensing Examination and meet entry-level employment requirements.

COS 118AB Salon IV-AB (Fall) **0 9 3**
Prerequisites: COS 111, COS 112
Corequisites: None
The first of two parts of COS 118.

COS 118BB Salon IV-BB (Spring) **0 12 4**
Prerequisites: COS 111, COS 112
Corequisites: None
A continuation of COS 118AB and final part of COS 118. The courses are not required to be taken in sequential order.

COS 223 Contemporary Hair Coloring (Fall, Spring) **1 3 2**
Prerequisites: COS 111, COS 112
Corequisites: None
This course covers basic color concepts, hair coloring problems, and application techniques. Topics include color theory, terminology, contemporary techniques, product knowledge, and other related topics. Upon completion, students should be able to identify a client's color needs and safely and competently perform color applications and correct problems.

CSC 121 Python Programming (Spring) **2 3 3**
Prerequisites: CTI 110
Corequisites: None
This course introduces computer programming using the Python programming language. Emphasis is placed on common algorithms and programming principles utilizing the standard library distributed with Python. Upon completion, students should be able to design, code, test, and debug Python language programs.

CSC 134 C++ Programming **2 3 3**
Prerequisites: None
Corequisites: None
This course introduces computer programming using the C++ programming language with object-oriented programming principles. Emphasis is placed on event=driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a

beginning level. This course has been approved for transfer under the CAA and ICAA as a pre-major and/or elective course requirement.

CSC 143 Object-Oriented Programming (Fall) 2 3 3
Prerequisites: CSC 251
Corequisites: None
This course introduces the concepts of object-oriented programming. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, test, debug, and implement objects at the application level using the appropriate environment.

CSC 151 Java Programming (Spring) 2 3 3
Prerequisites: EGR 125, EGR 150 or ELN 232 or CTI 110
Corequisites: None
This course introduces computer programming using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion students should be able to design, code, test, debug JAVA language programs. This course has been approved for transfer under the CAA and ICAA as a pre-major and/or elective course requirement.

CSC 251 Advanced Java Programming (Summer) 2 3 3
Prerequisites: CSC 151
Corequisites: None
This course is a continuation of CSC 151 using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment. This course has been approved for transfer under the CAA and ICAA as a pre-major and/or elective course requirement.

CTI 110 Web, Pgm & DB Foundation (Fall, Spring) 2 3 3
Prerequisites: None
Corequisites: None
This course covers the introduction of the tools and resources available to students in programming, mark-up language and services on the Internet. Topics include standard mark-up language Internet services, creating web pages, using search engines, file transfer programs; and database design and creation with DBMS products. Upon completion students should be able to demonstrate

knowledge of programming tools, deploy a web-site with mark-up tools, and create a simple database table.

CTI 120 Network & Sec Foundation (Fall, Spring) 2 2 3
Prerequisites: None
Corequisites: None
This course introduces students to the Network concepts, including networking terminology and protocols, local and wide area networks, and network standards. Emphasis is placed on securing information systems and the various implementation policies. Upon completion, students should be able to perform basic tasks related to networking mathematics, terminology, media and protocols.

CTI 141 Cloud & Storage Concepts (Fall) 1 4 3
Prerequisites: NOS 130
Corequisites: None
This course introduces cloud computing and storage concepts. Emphasis is placed on cloud terminology, virtualization, storage networking and access control. Upon completion, students should be able to perform tasks related to installation, configuration and management of cloud storage systems.

CTI 150 Mobile Computing Devices (Spring) 2 2 3
Prerequisites: NOS 130
Corequisites: None
This course introduces mobile computing devices, including topics related to their selection, usage, deployment, and support in enterprise environments. Emphasis is placed on the evaluation, usage, deployment, security, and support of mobile devices, applications (apps), and peripherals. Upon completion, students should be able to select, deploy, and support mobile devices in an enterprise environment.

CTI 175 Intro to Wireless Technology (Fall) 2 2 3
Prerequisites: NOS 130
Corequisites: None
This course introduces the student to the technologies and standards of wireless telecommunications. Topics include the design, implementation, configuration, security, standards and protocols of wireless local area networks (WLAN). Upon completion, students should be able to design, implement, and administer wireless local area networks.

CTI 240 Virtualization Admin I (Spring) 1 4 3
Prerequisites: NOS 130
Corequisites: None

This course covers datacenter virtualization concepts. Topics include data storage, virtual network configuration, virtual machine and virtual application deployment. Upon completion, students should be able to perform tasks related to virtual machine and hypervisor installation and configuration.

CTS 115 Info System Business Concepts (Fall) 3 0 3

Prerequisites: None

Corequisites: None

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

CTS 120 Hardware/Software Support (Fall) 2 3 3

Prerequisites: None

Corequisites: 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.

CTS 130 Spreadsheet (Fall, Spring) 2 2 3

Prerequisites: None Corequisites: None

This course introduces basic spreadsheet design and development. Topics include writing formulas, using functions, enhancing spreadsheets, creating charts, and printing. Upon completion, students should be able to design and print basic spreadsheets and charts.

CTS 220 Advanced Hardware/Software Support (Spring) 2 3 3

Prerequisites: CTS 120

Corequisites: None

This course provides advanced knowledge and competencies in hardware and operating system technologies for computer technicians to support personal computers. Emphasis is placed on: configuring and upgrading; diagnosis and

troubleshooting; as well as preventive maintenance of hardware and system software. Upon completion, students should be able to install, configure, diagnose, perform preventive maintenance, and maintain basic net- working on personal computers.

CTS 287 Emerging Technologies (Spring) 3 0 3
Prerequisites: None
Corequisites: 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.

CTS 289 System Support Project (Spring) 1 4 3
Prerequisites: CTS 115, CTI 110, CTI 120 and Instructor Permission
Corequisites: 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.

CUL 110 Sanitation and Safety (Fall, Spring) 2 0 2
Prerequisites: None
Corequisites: None
This course introduces the basic principles of sanitation and safety relative to the hospitality industry. Topics include personal hygiene, sanitation and safety regulations, use and care of equipment, the principles of food-borne illness, and other related topics. Upon completion, students should be able to demonstrate an understanding of the content necessary for successful completion of a nationally recognized food/safety/sanitation exam. Students must pass the course with a grade of C or better and must pass the ServSafe Food Safety exam with a 75% or better during the course in order to receive credit toward graduation and satisfy the CUL 110 prerequisite for culinary courses.

CUL 112 Nutrition for Foodservice (Summer) 3 0 3
Prerequisites: None
Corequisites: None
This course covers the principles of nutrition and its relationship to the foodservice industry. Topics include personal nutrition fundamentals, weight management, exercise, nutritional adaptation/analysis of recipes/menus, healthy cooking techniques, and marketing nutrition in a foodservice operation. Upon

completion, students should be able to apply basic nutritional concepts to food preparation and selection.

CUL 120 Purchasing (Fall) 2 0 2
Prerequisites: DMA 010, DMA 020, DMA 030
Corequisites: CUL 120A
This course covers purchasing for foodservice operations. Emphasis is placed on yield tests, procurement, negotiating, inventory control, product specification, purchasing ethics, vendor relationships, food product specification, and software applications. Upon completion, students should be able to apply effective purchasing techniques based on the end-use of the product.

CUL 120A Purchasing Lab (Fall) 0 2 1
Prerequisites: DMA 010, DMA 020, DMA 030
Corequisites: CUL 120
This course provides a laboratory experience for enhancing student skills in purchasing for foodservice operations. Emphasis is placed on practical experiences in yield tests, procurement, negotiating, inventory control, product specification, purchasing ethics, vendor relationships, food product specifications; and software applications. Upon completion, students should be able to demonstrate practical applications of purchasing within the hospitality industry.

CUL 130 Menu Design (Fall, Spring) 2 0 2
Prerequisites: None
Corequisites: None
This course introduces menu design and its relationship to foodservice operations. Topics include layout, marketing, concept development, dietary concerns, product utilization, target consumers, and trends. Upon completion, students should be able to design, create, and produce menus for a variety of foodservice settings.

CUL 135 Food and Beverage Service (Fall, Spring) 2 0 2
Prerequisites: None
Corequisites: CUL 135A
This course is designed to cover the practical skills and knowledge necessary for effective food and beverage service in a variety of settings. Topics include greeting/service of guests, dining room set-up, profitability, menu sales and merchandising, service styles, and reservations. Upon completion, students should be able to demonstrate competence in human relations and the skills required in the service of foods and beverages.

CUL 135A Food and Beverage Service Lab (Fall, Spring) 0 2 1
Prerequisites: None
Corequisites: CUL 135
This course provides a laboratory experience for enhancing student skills in effective food and beverage service. Emphasis is placed on practical experiences including greeting/service of guests, dining room set-up, profitability, menu sales and merchandising, service styles, and reservations. Upon completion, students should be able to demonstrate practical applications of human relations and the skills required in the service of foods and beverages.

CUL 140 Culinary Skills I (Fall, Spring) 2 6 5
Prerequisites: DMA 010, DMA 020, DMA 030
Corequisites: CUL 110
This course introduces the fundamental concepts, skills, and techniques in basic cookery, and moist, dry, and combination heat. Emphasis is placed on recipe conversion, measurements, terminology, classical knife cuts, safe food/equipment handling, flavorings/seasonings, stocks/sauces/soups, and related topics. Upon completion, students should be able to exhibit the basic cooking skills used in the food service industry.

CUL 142 Fundamentals of Food (Intermittently) 2 6 5
Prerequisites: None
Corequisites: CUL 110
This course introduces the student to the basic principles of cooking, baking and kitchen operations. Topics include preparation methods for protein, starch, vegetable/fruit identification/selection, storage; breakfast cookery, breads, sweet dough/pastries, basic fabrication, knife skills, and mise en place. Upon completion, students should be able to execute efficiently a broad range of basic cooking/baking skills as they apply to different stations in foodservice operations.

CUL 160 Baking I (Fall) 1 4 3
Prerequisites: DMA 010, DMA 020, DMA 030
Corequisites: CUL 110
This course covers basic ingredients, techniques, weights and measures, baking terminology, and formula calculations. Topics include yeast/chemically leavened products, laminated doughs, pastry dough batter, pies/tarts, meringue, custard, cakes and cookies, icings, glazes, and basic sauces. Upon completion, students should be able to demonstrate proper scaling and measurement techniques, and prepare and evaluate a variety of bakery products.

CUL 170 Garde Manger I (Fall) 1 4 3
Prerequisites: CUL 240
Corequisites: CUL 110
This course introduces basic cold food preparation techniques and pantry production. Topics include salads, sandwiches, appetizers, dressings, basic garnishes, cheeses, cold sauces, and related food items. Upon completion, students should be able to present a cold food display and exhibit an understanding of the cold kitchen and its related terminology.

CUL 230 Global Cuisines (Fall) 1 8 5
Prerequisites: CUL 110, CUL 140, CUL 240
Corequisites: None
This course provides practical experience in the planning, preparation, and presentation of representative foods from a variety of world cuisines. Emphasis is placed on indigenous ingredients and customs, nutritional concerns, and cooking techniques. Upon completion, students should be able to research and execute a variety of international and domestic menus.

CUL 240 Culinary Skills II (Spring) 1 8 5
Prerequisites: CUL 110, CUL 140
Corequisites: None
This course is designed to further students' knowledge of the fundamental concepts, skills, and techniques involved in basic cookery. Emphasis is placed on meat identification/fabrication, butchery, and cooking techniques/methods, appropriate vegetable/starch accompaniments; compound sauces; plate presentation; breakfast cookery; and quantity food preparation. Upon completion, students should be able to plan, execute, and successfully serve entrees with complementary side items.

CUL 250 Classical Cuisine (Spring) 1 8 5
Prerequisites: CUL 110, CUL 140, and CUL 240
Corequisites: None
This course is designed to reinforce the classical culinary kitchen. Topics include the working Grand Brigade of the kitchen, signature dishes, and classical banquets. Upon completion, students should be able to demonstrate competence in food preparation in a classical/upscale restaurant or banquet setting.

CUL 260 Baking II (Spring) 1 4 3
Prerequisites: CUL 110, CUL 160
Corequisites: None
This course is designed to further students' knowledge in ingredients, weights and measures, baking terminology, and formula calculation. Topics include classical desserts, frozen desserts, cake and torte production, decorating and icings/

glazes, dessert plating, and presentation. Upon completion, students should be able to demonstrate pastry preparation, plating, and dessert buffet production skills.

CUL 270 Garde Manger II (Spring) 1 4 3
Prerequisites: CUL 110, CUL 140, and CUL 170
Corequisites: None
This course is designed to further students' knowledge in basic cold food preparation techniques and pantry production. Topics include pâtés, terrines, galantines, decorative garnishing skills, carving, charcuterie, smoking, canapés, hors d' oeuvres, and related food items. Upon completion, students should be able to design, set up, and evaluate a cater- ing/event display to include a cold buffet with appropriate showpieces.

DBA 110 Database Concepts (Fall, Spring) 2 3 3
Prerequisites: None
Corequisites: None
This course introduces database design and creation using a DBMS product. Emphasis is placed on data dictionaries, normalization, data integrity, data modeling, and creation of simple tables, queries, reports, and forms. Upon completion, students should be able to design and implement normalized database structures by creating simple database tables, queries, reports, and forms.

DBA 115 Database Applications (Fall) 2 2 3
Prerequisites: DBA 110
Corequisites: None
This course applies concepts learned in DBA 110 to a specific DBMS. Topics include manipulating multiple tables, advanced queries, screens and reports, linking, and command files. Upon completion, students should be able to create multiple table systems that demonstrate updates, screens, and reports representative of industry requirements.

DFT 119 Basic CAD (Summer) 1 2 2
Prerequisites: None
Corequisites: None
This course introduces computer-aided drafting software for specific technologies to non- drafting majors. Emphasis is placed on understanding the software command structure and drafting standards for specific technical fields. Upon completion, students should be able to create and plot basic drawings.

DFT 151 CAD I (Spring) **2 3 3**
Prerequisites: CIS 110, CIS 113, or EGR 125
Corequisites: None
This course introduces CAD software as a drawing tool. Topics include drawing, editing, file management, and plotting. Upon completion, students should be able to produce and plot a CAD drawing.

DFT 170 Engineering Graphics (Fall, Spring) **2 2 3**
Prerequisites: None
Corequisites: None
This course introduces basic engineering graphics skills and applications. Topics include sketching, selection and use of current methods and tools, and the use of engineering graphics applications. Upon completion, students should be able to demonstrate an understanding of basic engineering graphics principles and practices. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

DMA 010 Operations with Integers **.75 .50 1**
Prerequisites: Appropriate score on Course Readiness Assessments
Corequisites: None
This course provides a conceptual study of integers and integer operations. Topics include integers, absolute value, exponents, square roots, perimeter and area of basic geometric figures, Pythagorean theorem, and use of the correct order of operations. Upon completion, students should be able to demonstrate an understanding of pertinent concepts and principles and apply this knowledge in the evaluation of expressions.

DMA 020 Fractions and Decimals **.75 .50 1**
Prerequisite: DMA 010
Corequisite: None
This course provides a conceptual study of the relationship between fractions and decimals and covers related problems. Topics include application of operations and solving contextual application problems, including determining the circumference and area of circles with the concept of pi. Upon completion, students should be able to demonstrate an understanding of the connections between fractions and decimals.

DMA 030 Proportions/Ratios/Rate/Percent **.75 .50 1**
Prerequisite: DMA 010 and DMA 020
Corequisite: None
This course provides a conceptual study of the problems that are represented by rates, ratios, percent, and proportions. Topics include rates, ratios, percent,

proportion, conversion of English and metric units, and applications of the geometry of similar triangles. Upon completion, students should be able to use their understanding to solve conceptual application problems.

DMA 040 Expressions/Linear Equations/Inequalities .75 .50 1
Prerequisite: DMA 010, DMA 020, and DMA 030, or DMA 025
Corequisite: None
This course provides a conceptual study of problems involving linear expressions, equations, and inequalities. Emphasis is placed on solving contextual application problems. Upon completion, students should be able to distinguish between simplifying expressions and solving equations and apply this knowledge to problems involving linear expressions, equations, and inequalities.

DMA 050 Graphs/Equations of Lines .75 .50 1
Prerequisite: DMA 010, DMA 020, DMA 030 and DMA 040 or DMA 025 and DMA 040
Corequisite: None
This course provides a conceptual study of problems involving graphic and algebraic representations of lines. Topics include slope, equations of lines, interpretation of basic graphs, and linear modeling. Upon completion, students should be able to solve contextual application problems and represent real-world situations as linear equations in two variables.

DMA 060 Polynomials/Quadratic Applications .75 .50 1
Prerequisite: DMA 010, DMA 020, DMA 030, DMA 040, and DMA 050 or DMA 025, and DMA 045
Corequisite: None
This course provides a study of problems involving algebraic representations of quadratic equations. Topics include basic polynomial operations, factoring polynomials, and solving polynomial equations by means of factoring. Upon completion, students should be able to find algebraic solutions to contextual problems with quadratic applications.

DMA 070 Rational Expressions and Equations .75 .50 1
Prerequisite: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050 and DMA 060 or DMA 025, DMA 045, and DMA 060
Corequisite: None
This course provides a study of problems involving algebraic representations of rational equations. Topics include simplifying and performing operations with rational expressions and equations, understanding the domain, and determining the reasonableness of an answer. Upon completion, students should be able to find algebraic solutions to contextual problems with rational applications.

DMA 080 Radical Expressions and Equations .75 .50 1
Prerequisite: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, and DMA 070, or DMA 025, DMA 045, DMA 060, and DMA 070
Corequisite: None
This course provides a study of problems involving algebraic representations of the manipulation of radical expressions and the application of radical equations. Topics include simplifying and performing operations with radical expressions and rational exponents, solving radical equations, and determining the seasonableness of a solution. Upon completion, students should be able to find algebraic solutions to contextual problems with radical applications.

DRA 111 Theatre Appreciation (Fall) 3 0 3
Prerequisites: None
Corequisites: 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 for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts. This is a Universal General Education Transfer Component (UGETC) course.

DRA 170 Play Production I (Spring) 0 9 3
Prerequisites: None
Corequisites: None
This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with a college theatre production. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a premajor and/or elective course requirement.

DRA 171 Play Production II (Spring) 0 9 3
Prerequisites: DRA 170
Corequisites: None
This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various periods and styles. Upon completion, students should be able to participate in an assigned position with

a college theatre production. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a premajor and/or elective course requirement.

DRE 096 Integrated Reading and Writing I 2.5 1 3
Prerequisites: None
Corequisites: None
This course is designed to develop proficiency in specific integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; these topics are primarily taught at the introductory level using texts primarily in a Lexile® range of 960 to 1115. Upon completion, students should be able to apply those skills toward understanding a variety of academic and career-related texts and composing effective paragraphs.

DRE 097 Integrated Reading and Writing II 2.5 1 3
Prerequisites: DRE 096
Corequisites: None
This course is designed to develop proficiency in integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; except where noted, these topics are taught at a reinforcement level using texts primarily in a Lexile® range of 1070 to 1220. Upon completion, students should be able to demonstrate and apply those skills toward understanding a variety of academic and career texts and composing essays incorporating relevant, valid evidence.

DRE 098 Integrated Reading and Writing III 2.5 1 3
Prerequisites: DRE 097
Corequisites: None
This course is designed to develop proficiency in integrated and contextualized reading and writing skills and strategies. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; except where noted, these topics are taught using texts primarily in a Lexile® range of 1185 to 1385. Upon completion, students should be able to apply those skills to- ward understanding a variety of texts at the career and college ready level and composing a documented essay.

DRE 099 Integrated Reading and Writing III 2 0 2

Prerequisites: DRE 097

Corequisites: ENG 111

This course is designed to develop proficiency in integrated and contextualized reading and writing skills and strategies by complementing, supporting and reinforcing material covered in ENG 111. Topics include reading and writing processes, critical thinking strategies, and recognition and composition of well-developed, coherent, and unified texts; except where noted, these topics are taught using texts primarily in a Lexile® range of 1185 to 1385 in order to prepare students to be career and college ready. Upon completion, students should be able to apply those skills toward understanding a variety of texts at the career and college ready level and toward composing a documented essay.

ECO 251 Principles of Microeconomics (Fall, Spring, Summer) 3 0 3

Prerequisites: None

Corequisites: 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 for transfer under Comprehensive Articulation Agreement as a general education core requirement in social/behavioral sciences. This is a Universal General Education Transfer Component (UGETC) course.

ECO 252 Principles of Macroeconomics (Fall, Spring, Summer) 3 0 3

Prerequisites: None

Corequisites: None

This course introduces economic analysis of aggregate employment, income, and prices Topics include major schools of economic thought; aggregate supply and demand; economic measures, fluctuations, and growth; money and banking; stabilization techniques; and international trade. Upon completion, students should be able to evaluate national economic components, conditions, and alternatives for achieving socioeconomic goals. This course has been approved for transfer under Comprehensive Articulation Agreement as a general education course in social/behavioral sciences. This is a Universal General Education Transfer Component (UGETC) course.

EDU 119 Introduction to Early Child Education (Fall, Spring) 4 0 4

Prerequisites: None
Corequisites: None
This course introduces the foundations of early childhood education, the diverse educational settings for young children, professionalism and planning intentional developmentally appropriate experiences for each child. Topics include theoretical foundations, national early learning standards, NC Foundations for Early Learning and Development, state regulations, program types, career options, professionalism, ethical conduct, quality inclusive environments, and curriculum responsive to the needs of each child/family. Upon completion, students should be able to design a career/professional development plan, appropriate environments, schedules, and activity plans.

EDU 131 Child, Family and Community (Fall, Spring) 3 0 3

Prerequisites: None
Corequisites: None
This course covers the development of partnerships among culturally, linguistically and ability diverse families, children, schools and communities through the use of evidence-based strategies. Emphasis is placed on developing skills and identifying benefits for establishing and supporting respectful relationships between diverse families, programs/schools, and community agencies/resources reflective of the NAEYC Code of Ethical Conduct and the Code of Ethics for North Carolina Educators. Upon completion, students should be able to identify appropriate relationship building strategies between diverse families, children birth through adolescence, schools, and communities and demonstrate a variety of communication skills including appropriate use of technology to support every child.

EDU 144 Child Development I (Fall, Spring) 3 0 3

Prerequisites: None
Corequisites: None
This course includes the theories of child development, observation and assessment, milestones, and factors that influence development, from conception through approximately 36 months. Emphasis is placed on knowledge, observation and assessment of developmental sequences in approaches to play/learning, emotional/social, health/physical, language/communication and cognitive domains. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain biological and environmental factors that impact development, and identify evidence-based strategies for enhancing development for children that are culturally, linguistically, and ability diverse.

EDU 145 Child Development II (Fall, Spring) 3 0 3

Prerequisites: None

Corequisites: None

This course includes the theories of child development, observation and assessment, milestones, and factors that influence development, from preschool through middle childhood. Emphasis is placed on knowledge, observation and assessment of developmental sequences in approaches to play/learning, emotional/social, health/physical, language/communication and cognitive domains. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain biological and environmental factors that impact development, and identify evidence-based strategies for enhancing development for children that are culturally, linguistically, and ability diverse.

EDU 146 Child Guidance (Fall, Spring) 3 0 3

Prerequisites: None

Corequisites: None

This course introduces evidence-based strategies to build nurturing relationships with each child by applying principles and practical techniques to facilitate developmentally appropriate guidance. Topics include designing responsive/supportive learning environments, cultural, linguistic and socio-economic influences on behavior, appropriate expectations, the importance of communication with children/families including using technology and the use of formative assessments in establishing intentional strategies for children with unique needs. Upon completion, students should be able to demonstrate direct/indirect strategies to encourage social skills, self-regulation, emotional expression and positive behaviors while recognizing the relationship between children's social, emotional and cognitive development.

EDU 151 Creative Activities (Fall, Spring) 3 0 3

Prerequisites: None

Corequisites: None

This course introduces developmentally supportive creative learning environments with attention to divergent thinking, creative problem-solving, evidence-based teaching practices, and open-ended learning materials while applying NC Foundations for Early Learning and Development. Emphasis is placed on observation of process driven learning experiences in art, music, creative movement, dance, and dramatics for every young child age birth through eight, integrated through all domains and academic content. Upon completion, students should be able to examine, create, and adapt developmentally creative learning materials, experiences, and environments for children that are culturally, linguistically, and ability diverse.

EDU 153 Health, Safety and Nutrition (Spring, Summer) 3 0 3

Prerequisites: None

Corequisites: None

This course covers promoting and maintaining the health and well-being of every child. Topics include health and nutritional guidelines, common childhood illnesses, maintaining safe and healthy learning environments, health benefits of active play, recognition and reporting of abuse/neglect, and state regulations. Upon completion, students should be able to apply knowledge of NC Foundations for Early Learning and Development for health, safety, nutritional needs and safe learning environments.

EDU 163 Classroom Management and Instruction (Intermittently) 3 0 3

Prerequisites: None

Corequisites: None

This course examines classroom management and evidence-based instructional strategies that create supportive learning environments to provide developmentally appropriate guidance for school-age populations. Topics include classroom management and organization, teaching strategies, individual student differences and learning styles, ongoing systematic observation, and developmentally appropriate classroom guidance techniques. Upon completion, students should be able to utilize developmentally appropriate behavior management and high quality instructional strategies that enhance the teaching/learning process and promote student's academic success.

EDU 184 Early Child Intro. Pract. (Fall, Spring) 1 3 2

Prerequisites: EDU-119

Corequisites: None

This course introduces students to early childhood settings and applying 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 on site faculty visits.

EDU 187 Teaching and Learning for All (Fall) 3 3 4

Prerequisites: None

Corequisites: None

This course introduces students to knowledge, concepts, and best practices needed to provide developmentally appropriate, effective, inclusive, and culturally responsive educational experiences in the classroom. Topics include growth and development, learning theory, student motivation, teaching diverse learners, classroom management, inclusive environments, student-centered practices, instructional strategies, teaching methodologies, observation/assessment techniques, education planning, reflective practice, collaboration, cultural competence, ethics, professionalism, and leadership. Upon completion, students should be able to identify knowledge, skills, roles, and responsibilities of an effective educator as defined by state and national professional teaching standards.

EDU 216 Foundations of Education (Spring) 3 0 3

Prerequisites: None

Corequisites: None

This course introduces the examination of the American educational systems and the teaching profession. Topics include the historical and philosophical influences on education, various perspectives on educational issues, and experiences in birth through grade 12 classrooms. Upon completion, students should be able to reflect on classroom observations, analyze the different educational approaches, including classical/traditional and progressive, and have knowledge of the various roles of educational systems at the federal, state and local level. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

EDU 221 Children with Exceptionalities (Fall) 3 0 3

Prerequisites: EDU-144 and EDU-145, or PSY-244 and PSY-245

Corequisites: None

This course covers atypical patterns of child development, inclusive/diverse settings, evidenced-based educational/family plans, differentiated instruction, adaptive materials, and assistive technology. Emphasis is placed on the characteristics of exceptionalities and delays, early intervention/special education, transitions, observation, developmental screening, formative assessment of children, and collaborating with families and community partners. Upon completion, students should be able to recognize diverse abilities, describe the referral process, identify community resources, explain the importance of collaboration with families/professionals, and develop appropriate strategies/adaptations to support children in all environments with best practices as defined by laws, policies and the NC Foundations for Early Learning and Development.

EDU 234 Infants, Toddlers and Twos (Spring) 3 0 3

Prerequisites: EDU-119

Corequisites: None

This course covers the development of high-quality, individualized, responsive/engaging relationships and experiences for infants, toddlers, and twos. Emphasis is placed on typical and atypical child development, working with diverse families to provide positive, supportive, and engaging early learning activities and interactions through field experiences and the application of the NC Foundations for Early Learning and Development. Upon completion, students should be able to demonstrate responsive curriculum planning, respectful relationships and exposure to a variety of developmentally appropriate experiences/materials that support a foundation for healthy development and growth of culturally, linguistically and ability diverse children birth to 36 months.

EDU 250 Teacher Licensure Preparation (Fall) 3 0 3

Prerequisites: ENG 111 and MAT 143, or ENG 111 and MAT 152, or ENG 111 and MAT 171

Corequisites: None

This course provides information and strategies necessary for transfer to a teacher licensure program at a senior institution. Topics include entry level teacher licensure exam preparation, performance based assessment systems, requirements for entry into teacher educational programs, the process to become a licensed teacher in North Carolina, and professionalism and expectation within the field of education. Upon completion, students should be able to utilize educational terminology and demonstrate knowledge of teacher licensure processes including exam preparation, technology based portfolio assessment, and secondary admissions processes to the school of education at a senior institution.

EDU 259 Curriculum Planning (Fall) 3 0 3

Prerequisites: EDU-119

Corequisites: None

This course is designed to focus on using content knowledge to build developmentally effective approaches for culturally/linguistically/ability diverse young children. Topics include components of curriculum, a variety of curriculum models, authentic observation and assessment, and planning developmentally appropriate experiences aligned with the NC Foundations for Early Learning and Development. Upon completion, students should be able to understand, evaluate, and use curriculum to plan for individual/group needs.

EDU 261 Early Childhood Administration I (Fall) 3 0 3
Prerequisites: None
Corequisites: EDU 119
This course introduces principles and practices essential to preparing and supporting child care administrators. Topics include program philosophy, policies and procedures, NC Child Care Law and Rules, business planning, personnel and fiscal management, and NAEYC Code of Ethical Conduct Supplement for Early Childhood Program Administration. Upon completion, students should be able to articulate a developmentally appropriate program philosophy, locate current state licensing regulations, analyze a business plan and examine comprehensive program policies and procedures.

EDU 262 Early Childhood Administration II (Spring) 3 0 3
Prerequisites: EDU 119 & EDU 261
Corequisites: 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.

EDU 271 Educational Technology (Intermittently) 2 2 3
Prerequisites: None
Corequisites: None
This course introduces the ethical use of technology to enhance teaching and learning in all educational settings. Emphasis is placed on technology concepts, ethical issues, digital citizenship, instructional strategies, assistive technology, and the use of technology for professional development and communication. Upon completion, students should be able to discuss technology concepts, ethically use a variety of technology resources, demonstrate appropriate technology skills in educational environments, and identify assistive technology.

EDU 279 Literacy Develop and Instruct (Spring) 3 3 4
Prerequisites: None
Corequisites: None
This course is designed to provide students with concepts and skills of literacy development, instructional methods/materials and assessment techniques needed to provide scientifically-based, systematic reading and writing instruction into educational practice. Topics include literacy concepts, reading and writing development, developmentally appropriate pedagogy, culturally-responsive

instruction, standards-based outcomes, lesson planning, formative/summative assessment, recognizing reading difficulties, research-based interventions, authentic learning experiences, classroom implementation, and reflective practice. Upon completion, students should be able to plan, implement, assess, evaluate, and demonstrate developmentally appropriate literacy instruction aligned to the NC Standard Course of Study and other state and national standards.

EDU 280 Language and Literacy Experiences (Fall) 3 0 3
Prerequisites: EDU 119
Corequisites: None
This course provides evidence-based strategies for enhancing language and literacy experiences that align with NC Foundations for Early Learning and Development. Topics include developmental sequences for children's emergent receptive and expressive language, print concepts, appropriate observations/assessments, literacy enriched environments, quality selection of diverse literature, interactive media, and inclusive practices. Upon completion, students should be able to select, plan, implement and evaluate developmentally appropriate language and literacy experiences for children who are culturally, linguistically and ability diverse.

EDU 282 Early Childhood Literature (Spring) 3 0 3
Prerequisites: EDU 119
Corequisites: 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 for children who are culturally, linguistically, and ability diverse.

EDU 284 Early Child Capstone Prac (Fall, Spring) 1 9 4
Prerequisites: EDU 119, EDU 144, EDU 145, EDU 146, EDU 151, EDU 184
Corequisites: None
This course is designed to allow students to demonstrate acquired 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/engaging families; and modeling reflective and professional practices based on national and state guidelines. Upon completion, students should be able to apply NC Foundations for Early Learning and Development to demonstrate developmentally appropriate plans/assessments, appropriate guidance techniques and

ethical/professional behaviors, including the use of appropriate technology, as indicated by assignments and onsite faculty assessments.

EGR 125 Appl Software for Tech (Fall, Spring, Summer) 1 2 2
Prerequisites: None
Corequisites: None
This course introduces personal computer software and teaches students how to customize the software for technical applications. Emphasis is placed on the use of common office applications software programs such as spreadsheets, word processing, graphics, and internet access. Upon completion, students should be able to demonstrate competency in using applications software to solve technical problems and communicate the results in text and graphical formats.

EGR 150 Introduction to Engineering (Fall, Spring) 1 2 2
Prerequisites: None
Corequisites: None
This course is an overview of the engineering profession. Topics include goal setting and career assessment, ethics, public safety, the engineering method and design process, written and oral communication, interpersonal skills and team building, and computer applications. Upon completion, students should be able to understand the engineering process, the engineering profession, and utilize college resources to meet their educational goals. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

EGR 210 Intro to Elec/Comp Eng Lab 1 3 2
Prerequisites: Take All: MAT 271 and PHY 251
Corequisites: None
This course provides an overview of electrical and computer engineering, through a lecture and laboratory setting. Topics include fundamental concepts, electronic circuits, digital circuits, communication systems, and signal processing. Upon completion, students should be able to discuss the wide range of fields available to the electrical or computer engineer. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

EGR 212 Logic System Design I 3 0 3
Prerequisites: Take All: MAT 271 and PHY 251
Corequisites: None
This course provides an introduction to digital circuits and analysis. Topics include Boolean Algebra; mixed logic; design of combinational circuits; introduction to sequential systems; and MSI building blocks. Upon completion, students should be able to analyze and design digital circuits and systems. This course has

been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

EGR 214 Numerical Methods for Engineers (Spring) 3 0 3
Prerequisites: MAT 272
Corequisites: None
This course introduces contemporary methods and tools for numerical analysis in engineering. Topics include numerical methods in differentiation , integration, root-finding, linear and non-linear regressions, Upon completion, students should be able to demonstrate: basic structured programming concepts involving decision making, loops, functions, and parameter passing: common numerical methods used in engineering analysis; estimation of the amount of error inherent in different numerical methods: assessment of numerical efficiency; method assessment of numerical efficiency,; and convergence properties of different numerical methods. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

EGR 215 Network Theory I 3 0 3
Prerequisites: Take All: MAT 272 and PHY 251
Corequisites: Take PHY 252 and MAT 273
This course provides an introduction to Kirchoff's laws and terminal equations, circuit analysis techniques and network theorems, transient and natural response, and state variable analysis. Topics include Kirchoff's laws, Ohm's law, circuit analysis techniques, Network theorems, singularity functions, transient and natural responses, power, and state variable analysis. Upon completion, students should be able to analyze electric circuits involving capacitors, inductors, and resistors to determine required parameters. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

EGR 216 Logic and Network Lab 0 3 1
Prerequisites: Take All: MAT 272 and PHY 251
Corequisites: Take EGR 215
This course provides laboratory experiments in network measurements and logic design and laboratory equipment and techniques. Topics include network measurement and applications, experimental logic design and introduction to laboratory equipment and techniques. Upon completion, students should be able to complete network measurement logic design and be able to use laboratory equipment with proper techniques. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

EGR 220 Engineering Statics (Spring) 3 0 3

Prerequisites: PHY 251

Corequisites: MAT 272

This course introduces the concepts of engineering based on forces in equilibrium. Topics include concentrated forces, distributed forces, forces due to friction, and inertia as they apply to machines, structures, and systems. Upon completion, students should be able to solve problems which require the ability to analyze systems of forces in static equilibrium. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

EGR 225 Engineering Dynamics 3 0 3

Prerequisites: Take EGR 220

Corequisites: Take MAT 273

This course introduces the concepts of engineering based on the analysis of motion in Cartesian, cylindrical, and spherical coordinate systems. Topics include the two and three dimensional motion of particles and rigid bodies, the forces associated with that motion, and relative motion between two coordinate systems. Upon completion, student should be able to solve problems which require the ability to analyze the motion and forces involved in a dynamic system. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

EGR 228 Intro to Solid Mechanics 3 0 3

Prerequisites: Take EGR 220

Corequisites: None

This course provides an introduction to engineering theory of deformable solids and applications. Topics include stress and deformation resulting from axial, torsion, and bending loads; shear and moment diagrams; Mohr's circle of stress; and strain and buckling of columns. Upon completion, students should be able to analyze solids subject to various forces and design systems using a variety of materials. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

EGR 250 Statics/Strength of Mater 4 3 5

Prerequisites: MAT 121 or MAT 171

Corequisites: None

This course includes vector analysis, equilibrium or force systems, friction, sectional properties, stress/strain, and deformation. Topics include resultants and components of forces, moments and couples, free-body diagrams, shear and moment diagrams, trusses, frames, beams, columns, connections, and combined stresses. Upon completion, students should be able to analyze simple structures.

ELC 111 Introduction to Electricity (Fall, Spring, Summer) 2 2 3
Prerequisites: None
Corequisites: None
This course introduces the fundamental concepts of electricity and test equipment to non- electrical/electronic majors. Topics include basic DC and AC principles (voltage, resistance, current, impedance); components (resistors, inductors and capacitors); power; and operation of test equipment. Upon completion, students should be able to construct and analyze simple DC and AC circuits using electrical test equipment.

ELC 113 Residential Wiring I (Fall) 2 6 4
Prerequisites: None
Corequisites: None
This course introduces the care/usage of tools and materials used in residential electrical installations and the requirements of the National Electrical Code. Topics include NEC, electrical safety, and electrical blueprint reading; planning, layout; and installation of electrical distribution equipment; lighting; overcurrent protection; conductors; branch circuits; and conduits. Upon completion, students should be able to properly install conduits, wiring, and electrical distribution equipment associated with basic electrical installations.

ELC 113AB Residential Wiring I-AB (Fall) 1 3 2
Prerequisites: None
Corequisites: None
The first of two parts of ELC 113.

ELC 113BB Residential Wiring I-BB (Spring) 1 3 2
Prerequisites: ELC 113AB
Corequisites: None
A continuation of ELC 113AB and final part of ELC 113.

ELC 115 Industrial Wiring (Spring) 2 6 4
Prerequisites: ELC 111 or ELC 113 or ELC 131
Corequisites: None
This course covers layout, planning, and installation of wiring systems in industrial facilities. Emphasis is placed on industrial wiring methods and materials. Upon completion, students should be able to install industrial systems and equipment.

ELC 117 Motors and Controls (Fall, Spring) 2 6 4
Prerequisites: ELC 111 or ELC 112 or ELC 131
Corequisites: None

This course introduces the fundamental concepts of motors and motor controls. Topics include ladder diagrams, pilot devices, contractors, motor starters, motors, and other control devices. Upon completion, students should be able to properly select, connect, and troubleshoot motors and control circuits.

ELC 117AB Motors and Controls-AB (Fall) **1 3 2**
Prerequisites: ELC 111, ELC 112, or ELC 131
Corequisites: None
The first of two parts of ELC 117.

ELC 117BB Motors and Controls-BB (Spring) **1 3 2**
Prerequisites: ELC 117AB
Corequisites: None
A continuation of ELC 117A and final part of ELC 117.

ELC 126 Electrical Computations (Fall, Spring, Summer) **2 2 3**
Prerequisites: None
Corequisites: None
This course introduces the fundamental applications of mathematics which are used by an electrical/electronics technician. Topics include whole numbers, fractions, decimals, powers, roots, simple electrical formulas, and usage of a scientific calculator. Upon completion, students should be able to solve simple electrical mathematical problems.

ELC 131 Circuit Analysis I (Fall, Spring) **3 3 4**
Prerequisites: None
Corequisites: ELC 131A
This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation software, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, verify, and analyze DC/AC circuits; and properly use test equipment.

ELC 131AB Circuit Analysis-AB (Fall) **1 3 2**
Prerequisites: None
Corequisites: ELC 131A
The first of two parts of ELC 131.

ELC 131BB Circuit Analysis-BB (Spring) **3 0 3**
Prerequisites: ELC 131AB
Corequisites: ELC 131A
A continuation of ELC 131AB and final part of ELC 131.

ELC 131A Circuit Analysis I Lab (Fall, Spring) **0 3 1**
Prerequisites: None
Corequisites: ELC 131
This course provides laboratory assignments as applied to fundamental principles of DC/ AC electricity. Emphasis is placed on measurements and evaluation of electrical components, devices and circuits. Upon completion, the students will gain hands-on experience by measuring voltage, current, and opposition to current flow utilizing various meters and test equipment.

ELC 213 Instrumentation (Spring) **3 2 4**
Prerequisites: ELC 112 or ELC 131
Corequisites: None
This course covers the fundamentals of instrumentation used in industry. Emphasis is placed on electric, electronic, and other instruments. Upon completion, students should be able to install, maintain, and calibrate instrumentation.

ELC 228 PLC Applications (Fall) **2 6 4**
Prerequisites: ELC 128 or ELN 260
Corequisites: None
This course covers programming and applications of programmable logic controllers. Emphasis is placed on programming techniques, networking, specialty I/O modules, and system troubleshooting. Upon completion, students should be able to specify, implement, and maintain complex PLC controlled systems.

ELC 228AB PLC Applications-AB (Fall) **1 3 2**
Prerequisites: ELC 128 or ELN 260
Corequisites: None
The first of two parts of ELC 228.

ELC 228BB PLC Applications-BB (Spring) **1 3 2**
Prerequisites: ELC 228AB
Corequisites: None
A continuation of ELC 228AB and final part of ELC 228.

ELC 231 Electric Power Systems (Fall) **3 2 4**
Prerequisites: ELC 111 or ELC 112 or ELC 131
Corequisites: None
This course covers the basic principles of electric power systems, including transmission lines, generator and transformer characteristics, and fault detection and correction. Emphasis is placed on line diagrams and per unit calculations for circuit performance analysis in regards to voltage regulation, power factor, and protection devices. Upon completion, students should be able to analyze simple

distribution subsystems, calculate fault current, and determine the size and type of circuit protection devices.

ELC 233 Energy Management (Spring) 2 2 3
Prerequisites: ELC 231
Corequisites: 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.

ELN 131 Analog Electronics I (Spring) 3 3 4
Prerequisites: ELC 112 or ELC 131
Corequisites: None
This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications. Upon completion, students should be able to construct, analyze, verify, and troubleshoot discrete component circuits using appropriate techniques and test equipment.

ELN 131AB Analog Electronics I - AB (Fall) 1 3 2
Prerequisites: ELC 112 or ELC 131
Corequisites: None
The first of two parts of ELN 131.

ELN 131BB Analog Electronics I - BB (Spring) 2 0 2
Prerequisites: ELN 131AB
Corequisites: None
A continuation of ELN 131AB and final part of ELN 131.

ELN 132 Analog Electronics II (Fall) 3 3 4
Prerequisites: ELN 131
Corequisites: None
This course covers additional applications of analog electronic circuits with an emphasis on analog and mixed signal integrated circuits (IC). Topics include amplification, filtering, oscillation, voltage regulation, and other analog circuits. Upon completion, students should be able to construct, analyze, verify, and

troubleshoot analog electronic circuits using appropriate techniques and test equipment.

ELN 132AB Linear IC Applications - AB (Fall) **1 3 2**
Prerequisites: ELN 131
Corequisites: None
The first of two parts of ELN 132.

ELN 132BB Analog Electronics II - BB (Spring) **2 0 2**
Prerequisites: ELN 132AB Corequisites: None
A continuation of ELN 132AB and final part of ELN 132.

ELN 133 Digital Electronics (Fall, Summer) **3 3 4**
Prerequisites: None
Corequisites: None
This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, medium scale integration (MSI) and large scale integration (LSI), analog to digital (AD) and digital to analog (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.

ELN 133AB Digital Electronics - AB (Fall) **1 3 2**
Prerequisites: None
Corequisites: None
The first of two parts of ELN 133.

ELN 133BB Digital Electronics - BB (Spring) **2 0 2**
Prerequisites: ELN 133AB
Corequisites: None
A continuation of ELN 133AB and final part of ELN 133.

ELN 229 Industrial Electronics (Spring) **3 3 4**
Prerequisites: ELC 112 or ELC 131
Corequisites: None
This course covers semiconductor devices used in industrial applications. Topics include the basic theory, application, and operating characteristics of semiconductor devices.
Upon completion, students should be able to install and/or troubleshoot these devices for proper operation in an industrial electronic circuit.

ELN 229AB Industrial Electronics-AB (Fall) **1 3 2**
Prerequisites: ELC 112 or ELC 131
Corequisites: None
The first of two parts of ELN 229.

ELN 229BB Industrial Electronics-BB (Spring) **2 0 2**
Prerequisites: ELN 229AB
Corequisites: None
A continuation of ELN 229AB and final part of ELN 229.

ELN 232 Introduction to Microprocessors (Spring) **3 3 4**
Prerequisites: ELN 133
Corequisites: None
This course introduces microprocessor architecture and microcomputer systems including memory and input/output interfacing. Topics include low-level language programming, bus architecture, I/O systems, memory systems, interrupts, and other related topics. Upon completion, students should be able to interpret, analyze, verify, and troubleshoot fundamental microprocessor circuits and programs using appropriate techniques and test equipment.

ELN 232AB Introduction to Microprocessors-AB (Fall) **1 3 2**
Prerequisites: ELN 133
Corequisites: None
The first of two parts of ELN 232.

ELN 232BB Introduction to Microprocessors-BB (Spring) **2 0 2**
Prerequisites: ELN 232AB
Corequisites: None
A continuation of ELN 232AB and final part of ELN 232.

ELN 235 Data Communication Systems (Fall, Spring)) **3 3 4**
Prerequisites: None
Corequisites: None
This course covers data communication systems and the transmission of digital information from source to destination. Topics include data transmission systems, interfaces and modems, protocols, networks, and other related topics. Upon completion, students should be able to demonstrate knowledge of the concepts associated with data communication systems.

ELN 235AB Data Communication Systems-AB (Fall) **1 3 2**
Prerequisites: None
Corequisites: None
The first of two parts of ELN 235.

ELN 235BB Data Communication Systems-BB (Spring) 2 0 2
Prerequisites: ELN 235AB
Corequisites: None
A continuation of ELN 235AB and final part of ELN 235.

ELN 236 Fiber Optics and Lasers (Spring) 3 2 4
Prerequisites: None
Corequisites: None
This course introduces the fundamentals of fiber optics and lasers. Topics include the transmission of light; characteristics of fiber optics and lasers and their systems; fiber optic production; types of lasers; and laser safety. Upon completion, students should be able to understand fiber optic communications and basic laser fundamentals.

ELN 236AB Fiber Optics and Lasers-AB (Fall) 1 2 2
Prerequisites: None
Corequisites: None
The first of two parts of ELN 236.

ELN 236BB Fiber Optics and Lasers-BB (Spring) 2 0 2
Prerequisites: ELN 236AB
Corequisites: None
A continuation of ELN 236AB and final part of ELN 236.

ELN 237 Local Area Networks (Intermittently) 2 3 3
Prerequisites: ELN 235
Corequisites: None
This course introduces the fundamentals of local area networks and their operation. Topics include the characteristics of network topologies, system hardware, system configuration, installation and operation of the LAN. Upon completion, students should be able to install and maintain a local area network.

ELN 238 Advanced LANs (Intermittently) 2 3 3
Prerequisites: ELN 237
Corequisites: None
This course covers advanced concepts, tools, and techniques associated with servers, workstations, and overall local area network performance. Topics include network security and configuration, system performance and optimization, communication protocols and packet formats, troubleshooting techniques, multiplatform integration, and other related

topics. Upon completion, students should be able to use advanced techniques to install, manage, and troubleshoot networks and optimize server and workstation performance.

ELN 260 Prog Logic Controllers (Spring, Summer) 3 3 4
Prerequisites: None
Corequisites: None
This course provides a detailed study of PLC applications, with a focus on design of industrial controls using the PLC. Topics include PLC components, memory organization, math instructions, documentation, input/output devices, and applying PLCs in industrial control systems. Upon completion, students should be able to select and program a PLC system to perform a wide variety of industrial control functions.

ELN 275 Troubleshooting (Summer) 1 3 2
Prerequisites: ELN 131 and ELN 133
Corequisites: None
This course covers techniques of analyzing and repairing failures in electronic equipment. Topics include safety, signal tracing, use of service manuals, and specific troubleshooting methods for analog, digital, and other electronics-based circuits and systems. Upon completion, students should be able to logically diagnose and isolate faults and perform necessary repairs to meet manufacturers' specifications.

ELT 111 Intro. to Electric Line Construction (Fall, Spring) 2 0 2
Prerequisites: None
Corequisites: None
This course introduces basic principles of electricity, tools, and materials. Topics include electrical distribution systems and components and line installation and maintenance applications. Upon completion, students should be able to identify tools and explain their use in electrical distribution systems.

ELT 111A Intro. to Electric Line Construction Lab (Fall, Spring) 0 6 2
Prerequisites: None
Corequisites: ELT 111
This course provides a laboratory setting to enhance basic electric lineman skills. Emphasis is placed on integrating classroom learning with hands-on experience. Upon completion, students should be able to demonstrate employability and work-related skills required for electric line construction.

ELT 112 National Electrical Safety Code (Spring) 2 2 3
Prerequisites: None
Corequisites: None
This course covers the use of the current National Electrical Safety Code. Topics include terms, systems, meters, overhead and underground construction and maintenance procedures. Upon completion, students should be able to apply principles of the NESC.

ELT 112AB National Electrical Safety Code-AB (Spring) 2 0 2
Prerequisites: None
Corequisites: None
The First of two parts of ELT 112.

ELT 112BB National Electrical Safety Code-BB (Spring) 0 2 1
Prerequisites: None
Corequisites: None
A continuation of ELT 112 AB and the final part of ELT 112. The courses are not required to be taken in sequential order.

ELT 114 Overhead Line Construction I (Fall, Spring) 2 0 2
Prerequisites: ELT 111
Corequisites: None
This course introduces the basics of Power Line Construction. Topics include safe work habits, protective equipment, and pole climbing techniques. Upon completion, students should be able to identify, inspect, and use equipment and demonstrate climbing techniques.

ELT 115 Overhead Line Construction II (Spring) 2 0 2
Prerequisites: ELT 114
Corequisites: None
This course introduces line maintenance, construction, and framing. Topics include safe working practices and procedures of working off a pole using hooks. Upon completion, students should be able to construct a line and perform routine maintenance to specifications.

ELT 116 Overhead Line Construction III (Spring) 2 0 2
Prerequisites: ELT 115
Corequisites: None
This course introduces the phase of energized line work. Topics include the use of aerial lifts and the application of rubber protective equipment. Upon completion, students will be able to delineate proper techniques of energized line work.

ELT 117 Overhead Line Construction IV (Spring) 2 0 2
Prerequisites: ELT 116
Corequisites: None
This course introduces regulators, reclosures, and fuse coordination. Topics include these concepts as applied to substation operation. Upon completion, students should be able to explain the operation of bypass, reclosures, and regulators in distribution substation.

ELT 117AB Overhead Line Construction IV-AB (Spring) 1 0 1
Prerequisites: ELT 116
Corequisites: None
The first of two parts of ELT 117

ELT 117BB Overhead Line Construction IV-BB (Spring) 1 0 1
Prerequisites: ELT 116
Corequisites: None
A continuation of ELT 117 AB and the final part of ELT 117 The courses are not required to be taken in sequential order.

ELT 211 Underground Line Construction I (Fall, Spring) 2 0 2
Prerequisites: None
Corequisites: None
This course introduces grounding an underground distribution system. Topics include terminators, elbows, and transformers; underground installation, safety practices. Upon completion, students should be able to relate safety practices associated with URD systems and delineate proper underground system makeup.

ELT 212 Underground Line Construction II (Spring) 2 0 2
Prerequisites: ELT 211
Corequisites: None
This course covers underground troubleshooting and associated equipment. Topics include fault locating, single and three-phase enclosures, and URD procedures. Upon completion, students should be able to install enclosures and recognize and utilize equipment used in URD troubleshooting.

ELT 221 Advanced Line Construction (Spring) 2 0 2
Prerequisites: ELT 117 and ELT 212
Corequisites: None
This course introduces advanced concepts in line construction. Topics include required OSHA training in trenching and excavations, digital paneling for regulators and reclosure, and lightning protection. Upon completion, students should

be able to identify lightning, trenching, and/or excavation safety practices and explain the use of digital panels.

ELT 221AB Advanced Line Construction-AB (Spring) 1 0 1
Prerequisites: ELT 117 and ELT 212
Corequisites: None
The first of two parts of ELT 221

ELT 221BB Advanced Line Construction-BB (Spring) 1 0 1
Prerequisites: ELT 117 and ELT 212
Corequisites: None
A continuation of ELT 221 AB and the final part of ELT 221. The courses are not required to be taken in sequential order.

EMS 110 Emergency Medical Technical 6 6 3 0 9
Prerequisite: None
Corequisite: None
This course introduces basic emergency medical care. Topics include preparatory, airway, patient assessment, medical emergencies, trauma, infants and children, and operations. Upon completion, students should be able to demonstrate the knowledge and skills necessary to achieve North Carolina State or National Registry EMT certification

EMS 122 EMS Practicum I 0 0 3 0 1
Prerequisite: EMS 110
Corequisite: None
This course provides the introductory hospital clinical experience for the paramedic student. Emphasis is placed on mastering fundamental paramedic skills. Upon completion, students should be able to demonstrate competency with fundamental paramedic level skills.

EMS 130 Pharmacology 3 3 0 0 4
Prerequisite: EMS 110
Corequisite: None
This course introduces the fundamental principles of pharmacology and medication administration and is required for paramedic certification. Topics include medical terminology, pharmacological concepts, weights, measures, drug calculations, vascular access for fluids and medication administration and legislation. Upon completion, students should be able to accurately calculate drug dosages, properly administer medications, and demonstrate general knowledge of pharmacology.

EMS 131 Advanced Airway Management **1 2 0 0 2**
Prerequisite: EMS 110
Corequisite: None
This course is designed to provide advanced airway management techniques and is required for paramedic certification. Topics must meet current guidelines for advanced airway management in the pre-hospital setting. Upon completion, students should be able to properly utilize all airway adjuncts and pharmacology associated with airway control and maintenance.

EMS 140 Rescue Scene Management **1 3 0 0 2**
Prerequisite: None
Corequisite: None
This course introduces rescue scene management. Topics include response to hazardous material conditions, incident command, and extrication of patients from a variety of situations. Upon completion, students should be able to recognize and manage rescue operations based upon initial and follow-up scene assessment.

EMS 160 Cardiology I **2 3 0 0 3**
Prerequisite: EMS -110
Corequisite: None
This course introduces the study of cardiovascular emergencies and is required for paramedic certification. Topics include anatomy and physiology, pathophysiology, electrophysiology, and rhythm interpretation. Upon completion, students should be able to recognize and interpret rhythms.

EMS 220 Cardiology II **2 3 0 0 3**
Prerequisite: EMS-122, EMS 130, and EMS 160
Corequisite: None
This course provides an in-depth study of cardiovascular emergencies and is required for paramedic certification. Topics include assessment and treatment of cardiac emergencies, cardiac pharmacology, and patient care. Upon completion, students should be able to manage the cardiac patient.

EMS 221 EMS Clinical Practicum II **0 0 6 0 2**
Prerequisite: EMS 121 or EMS 122
Corequisite: None
This course provides clinical experiences in the hospital and/or field. Emphasis is placed on increasing the proficiency of students' skills and abilities in patient assessments and the delivery of care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care.

EMS 231 EMS Clinical Practicum III **0 0 9 0 3**

Prerequisite: EMS 221

Corequisite: None

This course provides clinical experiences in the hospital and/or field. Emphasis is placed on enhancing the students' skills and abilities in providing advanced-level care. Upon completion, students should be able to demonstrate continued progress in advanced-level patient care.

EMS 235 EMS Management **2 0 0 0 2**

Prerequisite: None

Corequisite: None

This course stresses the principles of managing a modern emergency medical service system. Topics include structure and function of municipal governments, EMS grantsmanship, finance, regulatory agencies, system management, legal issues, and other topics relevant to the EMS manager. Upon completion, students should be able to understand the principles of managing emergency medical service delivery systems.

EMS 240 Patients with Special Challenges **1 2 0 0 2**

Prerequisite: EMS 122 and EMS 130

Corequisite: None

This course includes concepts of crisis intervention and techniques of interacting with patients with special challenges and is required for paramedic certification. Topics include appropriate intervention and interaction for neglected, abused, terminally ill, chronically ill, technology assisted, bariatric, physically challenged, mentally challenged, or assaulted patients as well as behavioral emergencies. Upon completion, students should be able to recognize and manage the care of patients with special challenges.

EMS 241 EMS Clinical Practicum IV **0 0 12 0 4**

Prerequisite: EMS 231

Corequisite: None

This course provides clinical experiences in the hospital and/or field. Emphasis is placed on mastering the skills/competencies required of the paramedic providing advanced-level care. Upon completion, students should be able to provide advanced-level patient care as an entry-level paramedic.

EMS 250 Medical Emergencies **3 3 0 0 4**

Prerequisite: EMS 122 and EMS 130

Corequisite: None

This course provides an in-depth study of medical conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics

include appropriate interventions/treatments for disorders/diseases/injuries affecting the following systems: respiratory, neurological, abdominal/gastrointestinal, endocrine, genitourinary, musculoskeletal, and immunological as well as toxicology, infectious diseases and diseases of the eyes, ears, nose and throat. Upon completion, students should be able to recognize, assess and manage the care of frequently encountered medical conditions based upon initial patient assessment.

EMS 260 Trauma Emergencies **1 3 0 0 2**

Prerequisite: EMS 122 and EMS 130

Corequisite: None

This course provides in-depth study of trauma including pharmacological interventions for conditions frequently encountered in the prehospital setting and is required for paramedic certification. Topics include an overview of thoracic, abdominal, genitourinary, orthopedic, neurological, and multi-system trauma, soft tissue trauma of the head, neck, and face as well as environmental emergencies. Upon completion, students should be able to recognize and manage trauma situations based upon patient assessment and should adhere to standards of care.

EMS 270 Lifespan Emergencies **3 3 0 0 3**

Prerequisite: EMS 122 and EMS 130

Corequisite: None

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

EMS 280 EMS Bridge Course **2 2 0 0 3**

Prerequisite: None

Corequisite: None

This course is designed to provide currently credentialed state or national Paramedic students with the most current education trends in Paramedic Practice. Emphasis is placed on transitions in healthcare. Upon completion, students should be able to integrate emerging trends in pre-hospital care.

EMS 285 EMS Capstone **1 3 0 0 2**

Prerequisite: EMS 220, EMS 250, and EMS 260

Corequisite: None

This course provides an opportunity to demonstrate problem-solving skills as a team leader in simulated patient scenarios and is required for paramedic certification. Emphasis is placed on critical thinking, integration of didactic and

psychomotor skills, and effective performance in simulated emergency situations. Upon completion, students should be able to recognize and appropriately respond to a variety of EMS-related events.

ENG 001 English Skills Support (Spring) 2 0 1
Prerequisites: None
Corequisites: None
This course is designed to supplement the skills introduced in ENG-111 with emphasis placed on the editing and revision components of the writing process. Topics include concepts, skills, writing in a variety of genres and formats using a recursive process, and effective use of rhetorical strategies, with emphasis placed on the editing and revision components of the writing process. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English.

ENG 002 Transition English (Fall) 6 0 3
Prerequisites: None
Corequisites: None
This course provides an opportunity to customize foundational English content in specific areas and will include developing a growth mindset. Topics include developing the academic habits, learning strategies, social skills, and growth mindset necessary to be successful in college-level English. Upon completion, students should be able to build a stronger foundation for success in their gateway level English courses by obtaining skills through a variety of instructional strategies with emphasis placed on the most essential prerequisite knowledge.

ENG 011 Writing and Inquiry Support (Fall) 1 2 3
Prerequisites: None
Corequisites: None
This course is designed to support students in the development of skills necessary for success in ENG 111 by complementing, supporting, and reinforcing ENG 111 Student Learning Outcomes. Emphasis is placed on developing a growth mindset, expanding skills for use in active reading and writing processes, recognizing organizational relationships within texts from a variety of genres and formats, and employing appropriate technology when reading and composing texts. Upon completion, students should be able to apply active reading strategies to college-level texts and produce unified, well-developed writing using standard written English.

ENG 101 Applied Communications I (Intermittently) 3 0 3
Prerequisites: None
Corequisites: None

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

ENG 110 Freshman Composition (Intermittently) 3 0 3
Prerequisites: DRE 097 or ENG 002 Tier 1
Corequisites: None
This course is designed to develop informative and business writing skills. Emphasis is placed on logical organization of writing, including effective introductions and conclusions, precise use of grammar, and appropriate selection and use of sources. Upon completion, students should be able to produce clear, concise, well-organized short papers.

ENG 111 Writing and Inquiry (Fall, Spring, Summer) 3 0 3
Prerequisites: BSP-4002, or ENG 090 and RED 090, or ENG 095, or ENG 002 or DRE 098
This course is designed to develop the ability to produce clear writing in a variety of genres and formats using a recursive process. Emphasis includes inquiry, analysis, effective use of rhetorical strategies, thesis development, audience awareness, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. This course has been approved for transfer under the CAA and ICAA as a general education course in English Composition. This is a Universal General Education Transfer Component (UGETC) course. This course has been approved for transfer under the CAA as a general education course in English Composition. This course has been approved for transfer under the ICAA as a general education course in English Composition.

ENG 111-HN Writing and Inquiry- Honors (Intermittently) 3 0 3
Prerequisites: Minimum Course Readiness Reading Assessment score of 96 or SAT score of 550 on critical reading portion or ACT score of 23 on the reading portion.
Corequisites: ACA 115 or ACA 122
This course is designed to develop the ability to produce clear writing in a variety of genres and formats using a recursive process. Emphasis includes inquiry, analysis, effective use of rhetorical strategies, thesis development, audience awareness, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. This course has been approved for transfer under the CAA and ICAA as a general education course in English Composition. This is a Universal General Education Transfer Component (UGETC) course.

ENG 112 Writing/Research in the Disciplines 3 0 3

Prerequisites: ENG 111

Corequisites: None

This course, the second in a series of two, introduces research techniques, documentation styles, and writing strategies. Emphasis is placed on analyzing information and ideas and incorporating research findings into documented writing and research projects. Upon completion, students should be able to evaluate and synthesize information from primary and secondary sources using documentation appropriate to various disciplines. This course has been approved for transfer under the CAA and ICAA as a general education course in English Composition. This is a Universal General Education Transfer Component (UGETC) course.

ENG 114 Professional Research and Reporting (Fall, Spring, Summer) 3 0 3

Prerequisites: ENG 111 Corequisites: None

This course, the second in a series of two, is designed to teach professional communication skills. Emphasis is placed on research, listening, critical reading and thinking, analysis, interpretation, and design used in oral and written presentations. Upon completion, students should be able to work individually and collaboratively to produce well-designed business and professional written and oral presentations. This course has been approved for transfer under the CAA and ICAA as a general education course in English Composition. This is a Universal General Education Transfer Component (UGETC) course.

ENG 125 Creative Writing I (Intermittently) 3 0 3

Prerequisites: ENG 111

Corequisites: None

This course is designed to provide students with the opportunity to practice the art of creative writing. Emphasis is placed on writing, fiction, poetry, and sketches. Upon completion, students should be able to craft and critique their own writing and critique the writing of others. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) or ICAA as a premajor and/or elective course requirement.

ENG 126 Creative Writing II (Intermittently) 3 0 3

Prerequisites: ENG 125

Corequisites: None

This course is designed as a workshop approach for advancing imaginative and literary skills. Emphasis is placed on the discussion of style, techniques, and challenges for first publications. Upon completion, students should be able to submit a piece of their writing for publication This course has been approved for transfer

under the Comprehensive Articulation Agreement (CAA) and ICAA as a premajor and/or elective course requirement.

ENG 231 American Literature I (Fall, Spring) 3 0 3
Prerequisites: ENG 112 or ENG 113 or ENG 114
Corequisites: None
This course covers selected works in American literature from its beginnings to 1865. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to analyze and interpret literary works in their historical and cultural contexts. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts. This is a Universal General Education Transfer Component (UGETC) course.

ENG 232 American Literature II (Fall, Spring) 3 0 3
Prerequisites: ENG 112 or ENG 113 or ENG 114
Corequisites: None
This course covers selected works in American literature from 1865 to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to analyze and interpret literary works in their historical and cultural contexts. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts. This is a Universal General Education Transfer Component (UGETC) course.

ENG 233 Major American Writers (Intermittently) 3 0 3
Prerequisites: ENG 112 or ENG 113 or ENG 114
Corequisites: None
This course provides an intensive study of the works of several major American authors. Emphasis is placed on American history, culture, and their literary merits. Upon completion, students should be able to interpret, analyze, and evaluate the works studied. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts.

ENG 241 British Literature I (Intermittently) 3 0 3
Prerequisites: ENG 112 or ENG 113 or ENG 114
Corequisites: None
This course covers selected works in British literature from its beginnings to the Romantic Period. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts. This is a Universal General Education Transfer Component (UGETC) course.

ENG 242 British Literature II (Intermittently) 3 0 3
Prerequisites: ENG 112 or ENG 113 or ENG 114
Corequisites: None
This course covers selected works in British literature from the Romantic Period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved for transfer under Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts. This is a Universal General Education Transfer Component (UGETC) course.

ENG 253 The Bible as Literature (Intermittently) 3 0 3
Prerequisites: ENG 112 or ENG 113 or ENG 114 Corequisites: None
This course introduces the Hebrew Old Testament and the Christian New Testament as works of literary art. Emphasis is placed on the Bible's literary aspects including history, composition, structure, and cultural contexts. Upon completion, students should be able to identify and analyze selected books and passages using appropriate literary conventions. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a premajor and/or elective course requirement.

ENG 261 World Literature I (Intermittently) 3 0 3
Prerequisites: ENG 112 or ENG 113 or ENG 114
Corequisites: None
This course introduces selected works from the Pacific, Asia, Africa, Europe, and the Americas from their literary beginnings through the seventeenth century. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works. This course has been

approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts.

ENG 262 World Literature II (Intermittently) 3 0 3
Prerequisites: ENG 112 or ENG 113 or ENG 114
Corequisites: None
This course introduces selected works from the Pacific, Asia, Africa, Europe, and the Americas from the eighteenth century to the present. Emphasis is placed on historical back- ground, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts.

ENG 273 African-American Literature (Intermittently) 3 0 3
Prerequisites: ENG 112 or ENG 113 or ENG 114
Corequisites: None
This course provides a survey of the development of African-American literature from its beginning to the present. Emphasis is placed on historical and cultural context, themes, literary traditions, and the backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and respond to selected texts. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a premajor and/or elective course requirement.

EPT 120 Sociology of Disaster 3 0 3
Prerequisites: None
Corequisites: 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, disasters warning, and evacuation considerations. Upon completion, students should be able to assess and predict the impact of disaster- related human behavior.

EPT 130 Mitigation and Preparedness 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the mitigation and preparation techniques and methods necessary to minimize the impact of natural, technological, and man-made disasters. Topics include hazard identification and mapping, design and construction applications, financial incentives, insurance, structural controls, preparation,

planning, assessment, implementation, and exercises. Upon completion students should be able to develop a mitigation and preparedness plan.

EPT 140 Emergency Management 3 0 3
Prerequisites: None
Corequisites: None
This course covers the four phases of emergency management: mitigation, prepared- ness, 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, student should be able to demonstrate an understanding of comprehensive emergency management and the integrated emergency management system.

EPT 150 Incident Management 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the National Incident Management System (NIMS). Topics include integrating command and control systems, maintaining communication within command and control systems, and using NIMS procedures. Upon completion, students should be able to demonstrate knowledge of key concepts necessary for operating within the National Incident Management System.

EPT 210 Response and Recovery 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the basic concepts, operational procedures, and authorities involved in response and recovery efforts to major disasters. Topics include federal, state, and local roles and responsibilities in major disaster response and recovery work, with an emphasis on governmental coordination. Upon completion, students should be able to implement a disaster response plan and assess the needs of those involved in a major disaster.

EPT 220 Terrorism and Emergency Management 3 0 3
Prerequisites: None
Corequisites: None
This course 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.

EPT 275 Emergency Operations Center Management 3 0 3

Prerequisites: None Corequisites: 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 and EOC. Upon completion, students should be able to demonstrate how to set up and operate an effective emergency operations center.

ETR 210 Introduction to Entrepreneurship (Intermittently) 3 0 3

Prerequisites: None

Corequisites: None

This course provides a survey of the starting and operating of an entrepreneurial venture. Topics include new venture creation, the business plan, economics of the business, deter- mining resource needs and acquiring resources, marketing, technology, leadership skills, and business ethics. Upon completion, students should be able to demonstrate an under- standing of entrepreneurship concepts and how to use the entrepreneurial mindset to succeed in their careers.

FIP 120 Introduction to Fire Protection 3 0 3

Prerequisites: None

Corequisites: None

This course provides an overview of the history, development, methods, systems, and regulations as they apply to the fire protection field. Topics include history, evolution, statistics, suppression, organizations, careers, curriculum, and other related topics. Upon completion, students should be able to demonstrate a broad understanding of the fire protection field.

FIP 124 Fire Protection & Public Ed. 3 0 3

Prerequisites: None

Corequisites: None

This course introduces fire prevention concepts as they relate to community and industrial operations referenced in the NFPA standard 101. Topics include the development and maintenance of fire prevention programs, educational programs, and inspection programs. Upon completion, students should be able to research, develop, and present a fire safety program to a citizens or industrial group.

FIP 128 Detection & Investigation 3 0 3

Prerequisites: None

Corequisites: None

This course covers procedures for determining the origin and cause of accidental and incendiary fires referenced in NFPA standard 921. 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.

FIP 132 Building Construction **3 0 3**

Prerequisites: None

Corequisites: None

This course introduces fire prevention concepts as they relate to community and industrial operations referenced in NFPA standard 101. Topics include they development and maintenance of fire prevention programs, educational programs, and inspection programs. Upon completion, students should be able to research, develop, and present a fire safety program to a citizens or industrial group.

FIP 136 Inspection and Codes **3 0 3**

Prerequisites: None

Corequisites: None

This course covers the fundamentals of fire and building codes and procedures to conduct an inspection. Topics include review of fire and building codes, writing inspection reports, identifying hazards, plan reviews, site sketches, and other related topics. Upon completion, students should be able to conduct a fire code compliance inspection and produce a writ- ten report.

FIP 152 Fire Protection Law **3 0 3**

Prerequisites: None

Corequisites: None

This course covers fire protection law. Topics include torts, legal terms, contracts, liability, review of case histories, and other related topics. Upon completion, students should be able to discuss laws, codes, and ordinances as they relate to fire protection.

FIP 176 HazMat: Operations **4 0 4**

Prerequisites: None

Corequisites: 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.

FIP 220 Fire Fighting Strategies 3 0 3
Prerequisites: None
Corequisites: None
This course provides preparation for command of initial incident operations involving emergencies within both the public and private sector. Topics include incident management, fire-ground tactics and strategies, incident safety, and command/control of emergency operations. Upon completion, students should be able to describe the initial incident system related to operations involving various emergencies in fire/non-fire situations, meeting NFPA 1021.

FIP 220 AB Fire Fighting Strategies – AB 2 0 2
Prerequisites: None
Corequisites: None
The first of two parts of FIP 220.

FIP 220 BB Fire Fighting Strategies – BB 1 0 1
Prerequisites: FIP 220AB
Corequisites: None
A continuation of FIP 220 AB and final part of FIP 220.

FIP 228 Local Government Finance 3 0 3
Prerequisites: None
Corequisites: None
This course introduces local governmental financial principles and practices. Topics include budget preparation and justification, revenue policies, statutory requirements, taxation, audits, and the economic climate. Upon completion, students should be able to comprehend the importance of finance as it applies to the operation of a department.

FIP 236 Emergency Management 3 0 3
Prerequisites: None
Corequisites: 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 for government agencies at all levels. Upon completion, students should be able to demonstrate an understanding of comprehensive emergency management and the integrated emergency management system.

FIP 240 Fire Service Supervision 3 0 3

Prerequisites: None

Corequisites: None

This course covers supervisory skills and practices in the fire protection field. Topics include the supervisor's job, supervision skills, the changing work environment, managing change, organizing for results, discipline and grievances, and safety. Upon completion, students should be able to demonstrate an understanding of the roles and responsibilities of the fire service supervisor, meeting elements of NFPA 1021.

FIP 248 Fire Services Personnel Admin 3 0 3

Prerequisites: None

Corequisites: None

This course covers the basics of setting up and administering the personnel functions of fire protection organizations referenced in NFPA standard 1021. Emphasis is placed on human resource planning, classification and job analysis, equal opportunity employment, affirmative action, recruitment, retention, development, performance evaluation, and assessment centers. Upon completion, students should be able to demonstrate knowledge of the personnel function as it relates to managing fire protection.

FIP 260 Fire Protection Planning 3 0 3

Prerequisites: None

Corequisites: None

This course covers the need for a comprehensive approach to fire protection planning referenced in NFPA standards 424 and 1620. Topics include the planning process, using an advisory committee, establishing goals and objectives, and techniques used to approve and implement a plan. Upon completion, students should be able to demonstrate a working knowledge of the concepts and principles of planning as it relates to fire protection.

FIP 276 Managing Fire Services 3 0 3

Prerequisites: None

Corequisites: None

This course covers 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. A continuation of FIP 276AB and final part of FIP 276.

FVP 240 Intro to Screenwriting (Spring) 3 0 3
Prerequisites: ENG 111
Corequisites: None
This course introduces the principles and practices of the screenwriting craft. Emphasis is placed on analysis of screenwriting and script components and the preparation and development of motion picture and television treatments and scripts. Upon completion, students should be able to critically analyze the components of both motion picture and television treatments and scripts, and prepare effective, camera-ready motion picture and television scripts.

GEL 111 Geology (Fall, Spring, Summer) 3 2 4
Prerequisites: None
Corequisites: None
This course introduces basic landforms and geological processes. Topics include rocks, minerals, volcanoes, fluvial process, geological history, plate tectonics, glaciers, coastal dynamics. Upon completion, students should be able to describe basic geological processes that shape the Earth. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science. This is a General Education Transfer Component (UGETC) course.

GEO 111 World Regional Geography (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the regional concept that 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 for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/Behavioral Sciences.

GRD 110 Typography I (Fall) 2 2 3
Prerequisites: None
Corequisites: None
This course introduces the history and mechanics of type and its application to layout and design. Topics include typographic fundamentals, anatomy, measurements, composition, identification, and terminology. Upon completion, students should be able to demonstrate proficiency in design application, analysis, specification, and creation of typographic elements.

GRD 121 Drawing Fundamentals I (Fall) 1 3 2
Prerequisites: None
Corequisites: 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.

GRD 131 Illustration I (Spring) 1 3 2
Prerequisites: ART 131 or DES 125 or GRD 121
Corequisites: None
This course introduces the application of rendering techniques to create illustrations. Emphasis is placed on controlling various media, methods, surfaces, design problems, and the appropriate media selection process. Upon completion, students should be able to produce quality illustrations from conception through finished artwork.

GRD 141 Graphic Design I (Fall) 2 4 4
Prerequisites: None
Corequisites: None
This course introduces the conceptualization process used in visual problem solving. Emphasis is placed on learning the principles of design and on the manipulation and organization of elements. Upon completion, students should be able to apply design principles and visual elements to projects.

GRD 142 Graphic Design II (Spring) 2 4 4
Prerequisites: DES 135 or GRD 141 or ART 121
Corequisites: None
This course covers the application of visual elements and design principles in advertising and graphic design. Topics include creation of various designs, such as logos, advertisements, posters, outdoor advertising, and publication design. Upon completion, students should be able to effectively apply design principles and visual elements to projects.

GRD 151 Computer Design Basics (Fall) 1 4 3
Prerequisites: None
Corequisites: None
This course covers designing and drawing with various types of software applications for advertising and graphic design. Emphasis is placed on creative and imaginative use of space, shapes, value, texture, color, and typography to provide effective solutions to advertising and graphic design problems. Upon completion, students should be able to use the computer as a creative tool.

GRD 152 Computer Design Tech I (Spring) 1 4 3
Prerequisites: GRD 151
Corequisites: None
This course covers complex design problems utilizing various design and drawing software applications. Topics include the expressive use of typography, image, and organization to communicate a message. Upon completion, students should be able to use appropriate computer software to professionally present.

GRD 160 Photo Fundamentals I (Fall) 1 4 3
Prerequisites: None
Corequisites: None
This course introduces basic camera operations, roll film processing, and photographic print production. Topics include contrast, depth-of-field, subject composition, enlarger operation, and density control. Upon completion, students should be able to produce photo- graphic prints with acceptable density values and quality.

GRD 241 Graphic Design III (Fall) 2 4 4
Prerequisites: DES 136 or GRD 142
Corequisites: None
This course is an advanced exploration of various techniques and media for advertising and graphic design. Emphasis is placed on advanced concepts and solutions to complex and challenging graphic design problems. Upon completion, students should be able to demonstrate competence and professionalism in visual problem solving.

GRD 242 Graphic Design IV (Spring) 2 4 4
Prerequisites: GRD 241
Corequisites: None
This course is a continuation of GRD 241. Emphasis is placed on using advanced media techniques, concepts, strategies, and professionalism in all aspects of design. Upon completion, students should be able to conceptualize, create, and produce designs for reproduction.

GRD 265 Digital Print Production (Spring) 1 4 3
Prerequisites: GRD 151 or GRA 151
Corequisites: None
This course covers preparation of digital files for output and reproduction. Emphasis is placed on output options, separations, color proofing, and cost and design considerations. Upon completion, students should be able to prepare files and select appropriate output methods for design solutions.

GRD 280 Portfolio Design (Spring) 2 4 4
Prerequisites: GRD 142 and GRD 152 or GRA 152
Corequisites: None
This course covers the organization and presentation of a design/advertising or graphic art portfolio and appropriate related materials. Emphasis is placed on development and evaluation of the portfolio, design and production of a resume and self-promotional mate- rials, and interview techniques. Upon completion, students should be able to prepare and professionally present an effective portfolio and related self-promotional materials.

GRD 281 Design of Advertising (Fall) 1 3 2
Prerequisites: GRD 151
Corequisites: None
This course explores the origins, roles, scope, forms , and development of advertising. Emphasis is place on advertising development from idea through production and the interrelationship of marketing to types of advertising, media, and organizational structure. Upon completion, students should be able to demonstrate an understanding of the complexities and relationships involved in advertising design.

GRD 285 Client/Media Relations (Spring) 1 2 2
Prerequisites: GRD 142 and GRA 121 or GRA 152 or GRD 152
Corequisites: None
This course introduces media pricing, scheduling, and business ethics. Emphasis is placed on communication with clients and determination of clients' advertising needs. Upon completion, students should be able to use professional communication skills to effectively orchestrate client/media relationships.

GRO 120 Gerontology 3 0 0 3
Prerequisites: DRE 097
Corequisites: 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.

GRO 220 Psy/Soc. Aspects of Aging (Spring) 3 0 0 3
Prerequisites: PSY 150
Corequisites: None
This course covers the individual and social aspects of the aging process. Topics include psychological and social factors of aging; roles of older adults within families, work, and community; and adjustments to aging and retirement.

GRO 230 Health Wellness & Nutrition (Spring) 3 2 0 4
Prerequisites: DRE 097, MAT 143, ENG 111
Corequisites: None
This course covers the basic concepts of health, wellness, and nutrition related to aging. Emphasis is placed on nutrition and diet, physical activity and exercise, and maintenance of well-being. Upon completion, students should be able to identify health, wellness, and nutrition concepts related to aging.

HBI 110 Issues and Trends in HBI (Spring) 3 0 0 3
Prerequisites: None
Corequisites: None
This course is a survey of current and emerging technology applications and data standards in the healthcare industry. Topics include history, implementation, use, management, and impact of information technology in healthcare settings. Upon completion, students should have an understanding of the current trends and issues in healthcare informatics.

HBI 113 Survey of Med Insurance (Fall, Spring) 3 0 0 3
Prerequisites: None
Corequisites: None
This course is a survey of the healthcare insurance systems. Emphasis is placed on the foundation necessary for understanding the healthcare delivery system, terminology and practices of healthcare insurance, and provider reimbursement. Upon completion, students should have an understanding of healthcare insurance and how outcomes are addressed through healthcare informatics.

HBI 250 Data Management & Utilization (Fall) 2 2 0 3
Prerequisites: DBA 110
Corequisites: None
This course covers the management and usage of data in healthcare settings according to current practices in healthcare informatics. Topics include data warehousing, data integrity, data security, data mining, and report generating in healthcare settings. Upon completion, students should be able to demonstrate and understanding of using healthcare data to support reporting and decision making in healthcare settings.

HEA 110 Personal Health/Wellness (Fall, Spring, Summer) 3 0 3
Prerequisites: None
Corequisites: None
This course provides an introduction to basic personal health and wellness. Emphasis is placed on current health issues such as nutrition, mental health, and fitness. Upon completion, students should be able to demonstrate an

understanding of the factors necessary to the maintenance of health and wellness. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

HEA 112 First Aid and CPR (Fall, Spring) 1 2 2
Prerequisites: None
Corequisites: None
This course introduces the basics of emergency first aid treatment. Topics include rescue breathing, CPR, first aid for choking and bleeding, and other first aid procedures. Upon completion, students should be able to demonstrate skills in providing emergency care for the sick and injured until medical help can be obtained. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.

HIS 111 World Civilizations I (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces world history from the dawn of civilization to the early modern era. Topics include Eurasian, African, American, and Greco-Roman civilizations and Christian, Islamic and Byzantine cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in pre-modern world civilizations. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/Behavioral Sciences. This is a Universal General Education Transfer Component (UGETC) course.

HIS 112 World Civilizations II (Intermittently) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces world history from the early modern era to the present. Topics include the cultures of Africa, Europe, India, China, Japan, and the Americas. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern world civilizations. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/Behavioral Sciences. This is a Universal General Education Trans- fer Component (UGETC) course.

HIS 116 Current World Problems (Intermittently) 3 0 3
Prerequisites: None
Corequisites: 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 for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a premajor and/or elective course requirement.

HIS 131 American History I (Fall, Spring) 3 0 3

Prerequisites: None

Corequisites: None

This course is a survey of American history from pre-history through the Civil War era. Topics include the migrations to the Americas, the colonial and revolutionary periods, the development of the Republic, and the Civil War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early American history. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/Behavioral Sciences. This is a Universal General Education Transfer Component (UGETC) course.

HIS 132 American History II (Fall, Spring) 3 0 3

Prerequisites: None

Corequisites: None

This course is a survey of American history from the Civil War era to the present. Topics include industrialization, immigration, the Great Depression, the major American wars, the Cold War, and social conflict. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in American history since the Civil War. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/Behavioral Sciences. This is a Universal General Education Transfer Component (UGETC) course.

HIS 145 The Second World War (Intermittently) 3 0 3

Prerequisites: None

Corequisites: None

This course covers the period of the Second World War from 1919 to 1945. Topics include the Treaty of Versailles, the rise of totalitarian regimes, the origins of the war, the major military campaigns in Europe and the Pacific, and the aftermath. Upon completion, students should be able to analyze significant political, military, socioeconomic, and cultural developments that influenced the Second World War. This course has been approved for transfer under The Comprehensive Articulation Agreement (CAA) and the ICAA as a pre-major and/or elective course requirement.

HIS 226 The Civil War (Intermittently) 3 0 3

Prerequisites: None

Corequisites: None

This course examines the social, political, economic, and ideological forces that led to the Civil War and Reconstruction. Topics include regional conflicts and sectionalism, dissolution of the Union, military campaigns, and the War's socioeconomic impact, aftermath, and consequences. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in the United States during the era of the Civil War. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a premajor and/or elective course requirement.

HIS 228 History of the South (Intermittently) 3 0 3

Prerequisites: None

Corequisites: 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 for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a premajor and/or elective course requirement.

HIS 236 North Carolina History (Intermittently) 3 0 3

Prerequisites: None

Corequisites: None

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

HIS 261 East Asian History (Intermittently) 3 0 3

Prerequisites: None

Corequisites: None

This course surveys the history of China and Japan from the development of civilization in Asia to the present. Emphasis is placed on the evaluation of social, political, economic, and governmental structures in China and Japan. Upon completion, students should be able to analyze significant political, socioeconomic, and

cultural developments in East Asia. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a premajor and/or elective course requirement.

HMT 110 Intro to Healthcare Management (Fall) 3 0 0 3
Prerequisites: None
Corequisites: None
This course introduces the functions, practices, organizational structures, and professional issues in healthcare management. Emphasis is placed on planning, controlling, directing, and communications within health and human services organizations. Upon completion, students should be able to apply the concepts of management within a healthcare service environment.

HRM 110 Introduction to Hospitality and Tourism (Fall) 3 0 3
Prerequisites: None
Corequisites: None
This course covers the growth and progress of the hospitality industry. Topics include tour- ism, lodging, resorts, gaming, restaurants, foodservice, and clubs. Upon completion, students should be able to demonstrate an understanding of the background, context, and career opportunities that exist within the hospitality industry.

HRM 120 Front Office Procedures (Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces a systematic approach to lodging front office procedures. Topics include reservations, registration, guest satisfaction, occupancy and revenue management, security, interdepartmental communications, and related guest services. Upon completion, students should be able to demonstrate a basic understanding of current front office operating systems, including efficient and courteous guest services.

HRM 130 Bed and Breakfast Management (Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course provides an overview of the management of bed and breakfast facilities. Emphasis is placed on lifestyle commitment, property needs, computer operations, business and marketing plans, customer service and facility management. Upon completion, students should be able to describe and apply the principles of management unique to the bed and breakfast industry.

HRM 140 Legal Issues-Hospitality (Fall) 3 0 3

Prerequisites: None

Corequisites: None

This course covers the rights and responsibilities that the law grants to or imposes upon the hospitality industry. Topics include federal and state regulations, historical and current practices, safety and security, risk management, loss prevention, relevant torts, and con- tracts. Upon completion, students should be able to demonstrate an understanding of the legal system and the concepts necessary to prevent or minimize organizational liability.

HRM 210 Meetings and Event Planning (Fall) 3 0 3

Prerequisites: None

Corequisites: None

This course introduces concepts related to the planning and operation of conventions, trade shows, professional meetings, and foodservice events. Emphasis is placed on methods of marketing, selling, organizing, and producing conventions, events, and trade shows that will increase financial and environmental value. Upon completion, students should be able to demonstrate an understanding of management principles for multi-function, multi-day conferences and events.

HRM 220 Cost Control - Food and Beverage (Spring) 3 0 3

Prerequisites: DMA 010, DMA 020, DMA 030, 040

Corequisites: None

This course introduces controls and accounting procedures as applied to costs in the hospitality industry. Topics include reports, cost control, planning and forecasting, control systems, financial statements, operational efficiencies, labor controls, and scheduling. Upon completion, students should be able to demonstrate an understanding of food, beverage, and labor cost control systems for operating troubleshooting and problem solving.

HRM 225 Beverage Management (Fall) 3 0 3

Prerequisites: None

Corequisites: None

This course introduces the management of beverages served in hospitality operations, Topics include history and trends; service, procurement, and storage; knowledge and control of wines and fermented/distilled beverages; and non-alcoholic beverages, coffees, and teas. Upon completion, students should be able to demonstrate an understanding of responsible alcohol service and the knowledge of beverages consumed in a hospitality operation.

HRM 240 Marketing for Hospitality (Spring) 3 0 3

Prerequisites: None

Corequisites: None

This course covers planning, organizing, directing, and analyzing the results of marketing programs for the hospitality industry. Emphasis is placed on target marketing, marketing mix, analysis, product and image development, use of current media, sales planning, advertising, public relations, and collateral materials. Upon completion, students should be able to apply the marketing process as it relates to the hospitality industry.

HRM 245 Human Resource Management - Hospitality (Fall) 3 0 3

Prerequisites: None

Corequisites: None

This course introduces a systematic approach to human resource management in the hospitality industry. Topics include training/development, staffing, selection, hiring, recruitment, evaluation, benefit administration, employee relations, labor regulations/laws, discipline, motivation, productivity, shift management, contract employees, and organizational culture. Upon completion, students should be able to apply human resource management skills for the hospitality industry.

HRM 280 Management Problems - Hospitality (Spring) 3 0 3

Prerequisites: HRM 110

Corequisites: None

This course is designed to introduce students to timely issues within the hospitality industry and is intended to move students into a managerial mindset. Emphasis is placed on problem-solving skills using currently available resources. Upon completion, students should be able to demonstrate knowledge of how hospitality management principles may be applied to real challenges facing industry managers.

HSE 110 Intro to Human Services (Fall, Spring) 2 2 0 3

Prerequisites: None

Corequisites: None

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

HSE 112 Group Process I (Fall, Spring) 1 2 0 2
Prerequisites: None
Corequisites: None
This course introduces interpersonal concepts and group dynamics. Emphasis is placed on self-awareness facilitated by experiential learning in small groups with analysis of personal experiences and the behavior of others. Upon completion, students should be able to show competence in identifying and explaining how people are influenced by their interactions in group settings.

HSE 123 Interviewing Techniques (Fall, Spring) 2 2 0 3
Prerequisites: None
Corequisites: 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.

HSE 125 Counseling (Fall, Spring) 2 2 0 3
Prerequisites: PSY 150
Corequisites: 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.

HSE 210 Human Service Issues (Fall, Spring) 2 0 0 2
Prerequisites: None
Corequisites: 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.

HSE 220 Case Management (Fall, Spring) 2 2 0 3
Prerequisites: HSE 110
Corequisites: None
This course covers the variety of tasks associated with professional case management. Topics include treatment planning, needs assessment, referral procedures, and follow-up and integration of services. Upon completion, students should

be able to effectively manage the care of the whole person from initial contact through termination of services.

HSE 225 Crisis Intervention (Fall, Spring) 3 0 3
Prerequisites: HSE 110, MAT 143, ENG 111
Corequisites: 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.

HUM 110 Technology and Society (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: 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 (CAA) and ICAA as a general education course in Humanities/Fine Arts.

HUM 115 Critical Thinking (Fall, Spring) 3 0 3
Take one set: Set 1: DRE 098; Set 2: ENG 002; Set 3: BSP 4002; Set 4: ENG 111
Corequisites: None
This course introduces the use of critical thinking skills in the context of human conflict. Emphasis is placed on evaluating information, problem solving, approaching cross-cultural perspectives, and resolving controversies and dilemmas. Upon completion, students should be able to demonstrate orally and in writing the use of critical thinking skills in the analysis of appropriate texts. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in the Humanities/Fine Arts.

HUM 120 Cultural Studies (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the distinctive features of a particular culture. Topics include art, his- tory, music, literature, politics, philosophy, and religion. Upon completion, students should be able to appreciate the unique character of the study culture. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts.

HUM 130 Myth in Human Culture (Intermittently) 3 0 3

Prerequisites: None

Corequisites: 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 for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts.

HUM 160 Introduction to Film (Intermittently) 2 2 3

Prerequisites: None

Corequisites: None

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

HUM 180 International Cultural Exploration (Intermittently) 2 3 3

Prerequisites: None

Corequisites: None

This course provides a framework for students to visit, examine, and analyze a country/region outside the United States to learn about the place and people. Upon completion, students should be able to identify similarities/differences, analyze causes/effects, and clearly articulate the impact of one or more cultural elements. This course has been approved for transfer under The Comprehensive Articulation Agreement (CAA) and the ICAA as a pre-major and/or elective course requirement.

HYD 110 Hydraulics/Pneumatics I (Fall) 2 3 3

Prerequisites: DMA 010, DMA 020, and DMA 030

Corequisites: None

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

HYD 110AB Hydraulics/Pneumatics I-AB (Fall) 2 0 2
Prerequisites: DMA 010, DMA 020 and DMA 030, and DMA 040
Corequisites: None
The first of two parts of HYD 110.

HYD 110BB Hydraulics/Pneumatics I-BB (Spring) 0 3 1
Prerequisites: HYD 110AB
Corequisites: None
A continuation of HYD 110AB and final part of HYD 110.

INT 110 International Business (Spring) 3 0 3
Prerequisites: DRE 097
Corequisites: None
This course provides an overview of the environment, concepts, and basic differences involved in international business. Topics include forms of foreign involvement, international trade theory, governmental influences on trade and strategies, international organizations, multinational corporations, personnel management, and international marketing. Upon completion, students should be able to describe the foundation of international business.

ISC 112 Industrial Safety (Fall, Spring) 2 0 2
Prerequisites: None
Corequisites: None
This course introduces the principles of industrial safety. Emphasis is placed on industrial safety and OSHA and environmental regulations. Upon completion, students should be able to demonstrate knowledge of a safe working environment and OSHA compliance. This course meets the OSHA requirement for the 30 hour general industry outreach training and students are eligible to receive an OSHA-issued completion card.

LOG 110 Introduction to Logistics (Intermittently) 3 0 3
Prerequisites: None
Corequisites: None
This course provides an overview of logistics. Topics include traffic management, warehousing, inventory control, material handling, global logistics, and the movement and storage of goods from raw materials sources to end consumers. Upon completion, students should be able to identify the different segments of logistics and use the terminology of the industry.

LOG 125 Transportation Logistics (Intermittently) 3 0 3
Prerequisites: None
Corequisites: None
This course covers the role and importance of the transportation industry. This is an over- view of transportation emphasizing its environmental and sociological aspects, economic impact, services, regulatory guidelines, policies, and its future. Upon completion, students should be able to identify modes of transportation, interpret governing regulations, and describe the principles and terminology used in the transportation industry.

LOG 211 Distribution Management (Intermittently) 2 2 3
Prerequisites: LOG 110
Corequisites: None
This course covers the functions, techniques, and tools utilized in warehousing and distribution centers and their role in business and logistics. Emphasis is placed on warehouse and distribution center management, operations, productivity, software systems, picking, automation, cross docking, safety, security, material handling, benchmarking, and cost. Upon completion, students should be able to describe the role of warehouses and distribution centers, apply industry principles and terminology, and understand distribution productivity measures.

LOG 215 Supply Chain Management (Intermittently) 3 0 3
Prerequisites: LOG 110
Corequisites: None
This course covers all activities involved in the flow of products and information between the suppliers, customers, producers, and service providers. Topics include acquiring, pur- chasing, manufacturing, assembling, and distributing goods and services throughout the supply chain organizations. Upon completion, students should be able to identify the supply chain units and describe the materials management processes.

LOG 225 Logistics Systems (Intermittently) 3 2 4
Prerequisites: LOG 215
Corequisites: None
This course covers the design, implementation, and application of logistics software systems utilized by businesses to improve accountability, and capabilities of their logistics processes. Emphasis is placed on an in-depth understanding of logistical software applications, optimization models, automated data collection, electronic data interchange, and other logistics software tools. Upon completion,

students should be able to identify the various logistics software applications and explain how they are utilized to improve business and logistics processes.

LOG 235 Import/Export Management (Intermittently) 3 0 3
Prerequisites: LOG 125
Corequisites: None
This course introduces the elements of import and export operations, from transportation to documentation, finance, and security and the effects on the global supply chain. Emphasis is placed on existing import/export regulations, customs documentation, intermodal transportation, foreign freight forwarders, global technology, and homeland security initiatives. Upon completion, students should be able to perform import/export operations, channels of distribution, implemented technologies, and associate with operating a secure supply chain.

LOG 240 Purchasing Logistics (Intermittently) 3 0 3
Prerequisites: LOG 110
Corequisites: None
This course introduces the various aspects of purchasing, and their impact on materials management, supply chain, transportation, and global logistics processes. Emphasis is placed on the different methods of electronic sourcing, negotiating and pricing principles, and on the internal and external considerations associated with international logistics. Upon completion, students should be able to describe and apply the principles and terminology used in procurement including electronic data interchange services, purchasing and logistics systems.

LOG 250 Advanced Global Logistics (Intermittently) 3 2 4
Prerequisites: LOG 125
Corequisites: None
This course covers the advanced application of global operations and logistics strategies, planning, technology, risk, and management necessary to cope with the global business environment. Emphasis is placed on an in-depth understanding of global sourcing, ship- ping, tracking, and e-logistics systems necessary to operate inbound/outbound logistics in a global market. Upon completion, students should be able to identify the different global markets and logistics technology available to process international inbound/outbound logistics transactions.

MAC 121 Introduction to CNC (Fall) 2 0 2
Prerequisites: None
Corequisites: None
This course introduces the concepts and capabilities of computer numerical control ma- chine tools. Topics include set-up, operation, and basic applications. Upon completion, students should be able to explain operator safety, machine protection, data input, program preparation, and program storage.

MAC 122 CNC Turning (Fall) **1 3 2**
Prerequisites: MAC 121
Corequisites: None
This course introduces the programming, setup, and operation of CNC turning centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC turning centers.

MAC 124 CNC Milling (Spring) **1 3 2**
Prerequisites: MAC 121
Corequisites: None
This course introduces the manual programming, setup, and operation of CNC machining centers. Topics include programming formats, control functions, program editing, part
production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC machining centers.

MAC 141 Machining Applications I (Fall) **2 6 4**
Prerequisites: None
Corequisites: None
This course provides an introduction to a variety of material-working processes that are common to the machining industry. Topics include safety, process specific machining equipment, measurement devices, setup and layout instruments, and common shop practices. Upon completion, students should be able to safely demonstrate basic machining operations, accurately measure components, and effectively use layout instruments.

MAC 141AB Machining Applications I-AB **1 3 2**
Prerequisites: None
Corequisites: None
The first of two parts of MAC 141.

MAC 141BB Machining Applications I-BB **1 3 2**
Prerequisites: MAC 141AB
Corequisites: None
A continuation of MAC 141AB and second part of MAC 141.

MAC 141A Machining Applications I Lab (Fall) **0 6 2**
Prerequisites: None
Corequisites: MAC 141
This course provides an introduction to a variety of material-working processes, in a laboratory setting, that are common to the machining industry. Topics

include safety, process- specific machining equipment, measurement devices, set-up and layout instruments, and common shop practices. Upon completion, students should be able to safely demonstrate basic machining operations, accurately measure components, and effectively use layout instruments.

MAC 142 Machining Applications II (Spring) 2 6 4
Prerequisites: MAC 141
Corequisites: None
This course provides instruction in the wide variety of processes associated with machining. Topics include safety, equipment set-up, holding fixtures, tooling, cutting speeds and depths, metal properties, and proper finishes. Upon completion, students should be able to safely demonstrate advanced machining operations, accurately measure components, and produce accurate components with a proper finish.

MAC 142A Machining Applications II Lab (Spring) 0 6 2
Prerequisites: MAC 141
Corequisites: MAC 142
This course provides laboratory instruction in the wide variety of processes associated with machining. Topics include safety, equipment setup, holding fixtures, tooling, cutting speeds and depths, metal properties, and proper finishes. Upon completion, students should be able to safely demonstrate advanced machining operations, accurately measure components, and produce accurate components with a proper finish.

MAC 143 Machining Applications III (Summer) 2 6 4
Prerequisites: MAC 142 and MAC 142A
Corequisites: None
This course provides instruction in the field of advanced machining. Emphasis is placed on creating complex components, close-tolerance machining, precise measurement, and proper equipment usage. Upon completion, students should be able to demonstrate the ability to produce an accurately machined component with a quality finish using the proper machining process.

MAC 151 Machining Calculations (Fall) 1 2 2
Prerequisites: None
Corequisites: None
This course introduces basic calculations as they relate to machining occupations. Emphasis is placed on basic calculations and their applications in the machine shop. Upon completion, students should be able to perform basic shop calculations.

MAC 152 Advanced Machining Calculations (Spring) 1 2 2
Prerequisites: MAC 151
Corequisites: None
This course combines mathematical functions with practical machine shop applications and problems. Emphasis is placed on gear ratios, lead screws, indexing problems, and their applications in the machine shop. Upon completion, students should be able to calculate solutions to machining problems.

MAC 171 Measure/Material & Safety (Fall) 0 2 1
Prerequisites: None
Corequisites: None
This course introduces precision measuring instruments, process control and adjustment, inspection, material handling and workplace safety. Topics include properly identifying and handling various measurement instruments and materials, process control, adjustment and improvement, personal protective equipment (PPE) and OSHA safety regulations. Upon completion, students should be able to safely demonstrate effective measurement techniques, identify and handle various materials, and explain safe industry practices

MAC 222 Advanced CNC Turning (Spring) 1 3 2
Prerequisites: MAC 122 and MEC 231
Corequisites: None
This course covers advanced methods in setup and operation of CNC turning centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC turning centers.

MAC 224 Advanced CNC Milling (Fall) 1 3 2
Prerequisites: MAC 124
Corequisites: None
This course covers advanced methods in setup and operation of CNC machining centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC machining centers.

MAC 226 CNC EDM Machining (Spring) 1 3 2
Prerequisites: MAC 121 and MEC 231
Corequisites: None
This course introduces the programming, setup, and operation of CNC electrical discharge machines. Topics include programming formats, control functions, program editing, production of parts, and inspection. Upon completion, students should be able to manufacture simple parts using CNC electrical discharge machines.

MAC 234 Advanced Multi-Axis Machining (Spring) 2 3 3
Prerequisites: MAC 224 and MEC 231
Corequisites: None
This course includes multi-axis machining using machining centers with multi-axis capabilities. Emphasis is placed on generation of machining center input with a CAM system and setup and operation of pallet changer and rotary system for multi-axis machining fixtures. Upon completion, students should be able to convert CAD to output for multi-axis machining centers, including tooling, setup, and debugging processes.

MAC 241 Jigs and Fixtures I (Fall) 2 6 4
Prerequisites: MAC 142
Corequisites: None
This course introduces the application and use of jigs and fixtures. Emphasis is placed on design and manufacture of simple jigs and fixtures. Upon completion, students should be able to design and build simple jigs and fixtures.

MAC 241AB Jigs and Fixtures I-AB (Fall) 1 3 2
Prerequisites: MAC 142
Corequisites: None
The first of two parts of MAC 241.

MAC 241BB Jigs and Fixtures I-BB (Spring) 1 3 2
Prerequisites: MAC 241AB
Corequisites: None
A continuation of MAC 241AB and final part of MAC 241.

MAC 247 Production Tooling (Spring) 2 0 2
Prerequisites: MAC 141
Corequisites: 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.

MAC 248 Production Procedures (Spring) 1 2 2
Prerequisites: MAC 122, MAC 124, and MEC 231
Corequisites: None
This course covers product planning and control and scheduling and routing of operations. Topics include cost-effective production methods, dimensional and statistical quality control, and the tooling and machines required for production.

Upon completion, students should be able to plan, set up, and produce cost-effective quality machined parts.

MAT 121 Algebra/Trigonometry I (Fall, Spring) 2 2 3
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, and DMA 060 or DMA 025, DMA 045, DMA 060, or MAT 003 with a grade of P3
Corequisites: None
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 the properties of plane and solid geometry, area and volume, and basic proportion applications; simplification, evaluation, and solving of algebraic equations and inequalities and radical functions; complex numbers; right triangle trigonometry; and systems of equations. Upon completion, students will be able to demonstrate the ability to use mathematics and technology for problem solving, analyzing and communicating results.

MAT 143 Quantitative Literacy (Fall, Spring, Summer) 2 2 3
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, and DMA 050, and DRE 098, or DMA 025, DMA 045, DRE 098, or MAT 003 with a grade of P2
Corequisites: None
This course is designed to engage students in complex and realistic situations involving the mathematical phenomena of quantity, change and relationship, and uncertainty through project- and activity-based assessment. Emphasis is placed on authentic contexts which will introduce the concepts of numeracy, proportional reasoning, dimensional analysis, rates of growth, personal finance, consumer statistics, practical probabilities, and mathematics for citizenship. Upon completion, students should be able to utilize quantitative information as consumers and to make personal, professional, and civic decisions by decoding, interpreting, using, and communicating quantitative information found in modern media and encountered in everyday life. This course has been approved for transfer under the CAA and ICAA as a general education course in Mathematics. This is a Universal General Education Transfer Component (UGETC) course.

MAT 152 Statistical Methods I (Fall, Spring, Summer) 3 2 4
Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, and DMA 050, and DRE 098, or DMA 025, DMA 045, DRE 098 , or MAT 003 with a grade of P2
Corequisites: None
This course provides a project-based approach to introductory statistics with emphasis on using real-world data and statistical literacy. Topics include descriptive statistics, correlation and regression, basic probability, discrete and continuous probability distributions, confidence intervals and hypothesis testing. Upon completion, students should be able to use appropriate technology to describe

important characteristics of a data set, draw inferences about a population from sample data, and interpret and communicate results. This course has been approved for transfer under the CAA and ICAA as a general education course in Mathematics. This is a Universal General Education Transfer Component (UGETC) course.

MAT 171 Precalculus Algebra (Fall, Spring, Summer) 3 2 4

Prerequisites: DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070, and DMA 080; or MAT 121, or DMA 025, DMA 045, DMA 065, or MAT 003 with a grade of P_3

Corequisites: None

This course is designed to develop topics which are fundamental to the study of Calculus. Emphasis is placed on solving equations and inequalities, solving systems of equations and inequalities, and analysis of functions (absolute value, radical, polynomial, rational, exponential, and logarithmic) in multiple representations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to algebra- related problems with and without technology. This course has been approved for transfer under the CAA and ICAA as a general education course in Mathematics. This is a Universal General Education Transfer Component (UGETC) course.

MAT 172 Precalculus Trigonometry (Fall, Spring, Summer) 3 2 4

Prerequisites: MAT 171

Corequisites: None

This course is designed to develop an understanding of topics which are fundamental to the study of Calculus. Emphasis is placed on the analysis of trigonometric functions in multiple representations, right and oblique triangles, vectors, polar coordinates, conic sections, and parametric equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to trigonometry-related problems with and without technology. This course has been approved for transfer under the CAA and ICAA as a general education course in Mathematics. This is a Universal General Education Transfer Component (UGETC) course.

MAT 263 Brief Calculus (Spring) 3 2 4

Prerequisites: MAT 171

Corequisites: None

This course is designed to introduce concepts of differentiation and integration and their application to solving problems. Topics include 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 for transfer under the CAA and ICAA as a general education course in Mathematics. This is a Universal General Education Transfer Component (UGETC) course.

MAT 271 Calculus I (Fall, Spring, Summer) 3 2 4
Prerequisites: MAT 172
Corequisites: None
This course is designed to develop the topics of differential and integral calculus. Emphasis is placed on limits, continuity, derivatives and integrals of algebraic and transcendental functions of one variable. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to derivative-related problems with and without technology. This course has been approved for transfer under the CAA and ICAA as a general education course in Mathematics. This is a Universal General Education Transfer Component (UGETC) course.

MAT 272 Calculus II (Fall, Spring) 3 2 4
Prerequisites: MAT 271
Corequisites: None
This course is designed to develop advanced topics of differential and integral calculus. Emphasis is placed on the 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 select and use appropriate models and techniques for finding solutions to integral-related problems with and without technology. This course has been approved for transfer under the CAA and ICAA as a general education course in Mathematics. This is a Universal General Education Transfer Component (UGETC) course.

MAT 273 Calculus III (Fall, Spring, Summer) 3 2 4
Prerequisites: MAT 272
Corequisites: None
This course is designed to develop the topics of multivariate calculus. Emphasis is placed on multivariate functions, partial derivatives, multiple integration, solid analytical geometry, vector valued functions, and line and surface integrals. Upon completion, students should be able to select and use appropriate models and techniques for finding the solution to multivariate-related problems with and without technology. This course has been approved for transfer under the CAA and ICAA as a general education course in Mathematics.

MAT 280 Linear Algebra (Fall) 2 2 3
Prerequisites: MAT 271
Corequisites: None
This course provides an introduction to linear algebra topics. Emphasis is placed on the development of abstract concepts and applications for vectors, systems of equations, matrices, determinants, vector spaces, multi-dimensional linear transformations, eigenvectors, eigenvalues, diagonalization and orthogonality. Upon completion, students should be able to demonstrate understanding of the theoretical concepts and select and use appropriate models and techniques for finding solutions to linear algebra-related problems with and without technology. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

MAT 285 Differential Equations (Spring) 2 2 3
Prerequisites: MAT 272
Corequisites: None
This course provides an introduction to topics involving ordinary differential equations. Emphasis is placed on the development of abstract concepts and applications for first- order and linear higher-order differential equations, systems of differential equations, numerical methods, series solutions, eigenvalues and eigenvectors, and LaPlace transforms. Upon completion, students should be able to demonstrate understanding of the theoretical concepts and select and use appropriate models and techniques for finding solutions to differential equations-related problems with and without technology. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

MEC 231 Computer-Aided Manufacturing I (Fall) 1 4 3
Prerequisites: DFT 119
Corequisites: None
This course introduces computer-aided design/manufacturing (CAD/CAM) applications and concepts. Topics include software, programming, data transfer and verification, and equipment setup. Upon completion, students should be able to produce parts using CAD/ CAM applications.

MEC 231AB Computer-Aided Manufacturing I-AB (Fall) 1 2 2
Prerequisites: DFT 119
Corequisites: None
The first of two parts of MEC 231.

MEC 231BB Computer-Aided Manufacturing I-BB (Spring) 0 2 1
Prerequisites: MEC 231AB
Corequisites: None
A continuation of MEC 231AB and final part of MEC 231.

MEC 232 Computer-Aided Manufacturing II (Spring) 1 4 3
Prerequisites: MEC 231
Corequisites: None
This course provides an in-depth study of CAM applications and concepts. Emphasis is placed on the manufacturing of complex parts using computer-aided manufacturing soft- ware. Upon completion, students should be able to manufacture complex parts using CAM software.

MEC 232AB Computer-Aided Manufacturing II-AB (Fall) 1 2 2
Prerequisites: MEC 231
Corequisites: None
The first of two parts of MEC 232.

MEC 232BB Computer-Aided Manufacturing II-BB (Spring) 0 2 1
Prerequisites: MEC 232AB
Corequisites: None
A continuation of MEC 232AB and final part of MEC 232.

MED 110 Orientation to Medical Assist (Fall) 1 0 1
Prerequisites: Admission to MA Program
Corequisites: MED 130, ACA 122, BIO 163, OST 141, OST 149, ENG 111
This course covers the history of medicine and the role of the medical assistant in the health care setting. Emphasis is placed on professionalism, communication, attitude, behaviors, and duties in the medical environment. Upon completion, students should be able to project a positive attitude and promote the profession of medical assisting.

MED 130 Administrative Office Procedures I (Fall) 1 2 2
Prerequisites: Admission to MA Program
Corequisites: MED 110, ACA 122, BIO 163, OST 141, ENG 111, OST 149
This course introduces medical office administrative procedures. Topics include appointment processing, written and oral communications, medical records, patient orientation, and safety. Upon completion, students should be able to perform basic administrative skills within the medical environment.

MED 131 Administrative Office Procedures II (Spring) 1 2 2
Prerequisites: MED 110, MED 130, ACA 122, BIO 163, ENG 111, OST 141, OST 149
Corequisites: MED 140, MED 150, OST 142, PSY 150
This course provides medical office procedures in both economic and management skills. Topics include physical plant maintenance, equipment and supplies, liability coverage, medical economics, and introductory insurance procedures. Upon completion, students should be able to manage the economics of the medical office and supervise personnel.

MED 140 Exam Room Procedures I (Spring) 3 4 5
Prerequisites: MED 110, MED 130, ACA 122, BIO 163, ENG 111, OST 141, OST 149
Corequisites: MED 150, OST 142, MED 131, PSY 150
This course provides instruction in clinical examining room procedures. Topics include asepsis, infection control, assisting with exams and treatment, patient education, preparation and administration of medications, EKG, vital signs, and medical emergencies. Upon completion, students should be able to demonstrate competence in exam room procedures.

MED 150 Laboratory Procedures I (Spring) 3 4 5
Prerequisites: MED 110, MED 130, ACA 122, BIO 163, OST 141, OST 149, ENG 111
Corequisites: MED 140, OST 142, MED 131, PSY 150
This course provides instruction in basic lab techniques used by the medical assistant. Topics include lab safety, quality control, collecting and processing specimens, performing selective tests, phlebotomy, screening and follow-up of test results, and OSHA/CLIA regulations. Upon completion, students should be able to perform basic lab tests/skills based on course topics.

MED 240 Exam Room Procedures II (Fall) 3 4 5
Prerequisites: MED 260 and MED 262
Corequisites: None
This course is designed to expand and build upon skills presented in MED 140. Emphasis is placed on advanced exam room procedures. Upon completion, students should be able to demonstrate enhanced competence in selected exam room procedures.

MED 260 MED Clinical Practicum (Summer) 0 0 15 5
Prerequisites: MED 140, MED 150, OST 142, PSY 150, MED 131
Corequisites: MED 262
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.

MED 262 Clinical Perspectives (Summer) 1 0 1
Prerequisites: MED 140, MED 150, OST 142, PSY 150, MED 131
Corequisites: MED 260
This course is designed to explore personal and occupational responsibilities of the practicing medical assistant. Emphasis is placed on problems encountered during externships and development of problem-solving skills. Upon completion, students should be able to demonstrate courteous and diplomatic behavior when solving problems in the medical facility.

MED 270 Symptomatology (Fall) 2 2 3
Prerequisites: MED 260, MED 262
Corequisites: None
This course covers the study of disease symptoms and the appropriate actions taken by medical assistants in a medical facility in relation to these symptoms. Emphasis is placed on interviewing skills and appropriate triage, preparing patients for procedures, and screening test results. Upon completion, students should be able to recognize how certain symptoms relate to specific diseases, recognize emergency situations, and take appropriate actions.

MED 272 Drug Therapy (Spring) 3 0 3
Prerequisites: MED 260, MED 262
Corequisites: 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.

MED 274 Diet Therapy / Nutrition 3 0 3
Prerequisites: MED 260, MED 262
Corequisites: None
This course introduces the basic principles of nutrition as they relate to health and disease. Topics include basic nutrients, physiology, dietary deficiencies, weight management, and therapeutic nutrition in wellness and disease. Upon completion, students should be able to interpret clinical and dietary data and provide patient counseling and education.

MKT 120 Principles of Marketing (Fall) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces principles and problems of marketing goods and services. Topics include promotion, placement, and pricing strategies for products. Upon completion, students should be able to apply marketing principles in organizational decision making.

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

MNT 110 Introduction to Maintenance Procedures (Spring) 1 3 2

Prerequisites: None
Corequisites: None
This course covers basic maintenance fundamentals for power transmission equipment. Topics include equipment inspection, lubrication, alignment, and other scheduled maintenance procedures. Upon completion, students should be able to demonstrate knowledge of accepted maintenance procedures and practices according to current industry standards.

MUS 110 Music Appreciation (Fall, Spring) 3 0 3

Prerequisites: None
Corequisites: None
This course is a basic survey of the music of the Western world. Emphasis is placed on the elements of music, terminology, composers, form, and style within a historical perspective. Upon completion, students should be able to demonstrate skills in basic listening and understanding of the art of music. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts. This is a Universal General Education Transfer Component (UGETC) course.

MUS 112 Introduction to Jazz (Fall, Spring) 3 0 3

Prerequisites: None
Corequisites: None
This course introduces the origins and musical components of jazz and the contributions of its major artists. Emphasis is placed on the development of discriminating listening habits, as well as the investigation of the styles and structural forms of the jazz idiom. Upon completion, students should be able to demonstrate skills in listening and understanding this form of American music. This is a Universal General Education Transfer Component (UGETC) course.

NET 125 Introduction to Networks (Fall) 1 4 3

Prerequisites: None
Corequisites: 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.

NET 126 Routing Basics (Spring) **1 4 3**

Prerequisites: NET 125

Corequisites: 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.

NET 225 Routing and Switching I (Fall) **1 4 3**

Prerequisites: NET 126

Corequisites: 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.

NET 226 Routing and Switching II (Intermittently) **1 4 3**

Prerequisites: NET 225

Corequisites: None

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

NOS 120 Linux/UNIX Single User (Spring) **2 2 3**

Prerequisites: None

Corequisites: None

This course develops the necessary skills for students to develop both GUI and command line skills for using and customizing a Linux workstation. Topics include Linux file system and access permissions, GNOME Interface, VI editor, X Window System expression pat- tern 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.

NOS 130 Windows Single User (Fall, Spring) 2 2 3
Prerequisites: None
Corequisites: None
This course introduces operating system concepts for single-user systems. Topics include hardware management, file and memory management, system configuration/optimization, and utilities. Upon completion, students should be able to perform operating systems functions at the support level in a single-user environment.

NOS 230 Windows Administration I (Fall) 2 2 3
Prerequisites: NOS 130
Corequisites: None
This course covers the installation and configuration of a Windows Server operating system. Emphasis is placed on the basic configuration of core network services, Active Directory and group policies. Upon completion, students should be able to install and configure a Windows Server operating system.

NUR 101 Practical Nursing I (Fall) 7 6 6 11
Prerequisites: Admission to the Practical Nursing Program
Corequisites: BIO 168, MAT 171
This course introduces the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts within each domain including assessment, clinical decision making, professional behaviors, caring interventions, biophysical and psychosocial concepts, communication, collaboration, teaching/learning, safety, ethical principles, legal issues, informatics, and evidence-based practice. Upon completion, student should be able to provide safe nursing care across the lifespan incorporating the concepts identified in this course.

NUR 102 Practical Nursing II (Spring) 7 0 9 10
Prerequisites: BIO 168, MAT 171 and NUR 101
Corequisites: BIO 169
This course is designed to further develop the concepts within the three domains of the individual, nursing, and healthcare. Emphasis is placed on the concepts within each domain including clinical decision making, caring interventions, biophysical and psychosocial concepts, communication, collaboration, teaching and learning, accountability, safety, informatics, and evidence-based practice. Upon completion, students should be able to provide safe nursing care across the lifespan incorporating the concepts identified in this course.

NUR 103 Practical Nursing III (Summer) 6 0 9 9
Prerequisites: BIO 169 and NUR 102
Corequisites: ENG 111
This course is designed to assimilate the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on biophysical and psychosocial concepts, professional behaviors, healthcare systems, health policy, and quality improvement. Upon completion, students should be able to demonstrate the knowledge, skills, and attitudes necessary to provide safe, quality, and individualized entry level nursing care.

NUR 111 Introduction to Health Concepts (Fall) 4 6 6 8
Prerequisites: Admission to the Associate Degree Nursing Program
Corequisites: ACA 122, BIO 168 and CHM 130/CHM 130A
This course introduces the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts within each domain including medication administration, assessment, nutrition, ethics, interdisciplinary teams, informatics, evidence- based practice, individual-centered care, and quality improvement. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 112 Health-Illness Concepts (Spring) 3 0 6 5
Prerequisites: NUR 111, BIO 168, ACA 122, and CHM 130/CHM 130A
Corequisites: BIO 169 and PSY 150
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of acid-base, metabolism, cellular regulation, oxygenation, infection, stress/coping, health-wellness-illness, communication, caring interventions, managing care, safety, quality improvement, and informatics. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 113 Family Health Concepts (Summer) 3 0 6 5
Prerequisites: NUR 114 or NUR 214, BIO 169 and PSY 150
Corequisites: MAT 171
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of oxygenation, sexuality, reproduction, grief/loss, mood/affect, behaviors, development, family, health- wellness-illness, communication, caring interventions, managing care, safety, and advocacy. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 114 Holistic Health Concepts (Spring) 3 0 6 5
Prerequisites: NUR 112, BIO 168, ACA 122, and CHM 130/CHM 130A
Corequisites: BIO 169, PSY 150
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, inflammation, sensory perception, stress/coping, mood/affect, cognition, self, violence, health-wellness-illness, professional behaviors, caring interventions, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 211 Health Care Concepts (Fall) 3 0 6 5
Prerequisites: NUR 113 and MAT 171
Corequisites: ENG 111, PSY 241
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of cellular regulation, perfusion, infection, immunity, mobility, comfort, behaviors, health-wellness-illness, clinical decision-making, caring interventions, managing care, and safety. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 212 Health System Concepts (Fall) 3 0 6 5
Prerequisites: NUR 211 and MAT 171
Corequisites: ENG 111, PSY 241
This course is designed to further develop the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of grief/loss, violence, health-wellness-illness, collaboration, managing care, safety, advocacy, legal issues, policy, healthcare systems, ethics, accountability, and evidence-based practice. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

NUR 213 Complex Health Concepts (Spring) 4 3 15 10
Prerequisites: NUR 212, ENG 111, and PSY 241
Corequisites: ENG 114 and HUM 115 or PHI 215 or PHI 240
This course is designed to assimilate the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of fluid/electrolytes, metabolism, perfusion, mobility, stress/coping, violence, health-wellness-illness, professional behaviors, caring interventions, managing care, healthcare systems, and quality improvement. Upon completion, students should be able to demonstrate the knowledge, skills, and attitudes necessary to provide quality, individualized, entry level nursing care.

NUR 214 Nursing Transition Concepts (Spring) 3 0 3 4
Prerequisites: Admission to Associate Degree Nursing Transition Program, Licensed Practical Nurse, and NUR 101, NUR 102, NUR 103, ACA 122, BIO 168, CHM 130/CHM 130A
Corequisites: BIO 169 and PSY 150
This course is designed to introduce concepts within the three domains of the individual, healthcare, and nursing as the LPN transitions to the ADN role. Emphasis is placed on the concepts within each domain including evidenced-based practice, quality improvement, communication, safety, interdisciplinary team, clinical decision-making, informatics, assessment, caring, and health-wellness-illness. Upon completion, students should be able to provide safe nursing care incorporating the concepts identified in this course.

OST 080 Keyboarding Literacy (Fall, Spring) 1 2 2
Prerequisites: None
Corequisites: None
This course is designed to develop elementary keyboarding skills. Emphasis is placed on mastery of the keyboard. Upon completion, students should be able to demonstrate basic proficiency in keyboarding.

OST 122 Office Computations (Spring) 2 2 3
Prerequisites: None
Corequisites: None
This course covers the keypad touch method using the electronic calculator (10-key) and mathematical functions used in office applications. Topics may include budgets, discounts, purchasing, inventory, and petty cash. Upon completion, students should be able to solve a wide variety of numerical problems commonly encountered in an office setting.

OST 132 Keyboard Skill Building (Fall, Spring) 1 2 2
Prerequisites: OST 080 or 25 words per minute
Corequisites: 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.

OST 134 Text Entry and Formatting (Spring) 2 2 3
Prerequisites: OST 132
Corequisites: 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. Forty (40) WPM required to pass course.

OST 136 Word Processing (Fall, Spring) 2 2 3
Prerequisites: None
Corequisites: 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.

OST 138 Office Applications II (Spring) 2 2 3
Prerequisites: None
Corequisites: None
This course is designed to improve the efficiency in the utilization of software applications used in business offices through a hands-on approach. Emphasis is placed on in-depth usage of software to create a variety of documents applicable to current business environments. Upon completion, students should be able to master the skills required to design documents that can be customized using the latest software applications.

OST 141 Med Office Terms I (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course uses a language-structure approach to present the terminology and vocabulary that will be encountered in medical office settings. Topics include word parts that re- late to systemic components, conditions, pathology, and disorder remediation in approximately one-half of the systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms.

OST 142 Med Office Terms II (Fall, Spring) 3 0 3
Prerequisites: OST 141 or MED 121
Corequisites: None
This course is a continuation of OST 141 and continues the study, using a language-structure approach, of medical office terminology and vocabulary. Topics include word parts that relate to systemic components, conditions, pathology, and disorder remediation in the remaining systems of the human body. Upon completion, students should be able to relate words to systems, pluralize, define, pronounce, and construct sentences with the included terms.

OST 148 Med Ins & Billing (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: 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.

OST 149 Medical Legal Issues (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the complex legal, moral, and ethical issues involved in providing health-care services. Emphasis is placed on the legal requirements of medical practices; the relationship of physician, patient, and office personnel; professional liabilities; and medical practice liability. Upon completion, students should be able to demonstrate a working knowledge of current medical law and accepted ethical behavior.

OST 164 Office Editing (Spring) 3 0 3
Prerequisites: DRE 097 or ENG 002 Tier 1
Corequisites: None
This course provides a comprehensive study of editing skills needed in the workplace. Emphasis is placed on grammar, punctuation, sentence structure, proofreading, and editing. Upon completion, students should be able to use reference materials to compose and edit text.

OST 184 Records Management (Spring) 2 2 3
Prerequisites: None
Corequisites: None
This course includes the creation, maintenance, protection, security, and disposition of re- cords stored in a variety of media forms. Topics include alphabetic, geographic, subject, and numeric filing methods. Upon completion, students should be able to set up and maintain a records management system.

OST 233 Office Publications Design (Fall) 2 2 3
Prerequisites: OST 136
Corequisites: None
This course provides entry-level skills in using software with desktop publishing capabilities. Topics include principles of page layout, desktop publishing terminology and applications, and legal and ethical considerations of software use. Upon completion, students should be able to design and produce professional business documents and publications.

OST 236 Advanced Word Processing (Spring) 2 2 3
Prerequisites: OST 136
Corequisites: None
This course develops proficiency in the utilization of advanced word processing functions. Emphasis is placed on advanced word processing features. Upon completion, students should be able to produce a variety of complex business documents.

OST 243 Medical Office Simulation (Intermittently) 2 2 3
Prerequisites: OST 148
Corequisites: None
This course introduces medical systems used to process information in the automated office. Topics include traditional and electronic information resources, storing and retrieving information, and the billing cycle. Upon completion, students should be able to use the computer accurately to schedule, bill, update, and make corrections.

OST 244 Med Document Processing (Fall) 2 2 3
Prerequisites: OST 134 or OST 136
Corequisites: 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.

OST 247 Procedure Coding (Fall, Spring) 2 2 3
Prerequisites: MED 121 or OST 141
Corequisites: MED 122 or OST 142
This course provides in-depth coverage of procedural coding. Emphasis is placed on CPT and HCPCS coding systems. Upon completion, students should be able to properly code procedures and services performed in a medical facility.

OST 248 Diagnostic Coding (Fall, Spring) 2 2 3
Prerequisites: MED 121 or OST 141
Corequisites: MED 122 or OST 142
This course provides an in-depth study of diagnostic coding. Emphasis is placed on ICD coding system. Upon completion, students should be able to properly code diagnoses in a medical facility.

OST 249 Med Coding Certification Prep (Spring) 2 3 3
Prerequisites: OST 247 and OST 248 and Course Instructor Permission
Corequisites: None

This course provides instruction that will prepare students to sit for the American Association of Professional Coders (AAPC) CPC Exam. Topics include diagnostic and procedural coding. Upon completion, students should be able to sit for the AAPC CPC Exam.

OST 260 Adv Coding Methodologies (Spring) 2 2 3
Prerequisites: OST 247 and OST 248
Corequisites: None
This course provides advanced instruction in a variety of emergent methodologies in medical coding. Topics include advanced outpatient coding, inpatient coding, risk adjustment coding, online encoder software, Correct Coding Initiatives (CCI), and advanced record abstraction. Upon completion, students should be able to perform advanced coding in a healthcare facility.

OST 263 Healthcare Customer Relations (Fall) 3 0 3
Prerequisites: OST 248
Corequisites: None
This course provides the soft skills necessary for effective communication and maintaining customer satisfaction in healthcare. Emphasis is placed on the importance of positive attitudes, techniques for handling difficult/angry customers, rephrasing blunt communication for better results, and the communication skills required to discuss topics such as insurance and billing issues with the patient and other medical personnel. Upon completion, students should be able to communicate information in a professional manner.

OST 264 Medical Auditing (Spring) 3 0 3
Prerequisites: OST 247 and OST 248
Corequisites: None
This course provides instruction on how to apply regulations and policies to perform medical record audits for provider services. Emphasis is placed on understanding the scope of an audit, statistical sampling methodologies, performing a medical record audit, and compiling data for reports to improve the revenue cycle for healthcare services. Upon completion, students should be able to perform a medical audit.

OST 265 Healthcare Comp & Reg (Fall, Spring) 2 2 3
Prerequisites: OST 264
Corequisites: None
This course provides advanced instruction in a variety of emergent methodologies in medial coding. Topics include advanced outpatient coding, inpatient coding, risk adjustment coding, online encoder software, Correct Coding Initiatives (CCI), and advanced record abstraction. Upon completion, students should be able to perform advanced coding in a healthcare facility.

OST 266 Adv Medical Auditing (Fall, Spring) 2 2 3
Prerequisites: OST 264
Corequisites: None
This course provides instruction on finalizing the audit report, determining trends of a healthcare facility, and communicating the audit report. Emphasis is placed on determining the audit report contents, analyzing the coding trends, compiling a formal report of findings, and delivering the audit results. Upon completion, students should be able to develop and present an audit report to the healthcare facility.

OST 280 Electronic Health Records (Fall) 2 2 3
Prerequisites: CIS 110
Corequisites: None
This course focuses on the use of electronic health records in medical documentation and patient management. Emphasis is placed on creating and maintaining patient medical information, scheduling patient appointments, documenting patient encounters, and billing/insurance claim processing. Upon completion, students should be able to perform the required software task following a patent visit from start to finish.

OST 286 Professional Development (Fall) 3 0 3
Prerequisites: Course Instructor Permission
Corequisites: None
This course covers the personal competencies and qualities needed to project a professional image in the office. Topics include interpersonal skills, health lifestyles, appearance, attitude, personal and professional growth, multicultural awareness, and professional etiquette. Upon completion, students should be able to demonstrate these attributes in the classroom, office, and society.

OST 288 Medical Office Admin Capstone (Spring) 2 2 3
Prerequisites: OST 148 and Instructor permission
Corequisites: None
This course is designed to be a capstone course for the medical office professional and provides a working knowledge of medical office procedures. Emphasis is placed on written and oral communication skills, practice management, electronic health records, medical office procedures, ethics, and professional development. Upon completion, students should be able to demonstrate the skills necessary to manage a medical office.

OST 289 Administrative Office Management (Spring) 2 2 3
Prerequisites: OST 164 and OST 134 or OST 136
Faculty approval and assignment.
Corequisites: 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.

PCI 264 Process Control with PLCs (Spring) 3 3 4
Prerequisites: ELC 228
Corequisites: 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 under- standing of advanced applications of process control and instrumentation systems with PLC-based devices.

PED 110 Fit and Well for Life (Fall, Spring, Summer) 1 2 2
Prerequisites: None
Corequisites: 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 for transfer under the CAA and ICAA as a premajor and/or elective requirement.

PED 123 Yoga II (Intermittently) 0 2 1
Prerequisites: PED 122
Corequisites: None
This course introduces more detailed aspects of the discipline of yoga. Topics include breathing and physical postures, relaxation, and mental concentration. Upon completion, students should be able to demonstrate advanced procedures of yoga. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective requirement.

PED 125 Self Defense (Intermittently) 0 2 1
Prerequisites: None
Corequisites: None
This course is designed to aid students in developing rudimentary skills in self-defense. Emphasis is placed on stances, blocks, punches, and kicks as well as

non-physical means of self-defense. Upon completion, students should be able to demonstrate basic self-defense techniques of a physical and non-physical nature. This course has been approved for trans- fer under the CAA as a premajor and/or elective course requirement. This course has been approved for transfer under the ICAA as a premajor and/or elective course requirement.

PHI 215 Philosophical Issues (Fall, Spring) 3 0 3

Prerequisites: ENG 111

Corequisites: None

This course introduces fundamental issues in philosophy considering the views of classical and contemporary philosophers. Emphasis is placed on knowledge and belief, appearance and reality, determinism and free will, faith and reason, and justice and inequality. Upon completion, students should be able to identify, analyze, and critically evaluate the philosophical components of an issue. This course has been approved for transfer under the CAA and ICAA as a general education course in Humanities/Fine Arts. This is a Universal General Education Transfer Component (UGETC) course.

PHI 240 Introduction to Ethics (Fall, Spring) 3 0 3

Prerequisites: ENG 111

Corequisites: None

This course introduces theories about the nature and foundations of moral judgments and applications to contemporary moral issues. Emphasis is placed on utilitarianism, rule- based ethics, existentialism, relativism versus objectivism, and egoism. Upon completion, students should be able to apply various ethical theories to individual moral issues such as euthanasia, abortion, crime and punishment, and justice. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts. This is a Universal General Education Transfer Component (UGETC) course.

PHS 121 Applied Physical Science I (Intermittently) 3 2 4

Prerequisites: DRE 097 or ENG 002 Tier 1

Corequisites: None

This course introduces the general principles of physics and chemistry. Topics include measurement, motion, Newton's laws of motion, momentum, energy, work, power, heat, thermodynamics, waves, sound, light, electricity, magnetism, and chemical principles. Upon completion, students should be able to demonstrate an understanding of the physical environment and be able to apply the scientific principles to observations experienced.

PHS 122 Applied Physical Science II (Intermittently) 3 2 4
Prerequisites: DRE 097 or ENG 002 Tier 1
Corequisites: None
This course introduces the principles of nuclear energy, modern physics, geology, oceanography, meteorology, and astronomy. Topics include nuclear chemistry, relativity, composition of the earth, geologic processes and time, ocean currents and tides, eroding beaches, climate, weather, atmospheric influences, and the solar system. Upon completion, students should be able to demonstrate an understanding of the physical environment and be able to apply the scientific principles to observations experienced.

PHS 130 Earth Science (Intermittently) 3 2 4
Prerequisites: None
Corequisites: None
This course is a survey of the forces that impact the earth. Topics include geology, oceanography, and meteorology. Upon completion, students should be able to explain and identify the forces within, on, and around the earth as they influence the earth's dynamics. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

PHY 110 Conceptual Physics (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: PHY 110A
This course provides a conceptually-based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles stud- ied. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

PHY 110A Conceptual Physics Lab (Fall, Spring) 0 2 1
Prerequisites: None
Corequisites: PHY 110
This course is a laboratory for PHY 110. Emphasis is placed on laboratory experiences that enhance materials presented in PHY 110. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in PHY 110. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

PHY 151 College Physics I (Fall) 3 2 4

Prerequisites: MAT 171 or MAT 271

Corequisites: None

This course uses algebra – and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

PHY 152 College Physics II (Spring) 3 2 4

Prerequisites: PHY 151

Corequisites: None

This course uses algebra-and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

PHY 251 General Physics I (Fall, Spring) 3 3 4

Prerequisites: MAT 271

Corequisites: MAT 272

This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vector operations, linear kinematics and dynamics, energy, power, momentum, rotational mechanics, periodic motion, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem- solving ability for the topics covered. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

PHY 252 General Physics II (Spring, Summer) 3 3 4

Prerequisites: MAT 272 and PHY 251

Corequisites: None

This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science. This is a Universal General Education Transfer Component (UGETC) course.

POL 110 Introduction to Political Science (Intermittently) **3 0 3**

Prerequisites: None
Corequisites: None
This course introduces basic political concepts used by governments and addresses a wide range of political issues. Topics include political theory, ideologies, legitimacy, and sovereignty in democratic and non-democratic systems. Upon completion, students should be able to discuss a variety of issues inherent in all political systems and draw logical conclusions in evaluating these systems. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/ Behavioral Sciences.

POL 120 American Government (Fall, Spring) **3 0 3**

Prerequisites: None
Corequisites: None
This course is a study of the origins, development, structure, and functions of American government. Topics include the constitutional framework, federalism, the three branches of government including the bureaucracy, civil rights and liberties, political participation and behavior, and policy formation. Upon completion, students should be able to demonstrate an understanding of the basic concepts and participatory processes of the American political system. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/Behavioral Sciences. This is a Universal General Education Transfer Component (UGETC) course.

POL 220 International Relations (Intermittently) **3 0 3**

Prerequisites: None
Corequisites: None
This course provides a study of the effects of ideologies, trade, armaments, and alliances on relations among nation-states. Emphasis is placed on regional and global cooperation and conflict, economic development, trade,

non-governmental organizations, and international institutions such as the World Court and UN. Upon completion, students should be able to identify and discuss major international relationships, institutions, and problems. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/Behavioral Sciences.

PSY 110 Life Span Development (Intermittently) 3 0 3
Prerequisites: None
Corequisites: None
This course provides an introduction to the study of human growth and development. Emphasis is placed on the physical, cognitive, and psychosocial aspects of development from conception to death. Upon completion, students should be able to demonstrate knowledge of development across the life span and apply this knowledge to their specific field of study.

PSY 118 Interpersonal Psychology (Intermittently) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the basic principles of psychology as they relate to personal and professional development. Emphasis is placed on personality traits, communication/leadership styles, effective problem solving, and cultural diversity as they apply to personal and work environments. Upon completion, students should be able to demonstrate an understanding of these principles of psychology as they apply to personal and professional development.

PSY 135 Group Processes (Intermittently) 3 0 3
Prerequisites: None
Corequisites: None
This course provides an examination of group dynamics and structure. Topics include team- building, interpersonal communication, leadership, decision making, and problem solving. Upon completion, students should be able to demonstrate the knowledge and skills necessary for effective group participation.

PSY 150 General Psychology (Fall, Spring, Summer) 3 0 3
Prerequisites: None
Corequisites: None
This course provides an overview of the scientific study of human behavior. Topics include history, methodology, biopsychology, sensation, perception, learning, motivation, cognition, abnormal behavior, personality theory, social psychology, and other relevant topics. Upon completion, students should be able to demonstrate a basic knowledge of the science of psychology. This course has been approved for transfer under Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/Behavioral Sciences. This is a Universal General Education Transfer Component (UGETC) course.

PSY 239 Psychology of Personality (Intermittently) 3 0 3
Prerequisites: PSY 150
Corequisites: None
This course covers major personality theories and personality research methods. Topics include psychoanalytic, behavioristic, social learning, cognitive, humanistic, and trait theories including supporting research. Upon completion, students should be able to compare and contrast traditional and contemporary approaches to the understanding of individual differences in human behavior. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/ Behavioral Sciences.

PSY 241 Developmental Psychology (Fall, Spring) 3 0 3
Prerequisites: PSY 150
Corequisites: None
This course is a study of human growth and development. Emphasis is placed on major theories and perspectives as they relate to the physical, cognitive, and psychosocial aspects of development from conception to death. Upon completion, students should be able to demonstrate knowledge of development across the life span. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/ Behavioral Sciences.

PSY 263 Educational Psychology (Intermittently) 3 0 3
Prerequisites: PSY 150
Corequisites: 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 under- standing of the application of psychological theory to educational practice. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a premajor and/ or elective course requirement.

PSY 281 Abnormal Psychology (Fall, Spring) 3 0 3
Prerequisites: PSY 150
Corequisites: None
This course provides an examination of the various psychological disorders, as well as theoretical, clinical, and experimental perspectives of the study of psychopathology. Emphasis is placed on terminology, classification, etiology, assessment, and treatment of the major disorders. Upon completion, students should

be able to distinguish between normal and abnormal behavior patterns as well as demonstrate knowledge of etiology, symptoms, and therapeutic techniques. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/Behavioral Sciences.

PTA 110 Introduction to Physical Therapy (Spring) 2 3 0 3
Prerequisites: Admission to the Physical Therapist Assistant Program, MAT 171, BIO 168, ENG 111, PSY 150, ACA 122, and CIS 110
Corequisites: BIO 169, COM 231, HUM/FA
This course introduces the field of physical therapy including the history and standards of practice for the physical therapist assistant and basic treatment techniques. Emphasis is placed on ethical and legal considerations, universal precautions, vital signs, documentation, basic patient preparation and treatment skills, and architectural barrier screening. Upon completion, students should be able to explain the role of the physical therapist assistant and demonstrate competence in basic techniques of patient care.

PTA 125 Gross and Functional Anatomy (Spring) 3 6 0 5
Prerequisites: PTA 110, MAT 171, BIO 168, ENG 111, ACA 122, and CIS 110
Corequisites: BIO 169, HUM/FA, COM 231
This course provides an in-depth, clinically oriented survey of gross and functional anatomy. Emphasis is placed on musculoskeletal and nervous systems and clinical biomechanics, including goniometry, basic manual muscle testing, and components of normal gait. Upon completion, students should be able to identify specific anatomical structures and describe, observe, and measure musculoskeletal posture and function.

PTA 135 Pathology (Summer) 4 0 0 4
Prerequisites: PTA 125, BIO 169, COM 231 and HUM/FA
Corequisites: PTA 225, PTA 222
This course introduces principles of pathology, processes of and normal responses to injury and disease, and changes related to aging. Emphasis is placed on conditions most commonly treated in physical therapy. Upon completion, students should be able to discuss basic pathological processes and identify etiology, signs, symptoms, complications, treatment options, and prognoses of specific orthopedic conditions.

PTA 145 Therapeutic Procedures (Fall) 2 6 0 4
Prerequisites: PTA 135, PTA 222, PTA 225
Corequisites: PTA 235
This course provides a detailed study of specific treatment procedures and the physiological principles and techniques involved. Emphasis is placed on the correct application of superficial heat and cold, massage and soft tissue mobilization,

ultrasound, diathermy, traction, and electrical stimulation. Upon completion, students should be able to demonstrate competence in the application of these modalities and explain the indications, contraindications, effects, and precautions for each.

PTA 155 PTA Clinical I (Spring) 0 0 6 2
Prerequisites: PTA 255
Corequisites: PTA 185
This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation.

PTA 185 PTA Clinical II (Spring) 0 0 9 3
Prerequisites: PTA 255
Corequisites: PTA 155
This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation.

PTA 212 Health Care/Resources (Spring) 2 0 0 2
Prerequisites: PTA 245
Corequisites: PTA 215
This course provides an overview of various aspects of health care delivery systems and the interrelationships of health care team members. Topics include health agencies and their functions, health care team member roles, management, and other health care issues. Upon completion, students should be able to discuss the functions of health organizations and team members and aspects of health care affecting physical therapy delivery.

PTA 215 Therapeutic Exercise (Spring) 2 3 0 3
Prerequisites: PTA 245
Corequisites: PTA 212
This course introduces basic concepts of strengthening, endurance, and flexibility exercise and balance, gait, and posture training. Emphasis is placed on applying techniques to the treatment of orthopedic conditions. Upon completion, students should be able to safely and effectively execute basic exercise programs and balance, gait, and posture training.

PTA 222 Professional Interactions (Summer) 2 0 0 2
Prerequisites: PTA 125, BIO 169, COM 231 and HUM/FA
Corequisites: PTA 135 and PTA 225
This course is designed to assist in the development of effective interpersonal skills in the physical therapist assistant setting. Topics include reactions to disability, the grieving process, methods of communication, motivation, health promotion, disease prevention, and aging. Upon completion, students should be able to discuss and demonstrate methods for achieving effective interaction with patients, families, the public, and other health care providers.

PTA 225 Introduction to Rehabilitation (Summer) 3 3 0 4
Prerequisites: PTA 125, BIO 169, COM 231 and HUM/FA
Corequisites: PTA 135 and PTA 222
This course covers cardiovascular, pulmonary, and integumentary conditions, as well as causes and treatment of amputations. Emphasis is placed upon pathological processes as well as comprehensive treatment of the various conditions studied. Upon completion, students should be able to discuss etiology, signs, symptoms, complications, and prognoses of various conditions and implement components of a comprehensive treatment program.

PTA 235 Neurological Rehabilitation (Fall) 3 6 0 5
Prerequisites: PTA 135, PTA 225, and PTA 222
Corequisites: PTA 145
This course covers neurological and neuromuscular conditions experienced throughout the life span. Topics include the pathology of selected conditions and the methods and rationales of various treatment approaches. Upon completion, students should be able to discuss etiology, signs, symptoms, complications, and prognoses of various conditions and implement components of a comprehensive treatment program.

PTA 245 PTA Clinical III (Fall) 0 0 12 4
Prerequisites: PTA 145 and PTA 235
Corequisites: None
This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation.

PTA 255 PTA Clinical IV (Spring) 0 0 12 4
Prerequisites: PTA 212 and PTA 215
Corequisites: None

This course provides the opportunity to gain clinical experience and apply academic skills and knowledge to patient care. Emphasis is placed on performing patient care skills, observation and measurement, and professional and patient interaction. Upon completion, students should be able to demonstrate safe and effective clinical practice as measured by a standardized performance evaluation.

REL 110 World Religions (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course introduces the world's major religious traditions. Topics include Primal religions, Hinduism, Buddhism, Islam, Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts.

REL 211 Introduction to Old Testament (Fall) 3 0 3
Prerequisites: None
Corequisites: None
This course is a survey of the literature of the Hebrews with readings from the law, prophets, and other writings. Emphasis is placed on the use of literary, historical, archeological, and cultural analysis. Upon completion, students should be able to use the tools of critical analysis to read and understand Old Testament literature. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/ Fine Arts.

REL 212 Introduction to New Testament (Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course is a survey of the literature of first-century Christianity with readings from the gospels, Acts, and the Pauline and pastoral letters. Topics include the literary structure, audience, and religious perspective of the writings, as well as the historical and cultural con- text of the early Christian community. Upon completion, students should be able to use the tools of critical analysis to read and understand New Testament literature. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts.

SAB 110 Substance Abuse Overview 3 0 3
Prerequisites: DRE 097 or ENG 002 Tier 1
Corequisites: 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 ad- diction, and preventive measures. Upon completion, students should be able to demonstrate knowledge of the etiology of drug abuse, addiction, prevention, and treatment.

SAB 120 Intake and Assessment 3 0 3

Prerequisites: DRE 097 or ENG 002 Tier 1

Corequisites: 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.

SAB 125 SA Case Management 2 2 3

Prerequisites: DRE 097 or ENG 002 Tier 1, SAB 110, MAT 143, ENG 111

Corequisites: 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.

SAB 135 Addictive Process 3 0 3

Prerequisites: DRE 097 or ENG 002 Tier 1

Corequisites: 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.

SAB 240 Sab Issues in Client Serv 3 0 3

Prerequisites: DRE 097 or ENG 002 Tier 1

Corequisites: 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.

SEC 110 Security Concepts (Spring) 2 2 3
Prerequisites: None
Corequisites: None
This course introduces the concepts and issues related to securing information systems and the development of policies to implement information security controls. Topics include the historical view of networking and security, security issues, trends, security resources, and the role of policy, people, and processes in information security. Upon completion, students should be able to identify information security risks, create an information security policy, and identify processes to implement and enforce policy.

SEC 150 Secure Communications (Fall) 2 2 3
Prerequisites: SEC 110
Corequisites: 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.

SEC 160 Security Administration I 2 2 3
Prerequisites: SEC 110 or NET 126
Corequisites: 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.

SEC 180 Info Assurance Principles (Spring) 2 3 3
Prerequisites: SEC 110
Corequisites: None
This course introduces students to the concepts of layered and comprehensive Information Assurance best practices. Topics include user defensive measures, edge defensive measures, along with confidentiality, integrity and availability of enterprise data with the business continuity concepts of: redundancy, disaster recovery, incident handling, compliance and auditing. Upon completion, students should be able to plan effective information assurance strategies.

SEC 210 Intrusion Detection (Spring) 2 2 3

Prerequisites: SEC 110

Corequisites: 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.

SGD 111 Intro. to Simulation and Game Development (Fall) 2 3 3

Prerequisites: None

Corequisites: 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.

SGD 112 SGD Design (Fall) 2 3 3

Prerequisites: None

Corequisites: 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.

SGD 113 SGD Programming I (Spring) 2 3 3

Prerequisites: None

Corequisites: None

This course introduces the fundamentals of programming languages and tools employed in simulation and game development. Emphasis is placed on programming concepts used to create simulations and games. Upon completion, students should be able to program simple games and/or simulations.

SGD 116 Graphic Design Tools (Spring) 2 2 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.

SGD 162 SG 3D Animation (Fall) 2 3 3

Prerequisites: SGD 116

Corequisites: None

This course introduces the fundamental principles of 3D animation used in simulation and game development. Emphasis is placed on a historical survey of 3D animation, aspects of the 3D animation techniques. Upon completion, students should be able to produce 3D character sketches, morph simple objects, create walk and run cycles and develop professional storyboards.

SGD 165 SG Character Development (Fall) 2 3 3

Prerequisites: None

Corequisites: None

This course introduces the concepts needed to create fictional personality for use in digital videos, animations, simulations and games. Topics include aspects of character, developing backgrounds, mannerisms and voice. Upon completion, students should be able to develop characters and backgrounds for simulations and games.

SGD 174 SG Level Design (Spring) 2 3 3

Prerequisites: SGD 162

Corequisites: None

This course introduces the tools used to create levels for real-time simulation and games. Topics include level design, architecture theory, modeling for 3D engines and texturing methods. Upon completion, students should be able to design simple levels using industry standard tools.

SGD 212 SGD Design II (Spring) 2 3 3

Prerequisites: SGD 112

Corequisites: None

This course covers the advanced principles of simulation and game design. Topics include advanced design concepts in simulation and game development. Upon completion, students should be able to design an advanced simulation or game.

SGD 289 SGD Project (Spring) 2 3 3

Prerequisites: SGD 212

Corequisites: None

This course provides students with the opportunity to create a functional simulation or game with minimal instructor support. Emphasis is placed upon verbal and written communication, skill documentation, professional presentation and user training. Upon completion, students should be able to create and professionally present a fully functional simulation or game.

SOC 210 Introduction to Sociology (Fall, Spring) 3 0 3

Prerequisites: None

Corequisites: None

This course introduces the scientific study of human society, culture, and social interactions. Topics include socialization, research methods, diversity and inequality, cooperation and conflict, social change, social institutions, and organizations. Upon completion, students should be able to demonstrate knowledge of sociological concepts as they apply to the interplay among individuals, groups, and societies. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/ Behavioral Sciences. This is a Universal General Education Trans- fer Component (UGETC) course.

SOC 213 Sociology of the Family (Fall, Spring) 3 0 3

Prerequisites: None

Corequisites: None

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

SOC 220 Social Problems (Intermittently) 3 0 3

Prerequisites: DRE 097 or ENG 002 Tier 1

Corequisites: None

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

SOC 225 Social Diversity 3 0 3

Prerequisites: None

Corequisites: 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 for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/Behavioral Sciences.

SOC 240 Social Psychology (Intermittently) 3 0 3
Prerequisites: None
Corequisites: None
This course examines the influence of culture and social groups on individual behavior and personality. Emphasis is placed on the process of socialization, communication, conformity, deviance, interpersonal attraction, intimacy, race and ethnicity, small group experiences, and social movements. Upon completion, students should be able to identify and analyze cultural and social forces that influence the individual in a society. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Social/Behavioral Sciences.

SOC 242 Sociology of Deviance (Intermittently) 3 0 3
Prerequisites: None
Corequisites: 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 for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a premajor and/or elective course requirement.

SPA 111 Elementary Spanish I (Fall, Spring) 3 0 3
Prerequisites: DRE 097 or ENG 002 Tier 1
Corequisites: None
This course introduces the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts.

SPA 112 Elementary Spanish II (Fall, Spring) 3 0 3
Prerequisites: SPA 111
Corequisites: None
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 Span- ish and demonstrate further cultural awareness. This course has been approved for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts.

SPA 120 Spanish for the Workplace (Fall, Spring) 3 0 3
Prerequisites: None
Corequisites: None
This course offers applied Spanish for the workplace to facilitate basic communication with people whose native language is Spanish. Emphasis is placed on oral communication and career-specific vocabulary that targets health, business, and/or public service professions. Upon completion, students should be able to communicate at a functional level with native speakers and demonstrate cultural sensitivity. The course will incorporate development of cultural awareness through the cultural context of the Spanish language.

SPA 211 Intermediate Spanish I (Intermittently) 3 0 3
Prerequisites: SPA 112
Corequisites: 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 for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts.

SPA 212 Intermediate Spanish II (Intermittently) 3 0 3
Prerequisites: SPA 211
Corequisites: 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 for transfer under the Comprehensive Articulation Agreement (CAA) and ICAA as a general education course in Humanities/Fine Arts.

SST 140 Green Bldg & Design Concepts (Fall) 3 0 3

Prerequisites: None Corequisites: None

This course is designed to introduce the student to sustainable building design and construction principles and practices. Topics include sustainable building rating systems and certifications, energy efficiency, indoor environmental quality, sustainable building materials and water use. Upon completion, students should be able to identify the principles and practices of sustainable building design and construction.

SWK 110 Intro to Social Work 3 0 3

Prerequisites: None

Corequisites: None

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

SWK 113 Working with Diversity 3 0 3

Prerequisites: None

Corequisites: None

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

TRN 110 Intro to Transport Tech (Fall) 1 2 2

Prerequisites: None

Corequisites: None

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

TRN 120 Basic Transport Electricity (Fall) 4 3 5
Prerequisites: None
Corequisites: 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.

TRN 120A Basic Transport Electricity Lab (Fall) 0 3 1
Prerequisites: None
Corequisites: TRN 120
This course provides a lab that allows students to enhance their understanding of electrical components and circuits used in the transportation industry. Topics include inspection, diagnosis, and repair of electrical components and circuits using appropriate service information for specific transportation systems. Upon completion, students should be able to diagnose and service electrical components and circuits used in transportation systems.

TRN 130 Intro to Sustainable Transport (Fall) 2 2 3
Prerequisites: None
Corequisites: None
This course provides an overview of alternative fuels and alternative fuel vehicles. Topics include composition and use of alternative fuels including compressed natural gas, biodiesel, ethanol, hydrogen, and synthetic fuels, hybrid/electric, and vehicles using alternative fuels. Upon completion, students should be able to identify alternative fuel vehicles, explain how each alternative fuel delivery system operates, and perform minor repairs.

TRN 140 Transport Climate Control (Spring) 1 2 2
Prerequisites: None
Corequisites: TRN 140A
This course covers the theory of refrigeration and heating, electrical/electronic/pneumatic controls, and diagnosis and 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 diagnose and repair vehicle climate control systems.

TRN 140A Transport Climate Cont Lab (Spring) 1 2 2
Prerequisites: None
Corequisites: TRN 140
This course provides experiences for enhancing student skills in the diagnosis and re- pair of transportation climate control systems. Emphasis is placed on reclaiming, recovery, recharging, leak detection, climate control components, diagnosis, air conditioning equipment, tools and safety. Upon completion, students should be able to describe the operation, diagnose, and safely service climate control systems using appropriate tools, equipment, and service information.

TRN 145 Advanced Transport Electronics (Fall) 2 3 3
Prerequisites: TRN 120
Corequisites: None
This course covers advanced transportation electronic systems including programmable logic controllers, on-board data networks, telematics, high voltage systems, navigation, collision avoidance systems and electronic accessories. Topics include interpretation of wiring schematics, reprogramming PLCs, diagnosing and testing data networks and other electronic concerns. Upon completion, students should be able to reprogram PLCs, diagnose and test data networks and other electronic concerns, and work safely with high volt- age systems.

VET 110 Animal Breeds and Husbandry 2 2 0 3
Prerequisites: Admission to VMT
Corequisites: ACA 122, ENG 110 or ENG 111, CHM 130/130A, VET 121, VET 123
This course provides a study of the individual breed characteristics and management techniques of the canine, feline, equine, bovine, porcine, ovine, caprine, and laboratory animals. Topics include physiological data, animal health management, and basic care and handling of animals. Upon completion, students should be able to identify breeds of domestic and laboratory animals, list physiological data, and outline basic care, handling, and management techniques.

VET 120 Vet Anatomy and Physiology 3 3 0 4
Prerequisites: ACA 122, ENG 110 or ENG 111, CHM 130/130A, VET 110, VET 121, VET 123
Corequisites: MAT 171, PSY 150, VET 131, VET 133
This course covers the structure and function of the animal body with emphasis on the similarities and differences among domestic animals. Emphasis is placed on the structure and function of the major physiological systems of domestic, laboratory, and zoo animals. Upon completion, students should be able to identify relevant anatomical structure and describe basic physiological processes for the major body systems.

VET 121 Veterinary Medical Terminology 3 0 0 3

Prerequisites: Admission to VMT

Corequisites: ACA 122, ENG 110 or ENG 111, CHM 130/130A, VET 110, VET 123

This course covers the basic medical terminology required for veterinary technicians. Topics include the pronunciation, spelling and definition of word parts and vocabulary terms unique to the anatomy, clinical pathology, and treatment of animals. Upon completion, students should be able to demonstrate knowledge and understanding of basic medical terms as they relate to veterinary medicine.

VET 123 Veterinary Parasitology 2 3 0 3

Prerequisites: Admission to VMT

Corequisites: ACA 122, ENG 110 or ENG 111, CHM 130/130A, VET 110, VET 121

This course covers the common internal and external parasites of companion animals, livestock, selected zoo animals, and wild animals. Emphasis is placed on laboratory diagnosis of the most common forms of the parasite through fecal, urine, skin, and blood exams. Upon completion, students should be able to identify common parasites and discuss life-cycles, treatment and prevention strategies, and public health aspects of veterinary parasitology.

VET 125 Veterinary Diseases I 2 0 0 2

Prerequisites: MAT 171, PSY 150, VET 120, VET 131, VET 133

Corequisites: COM elective (110, 120, or 231), VET 137

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

VET 126 Veterinary Diseases II 1 3 0 2

Prerequisites: COM elective (110,120,231), VET 125, VET 137

Corequisites: HUM/FA elective, VET 211, VET 213, VET 215, WBL 112A

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

VET 131 Veterinary Laboratory Techniques I 2 3 0 3
Prerequisites: ACA 122, ENG 110 or 111, CHM 130/130A, VET 110, VET 121, VET 123
Corequisites: MAT 171, PSY 150, VET 120, VET 133
This course includes the fundamental study of hematology, hemostasis, and urinalysis. Emphasis is placed on basic hematology and urinalysis techniques, manual skill development, instrumentation, quality control, and applications to veterinary science. Upon completion, students should be able to perform manual and automated CBCs, hemostatic assays, and complete urinalyses and maintain laboratory equipment and quality control.

VET 133 Veterinary Clinical Practice I 2 3 0 3
Prerequisites: ACA 122, ENG 110 or 111, CHM 130/130A, VET 110, VET 121 VET 123,
Corequisites: MAT 171, PSY 150, VET 120, VET 131
This course introduces basic practices and techniques of the veterinary clinic and biomedical research fields for dogs, cats, and laboratory animals. Topics include physical exam, husbandry, housing, sanitation, restraint and handling, administration of medications, anesthesia and euthanasia techniques, grooming, and dentistry. Upon completion, students should be able to properly restrain, medicate, examine, groom, and maintain each of the species studied.

VET 137 Veterinary Office Practices 1 2 0 2
Prerequisites: MAT 171, PSY 150, VET 120, VET 131, VET 133
Corequisites: COM elective (110, 120, or 231), VET 125
This course is designed to teach basic administrative techniques, client communication skills, and regulations pertaining to veterinary medicine. Topics include record keeping, telephone techniques, professional liability, office procedures, state and national regulatory laws, human relations, and animal welfare. Upon completion, students should be able to demonstrate effective communication techniques, office procedures, and knowledge of regulatory laws and issues relating to animal welfare.

VET 211 Veterinary Laboratory Techniques II 2 3 0 3
Prerequisites: COM elective (110, 120, or 231), VET 125, VET 131, VET 137
Corequisites: HUM/FA elective, VET 126, VET 213, VET 215, WBL 112A
This course covers advanced hematology, serology, immunology, and clinical chemistry. Topics include advanced hematologic, serologic, and immunologic test procedures: manual and automated clinical chemistry procedures: laboratory safety: and quality control. Upon completion, students should be able to collect, prepare, and analyze serum and plasma samples and outline quality control and safety procedures.

VET 212 Veterinary Laboratory Techniques III 2 3 0 3
Prerequisites: HUM/FA elective, VET 126, VET 211, VET 213, VET 215, WBL 112A
Corequisites: VET 214, VET 217, VET 237, WBL 112B
This course introduces the basic principles of microbiology, histology, and cytology. Emphasis is placed on collection of microbiological samples for culture and sensitivity and collection and preparation of samples for histological and cytological examination. Upon completion, students should be able to perform microbiological culture and sensitivity and evaluate cytology and histology specimens.

VET 213 Veterinary Clinical Practice II 1 9 0 4
Prerequisites: COM elective (110, 120, or 231), VET 125, VET 133 VET 137
Corequisites: HUM/FA elective, VET 126, VET 211, VET 215, WBL 112A
This course covers basic radiography, anesthesia techniques, dentistry, sample collection and handling, surgical assistance and instrumentation, sterile techniques, and patient record keeping. Topics include basic radiography, injectable and gas anesthesia, dentistry, instrument identification and care, sterile surgical technique, specimen collection and processing, and maintenance of patient records. Upon completion, students should be able to take and process radiographs, administer and monitor anesthesia, assist in surgical procedures, collect specimens, and maintain surgical records.

VET 214 Veterinary Clinical Practice III 1 9 0 4
Prerequisites: HUM/FA elective, VET 126, VET 211, VET 213, VET 215, WBL 112A
Corequisites: VET 212, VET 217, VET 237, WBL 112B
This course covers advanced anesthetic techniques, special radiographic techniques, advanced dentistry, sample collection and processing, bandaging, and emergency and critical care procedures. Topics include induction and maintenance of anesthesia, radiographic contrast studies, advanced dentistry, external coaptation, intensive care procedures, and advanced sample collection techniques. Upon completion, students should be able to demonstrate proficiency in sample collection, radiology, anesthesia, critical care and emergency procedures, and dentistry.

VET 215 Veterinary Pharmacology 3 0 0 3
Prerequisites: COM elective (110, 120, or 231), VET 125, VET 137
Corequisites: HUM/FA elective, VET 126, VET 211, VET 213, WBL 112A
This course introduces drugs and other substances utilized in veterinary medicine. Emphasis is placed on drug classification and methods of action, administration, effects and side effects, storing and handling of drugs, and dosage calculations. Upon completion, students should be able to properly calculate and administer medications, recognize adverse reactions, and maintain pharmaceutical inventory and administration records.

VET 217 Large Animal Clinical Practice 2 3 0 3
Prerequisites: HUM/FA, VET 120 VET, 126, VET 211, VET 213, VET 215, WBL 112A
Corequisites: VET 212, VET 214, VET 237, WBL 112B
This course covers topics relevant to the medical and surgical techniques for the common domestic large animal species. Topics include physical exam, restraint, sample collection, bandaging, emergency treatment, surgical and obstetrical procedures and instruments, herd health, and lameness topics. Upon completion, students should be able to safely perform restraint, examination, and sample collection; assist surgical, obstetrical, and emergency procedures; and discuss herd health.

VET 237 Animal Nutrition 3 0 0 3
Prerequisites: HUM/FA elective, VET 126, VET 211, VET 213, VET 215, WBL 112A
Corequisites: VET 212, VET 214, VET 217, WBL 112B
This course covers the principles of nutrition and their application to feeding practices of domestic, farm, and companion animals. Topics include basic nutrients and nutritional needs of individual species, proximate analysis, interpretation of food and feed labels, types of animal foods, and ration formulation. Upon completion, students should be able to select appropriate diets for animals in various stages of health and disease, analyze nutrition labels, and identify foods.

WBL 111 Work-Based Learning I (Fall, Spring, Summer)
0 0 10 1
Prerequisites: For Hospitality Management – Instructor Permission Required;
For Human Services Technology/Gerontology & Substance Abuse
– Instructor Permission Required
For Information Technologies – Instructor Permission Required
For Advertising and Graphic Design – Instructor Permission Required
For Medical Office Administration – Instructor Permission Required
For Office Administration – Instructor Permission Required
Corequisites: None
This course provides a work-based learning 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 per- form work-related competencies.

WBL 112 Work-Based Learning I (Fall, Spring) 0 0 20 2
Prerequisites: For Computer Integrated Machining, completion of 9 semester credit hours and MAC 141 and MAC 141A.
For Veterinary Medical Technology, faculty approval and assignment.
Corequisites: None
This course provides a work-based learning 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 per- form work-related competencies. Appropriate departmental faculty/department chair will monitor student progress and attendance.

WBL 114 Work-Based Learning I (Fall, Spring) 0 0 40 4
Prerequisites: For Electric Line Construction, completion of 9 semester credit hours and one major core course.
Corequisites: None
This course provides a work-based learning 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 per- form work-related competencies. The Vice President of Corporate and Economic Development will assign appropriate personnel to monitor student progress and attendance.

WBL 115 Work-Based Learning Seminar I 1 0 0 1
Prerequisites: None
Corequisites: WBL 111
This course is designed to be taken during the same semester as WBL 111 to allow students to reflect on what they are learning during their co-op work experience and to make connections between academic concepts and their application in the field. Emphasis is placed on integrating classroom learning with related work experience. Appropriate departmental faculty will monitor student progress and attendance.

WBL 121 Work-Based Learning II (Fall, Spring, Summer)
0 0 10 1
Prerequisites: For Hospitality Management – Instructor Permission Required
Corequisites: None
This course provides a work-based learning 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 per- form work-related competencies.

WBL 124 Work-Based Learning II (Fall, Spring) 0 0 40 4
Prerequisites: For Electric Lineman Technology (ELT), WBL 114
Corequisites: None
This course provides a work-based learning 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 per- form work-related competencies. The Vice President of Corporate and Economic Development will assign appropriate personnel to monitor student progress and attendance.

WBL 131 Work-Based Learning III (Fall, Spring, Summer)
0 0 10 1

Prerequisites: For Culinary Arts – CUL 240
Corequisites: None
This course provides a work-based learning 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 per- form work-related competencies.

WBL 134 Work Based Learning III (Fall, Spring) 0 0 40 4
Prerequisites: For Electric Lineman Technology (ELT), WBL 124
Corequisites: None
This course provides a work-based learning 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 per- form work-related competencies. The Vice President of Corporate and Economic Development will assign appropriate personnel to monitor student progress and attendance.

WBL 211 Work-Based Learning IV (Fall, Spring, Summer)
0 0 10 1

Prerequisites: For Culinary Arts – CUL 240
Corequisites: None
This course provides a work-based learning 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 per- form work-related competencies.

WEB 111 Introduction to Web Graphics (Fall) 2 2 3
Prerequisites: None
Corequisites: None
This course introduces the creation of web graphics and addressing problems peculiar to WWW display using appropriate software. Topics include web graphics

file types, optimization, RGB color, web typography, elementary special effects, transparency, animation, slicing, basic photo manipulation, and other related topics. Upon completion, students should be able to create graphics such as animated banners, buttons, backgrounds, logos, and manipulate photographic images for Web delivery.

WEB 115 Web Markup and Scripting (Fall) 2 2 3

Prerequisites: WEB 210

Corequisites: None

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

WEB 125 Mobile Web Design (Fall) 2 3 3

Prerequisites: WEB 210

Corequisites: None

This course introduces students to web design for mobile devices. Topics include planning an effective mobile Web site, industry standard Mobile Markup Language, CSS3, multimedia, m-commerce, social media, testing and publishing. Upon completion, students should be able to plan, develop, test, and publish Web content designed for mobile devices.

WEB 140 Web Development Tools (Spring) 2 2 3

Prerequisites: None

Corequisites: 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.

WEB 151 Mobile Application Dev I (Spring) 2 3 3

Prerequisites: WEB 210

Corequisites: None

This course introduces students to programming technologies, design and development related to mobile applications. Topics include accessing device capabilities, industry standards, operating systems, and programming for mobile applications using an OS Software Development Kit (SDK). Upon completion, students should be able to create basic applications for mobile devices.

WEB 210 Web Design (Spring) 2 3 3
Prerequisites: CTI 110
Corequisites: None
This course introduces intermediate to advanced web page design techniques. Topics include customer expectations, advanced markup language, multimedia technologies, us- ability and accessibility practices, and techniques for the evaluation of web design. Upon completion, students should be able to employ advanced design techniques to create high impact and highly functional websites.

WEB 250 Database Driven Web sites (Spring) 2 3 3
Prerequisites: DBA 115 and WEB 115
Corequisites: None
This course introduces dynamic (database-driven) web site development. Topics include the use of basic database CRUD statements (create, read, update and delete) incorporated into web applications, as well as in software architecture principles. Upon completion, students should be able to design and develop database driven web applications according to industry standards.

WLD 112 Basic Welding Processes (Spring) 1 3 2
Prerequisites: None
Corequisites: None
This course introduces basic welding and cutting. Emphasis is placed on beads applied with gases, mild steel fillers, and electrodes and the capillary action of solder. Upon completion, students should be able to set up welding and oxy-fuel equipment and perform welding, brazing, and soldering processes.

WLD 115 SMAW (Stick) Plate (Fall) 2 9 5
Prerequisites: None
Corequisites: None
This course introduces the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, students should be able to perform SMAW fillet and groove welds on carbon plate with prescribed electrodes.

WLD 115AB SMAW (Stick) Plate-AB (Fall) 2 4 3
Prerequisites: None
Corequisites: None
This first of two parts of WLD 115.

WLD 115BB SMAW (Stick) Plate-BB (Spring) 0 5 2
Prerequisites: WLD 115AC
Corequisites: None
A continuation of WLD 115AB and second part of WLD 115.

WLD 116 SMAW (Stick) Plate/Pipe (Spring) 1 9 4
Prerequisites: WLD 115
Corequisites: None
This course is designed to enhance skills with the shielded metal art (stick) welding process. Emphasis is placed on advancing manipulative skills with SMAW electrodes on varying joint geometry. Upon completion, students should be able to perform groove welds on carbon steel with prescribed electrodes in the flat, horizontal, vertical, and overhead positions.

WLD 116AB SMAW (Stick) Plate/Pipe-AC (Spring) 1 4 2
Prerequisites: WLD 115
Corequisites: None
The first of two parts of WLD 116.

WLD 116BB SMAW (Stick) Plate/Pipe-BC (Fall) 0 5 2
Prerequisites: WLD 116AB
Corequisites: None
A continuation of WLD 116AB and second part of WLD 116.

WLD 121 GMAW (MIG) FCAW/Plate (Fall) 2 6 4
Prerequisites: None
Corequisites: None
This course introduces metal arc welding and flux core arc welding processes. Topics include equipment setup and fillet and groove welds with emphasis on application of GMAW and FCAW electrodes on carbon steel plate. Upon completion, students should be able to perform fillet welds on carbon steel with prescribed electrodes in the flat, horizontal, and overhead positions.

WLD 121AB GMAW (MIG) FCAW/Plate-AB (Fall) 1 3 2
Prerequisites: None
Corequisites: None
The first of two parts of WLD 121.

WLD 121BB GMAW (MIG) FCAW/Plate-BB (Spring) 1 3 2
Prerequisites: WLD 121AB
Corequisites: None
A continuation of WLD 121AB and final part of WLD 121.

WLD 122 GMAW (MIG) Plate/Pipe (Spring) 1 6 3
Prerequisites: WLD 121
Corequisites: None
This course is designed to enhance skills with the gas metal arc (MIG) welding process. Emphasis is placed on advancing skills with the GMAW process making

groove welds on carbon steel plate and pipe in various positions. Upon completion, students should be able to perform groove welds with prescribed electrodes on various joint geometry.

WLD 122AB GMAW (MIG) Plate/Pipe-AB (Spring) 1 3 2
Prerequisites: WLD 121
Corequisites: None
The first of two parts of WLD 122.

WLD 122BB GMAW (MIG) Plate/Pipe-BB (Fall) 0 3 1
Prerequisites: WLD 122AB
Corequisites: None
A continuation of WLD 122AB and final part of WLD 122.

WLD 131 GTAW (TIG) Plate (Spring) 2 6 4
Prerequisites: None
Corequisites: None
This course introduces the gas tungsten arc (TIG) welding process. Topics include correct selection of tungsten, polarity, gas, and proper filler rod with emphasis placed on safety, equipment setup, and welding techniques. Upon completion, students should be able to perform GTAW fillet and groove welds with various electrodes and filler materials.

WLD 131AB GTAW (TIG) Plate-AB (Spring) 1 3 2
Prerequisites: None
Corequisites: None
The first of two parts of WLD 131.

WLD 131BB GTAW (MIG) Plate-BB (Fall) 1 3 2
Prerequisites: WLD 131AB
Corequisites: None
A continuation of WLD 131AB and final part of WLD 131.

WLD 132 GTAW (TIG) Plate/Pipe (Summer) 1 6 3
Prerequisites: WLD 131
Corequisites: None
This course is designed to enhance skills with the gas tungsten arc (TIG) welding process. Topics include setup, joint preparation, and electrode selection with emphasis on manipulative skills in all welding positions on plate and pipe. Upon completion, students should be able to perform GTAW welds with prescribed electrodes and filler materials on various joint geometry.

WLD 132AB GTAW (TIG) Plate/Pipe-AB (Summer) **1 3 2**
Prerequisites: None
Corequisites: None
The first of two parts of WLD 132.

WLD 132BB GTAW (TIG) Plate/Pipe-BB (Fall) **0 3 1**
Prerequisites: WLD 132AB
Corequisites: None
A continuation of WLD 132AB and final part of WLD 132.

WLD 141 Symbols and Specifications (Fall) **2 2 3**
Prerequisites: None
Corequisites: None
This course introduces the basic symbols and specifications used in welding. Emphasis is placed on interpretation of lines, notes, welding symbols, and specifications. Upon completion, students should be able to read and interpret symbols and specifications commonly used in welding.

WLD 151 Fabrication I (Fall) **2 6 4**
Prerequisites: DFT 119 or DFT 151
Corequisites: MAC 121
This course introduces the basic principles of fabrication. Emphasis is placed on safety, measurement, layout techniques, and the use of fabrication tools and equipment. Upon completion, students should be able to perform layout activities and operate various fabrication and material handling equipment.

WLD 151AB Fabrication I-AB (Fall) **1 3 1**
Prerequisites: DFT 119 or DFT 151
Corequisites: MAC 121
The first of two parts of WLD 151.

WLD 151BB Fabrication I-BB (Spring) **1 3 2**
Prerequisites: WLD 151AB
Corequisites: None
A continuation of WLD 151AB and final part of WLD 151.

WLD 251 Fabrication II (Spring) **1 6 3**
Prerequisites: WLD 151
Corequisites: None
This course covers advanced fabrication skills. Topics include advanced layout and assembly methods with emphasis on the safe and correct use of fabrication tools and equipment. Upon completion, students should be able to fabricate projects from working drawings.

WLD 251AB Fabrication II-AB (Fall) **1 3 2**
Prerequisites: WLD 151
Corequisites: None
The first of two parts of WLD 251.

WLD 251BB Fabrication II-BB (Spring) **0 3 1**
Prerequisites: WLD 251AB
Corequisites: None
A continuation of WLD 251AB and final part of WLD 251.

WLD 261 Certification Practices (Spring) **1 3 2**
Prerequisites: WLD 115, WLD 121, and WLD 131
Corequisites: None
This course covers certification requirements for industrial welding processes. Topics include techniques and certification requirements for prequalified joint geometry. Upon completion, students should be able to perform welds on carbon steel plate and/or pipe according to applicable codes.

WLD 262 Inspection and Testing (Spring) **2 2 3**
Prerequisites: None
Corequisites: None
This course introduces destructive and non-destructive testing methods. Emphasis is placed on safety, types and methods of testing, and the use of testing equipment and materials. Upon completion, students should be able to understand and/or perform a variety of destructive and non-destructive testing processes.

WLD 265 Automated Welding/Cutting (Fall) **2 6 4**
Prerequisites: DFT-151, WLD-110, and WLD-121
Corequisites: None
This course introduces automated welding equipment and processes. Topics include setup, programming, and operation of automated welding and cutting equipment. Upon completion, students should be able to set up, program, and operate automated welding and cutting equipment. Has been approved for transfer under the CAA and ICAA as a premajor and/or elective requirement.

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