

Academic Programs

Course Descriptions

ACADEMIC RELATED

ACA 115 Success and Study Skills 0 2 0 0 1

This course provides an orientation to the campus resources and academic skills necessary to achieve educational objectives. Emphasis is placed on an exploration of facilities and services, study skills, library skills, self-assessment, wellness, goal-setting, and critical thinking. Upon completion, students should be able to manage their learning experiences to successfully meet educational goals. This course must be completed as a prerequisite or corequisite of ENG 111.

ACCOUNTING

ACC 120 Principles of Financial Accounting 3 2 0 0 4

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

ACC 121 Principles of Managerial Accounting 3 2 0 0 4 Prerequisites: ACC 120

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

ACC 129 Individual Income Taxes 2 2 0 0 3

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

ACC 130 Business Income Taxes 2 2 0 0 3

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

ACC 140 Payroll Accounting 1 2 0 0 2 Prerequisites: ACC 120

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

ACC 150 Acct Software Applications 1 2 0 0 2 Prerequisites: ACC 115 or ACC 120

This course introduces microcomputer applications related to

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

ACC 180 Practices in Bookkeeping 3 0 0 0 3 Prerequisites: ACC 120

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

ACC 220 Intermediate Accounting I 3 2 0 0 4 Prerequisites: ACC 121

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

ACC 227 Practices in Accounting 3 0 0 0 3 Prerequisites: ACC 220

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

AIR CONDITIONING, HEATING, and REFRIGERATION

AHR 110 Introduction to Refrigeration 2 6 0 0 5

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 111 HVACR Electricity 2 2 0 0 3

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

AHR 112 Heating Technology 2 4 0 0 4

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.

AHR 113 Comfort Cooling 2 4 0 0 4

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

AHR 114 Heat Pump Technology 2 4 0 0 4**Prerequisites:** AHR 110 or AHR 113

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

AHR 120 HVACR Maintenance 1 3 0 0 2

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

AHR 130 HVAC Controls 2 2 0 0 3**Prerequisites:** AHR 111 or ELC 111

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

AHR 160 Refrigerant Certification 1 0 0 0 1

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

AHR 170 Heating Lab 0 3 0 0 1**Corequisites:** AHR 112

This course provides a laboratory experience in heating technology. Emphasis is placed on providing practical experience in the fundamentals of heating. Upon completion, students should be able to demonstrate an understanding of electric, oil, and gas fueled heating systems.

AHR 171 Comfort Cooling Lab 0 3 0 0 1**Corequisites:** AHR 113

This course provides a laboratory experience in comfort cooling. Emphasis is placed on providing practical experience in installation, operations, and maintenance of residential and light commercial comfort cooling systems. Upon completion, students should be able to demonstrate an understanding of comfort cooling systems.

AHR 172 Heat Pump Lab 0 3 0 0 1**Corequisites:** AHR 114

This course provides a laboratory experience in heat pump technology. Emphasis is placed on providing practical experience with air source and water source heat pumps. Upon completion, students should be able to demonstrate an understanding of heat pump year round comfort systems.

AHR 180 HVACR Customer Relations 1 0 0 0 1

This course introduces common business and customer relation practices that may be encountered in HVACR. Topics include business practices, appearance of self and vehicle, ways of handling customer complaints, invoices, telephone communications, and warranties. Upon completion, students should be able to present themselves to customers in a professional manner, understand how the business operates, complete invoices, and handle complaints.

AHR 210 Residential Building Code 1 2 0 0 2

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

ALTERNATIVE ENERGY TECHNOLOGY**ALT 120 Renewable Energy Tech 2 2 0 0 3**

This course provides an introduction to multiple technologies that allow for the production and conservation of energy from renewable sources. Topics include hydro-electric, wind power, passive and active solar energy, tidal energy, appropriate building techniques, and energy conservation methods. Upon completion, students should be able to demonstrate an understanding of renewable energy production and its impact on humans and their environment.

ALT 220 Photovoltaic Sys Tech 2 3 0 0 3

This course introduces the concepts, tools, techniques, and materials needed to understand systems that convert solar energy into electricity with photovoltaic (pv) technologies. Topics include site analysis for system integration, building codes, and advances in photovoltaic technology. Upon completion, students should be able to demonstrate an understanding of the principles of photovoltaic technology and current applications.

ANTHROPOLOGY**ANT 210 General Anthropology 3 0 0 0 3**

This course introduces the physical, archaeological, linguistic, and ethnological fields of anthropology. Topics include human origins, genetic variations, archaeology, linguistics, primatology, and contemporary cultures. Upon completion, students should be able to demonstrate an understanding of the four major fields of anthropology. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

ANT 220 Cultural Anthropology 3 0 0 0 3

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

ART**ART 111 Art Appreciation 3 0 0 0 3**

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

ART 114 Art History Survey I 3 0 0 0 3

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

ART 115 Art History Survey II 3 0 0 0 3

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

ART 121 Design I 0 6 0 0 3

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

ART 122 Design II 0 6 0 0 3**Prerequisites: ART 121**

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

ART 131 Drawing I 0 6 0 0 3

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

ART 132 Drawing II 0 6 0 0 3**Prerequisites: ART 131**

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

ART 135 Figure Drawing I 0 6 0 0 3**Prerequisites: ART 131**

This course introduces rendering the human figure with various drawing materials. Emphasis is placed on the use of the visual elements, anatomy, and proportion in the representation of the draped and undraped figure. Upon completion, students should be able to demonstrate competence in drawing the human figure. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 171 Computer Art I 0 6 0 0 3

This course introduces the use of the computer as a tool for solving visual problems. Emphasis is placed on fundamentals of computer literacy and design through bit-mapped image manipulation. Upon completion, students should be able to demonstrate an understanding of paint programs, printers, and scanners to capture, manipulate, and output images. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 222 Wood Design I 0 6 0 0 3

This course introduces the historical and contemporary design concepts and their application to the construction of functional and sculptural wood forms. Emphasis is placed on the mastery of hand and power tools. Upon completion, students should be able to demonstrate appropriate use of tools to create unique designs. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 223 Wood Design II 0 6 0 0 3**Prerequisites: ART 222**

This course provides a continuation of the skills and techniques used in ART 222. Emphasis is placed on woodcarving and other processes. Upon completion, students should be able to use original designs in the creation of functional and sculptural forms. This course has been

approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 231 Printmaking I 0 6 0 0 3

This course introduces printmaking: its history, development techniques, and processes. Emphasis is placed on basic applications with investigation into image source and development. Upon completion, students should be able to produce printed images utilizing a variety of methods. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 232 Printmaking II 0 6 0 0 3**Prerequisites: ART 231**

This course includes additional methods and printmaking processes. Emphasis is placed on the printed image as related to method, source, and concept. Upon completion, students should be able to produce expressive images utilizing both traditional and innovative methods. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 235 Figure Drawing II 0 6 0 0 3**Prerequisites: ART 135**

This course extends the study and rendering of the draped and undraped human figure. Emphasis is placed on the exploration of materials and approaches to drawing. Upon completion, students should be able to demonstrate creativity in the representation of the figure. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 240 Painting I 0 6 0 0 3

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

ART 241 Painting II 0 6 0 0 3**Prerequisites: ART 240**

This course provides a continuing investigation of the materials, processes, and techniques of painting. Emphasis is placed on the exploration of expressive content using a variety of creative processes. Upon completion, students should be able to demonstrate competence in the expanded use of form and variety. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 260 Photography Appreciation 3 0 0 0 3

This course introduces the origins and historical development of photography. Emphasis is placed on the study of composition and history of photography as an art form. Upon completion, students should be able to recognize and produce, using color transparencies, properly exposed, well-composed photographs. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 261 Photography I 0 6 0 0 3

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

ART 262 Photography II 0 6 0 0 3**Prerequisites: ART 261**

This course introduces the creative manipulation of alternative photographic materials and processes such as toning, hand coloring, infrared, and multiple exposure. Emphasis is placed on

personal vision and modes of seeing. Upon completion, students should be able to create properly exposed images using a variety of photographic materials and processes. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 264 Digital Photography I 1 4 0 0 3

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

ART 265 Digital Photography II 1 4 0 0 3

Prerequisites: ART 264

This course provides exploration of the concepts and processes of photo manipulation through complex composite images, special effects, color balancing and image/text integration. Emphasis is placed on creating a personal vision and style. Upon completion, students should be able to produce well-executed images using a variety of photographic and photo manipulative approaches. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 266 Videography I 0 6 0 0 3

This course introduces various aspects of basic video production including concept development, scripting, camera operation, and post-production. Emphasis is placed on creative expression, camera handling, story boarding, and editing. Upon completion, students should be able to demonstrate a basic understanding of video camera operation and production techniques. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 267 Videography II 0 6 0 0 3

Prerequisites: ART 266

This course is designed to provide a framework for the production of a long-term video project. Emphasis is placed on realization of the unique creative vision. Upon completion, students should be able to produce a thematically coherent, edited video with sound and titling. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 271 Computer Art II 0 6 0 0 3

Prerequisites: ART 171

This course includes advanced computer imaging techniques. Emphasis is placed on creative applications of digital technology. Upon completion, students should be able to demonstrate command of computer systems and applications to express their personal vision. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 281 Sculpture I 0 6 0 0 3

This course provides an exploration of the creative and technical methods of sculpture with focus on the traditional processes. Emphasis is placed on developing basic skills as they pertain to three-dimensional expression in various media. Upon completion, students should be able to show competence in a variety of sculptural approaches. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 282 Sculpture II 0 6 0 0 3

Prerequisites: ART 281

This course builds on the visual and technical skills learned in ART 281. Emphasis is placed on developing original solutions to sculptural problems in a variety of media. Upon completion, students should be able to express individual ideas using the techniques and materials of sculpture. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ART 283 Ceramics I 0 6 0 0 3

This course provides an introduction to three-dimensional design principles using the medium of clay. Emphasis is placed on fundamentals of forming, surface design, glaze application, and firing. Upon completion, students should be able to demonstrate skills in slab and coil construction, simple wheel forms, glaze technique, and creative expression. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

ART 284 Ceramics II 0 6 0 0 3

Prerequisites: ART 283

This course covers advanced hand building and wheel techniques. Emphasis is placed on creative expression, surface design, sculptural quality, and glaze effect. Upon completion, students should be able to determine a high level of technical competence in forming and glazing with a development of three dimensional awareness. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

AMERICAN SIGN LANGUAGE

ASL 111 Elementary ASL I 3 0 0 0 3

Corequisites: ASL 181

This course introduces the fundamental elements of American Sign Language within a cultural context. Emphasis is placed on the development of basic expressive and receptive skills. Upon completion, students will be able to comprehend and respond with grammatical accuracy to expressive American Sign Language and demonstrate cultural awareness. This course has been approved to satisfy the comprehensive articulation agreement general education core requirement in humanities/fine arts.

ASL 112 Elementary ASL II 3 0 0 0 3

Prerequisites: ASL 111

Corequisites: ASL 182

This course is a continuation of ASL 111 focusing on the fundamental elements of American Sign Language in a cultural context. Emphasis is placed on the progressive development of expressive and receptive skills. Upon completion, students should be able to comprehend and respond with increasing accuracy to expressive American Sign Language and demonstrate cultural awareness. This course has been approved to satisfy the comprehensive articulation agreement general education core requirement in humanities/fine arts.

ASL 181 ASL Lab 1 0 2 0 0 1

Corequisites: ASL 111

This course provides an opportunity to enhance acquisition of the fundamental elements of American Sign Language. Emphasis is placed on the development of basic expressive and receptive skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing accuracy to expressive American Sign Language. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ASL 182 ASL Lab 2 0 2 0 0 1

Prerequisites: ASL 181

Corequisites: ASL 112

This course provides an opportunity to enhance acquisition of the fundamental elements of American Sign Language. Emphasis is placed on the progressive development of basic expressive and receptive skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing accuracy to expressive American Sign Language. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ASL 211 Intermediate ASL I 3 0 0 0 3

Prerequisites: ASL 112

Corequisites: ASL 281

This course provides a review and expansion of the essential skills of American Sign Language. Emphasis is placed on the progressive

development of expressive and receptive skills study of authentic and representative literacy and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively using American Sign Language about the past, present, and future. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ASL 212 Intermediate ASL II 3 0 0 0 3

Prerequisites: ASL 211

Corequisites: ASL 282

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

ASL 221 Advanced ASL I 3 0 0 0 3

Prerequisites: ASL 212

This course provides an expansion of the essential and advanced skills of ASL, including advanced vocabulary, lexicalized fingerspelling, and complex grammatical structures. Emphasis is placed on the advanced development of expressive, receptive and conversational skills, study of authentic and representative literacy and cultural texts. Upon completion, students will communicate more accurately with advanced complexity, and to present the topics in the various registers, pragmatics and genres of ASL.

ASL 222 Advanced ASL II 3 0 0 0 3

Prerequisites: ASL 221

This course provides more expansion of the essential and advanced skills of ASL, including advanced vocabulary, lexicalized fingerspelling, story telling, and complex grammatical structures. Emphasis is placed on the more advanced development of expressive, receptive, conversational and presentational skills in a variety of discourse genres. Upon completion, students should be able to debate and lecture with advanced complexity, create story telling, and to present the complementary issues of Deaf community.

ASL 250 Linguistics of ASL 3 0 0 0 3

Prerequisites: ASL 112

This course is designed to increase knowledge and skills necessary to linguistically analyze ASL. Emphasis is placed on applying phonology, morphology, syntax, semantics, discourse and sociolinguistics of ASL. Upon completion, students should be able to demonstrate knowledge and understanding of the basic linguistics of ASL through a variety of assessment methods.

ASL 281 ASL Lab 3 0 2 0 0 1

Prerequisites: ASL 182

Corequisites: ASL 211

This course provides an opportunity to enhance the review and the expansion of the essential skills of American Sign Language. Emphasis is placed on the progressive development of expressive and receptive skills study of representative literacy and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ASL 282 ASL Lab 4 0 2 0 0 1

Prerequisites: ASL 281

Corequisites: ASL 212

This course provides an opportunity to enhance the review and expansion of the essential skills of American Sign Language. Emphasis is placed on the continuing development of expressive and receptive skills study of authentic and representative literacy and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate

spontaneously and accurately with increasing complexity and sophistication. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ASTRONOMY

AST 111 Descriptive Astronomy 3 0 0 0 3

This course introduces an overall view of modern astronomy. Topics include an overview of the solar system, the sun, stars, galaxies, and the larger universe. Upon completion, students should be able to demonstrate an understanding of the universe around them. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

AST 111A Descriptive Astronomy Lab 0 2 0 0 1

Corequisites: AST 111

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

AUTOMOTIVE BODY REPAIR

AUB 111 Painting and Refinishing I 2 6 0 0 4

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

AUB 112 Painting and Refinishing II 2 6 0 0 4

Prerequisites: AUB 111

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

AUB 114 Special Finishes 1 2 0 0 2

Prerequisites: AUB 111

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

AUB 121 Non-Structural Damage I 1 4 0 0 3

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

AUB 122 Non-Structural Damage II 2 6 0 0 4

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

AUB 131 Structural Damage I 2 4 0 0 4

This course introduces safety, equipment, structural damage analysis, and damage repairs. Topics include shop safety, design and construction, structural analysis and measurement, equipment, structural glass, repair techniques, and other related topics. Upon

completion, students should be able to analyze and perform repairs to a vehicle that has received light/moderate structural damage.

AUB 132 Structural Damage II 2 6 0 0 4

Prerequisites: AUB 131

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

AUB 134 Autobody MIG Welding 1 4 0 0 3

This course covers the terms and procedures for welding the various metals found in today's autobody repair industry with an emphasis on personal/environmental safety. Topics include safety and precautionary measures, setup/operation of MIG equipment, metal identification methods, types of welds/joints, techniques, inspection methods, and other related topics. Upon completion, students should be able to demonstrate a basic knowledge of welding operations and safety procedures according to industry standards.

AUB 136 Plastics and Adhesives 1 4 0 0 3

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

AUB 141 Mech and Elec Components I 2 2 0 0 3

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

AUB 160 Body Shop Operations 1 0 0 0 1

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

AUB 162 Autobody Estimating 1 2 0 0 2

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

AUTOMOTIVE

AUT 110 Intro to Auto Technology 2 2 0 0 3

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

AUT 116 Engine Repair 2 3 0 0 3

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

AUT 116A Engine Repair Lab 0 3 0 0 1

Corequisites: AUT 116

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

AUT 141 Suspension and Steering Sys 2 3 0 0 3

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 0 3 0 0 1

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 2 3 0 0 3

This course covers principles of operation and types, diagnosis, service, and repair of brake systems. Topics include drum and disc brakes involving hydraulic, vacuum boost, 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 0 3 0 0 1

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 161 Basic Auto Electricity 4 3 0 0 5

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

AUT 163 Adv Auto Electricity 2 3 0 0 3

Prerequisites: AUT 161

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 Adv Auto Electricity Lab 0 3 0 0 1

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 171 Auto Climate Control 2 4 0 0 4

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

AUT 181 Engine Performance 1 2 3 0 0 3

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

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

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 systems, fuel delivery, injection components and systems and emission control devices and emerging engine performance technologies. Upon completion, students should be able to describe operation and diagnose/repair basic ignition, fuel and emission related driveability problems using appropriate test equipment/service information.

AUT 183 Engine Performance 2 2 6 0 0 4

Prerequisites: AUT 181

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

AUT 186 PC Skills for Auto Techs 2 2 0 0 3

This course introduces students to personal computer literacy and Internet literacy with an emphasis on the automotive service industry. Topics include service information systems, management systems, computer-based systems, and PC based diagnostic equipment. Upon completion, students should be able to access information pertaining to automotive technology and perform word processing.

AUT 221 Auto Transm/Transaxles 2 3 0 0 3

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

AUT 221A Auto Transm/Transax Lab 0 3 0 0 1

Corequisites: AUT 221

This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include hydraulic, pneumatic, mechanical, and electrical/electronic operation of automatic drive trains and the use of appropriate service tools and equipment. Upon completion, students should be able to diagnose and repair automatic drive trains.

AUT 231 Man Trans/Axles/Drtrains 2 3 0 0 3

This course covers the operation, diagnosis, and repair of manual transmissions/transaxles, clutches, driveshafts, axles, and final

drives. Topics include theory of torque, power flow, and manual drive train servicing and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to explain operational theory, diagnose and repair manual drive trains.

AUT 231A Man Trans/Ax/Drtrains Lab 0 3 0 0 1

Corequisites: AUT 231

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

AUT 284 Emerging Auto Tech 2 6 0 0 4

This course covers emerging technologies in the automotive industry and the diagnostics associated with those technologies. Topics include exploring new technologies, diagnostic tools and methods, and repairs. Upon completion, students should be able to understand emerging automotive technologies.

BIOLOGY

BIO 090 Foundations of Biology 3 2 0 0 4

Corequisites: RED 090

This course introduces basic biological concepts. Topics include basic biochemistry, cell structure and function, interrelationships among organisms, scientific methodology, and other related topics. Upon completion, students should be able to demonstrate preparedness for college-level biology courses. A student must earn a "C" or better to progress to the next class. A lab fee is required.

BIO 111 General Biology I 3 3 0 0 4

Prerequisites: High School biology or BIO 090

This course introduces the principles and concepts of biology. Emphasis is placed on basic biological chemistry, cell structure and function, metabolism and energy transformation, genetics, evolution, classification, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/ mathematics. A lab fee is required.

BIO 112 General Biology II 3 3 0 0 4

Prerequisites: BIO 111

This course is a continuation of BIO 111. Emphasis is placed on organisms, biodiversity, plant and animal systems, ecology, and other related topics. Upon completion, students should be able to demonstrate comprehension of life at the organismal and ecological levels. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. A lab fee is required.

BIO 120 Introductory Botany 3 3 0 0 4

Prerequisites: BIO 110 or BIO 111

This course provides an introduction to the classification, relationships, structure, and function of plants. Topics include reproduction and development of seed and non-seed plants, levels of organization, form and function of systems, and a survey of major taxa. Upon completion, students should be able to demonstrate comprehension of plant form and function, including selected taxa of both seed and non-seed plants. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. A lab fee is required.

BIO 130 Introductory Zoology 3 3 0 0 4

Prerequisites: BIO 110 or BIO 111

This course provides an introduction to the classification, relationships, structure, and function of major animal phyla. Emphasis is placed on levels of organization, reproduction and development, comparative systems, and a survey of selected phyla. Upon completion, students should be able to demonstrate

comprehension of animal form and function including comparative systems of selected groups. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. A lab fee is required.

BIO 140 Environmental Biology 3 0 0 0 3

Corequisites: BIO 140A

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

BIO 140A Environmental Biology Lab 0 3 0 0 1

Corequisites: BIO 140

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

BIO 145 Ecology 3 3 0 0 4

Prerequisites: BIO 111

This course provides an introduction to ecological concepts using an ecosystems approach. Topics include energy flow, nutrient cycling, succession, population dynamics, community structure, and other related topics. Upon completion, students should be able to demonstrate comprehension of basic ecosystem structure and dynamics. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. A lab fee is required.

BIO 163 Basic Anatomy and Physiology 4 2 0 0 5

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

BIO 165 Anatomy and Physiology I 3 3 0 0 4

Prerequisites: RED 090; CHM 092 or High School chemistry; and BIO 090 or High School biology

This course is the first of a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. A lab fee is required.

BIO 166 Anatomy and Physiology II 3 3 0 0 4

Prerequisites: BIO 165

This course is the second in a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and the interrelationships of all body systems. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. A lab fee is required.

BIO 175 General Microbiology 2 2 0 0 3

Prerequisites: BIO 111 or BIO 163 or BIO 165

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

BIO 176 Adv General Microbiology 1 2 0 0 2

Prerequisites: BIO 175

This course is a continuation of BIO 175. Emphasis is placed on microbial metabolism, genetics, and environmental and food microbiology. Upon completion, students should be able to identify unknown microbes and demonstrate an understanding of the fundamentals of molecular biology and microbial ecology. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. A lab fee is required.

BIO 240 Waste Management 3 0 0 0 3

Prerequisites: BIO 110 or BIO 111 or BIO 140/140A

This course is a study of human use of and impact on the environment. Topics include how human activities can negatively affect the land and water and how to avoid and cope with waste problems. Upon completion, students should be able to identify both hazardous and nonhazardous waste products and solutions for their management. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

BIO 242 Natural Resource Conserv. 3 0 0 0 3

Prerequisites: BIO 112 or BIO140/140A

This course describes the importance of natural resources and their role in our environment. Emphasis is placed on the physical, biological, and ecological principles underlying natural resource conservation with attention to the biological consequences of human impacts. Upon completion, students should be able to demonstrate an understanding of natural resource conservation. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

BLUEPRINT READING

BPR 130 Blueprint Reading/Const 1 2 0 0 2

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

BUSINESS

BUS 110 Introduction to Business 3 0 0 0 3

This course provides a survey of the business world. Topics include the basic principles and practices of contemporary business. Upon completion, students should be able to demonstrate an understanding of business concepts as a foundation for studying other business subjects. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).

BUS 115 Business Law I 3 0 0 0 3

This course introduces the ethics and legal framework of business. Emphasis is placed on contracts, negotiable instruments, Uniform Commercial Code, and the working of the court systems. Upon completion, students should be able to apply ethical issues and laws covered to selected business decision-making situations. This course has been approved to satisfy the Comprehensive Articulation

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

BUS 116 Business Law II 3 0 0 0 3

Prerequisites: BUS 115

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

BUS 125 Personal Finance 3 0 0 0 3

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

BUS 137 Principles of Management 3 0 0 0 3

This course is designed to be an overview of the major functions of management. Emphasis is placed on planning, organizing, controlling, directing, and communicating. Upon completion, students should be able to work as contributing members of a team utilizing these functions of management. This course is also available through the Virtual Learning Community (VLC). This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

BUS 153 Human Resource Management 3 0 0 0 3

This course introduces the functions of personnel/human resource management within an organization. Topics include equal opportunity and the legal environment, recruitment and selection, performance appraisal, employee development, compensation planning, and employee relations. Upon completion, students should be able to anticipate and resolve human resource concerns. This course is also available through the Virtual Learning Community (VLC).

BUS 225 Business Finance 2 2 0 0 3

Prerequisites: ACC 120

This course provides an overview of business financial management. Emphasis is placed on financial statement analysis, time value of money, management of cash flow, risk and return, and sources of financing. Upon completion, students should be able to interpret and apply the principles of financial management. This course is also available through the Virtual Learning Community (VLC).

BUS 228 Business Statistics 2 2 0 0 3

Prerequisites: MAT 115, MAT 140, or MAT 161

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

BUS 239 Bus Applications Seminar 1 2 0 0 2

Prerequisites: ACC 120, BUS 115, BUS 137, MKT 120, and either ECO 151, ECO 251 or ECO 252

This course is designed as a capstone course for Business Administration majors. Emphasis is placed on decision making in the areas of management, marketing, production, purchasing, and finance. Upon completion, students should be able to apply the techniques, processes, and vital professional skills needed in the work place. This course is also available through the Virtual Learning Community (VLC).

BUS 240 Business Ethics 3 0 0 0 3

This course introduces contemporary and controversial ethical issues that face the business community. Topics include moral reasoning, moral dilemmas, law and morality, equity, justice and fairness, ethical standards, and moral development. Upon completion, students

should be able to demonstrate an understanding of their moral responsibilities and obligations as members of the workforce and society.

BUS 261 Diversity in Mgmt 3 0 0 0 3

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

BUS 270 Professional Development 3 0 0 0 3

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

BUS 280 REAL Small Business 4 0 0 0 4

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

CHEMISTRY

CHM 092 Fundamentals of Chemistry 3 2 0 0 4

Prerequisites: MAT 070

This course covers fundamentals of chemistry with laboratory applications. Topics include measurements, matter, energy, atomic theory, bonding, molecular structure, nomenclature, balancing equations, stoichiometry, solutions, acids and bases, gases, and basic organic chemistry. Upon completion, students should be able to understand and apply basic chemical concepts and demonstrate basic laboratory skills necessary for success in college-level science courses. A student must earn a "C" or better to progress to the next class; lab fee required.

CHM 131 Introduction to Chemistry 3 0 0 0 3

Prerequisites: High School chemistry or CHM 092; MAT 080

Corequisites: CHM 131A

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

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

Corequisites: CHM 131

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

CHM 132 Organic and Biochemistry 3 3 0 0 4

Prerequisites: CHM 131 and CHM 131A or CHM 151

This course provides a survey of major functional classes of compounds in organic and biochemistry. Topics include structure, properties, and reactions of the major organic and biological molecules and basic principles of metabolism. Upon completion, students should be able to demonstrate an understanding of fundamental chemical concepts needed to pursue studies in related

professional fields. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. A lab fee is required.

CHM 151 General Chemistry I 3 3 0 0 4

Prerequisites: High school chemistry or CHM 092; and MAT 080

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

CHM 152 General Chemistry II 3 3 0 0 4

Prerequisites: CHM 151

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

CHM 251 Organic Chemistry I 3 3 0 0 4

Prerequisites: CHM 152

This course provides a systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of hydrocarbons, alkyl halides, alcohols, and ethers; further topics include isomerization, stereochemistry, and spectroscopy. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of covered organic topics as needed in CHM 252. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. A lab fee is required.

CHM 252 Organic Chemistry II 3 3 0 0 4

Prerequisites: CHM 251

This course provides continuation of the systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of aromatics, aldehydes, ketones, carboxylic acids and derivatives, amines and heterocyclics; multi-step synthesis will be emphasized. Upon completion, students should be able to demonstrate an understanding of organic concepts as needed to pursue further study in chemistry and related professional fields. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. A lab fee is required.

INFORMATION SYSTEMS

CIS 070 Fundamentals of Computing 0 2 0 0 1

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

CIS 110 Introduction to Computers 2 2 0 0 3

This course introduces computer concepts, including fundamental functions and operations of the computer. Topics include identification of hardware components, basic computer operations, security issues, and use of software applications. Upon completion, students should be able to demonstrate an understanding of the role and function of computers and use the computer to solve problems. This course has been approved to satisfy the Comprehensive Articulation Agreement

general education core requirement in natural science/mathematics (Quantitative Option). This course is also available through the Virtual Learning Community (VLC).

CIS 115 Intro to Programming and Logic 2 3 0 0 3

Prerequisites: MAT 070, MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175

This course introduces computer programming and problem solving in a structured program logic environment. Topics include language syntax, data types, program organization, problem solving methods, algorithm design, and logic control structures. Upon completion, students should be able to manage files with operating system commands, use top-down algorithm design, and implement algorithmic solutions in a programming language. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics (Quantitative Option). This course is also available through the Virtual Learning Community (VLC).

CRIMINAL JUSTICE

CJC 111 Intro to Criminal Justice 3 0 0 0 3

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

CJC 112 Criminology 3 0 0 0 3

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

CJC 113 Juvenile Justice 3 0 0 0 3

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

CJC 120 Interviews/Interrogations 1 2 0 0 2

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

CJC 121 Law Enforcement Operations 3 0 0 0 3

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

CJC 122 Community Policing 3 0 0 0 3

This course covers the historical, philosophical, and practical dimensions of community policing. Emphasis is placed on the empowerment of police and the community to find solutions to

problems by forming partnerships. Upon completion, students should be able to define community policing, describe how community policing strategies solve problems, and compare community policing to traditional policing.

CJC 131 Criminal Law 3 0 0 0 3

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

CJC 132 Court Procedure and Evidence 3 0 0 0 3

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

CJC 141 Corrections 3 0 0 0 3

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

CJC 151 Intro to Loss Prevention 3 0 0 0 3

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 170 Critical Incident Management for Public Safety 3 0 0 0 3

This course prepares the student to specialize in the direct response, operations, and management of critical incidents. Emphasis is placed upon the theoretical and applied models to understand and manage disasters, terrorism, and school/work place violence. Upon completion, the student should be able to identify and discuss managerial techniques, legal issues, and response procedures to critical incidents.

CJC 212 Ethics and Community Relations 3 0 0 0 3

This course covers ethical considerations and accepted standards applicable to criminal justice organizations and professionals. Topics include ethical systems; social change, values, and norms; cultural diversity; citizen involvement in criminal justice issues; and other related topics. Upon completion, students should be able to apply ethical considerations to the decision-making process in identifiable criminal justice situations. This course is also available through the Virtual Learning Community (VLC).

CJC 213 Substance Abuse 3 0 0 0 3

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

CJC 215 Organization and Administration 3 0 0 0 3

This course introduces the components and functions of organization and administration as it applies to the agencies of the criminal

justice system. Topics include operations/functions of organizations; recruiting, training, and retention of personnel; funding and budgeting; communications; span of control and discretion; and other related topics. Upon completion, students should be able to identify and discuss the basic components and functions of a criminal justice organization and its administrative operations.

CJC 221 Investigative Principles 3 2 0 0 4

This course introduces the theories and fundamentals of the investigative process. Topics include crime scene/incident processing, information gathering techniques, collection/preservation of evidence, preparation of appropriate reports, court presentations, and other related topics. Upon completion, students should be able to identify, explain, and demonstrate the techniques of the investigative process, report preparation, and courtroom presentation. This course is also available through the Virtual Learning Community (VLC).

CJC 231 Constitutional Law 3 0 0 0 3

The course covers the impact of the Constitution of the United States and its amendments on the criminal justice system. Topics include the structure of the Constitution and its amendments, court decisions pertinent to contemporary criminal justice issues, and other related topics. Upon completion, students should be able to identify/discuss the basic structure of the United States Constitution and the rights/procedures as interpreted by the courts. This course is also available through the Virtual Learning Community (VLC).

CJC 244 Footwear and Tire Imprints 2 3 0 0 3

This course provides a study of the fundamental concepts of footwear and tire imprint evidence as related to forensic science. Topics include proper photographic recording, casting, recognition of wear patterns and imprint identification. Upon completion, the student should be able to recognize, record, photograph, and identify footwear and tire imprints.

CJC 255 Issue in Crim Justice App 3 0 0 0 3

Prerequisites: CJC 111, CJC 221, and CJC 231

This course provides an opportunity to exhibit interpersonal and technical skills required for application of criminal justice concepts in contemporary practical situations. Emphasis is placed on critical thinking and integration of theory and practical skills components. Upon completion, students should be able to demonstrate the knowledge required of any entry-level law enforcement officer.

COOPERATIVE EDUCATION

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

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

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

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

COE 113 Co-op Work Experience I 0 0 0 30 3

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

COE 114 Co-op Work Experience I 0 0 0 40 4

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

COE 115 Work Exp Seminar I 1 0 0 0 1**Corequisites: COE111**

This course must be taken in conjunction with COE 111 in Community Spanish Interpreter and Interpreter Education. It provides the opportunity to discuss work experiences with peers and faculty. Emphasis is placed on planning, integrating, and evaluating work experiences.

COE 121 Co-op Work Experience II 0 0 0 10 1

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

COE 122 Co-op Work Experience II 0 0 0 20 2

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

COE 123 Co-op Work Experience II 0 0 0 30 3

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

COE 124 Co-op Work Experience II 0 0 0 40 4

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

COE 131 Co-op Work Experience III 0 0 0 10 1

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

COE 132 Co-op Work Experience III 0 0 0 20 2

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

COE 211 Co-op Work Experience IV 0 0 0 10 1

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

COE 212 Co-op Work Experience IV 0 0 0 20 2

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

COMMUNICATION**COM 120 Intro Interpersonal Communication 3 0 0 0 3**

This course introduces the practices and principles of interpersonal communication in both dyadic and group settings. Emphasis is placed on the communication process, perception, listening, self-disclosure, speech apprehension, ethics, nonverbal communication, conflict, power, and dysfunctional communication relationships. Upon completion, students should be able to demonstrate interpersonal communication skills, apply basic principles of group discussion, and manage conflict in interpersonal communication situations. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts (substitute).

COM 140 Intro Intercultural Communication 3 0 0 0 3

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

COM 160 Small Group Communication 3 0 0 0 3

This course provides an overview of the theory, practice, and critical analysis of communication in the small group setting. Emphasis is placed on group development, conflict, and conformity; leadership skills and styles; group roles and ranks; and decision making, problem solving, and conflict resolution. Upon completion, students should be able to apply topics of gender, culture, and social-emotional functions within group settings. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

COM 231 Public Speaking 3 0 0 0 3

This course provides instruction and experience in preparation and delivery of speeches within a public setting and group discussion. Emphasis is placed on research, preparation, delivery, and evaluation of informative, persuasive, and special occasion public speaking. Upon completion, students should be able to prepare and deliver well-organized speeches and participate in group discussion with appropriate audiovisual support. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in speech/communication.

COSMETOLOGY**COS 111 Cosmetology Concepts I 4 0 0 0 4****Corequisites: COS 112**

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

COS 112 Salon I 0 24 0 0 8**Corequisites: COS 111**

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

COS 113 Cosmetology Concepts II 4 0 0 0 4**Corequisites: COS 114**

This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, chemistry, manicuring, chemical restructuring, and hair coloring. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.

COS 114 Salon II	0 24 0 0 8	COS 125 Esthetics Concepts II	2 0 0 0 2
Corequisites: COS 113		This course covers more comprehensive esthetics. Topics include nutrition, business management, makeup, and color analysis. Upon completion, students should be able to demonstrate an understanding of the advanced esthetics concepts and meet course requirements.	
This course provides experience in a simulated salon setting. Topics include basic skin care, manicuring, nail application, scalp treatments, shampooing, rinsing, hair color, design, haircutting, chemical restructuring, pressing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.			
COS 115 Cosmetology Concepts III	4 0 0 0 4	COS 126 Esthetics Salon II	0 18 0 0 6
Corequisites: COS 116		This course provides experience in a simulated esthetics setting. Topics include machine facials, aromatherapy, massage therapy, electricity, and apparatus. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology licensing examination for Estheticians.	
This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, salon management, salesmanship, skin care, electricity/light therapy, wigs, thermal hair styling, lash and brow tinting, superfluous hair removal, and other related topics. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.			
COS 116 Salon III	0 12 0 0 4	COS 222 Manicure/Nail Technology II	4 6 0 0 6
Corequisites: COS 115		Prerequisites: COS 121	
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.		This course covers advanced techniques of nail technology, hand and arm massage. Topics include OSHA/safety, product knowledge, customer service, salesmanship, artificial applications, nail art, and other related topics. Upon completion, students should be able to demonstrate competence necessary for the licensing examination, including advanced nail care, artificial enhancements and decorations.	
COS 117 Cosmetology Concepts IV	2 0 0 0 2	COS 240 Contemporary Design	1 3 0 0 2
Corequisites: COS 118		Prerequisites: COS 111 and COS 112	
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.		This course covers methods and techniques for contemporary designs. Emphasis is placed on contemporary designs and other related topics. Upon completion, students should be able to demonstrate and apply techniques associated with contemporary design.	
COS 118 Salon IV	0 21 0 0 7	COS 250 Computerized Salon Ops	1 0 0 0 1
Prerequisites: COS 114 and COS 116		This course introduces computer and salon software. Emphasis is placed on various computer and salon software applications. Upon completion, students should be able to utilize computer skills and software applications in the salon setting.	
Corequisites: COS 117			
This course provides advanced experience in a simulated salon setting. Emphasis is placed on efficient and competent delivery of all salon services in preparation for the licensing examination and employment. Upon completion, students should be able to demonstrate competence in program requirements and the areas covered on the Cosmetology Licensing Examination and meet entry-level employment requirements.		COS 251 Manicure Instructor Concepts	8 0 0 0 8
COS 119 Esthetics Concepts I	2 0 0 0 2	This course introduces manicuring instructional concepts. Topics include orientation, theories of education, unit planning, daily lesson planning, laboratory management, student assessment, record keeping, and other related topics. Upon completion, students should be able to identify theories of education, develop lesson plans, demonstrate supervision techniques, and assess student classroom performance.	
This course covers the concepts of esthetics. Topics include orientation, anatomy, physiology, hygiene, sterilization, first aid, chemistry, basic dermatology, and professional ethics. Upon completion, students should be able to demonstrate an understanding of the concepts of esthetics and meet course requirements.		COS 252 Manicure Instructor Practicum	0 15 0 0 5
COS 120 Esthetics Salon I	0 18 0 0 6	Prerequisites: NC Cosmetology or Manicurist License and six months work experience in a cosmetic arts salon	
This course covers the techniques of esthetics in a comprehensive experience in a simulated salon setting. Topics include client consultation, facials, body treatments, hair removal, make-up applications, and color analysis. Upon completion, students should be able to safely and competently demonstrate esthetic services on clients in a salon setting.		Corequisites: COS 251	
COS 121 Manicure/Nail Technology I	4 6 0 0 6	This course covers supervisory and instructional skills for teaching manicuring students in a laboratory setting. Topics include demonstrations of services, supervision, student assessment, and other related topics. Upon completion, students should be able to demonstrate competence in the areas covered by the Manicuring Instructor Licensing Examination and meet program completion requirements.	
This course covers techniques of nail technology, hand and arm massage, and recognition of nail diseases and disorders. Topics include OSHA/safety, sanitation, bacteriology, product knowledge, salesmanship, manicures, artificial applications, pedicures, massage, and other related topics. Upon completion, students should be able to safely and competently perform nail care, including manicures, pedicures, massage, decorating, and artificial applications in a salon setting.		COS 253 Esthetics Instructor Concepts I	6 15 0 0 11
COS 122 Manicure/Nail Technology II	4 6 0 0 6	This course introduces esthetic instructional concepts and skills. Topics include orientation, theories of education, unit planning, daily lesson plans, laboratory management, student assessment in a laboratory setting. Upon completion, students should be able to demonstrate esthetic services and instruct and objectively assess student performance in a classroom setting.	
Prerequisites: COS 121		COS 254 Esthetics Instructor Concepts II	6 15 0 0 11
This course covers advanced techniques of nail technology, hand and arm massage. Topics include OSHA/safety, product knowledge, customer service, salesmanship, artificial applications, nail art, and other related topics. Upon completion, students should be able to demonstrate competence necessary for the licensing examination, including advanced nail care, artificial enhancements and decorations.		This course covers advanced esthetic instructional concepts and skills. Topics include practical demonstrations, lesson planning, lecture techniques, development and administration of assessment tools record keeping and other related topics. Upon completion, students should be able to demonstrate competencies in the areas covered by the Esthetics Instructor Licensing Examination and meet program requirements.	
COS 240 Contemporary Design	1 3 0 0 2		
Prerequisites: COS 111 and COS 112			
This course covers methods and techniques for contemporary designs. Emphasis is placed on contemporary designs and other related topics. Upon completion, students should be able to demonstrate and apply techniques associated with contemporary design.			
COS 250 Computerized Salon Ops	1 0 0 0 1		
This course introduces computer and salon software. Emphasis is placed on various computer and salon software applications. Upon completion, students should be able to utilize computer skills and software applications in the salon setting.			
COS 251 Manicure Instructor Concepts	8 0 0 0 8		
This course introduces manicuring instructional concepts. Topics include orientation, theories of education, unit planning, daily lesson planning, laboratory management, student assessment, record keeping, and other related topics. Upon completion, students should be able to identify theories of education, develop lesson plans, demonstrate supervision techniques, and assess student classroom performance.			
COS 252 Manicure Instructor Practicum	0 15 0 0 5		
Prerequisites: NC Cosmetology or Manicurist License and six months work experience in a cosmetic arts salon			
Corequisites: COS 251			
This course covers supervisory and instructional skills for teaching manicuring students in a laboratory setting. Topics include demonstrations of services, supervision, student assessment, and other related topics. Upon completion, students should be able to demonstrate competence in the areas covered by the Manicuring Instructor Licensing Examination and meet program completion requirements.			
COS 253 Esthetics Instructor Concepts I	6 15 0 0 11		
This course introduces esthetic instructional concepts and skills. Topics include orientation, theories of education, unit planning, daily lesson plans, laboratory management, student assessment in a laboratory setting. Upon completion, students should be able to demonstrate esthetic services and instruct and objectively assess student performance in a classroom setting.			
COS 254 Esthetics Instructor Concepts II	6 15 0 0 11		
This course covers advanced esthetic instructional concepts and skills. Topics include practical demonstrations, lesson planning, lecture techniques, development and administration of assessment tools record keeping and other related topics. Upon completion, students should be able to demonstrate competencies in the areas covered by the Esthetics Instructor Licensing Examination and meet program requirements.			

COS 271 Instructor Concepts I 5 0 0 0 5**Prerequisites:** Cosmetology License and six months experience as a licensed cosmetologist**Corequisites:** COS 272

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

COS 272 Instructor Practicum I 0 21 0 0 7**Prerequisites:** Cosmetology License and six months experience as a licensed cosmetologist**Corequisites:** COS 271

This course covers supervisory and instructional skills for teaching entry-level cosmetology students in a laboratory setting. Topics include demonstrations of services, supervision, and entry-level student assessment. Upon completion, students should be able to demonstrate salon services and instruct and objectively assess the entry-level student.

COS 273 Instructor Concepts II 5 0 0 0 5**Prerequisites:** COS 271 and COS 272**Corequisites:** COS 274

This course covers advanced cosmetology instructional concepts. Topics include practical demonstrations, lesson planning, lecture techniques, development and administration of assessment tools, record keeping, and other related topics. Upon completion, students should be able to develop lesson plans, demonstrate supervision techniques, assess student performance in a classroom setting, and keep accurate records.

COS 274 Instructor Practicum II 0 21 0 0 7**Prerequisites:** COS 271 and COS 272**Corequisites:** COS 273

This course is designed to develop supervisory and instructional skills for teaching advanced cosmetology students in a laboratory setting. Topics include practical demonstrations, supervision, and advanced student assessment. Upon completion, students should be able to demonstrate competence in the areas covered by the Instructor Licensing Examination and meet program completion requirements. This is a certificate-level course.

COMPUTER SCIENCE**CSC 134 C++ Programming 2 3 0 0 3**

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 to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).

CSC 139 Visual BASIC Programming 2 3 0 0 3

This course introduces computer programming using the Visual BASIC programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level. This course is also available through the Virtual Learning Community (VLC).

CSC 151 JAVA Programming 2 3 0 0 3

This course introduces computer programming using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. This course has been approved to

satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

CSC 153 C# Programming 2 3 0 0 3

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, debug, and implement objects using the appropriate environment at the beginning level.

CSC 234 Advanced C++ 2 3 0 0 3**Prerequisites:** CSC 134

This course is a continuation of CSC 134 using the C++ programming language with standard programming principles. Emphasis is placed on advanced arrays/tables, file management/processing techniques, data structures, sub-programs, interactive processing, sort/merge routines, and libraries. Upon completion, students should be able to design, code, test, debug and document programming solutions.

CSC 251 Adv JAVA Programming 2 3 0 0 3**Prerequisites:** CSC 151

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.

CSC 289 Programming Capstone Proj 1 4 0 0 3**Prerequisites:** CTS 285

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

COMPUTER INFORMATION TECHNOLOGY**CTS 120 Hardware/Software Support 2 3 0 0 3****Prerequisites:** CIS 110 or CIS 111

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 125 Presentation Graphics 2 2 0 0 3**Prerequisites:** CIS 110 or CIS 111

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

CTS 130 Spreadsheet 2 2 0 0 3**Prerequisites:** CIS 110 or CIS 111 or OST 137

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

CTS 155 Tech Support Functions 2 2 0 0 3

This course introduces a variety of diagnostic and instructional tools that are used to evaluate the performance of technical support technologies. Emphasis is placed on technical support management

techniques and support technologies. Upon completion, students should be able to determine the best technologies to support and solve actual technical support problems.

CTS 217 Computer Train/Support 2 2 0 0 3

This course introduces computer training and support techniques. Topics include methods of adult learning, training design, delivery, and evaluation, creating documentation, and user support methods. Upon completion, students should be able to design and implement training and provide continued support for computer users.

CTS 285 Systems Analysis and Design 3 0 0 0 3

Prerequisites: CIS 115

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

CTS 289 System Support Project 1 4 0 0 3

Prerequisites: CTS 285

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

DATABASE MANAGEMENT TECHNOLOGY

DBA 110 Database Concepts 2 3 0 0 3

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 120 Database Programming I 2 2 0 0 3

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

DRAFTING

DFT 151 CAD I 2 3 0 0 3

This course introduces CAD software as a drawing tool. Topics include drawing, editing, file management, and plotting. Upon completion, students should be able to produce and plot a CAD drawing. For online sections of this course, a computer capable of running Solidworks and Solidworks Student Design Kit software (included with the text) are required.

DFT 152 CAD II 2 3 0 0 3

This course introduces extended CAD applications. Emphasis is placed upon intermediate applications of CAD skills. Upon completion, students should be able to use extended CAD applications to generate and manage drawings. For online sections of this course, a computer capable of running Solidworks and Solidworks Student Design Kit software (included with the text) are required.

DFT 153 CAD III 2 3 0 0 3

This course introduces advanced CAD applications. Emphasis is placed upon advanced applications of CAD skills. Upon completion, students should be able to use advanced CAD applications to generate and manage data. For online sections of this course, a computer capable of running Solidworks and Solidworks Student Design Kit software (included with the text) are required.

DFT 154 Intro Solid Modeling 2 3 0 0 3

This course is an introduction to basic three-dimensional solid

modeling and design software. Topics include basic design, creation, editing, rendering and analysis of solid models and creation of multiview drawings. Upon completion, students should be able to use design techniques to create, edit, render and generate a multiview drawing. For online sections of this course, a computer capable of running Solidworks and Solidworks Student Design Kit software (included with the text) are required.

DFT 170 Engineering Graphics 2 2 0 0 3

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. For online sections of this course, a computer capable of running AutoCAD and a 150-day license of AutoCAD Student Edition software (included with the text) are required. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

DFT 254 Interme Solid Model/Render 2 3 0 0 3

Prerequisites: DFT 154

This course presents a continuation of basic three-dimensional solid modeling and design software. Topics include advanced study of parametric design, creation, editing, rendering and analysis of solid model assemblies, and multiview drawing generation. Upon completion, students should be able to use parametric design techniques to create and analyze the engineering design properties of a model assembly.

DRAMA/THEATRE

DRA 111 Theatre Appreciation 3 0 0 0 3

This course provides a study of the art, craft, and business of the theatre. Emphasis is placed on the audience's appreciation of the work of the playwright, director, actor, designer, producer, and critic. Upon completion, students should be able to demonstrate a vocabulary of theatre terms and to recognize the contributions of various theatre artists. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

DRA 112 Literature of the Theatre 3 0 0 0 3

This course provides a survey of dramatic works from the classical Greek through the present. Emphasis is placed on the language of drama, critical theory, and background as well as on play reading and analysis. Upon completion, students should be able to articulate, orally and in writing, their appreciation and understanding of dramatic works. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

DRA 115 Theatre Criticism 3 0 0 0 3

Prerequisites: DRA 111

This course is designed to develop a critical appreciation of the theatre from the viewpoint of the audience/consumer. Emphasis is placed on viewing, discussing, and evaluating selected theatre performance, either live or on film/video. Upon completion, students should be able to express their critical judgments both orally and in writing. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

DRA 120 Voice for Performance 3 0 0 0 3

This course provides guided practice in the proper production of speech for the theatre. Emphasis is placed on improving speech, including breathing, articulation, pronunciation, and other variables. Upon completion, students should be able to demonstrate effective theatrical speech. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

DRA 122 Oral Interpretation 3 0 0 0 3

This course introduces the dramatist study of literature through performance. Emphasis is placed on analysis and performance of poetry, drama and prose fiction. Upon completion, students

should be able to embody and discuss critically the speakers inherent in literature. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

DRA 124 Readers Theatre 3 0 0 0 3

This course provides a theoretical and applied introduction to the medium of readers theatre. Emphasis is placed on the group performance considerations posed by various genres of literature. Upon completion, students should be able to adapt and present a literary script following the conventions of readers theatre. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

DRA 128 Children's Theatre 3 0 0 0 3

This course introduces the philosophy and practice involved in producing plays for young audiences. Topics include the selection of age-appropriate scripts and the special demands placed on directors, actors, designers, and educators in meeting the needs of young audiences. Upon completion, students should be able to present and critically discuss productions for children. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

DRA 130 Acting I 0 6 0 0 3

This course provides an applied study of the actor's craft. Topics include role analysis, training the voice, and body concentration, discipline, and self-evaluation. Upon completion, students should be able to explore their creativity in an acting ensemble. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

DRA 131 Acting II 0 6 0 0 3

Prerequisites: DRA 130

This course provides additional hands-on practice in the actor's craft. Emphasis is placed on further analysis, characterization, growth, and training for acting competence. Upon completion, students should be able to explore their creativity in an acting ensemble. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

DRA 135 Acting for the Camera I 1 4 0 0 3

This course provides an applied study of the camera actor's craft. Topics include commercial, dramatic, and print performance styles. Upon completion, students should be able to explore their creativity in on-camera performance. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

DRA 136 Acting for the Camera II 1 4 0 0 3

Prerequisites: DRA 135

This course provides additional hands-on study of the camera actor's craft. Emphasis is placed on more advanced camera acting theories, auditioning techniques, daytime drama, feature film, and print advertisement performance styles. Upon completion, students should be able to explore their creativity in on-camera performance. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

DRA 140 Stagecraft I 0 6 0 0 3

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

DRA 141 Stagecraft II 0 6 0 0 3

Prerequisites: DRA 140

This course provides additional hands-on practice in the elements of stagecraft. Emphasis is placed on the design and implementation of the arts and crafts of technical theatre. Upon completion, students should be able to pursue vocational and avocational roles in technical

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

DRA 142 Costuming 2 2 0 0 3

This course covers the techniques of costume construction and crafts processes. Emphasis is placed on learning costuming techniques, using equipment and materials, and finishing production-appropriate costumes. Upon completion, students should be able to demonstrate an understanding of pattern drafting, construction techniques, and costume fitting procedures. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

DRA 145 Stage Make-up 1 2 0 0 2

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

DRA 150 Stage Management 3 0 0 0 3

Prerequisites: DRA 140

This course covers the skills necessary for a stage manager of school or professional productions. Emphasis is placed on scheduling, rehearsal documentation and management, personnel, paperwork, and organization. Upon completion, students should be able to effectively stage-manage productions. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

DRA 160 Box Office and Publicity 1 3 0 0 2

This course covers the creation of a publicity program and the setup and operation of the theatre box office. Emphasis is placed on the use of an effective play marketing scheme and the smooth operation of the box office. Upon completion, students should be able to set up and run a marketing system and box office. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

DRA 170 Play Production I 0 9 0 0 3

This course provides an applied laboratory study of the processes involved in the production of a play. Topics include fundamental practices, principles, and techniques associated with producing plays of various styles. Upon completion, students should be able to participate in an assigned position with a college theatre production. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

DRA 171 Play Production II 0 9 0 0 3

Prerequisites: DRA 170

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

DRA 211 Theatre History I 3 0 0 0 3

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

DRA 212 Theatre History II 3 0 0 0 3

This course covers the development of theatre from 1660 through the diverse influences which shaped the theatre of the twentieth century. Topics include the history, aesthetics, and representative dramatic literature of the period. Upon completion, students should be able to trace the evolution of theatre and recognize the styles

and types of world drama. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

DRA 240 Lighting for the Theatre 2 2 0 0 3
Prerequisites: DRA 140

This course is an applied study of theatre lighting and is designed to train theatre technicians. Emphasis is placed on lighting technology including the mechanics of lighting and light control equipment by practical work with lighting equipment. Upon completion, students should be able to demonstrate competence with lighting equipment. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

DRA 243 Scene Design 2 2 0 0 3
Prerequisites: DRA 140

This course covers the analysis, research, design, and problem solving related to scene design. Emphasis is placed on director/designer communication, concepting, researching, rendering, and modeling of designs. Upon completion, students should be able to demonstrate skills in communication, design process, rendering, and modeling. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

DRA 250 Theatre Management 1 3 0 0 2

This course introduces the organization and operation of a theatre. Emphasis is placed on organization, communication, networking with other organizations, and grant writing. Upon completion, students should be able to demonstrate an understanding of the structure and operation of a theatre organization. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

DRA 260 Directing 0 6 0 0 3
Prerequisites: DRA 130
Corequisites: DRA 140

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

DRA 270 Play Production III 0 9 0 0 3
Prerequisites: DRA 171

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

DRA 271 Play Production IV 0 9 0 0 3
Prerequisites: DRA 270

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

ELECTRONIC COMMERCE

ECM 168 Electronic Business 2 2 0 0 3

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

business implementation. This course is a unique concentration requirement of the E-Commerce concentration in the Business Administration program.

ECM 210 Intro to Electronic Commerce 2 2 0 0 3

This course introduces the concepts and tools to implement electronic commerce via the Internet. Topics include application and server software selection, securing transactions, use and verification of credit cards, publishing of catalogs, and site administration. Upon completion, students should be able to setup a working Electronic Commerce Internet Web site. Discussions of various business strategies, business model, managerial issues, and current research in e-commerce will be included.

ECM 220 Electronic Commerce Plan and Imple 2 2 0 0 3

This course builds on currently accepted business practices to develop a business plan and implementation model for Electronic Commerce. Topics include analysis and synthesis of the planning cycle, cost/benefit analysis, technical systems, marketing, security, financial support, Internet strategies, Web site design, customer support and feedback and assessment. Upon completion, students should be able to develop a plan for Electronic Commerce in a small to medium size business.

ECM 230 Capstone Project 1 6 0 0 3

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

ECONOMICS

ECO 151 Survey of Economics 3 0 0 0 3

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

ECO 251 Principles of Microeconomics 3 0 0 0 3

This course introduces economic analysis of individual, business, and industry choices in the market economy. Topics include the price mechanism, supply and demand, optimizing economic behavior, costs and revenue, market structures, factor markets, income distribution, market failure, and government intervention. Upon completion, students should be able to identify and evaluate consumer and business alternatives in order to efficiently achieve economic objectives. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

ECO 252 Principles of Macroeconomics 3 0 0 0 3

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

EDUCATION

EDU 119 Intro to Early Child Education 4 0 0 0 4

This course covers the foundations of the education profession, the diverse educational settings for young children, professionalism and planning developmentally appropriate programs for children. Topics include historical foundations, program types, career options, professionalism, and creating inclusive environments and curriculum that are responsive to the needs of children and families. Upon completion, students should be able design career plans and develop

appropriate schedules, environments and activity plans appropriate for all children. This course is also available through the Virtual Learning Community (VLC).

EDU 131 Child, Family, and Community 3 0 0 0 3
Prerequisites: ENG 080 and RED 080

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

EDU 144 Child Development I 3 0 0 0 3
Prerequisites: ENG 080 and RED 080

This course includes the theories of child development, needs, milestones, and factors that influence development, from conception through approximately 36 months. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development. This course is also available through the Virtual Learning Community (VLC). This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

EDU 145 Child Development II 3 0 0 0 3
Prerequisites: ENG 080 and RED 080

This course includes the theories of child development, needs, milestones, and factors that influence development, from preschool through middle childhood. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development. This course is also available through the Virtual Learning Community (VLC). This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

EDU 146 Child Guidance 3 0 0 0 3
Prerequisites: ENG 080 and RED 080

This course introduces principles and practical techniques including the design of learning environments for providing developmentally appropriate guidance for all children, including those at risk. Emphasis is placed on observation skills, cultural influences, underlying causes of behavior, appropriate expectations, development of self control and the role of communication and guidance. Upon completion, students should be able to demonstrate direct/indirect strategies for preventing problem behaviors, teaching appropriate/acceptable behaviors, negotiation, setting limits and recognizing at risk behaviors. This course is also available through the Virtual Learning Community (VLC). This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

EDU 151 Creative Activities 3 0 0 0 3
Prerequisites: ENG 080 and RED 080

This course covers planning, creation and adaptation of developmentally supportive learning environments with attention to curriculum, interactions, teaching practices and learning materials. Emphasis is placed on creating and adapting integrated, meaningful, challenging and engaging developmentally supportive learning experiences in art, music, movement and dramatics for all children. Upon completion, students should be able to create,

adapt, implement and evaluate developmentally supportive learning materials, experiences and environments. This course is also available through the Virtual Learning Community (VLC).

EDU 153 Health, Safety and Nutrition 3 0 0 0 3
Prerequisites: ENG 080 and RED 080

This course covers promoting and maintaining the health and well-being of all children. Topics include health and nutritional guidelines, common childhood illnesses, maintaining safe and healthy learning environments, recognition and reporting of abuse and neglect and state regulations. Upon completion, students should be able to demonstrate knowledge of health, safety, and nutritional needs, safe learning environments, and adhere to state regulations. This course is also available through the Virtual Learning Community (VLC).

EDU 163 Classroom Mgt and Instruction 3 0 0 0 3
Prerequisites: ENG 080 and RED 080

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

EDU 173 Becoming a Professional in ECE 3 0 0 0 3
Prerequisites: ENG 080 and RED 080

This course is an introduction to the early childhood profession. Emphasis is placed on the NAEYC Ethical Code, professional growth through involvement in professional organizations, and development of a professional portfolio. Upon completion, students should be able to identify professional resources and community partners in order to involve oneself in the early childhood field.

EDU 184 Early Childhood Intro Practicum 1 3 0 0 2
Prerequisites: ENG 080 and RED 080

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 onsite faculty visits.

EDU 216 Foundations of Education 4 0 0 0 4
Prerequisites: ENG 090 and RED 090

This course introduces the American educational system and the teaching profession. Topics include historical and philosophical foundations of education, contemporary educational, structural, legal, and financial issues, and experiences in public school classrooms. Upon completion, students should be able to relate classroom observations to the roles of teachers and schools and the process of teacher education. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement at select institutions only. This course is also available through the Virtual Learning Community (VLC).

EDU 221 Children with Exceptionalities 3 0 0 0 3
Prerequisites: ENG 090, RED 090, EDU 144 and EDU 145

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

EDU 222 Learners w/Beh Disorders 3 0 0 0 3**Prerequisites:** ENG 090, RED 090, EDU 144 and EDU 145

This course provides a comprehensive study of learners with behavioral disorders encompassing characteristics, assessments, placement alternatives, inclusion and family interventions. Topics include legislation, appropriate management interventions, and placement options for children with behavior disorders. Upon completion, students should be able to identify, develop, and utilize positive behavior support systems.

EDU 223 Specific Learning Disabilities 3 0 0 0 3**Prerequisites:** ENG 090, RED 090, EDU 144 and EDU 145

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

EDU 234 Infants, Toddlers and Twos 3 0 0 0 3**Prerequisites:** ENG 090, RED 090, and EDU 119

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

EDU 234A Infants/Toddlers/Twos Lab 0 0 0 2 1**Prerequisites:** Take one set**Set 1: ENG 090, RED 090 or Set 2: ENG 095****Corequisites:** EDU 234

This course focuses on practical applications that support the healthy development of very young children by applying principles of quality inclusive early care and education. Emphasis is placed on recognizing the interrelated factors that impact children's development through planning, evaluating and adapting quality environments, including activities and adult/child interactions. Upon completion, students should be able to demonstrate the ability to engage in respectful, responsive care that meets the unique needs of individual children/families.

EDU 235 School-Age Dev and Programs 3 0 0 0 3**Prerequisites:** ENG 090 and RED 090

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

EDU 259 Curriculum Planning 3 0 0 0 3**Prerequisites:** ENG 090, RED 090, and EDU 119

This course is designed to focus on curriculum planning for three to five year olds. Topics include philosophy, curriculum models, indoor and outdoor environments, scheduling, authentic assessment, and planning developmentally appropriate experiences. Upon completion, students should be able to evaluate children's development, critique curriculum, plan for individual and group needs, and assess and create quality environments.

EDU 261 Early Childhood Administration I 3 0 0 0 3**Prerequisites:** ENG 090, RED 090, and EDU 119

This course introduces principles of basic programming and staffing, budgeting/financial management and marketing, and rules and regulations of diverse early childhood programs. Topics include program structure and philosophy, standards of NC child care programs, finance, funding resources, and staff and organizational

management. Upon completion, students should be able to develop components of program/personnel handbooks, a program budget, and demonstrate knowledge of fundamental marketing strategies and NC standards. This course is also available through the Virtual Learning Community (VLC).

EDU 262 Early Childhood Administration II 3 0 0 0 3**Prerequisites:** ENG 090, RED 090, EDU 119 and EDU 261

This course focuses on advocacy/leadership, public relations/community outreach and program quality/evaluation for diverse early childhood programs. Topics include program evaluation/accreditation, involvement in early childhood professional organizations, leadership/mentoring, family, volunteer and community involvement and early childhood advocacy. Upon completion, students should be able to define and evaluate all components of early childhood programs, develop strategies for advocacy and integrate community into programs. This course is also available through the Virtual Learning Community (VLC).

EDU 271 Educational Technology 2 2 0 0 3**Prerequisites:** ENG 090 and RED 090

This course introduces the use of technology to enhance teaching and learning in all educational settings. Topics include technology concepts, instructional strategies, materials and adaptive technology for children with exceptionalities, facilitation of assessment/evaluation, and ethical issues surrounding the use of technology. Upon completion, students should be able to apply technology enhanced instructional strategies, use a variety of technology resources and demonstrate appropriate technology skills in educational environments. This course is also available through the Virtual Learning Community (VLC).

EDU 275 Effective Teach Train 2 0 0 0 2**Prerequisites:** ENG 090 and RED 090

This course provides specialized training using an experienced-based approach to learning. Topics include instructional preparation and presentation, student interaction, time management, learning expectations, evaluation, and curriculum principles and planning. Upon completion, students should be able to prepare and present a six-step lesson plan and demonstrate ways to improve student's time-on-task.

EDU 280 Lang and Literacy Experiences 3 0 0 0 3**Prerequisites:** ENG 090 and RED 090

This course is designed to expand students' understanding of children's language and literacy development and provides strategies for enhancing language/literacy experiences in an enriched environment. Topics include selection of diverse literature and interactive media, the integration of literacy concepts throughout the curriculum, appropriate observations/assessments and inclusive practices. Upon completion, students should be able to select, plan, implement and evaluate developmentally appropriate and diverse language/literacy experiences. This course is also available through the Virtual Learning Community (VLC).

EDU 284 Early Child Capstone Practicum 1 9 0 0 4**Prerequisites:** ENG 090, RED 090, EDU 119, EDU 144, EDU 145, EDU 146, and EDU 151

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

EDU 285 Internship Exp-School-Age 1 9 0 0 4**Prerequisites:** ENG 090, RED 090, EDU 144, EDU 145, EDU 163 and EDU 216

This course is designed to allow students to apply skills in a quality public or private school environment. Emphasis is placed on designing, implementing and evaluating developmentally

appropriate activities and environments for all children; supporting/involving families; and modeling reflective and professional practices. Upon completion, students should be able to demonstrate developmentally appropriate lesson plans/assessments, appropriate guidance techniques, ethical/professional behaviors as indicated by assignments and onsite faculty visits.

EDU 289 Adv Issues/School-Age 2 0 0 0 2
Prerequisites: ENG 090 and RED 090

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

ENGINEERING

EGR 130 Engineering Cost Control 2 2 0 0 3
Prerequisites: MAT 121, MAT 161, or MAT 171

This course covers the management of projects and systems through the control of costs. Topics include economic analysis of alternatives within budget constraints and utilization of the time value of money approach. Upon completion, students should be able to make choices that optimize profits on both short-term and long-term decisions.

EGR 131 Intro to Electronics Tech 1 2 0 0 2

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

EGR 150 Intro to Engineering 1 2 0 0 2

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 to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

EGR 220 Engineering Statics 3 0 0 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 to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

EGR 225 Engineering Dynamics 3 0 0 0 3
Prerequisites: EGR 220
Corequisites: 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, students 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 to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement

EGR 228 Intro to Solid Mechanics 3 0 0 0 3
Prerequisites: EGR 220

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 to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

EGR 230 Engineering Materials 3 0 0 0 3
Prerequisites: CHM 151

This course provides an introduction to fundamental physical principals governing the structure and constitution of metallic and nonmetallic materials. Topics include the relationships among the fundamental physical principles and the mechanical, physical and chemical properties of engineering materials. Upon completion, students should be able to explain the fundamental physical properties important to the design and understanding of engineering materials. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement

EGR 285 Design Project 0 4 0 0 2

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

ENVIRONMENTAL HEALTH AND SAFETY

EHS 114 OSHA Regulations 4 0 0 0 4

This course emphasizes application of OSHA performance-oriented standards for workplace safety and health. Topics include hazard communication, bloodborne pathogens, and the laboratory standard. Upon completion, students should be able to implement written plans required for compliance.

EHS 215 Incident Management 3 2 0 0 4

This course introduces management of hazardous materials and incidents. Topics include analysis and application of the Incident Command System from the discovery of a hazardous substance release to decontamination and termination procedures. Upon completion, students should be able to demonstrate an understanding of the roles and responsibilities of hazardous materials team members.

ELECTRICITY

ELC 111 Intro to Electricity 2 2 0 0 3

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 117 Motors and Controls 2 6 0 0 4

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

ELC 127 Software for Technicians 1 3 0 0 2

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

ELC 128 Introduction to PLC 2 3 0 0 3

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

ELC 131 DC/AC Circuit Analysis 4 3 0 0 5

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

ELC 131A DC/AC Circuit Analysis Lab 0 3 0 0 1

Corequisites: ELC 131

This course introduces 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, students should have gained hands-on experience by measuring voltage, current, and opposition to current flow utilizing various meters and test equipment.

ELECTRONICS**ELN 131 Semiconductor Applications** 3 3 0 0 4

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 132 Linear IC Applications 3 3 0 0 4

This course introduces the characteristics and applications of linear integrated circuits. Topics include op-amp circuits, waveform generators, active filters, IC voltage regulators, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot linear integrated circuits using appropriate techniques and test equipment.

ELN 133 Digital Electronics 3 3 0 0 4

This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, MSI and LSI circuits, AD/DA conversion, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment.

ELN 229 Industrial Electronics 3 3 0 0 4

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 232 Intro to Microprocessors 3 3 0 0 4

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 234 Communication Systems 3 3 0 0 4

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

ELN 275 Troubleshooting 1 3 0 0 2

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 manufacturer's specifications.

ENGLISH

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

ENG 080 Writing Foundations 3 2 0 0 4

Prerequisites: STAR Center referral or satisfactory pre-enrollment placement test scores

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

ENG 090 Composition Strategies 3 0 0 0 3

Prerequisites: ENG 080

This course provides practice in the writing process and stresses effective paragraphs. Emphasis is placed on learning and applying the conventions of standard written English in developing paragraphs within the essay. Upon completion, students should be able to compose a variety of paragraphs and a unified, coherent essay. This course satisfies the developmental writing prerequisite for ENG 111. A student must earn a "C" or better to progress to the next class.

ENG 102 Applied Communications II 3 0 0 0 3

Prerequisites: STAR Center referral or satisfactory pre-enrollment placement test scores

This course is designed to enhance writing and speaking skills for the workplace. Emphasis is placed on generating short writings such as job application documents, memoranda, and reports and developing interpersonal communication skills with employees and the public. Upon completion, students should be able to prepare effective, short, and job-related written and oral communications. This is a diploma-level course.

ENG 111 Expository Writing 3 0 0 0 3

Prerequisites: ENG 090 and RED 090

Corequisites: ACA 115

This course is the required first course in a series of two designed to develop the ability to produce clear expository prose. Emphasis is placed on the writing process including audience analysis, topic selection, thesis support and development, editing, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. This course will also teach the process of academic research emphasizing MLA documentation. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.

Note: The second level curriculum English (ENG 112, ENG 113, or ENG 114) should be carefully selected with input from the student faculty advisor to ensure proper program credit. This course should be selected based on the requirements of the student's

ENG 113 Literature-Based Research 3 0 0 0 3

Prerequisites: ENG 111

This course, the second in a series of two, expands the concepts developed in ENG 111 by focusing on writing that involves literature-based research and documentation. Emphasis is placed on critical reading and thinking and the analysis and interpretation of prose,

poetry, and drama: plot, characterization, theme, cultural context, etc. Upon completion, students should be able to construct mechanically sound, documented essays and research papers that analyze and respond to literary works. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition. This course also requires students to participate in an oral communications process in the development of class presentations.

ENG 114 Prof Research and Reporting 3 0 0 0 3
Prerequisites: ENG 111

This course, the second in a series of two, is designed to teach professional communication skills. Emphasis is placed on research, listening, critical reading and thinking, analysis, interpretation, and design used in oral and written presentations. Upon completion, students should be able to work individually and collaboratively to produce well-designed business and professional written and oral presentations. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in English composition.

ENG 125 Creative Writing I 3 0 0 0 3
Prerequisites: ENG 111

This course is designed to provide students with the opportunity to practice the art of creative writing. Emphasis is placed on writing, fiction, poetry, and sketches. Upon completion, students should be able to craft and critique their own writing and critique the writing of others. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ENG 126 Creative Writing II 3 0 0 0 3
Prerequisites: ENG 125

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

ENG 231 American Literature I 3 0 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114

This course covers selected works in American literature from its beginnings to 1865. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG 232 American Literature II 3 0 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114

This course covers selected works in American literature from 1865 to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG 233 Major American Writers 3 0 0 0 3
Prerequisites: ENG 112, ENG 113, or ENG 114

This course provides an intensive study of the works of several major American authors. Emphasis is placed on American history, culture, and the literary merits. Upon completion, students should be able to interpret, analyze, and evaluate the works studied. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG 235 Survey of Film as Lit 3 0 0 0 3

Prerequisites: ENG 113

This course provides a study of the medium of film with a focus on the historical impact and the various literary genres of movies. Emphasis is placed on an appreciation of film as a form of literature which demonstrates various elements of fiction (character, setting, theme, etc.). Upon completion, students should be able to analyze film critically in various literary contexts. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ENG 241 British Literature I 3 0 0 0 3

Prerequisites: ENG 112, ENG 113, or ENG 114

This course covers selected works in British literature from its beginnings to the Romantic Period. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG 242 British Literature II 3 0 0 0 3

Prerequisites: ENG 112, ENG 113, or ENG 114

This course covers selected works in British literature from the Romantic Period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG 252 Western World Literature II 3 0 0 0 3

Prerequisites: ENG 112, ENG 113, or ENG 114

This course provides a survey of selected European works from the Neoclassical period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG 262 World Literature II 3 0 0 0 3

Prerequisites: ENG 112, ENG 113, or ENG 114

This course introduces selected works from the Pacific, Asia, Africa, Europe, and the Americas from the eighteenth century to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to selected works. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

ENG 272 Southern Literature 3 0 0 0 3

Prerequisites: ENG 112, ENG 113, or ENG 114

This course provides an analytical study of the works of several Southern authors. Emphasis is placed on the historical and cultural contexts, themes, aesthetic features of individual works, and biographical backgrounds of the authors. Upon completion, students should be able to interpret, analyze, and discuss selected works. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

ENVIRONMENTAL SCIENCE

ENV 214 Water Quality 3 2 0 0 4

Prerequisites: BIO 140, BIO 140A, and CHM 131

This course examines the constituents of natural waters from a biological and geochemical perspective. Topics include common components of water, water sources, water law, health consequences, water treatment procedures, and the design of water treatment plants. Upon completion, students should be able to demonstrate an understanding of the biological, chemical, and geological factors affecting water quality.

ENV 218 Environmental Health 3 0 0 0 3**Prerequisites: BIO 140 and BIO 140A**

This course covers the influence of environmental conditions on human health. Emphasis is placed on environmental contaminants and the major exposure routes of the human body. Upon completion, students should be able to examine segments of the environment, including air, water, and food, and determine how the conditions of these influence human health.

ENV 222 Air Quality 3 2 0 0 4**Prerequisites: BIO 140, BIO 140A and CHM 131**

This course introduces the study of air quality and air pollution. Emphasis is placed on air pollution basics, current atmospheric conditions, effects of air pollution, air quality analysis and measurement, and regulatory control of air pollution. Upon completion, students should be able to demonstrate an understanding of the environmental hazards associated with air pollution from a human health and welfare perspective.

ENV 226 Environmental Law 3 0 0 0 3**Prerequisites: BIO 140 and BIO 140A**

This course covers federal laws and acts concerning environmental quality standards and the use of resources, legal procedures for enforcing laws, and problems concerning enforcement. Emphasis is placed on environmental law basics, water quality laws, air quality laws, waste disposal laws, and biological resource protection laws. Upon completion, students should be able to demonstrate an understanding of federal/state environmental laws and their importance to the protection of environmental quality.

ENV 228 Environmental Issues 1 0 0 0 1**Prerequisites: BIO 140 and BIO 140A**

This course provides a forum for the discussion of current environmental issues. Emphasis is placed on environmental news, regulations, accidents, and areas of controversy. Upon completion, students should be able to demonstrate an understanding of the impact of local, state, national, and global events on environmental quality.

FIRE PROTECTION**FIP 120 Intro to Fire Protection 3 0 0 0 3**

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

FIP 124 Fire Prevention and Public Education 3 0 0 0 3

This course introduces fire prevention concepts as they relate to community and industrial operations. 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, meeting NFPA 1021. This course is also available through the Virtual Learning Community (VLC).

FIP 128 Detection and Investigation 3 0 0 0 3

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

FIP 132 Building Construction 3 0 0 0 3

This course covers the principles and practices related to various types of building construction, including residential and commercial, as impacted by fire conditions. Topics include types of construction and related elements, fire resistive aspects of construction materials, building codes, collapse, and other related topics. Upon completion,

students should be able to understand and recognize various types of construction as related to fire conditions meeting NFPA 1021. This course is also available through the Virtual Learning Community (VLC).

FIP 136 Inspections and Codes 3 0 0 0 3

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 written report, meeting NFPA 1021.

FIP 144 Sprinklers and Auto Alarms 2 2 0 0 3

This course introduces various types of automatic sprinklers, standpipes, and fire alarm systems. Topics include wet or dry systems, testing and maintenance, water supply requirements, fire detection and alarm systems, and other related topics. Upon completion, students should be able to demonstrate a working knowledge of various sprinkler and alarm systems and required inspection and maintenance.

FIP 152 Fire Protection Law 3 0 0 0 3

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

FIP 164 OSHA Standards 3 0 0 0 3

This course covers public and private sector OSHA work site requirements. Emphasis is placed on accident prevention and reporting, personal safety, machine operation, and hazardous material handling. Upon completion, students should be able to analyze and interpret specific OSHA regulations and write workplace policies designed to achieve compliance.

FIP 220 Firefighting Strategies 3 0 0 0 3

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

FIP 221 Advanced Firefighting Strategies 3 0 0 0 3**Prerequisites: FIP 220**

This course covers command-level operations for multi-company/agency operations involving fire and non-fire emergencies. Topics include advanced ICS, advanced incident analysis, command-level fire operations, and control of both man made and natural major disasters. Upon completion, students should be able to describe proper and accepted systems for the mitigation of emergencies at the level of overall scene command.

FIP 224 Instructional Methodology 4 0 0 0 4

This course covers the knowledge, skills, and abilities needed to train others in fire service operations. Topics include planning, presenting, and evaluating lesson plans, learning styles, use of media, communication, and other related topics. Upon completion, students should be able to meet all requirements of NFPA 1041 and NFPA 1021.

FIP 228 Local Government Finance 3 0 0 0 3

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 230 Chemistry of Hazardous Materials 5 0 0 0 5

This course covers the evaluation of hazardous materials. Topics include use of the periodic table, hydrocarbon derivatives, placards

and labels, parameters of combustion, and spill and leak mitigation. Upon completion, students should be able to demonstrate knowledge of the chemical behavior of hazardous materials.

FIP 240 Fire Service Supervision 3 0 0 0 3
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 effective fire service supervisor, meeting elements of NFPA 1021.

FIP 248 Fire Service Personnel Administration 3 0 0 0 3
This course covers the basics of setting up and administering the personnel functions of fire protection organizations. 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 256 Municipal Public Relations 3 0 0 0 3
This course is a general survey of municipal public relations and their effect on the governmental process. Topics include principles of public relations, press releases, press conferences, public information officers, image surveys, and the effects of perceived service on fire protection delivery. Upon completion, students should be able to manage the public relations functions of a fire service organization, which meet elements of NFPA 1021 for Fire Officer I and II.

FIP 260 Fire Protect Planning 3 0 0 0 3
This course covers the need for a comprehensive approach to fire protection planning. 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 Service 3 0 0 0 3
This course provides an overview of fire department operative services. Topics include finance, staffing, equipment, code enforcement, management information, specialized services, legal issues, planning, and other related topics. Upon completion, students should be able to understand concepts and apply fire department management and operations principles, meeting NFPA 1021.

FIP 277 Fire and Social Behavior 3 0 0 0 3
This course covers fire-related aspects of human behavior, with an emphasis on research and a systems approach to human-behavior analysis. Topics include identification of populations and structures at high risk, evaluation of systems models, and use of computer models to predict human behavior during fires. Upon completion, students should be able to identify and anticipate human behavior in response to various residential, commercial, board-and-care facility, and wildland/rural fire events.

FRENCH

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

FRE 111 Elementary French I 3 0 0 0 3
Prerequisites: High School French or FRE 110
Corequisites: FRE 181
This course introduces the fundamental elements of the French language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written French and

demonstrate cultural awareness. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

FRE 112 Elementary French II 3 0 0 0 3
Prerequisites: FRE 111
Corequisites: FRE 182

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

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

FRE 151 Francophone Literature 3 0 0 0 3
Prerequisites: ENG 111
This course, in English, includes selected readings by Francophone writers. Topics include fictional and non-fictional works by representative authors from a variety of genres and literary periods. Upon completion, students should be able to analyze and discuss selected texts within relevant cultural and historical contexts. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

FRE 161 Cultural Immersion 2 3 0 0 3
Prerequisites: FRE 111
This course explores Francophone culture through intensive study on campus and field experience in a host country or area. Topics include an overview of linguistic, historical, geographical, sociopolitical, economic, and/or artistic concerns of the area visited. Upon completion, students should be able to exhibit first-hand knowledge of issues pertinent to the host area and demonstrate an understanding of cultural differences. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

FRE 181 French Lab 1 0 2 0 0 1
Corequisites: FRE 111
This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written French and demonstrate cultural awareness. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

FRE 182 French Lab 2 0 2 0 0 1
Prerequisites: FRE 181
Corequisites: FRE 112
This course provides an opportunity to enhance acquisition of the fundamental elements of the French language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written French and demonstrate cultural awareness. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

FRE 211 Intermediate French I 3 0 0 0 3**Prerequisites: FRE 112**

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

FRE 212 Intermediate French II 3 0 0 0 3**Prerequisites: FRE 211**

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

FRE 221 French Conversation 3 0 0 0 3**Prerequisites: FRE 212**

This course provides an opportunity for intensive communication in spoken French. Emphasis is placed on vocabulary acquisition and interactive communication through the discussion of media materials and authentic texts. Upon completion, students should be able to discuss selected topics, express ideas and opinions clearly, and engage in formal and informal conversations. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

FRE 231 Reading and Composition 3 0 0 0 3**Prerequisites: FRE 212**

This course provides an opportunity for intensive reading and composition in French. Emphasis is placed on the use of literary and cultural materials to enhance and expand reading and writing skills. Upon completion, students should be able to demonstrate in writing an in-depth understanding of assigned readings. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

FRE 281 French Lab 3 0 2 0 0 1**Prerequisites: FRE 182**

This course provides an opportunity to enhance the review and expansion of the essential skills of the French language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

FRE 282 French Lab 4 0 2 0 0 1**Prerequisites: FRE 281**

This course provides an opportunity to enhance the review and expansion of the essential skills of the French language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

FILM AND VIDEO PRODUCTION**FVP 111 Introduction to Film and Video 2 3 0 0 3**

This course is an overview of the film making process from conceptualization to execution and examines film genres in the context of history, theory, creativity, and commerce. Topics include the history of film and video in the US, technical terminology, relationships between various job categories, and the language of film. Upon completion, students should be able to demonstrate a film vocabulary and knowledge of working conditions in the film/video production field.

FVP 112 Art Dept. Operations I 1 4 0 0 3

This course introduces practical fabrication skills for wood and other materials required to build both props and sets from blueprints, photographs, or sketches. Emphasis is placed on the safe use of hand and power tools, and the skills required for collaborative efforts in set and prop construction. Upon completion, students should be able to demonstrate a working knowledge of the equipment and skills necessary to assist in constructing sets and props.

FVP 113 Grip and Electrical I 1 4 0 0 3

This course covers various grip/support packages used in different environments for studio and location. Topics include lighting units, hardware, stands, color media, and electrical theory with emphasis on safety. Upon completion, students should be able to execute basic grip and electrical directions given by the key grip, and/or gaffer.

FVP 114 Camera and Lighting I 2 3 0 0 3

This course covers the basic principles of video camera and recorder operations in professional formats, crew protocol and safety, and basic lighting theory and application. Emphasis is placed on terminology, the characteristics of light, basic lighting procedures, and proper procedures of field recording with video equipment. Upon completion, students should be able to demonstrate an understanding of the basic technical terms of camera operation, video recording and lighting equipment.

FVP 115 Camera and Lighting II 2 3 0 0 3**Prerequisites: FVP 114**

This course offers advanced principles of video camera and recorder operations and introduces students to film formats and equipment as well as advanced lighting theory applications. Emphasis is placed on terminology, lighting for effect, and color correction. Upon completion, students should be able to demonstrate an understanding of camera terms and equipment, lighting theory and applications, and assist on studio and location shoots.

FVP 116 Sound Operations 2 3 0 0 3

This course provides an overview of sound theory, methods and technologies for location and studio recording, and hands-on work in location sound gathering. Emphasis is placed on terminology, protocol, cabling, trouble-shooting, mixing skills and safety aspects associated with hands-on work in sound gathering. Upon completion, students should be able to demonstrate an understanding of sound theory and terminology and assist professionals in sound gathering in both film and audio production.

FVP 117 Make Up and Wardrobe

This course covers talent presentation for camera including period and genre make-up styles, materials and methods of fabrication. Emphasis is placed on understanding the wardrobe department, make-up application, prosthetics and special effects make-up with emphasis on safety, hygiene, durability and continuity. Upon completion, students should understand the functions of the wardrobe department and demonstrate competence in the use of various make-up applications.

FVP 120 Art Dept. Operations II 1 4 0 0 3**Prerequisites: FVP 112**

This course provides a more in-depth coverage of the skills necessary to assist in the set construction, paint, set dressing, props and greens departments. Emphasis is placed on the skill range required for each craft including, but not limited to, plumbing, casting, wallpapering, furniture construction, upholstery, wiring and drapery. Upon completion, students should be competent to assist in all fields related to the fabrication and decoration of sets and props.

FVP 130 Grip and Electrical II 1 4 0 0 3**Prerequisites: FVP 113**

This course provides a more in-depth coverage of grip/support packages used in studio work and on location. Topics include advanced coverage of lighting, color media, and camera dollies, rigging, and electrical distribution with emphasis on safety issues. Upon completion, students should be able to execute grip and electrical directions given by the key grip, gaffer cinematographer and/or director of photography (DP).

FVP 211 Continuity and Locations 2 3 0 0 3**Prerequisites:** FVP 111, FVP 115, FVP 116, and FVP 120

This course introduces students to camera and script continuity as well as the necessary skills and technical vocabulary associated with location scouting. Emphasis is placed on the technical terms, protocol, and industry-standard forms, note taking, as well as still photography, location contracts and forms. Upon completion, students should be able to assist above-the-line industry personnel prior to and during production as well as assist in all aspects of selecting and securing suitable shooting sites.

FVP 212 Production Techniques I 1 12 0 0 5

This course provides experience working in a variety of crew positions with both student and professional productions and covers advanced film production concepts. Emphasis is placed on successful interaction with other advanced students and/or professionals as well as competency in advanced film production concepts. Upon completion, students should be able to demonstrate professional skills needed to pursue careers in the film and video industry.

FVP 213 Production Techniques II 1 12 0 0 5**Prerequisites:** FVP 212

This course provides experience working in a variety of crew positions with both student and professional productions and covers advanced film production concepts. Emphasis is placed on successful interaction with other advanced students and/or professionals as well as competency in advanced film production concepts. Upon completion, students should be able to demonstrate professional skills needed to pursue careers in key positions in the film and video industry.

FVP 215 Production Management 2 3 0 0 3**Corequisites:** FVP 238

This course emphasizes the activity of script breakdown in pre-production as well as the activities of the production office in both the production and post-production stages. Emphasis is placed on procedures, use of industry standard forms and software, as well as the functions and practices of the production office. Upon completion students should be able to demonstrate the people and technical skills necessary to assist above-the-line professionals in all types of film and video production.

FVP 220 Editing I 2 3 0 0 3

This course covers film and video editing from traditional methods to digital non-linear systems and basic film lab and transfer facility procedures. Topics include terminology, technologies, aesthetics, basic picture-only editing skills; and the editor's role augmented by hands-on experience. Upon completion, students should be able to use editing equipment and basic digitizing, logging, and picture-only editing skills.

FVP 221 Editing II 2 3 0 0 3**Prerequisites:** FVP 220

This course covers editing in the digital environment, starting from the camera negative through the transfer, the non-linear digital edit and going back to negative matching. Topics include terminology, technologies, aesthetics, advanced sound and picture editing skills, and the editor's role augmented by hands-on experience. Upon completion students should be able to demonstrate proficiency in using editing equipment and sound and picture editing skills.

FVP 223 Postproduct. Sound Design 1 4 0 0 3**Prerequisites:** FVP 116 or FVP 220**Corequisites:**

This course covers audio postproduction recording, mixing, and editing techniques, technologies, and aesthetics for the development of a compelling soundtrack for film and video media. Topics include using library effects, recording sound, effects and Foley to reinforce images and the story, preparing and mixing sound tracks for media productions. Upon completion students should be able to record, edit and mix sound design projects that strengthen narrative elements and perform critique of media sound design.

FVP 227 Multimedia Production 2 3 0 0 3

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

FVP 238 Software Apps for FVP 2 3 0 0 3

This course introduces the use of industry standard computer software unique to the motion picture industry using personal computers. Emphasis is placed on hands-on work with budgeting and scheduling software and in facilitating the relationship between the technical crew and the script. Upon completion, students should be able to assist with script breakdown for budgeting and scheduling and work with that information in computer-based formats.

FVP 250 Production Specialties I 1 6 0 0 3

This course provides education and training through contextual learning in the film production areas of art department, camera, sound, grip, electric, locations, script, and continuity. Emphasis is placed on successful professional level interaction with other students and industry professionals through pre-production and initial production of an actual film/video project. Upon completion, students should demonstrate an understanding of the film/video pre-production and initial production process, and the relationship among the departments in these areas.

FVP 251 Production Specialties II 1 6 0 0 3

This course provides education and training through contextual learning in the film production areas of concluding photography and post-production areas of sound and picture editing. Emphasis is placed on successful professional level interaction with other students and industry professionals through concluding production and post-production of an actual film/video project. Upon completion, students should demonstrate an understanding of the film/video production from concluding photography to the post-production areas of sound and picture editing.

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

This course introduces the regional concept which emphasizes the spatial association of people and their environment. Emphasis is placed on the physical, cultural, and economic systems that interact to produce the distinct regions of the earth. Upon completion, students should be able to describe variations in physical and cultural features of a region and demonstrate an understanding of their functional relationships. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

GEO 130 General Physical Geography 3 0 0 0 3

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

GEOLOGY**GEL 120 Physical Geology 3 2 0 0 4**

This course provides a study of the structure and composition of the earth's crust. Emphasis is placed on weathering, erosional and depositional processes, mountain building forces, rocks and minerals, and structural changes. Upon completion, students should be able to explain the structure, composition, and formation of the earth's crust. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

GERMAN

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

GER 111 Elementary German I 3 0 0 0 3
Prerequisites: GER 110 or high school German
Corequisites: GER 181
This course introduces the fundamental elements of the German 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 German and demonstrate cultural awareness. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

GER 112 Elementary German II 3 0 0 0 3
Prerequisites: GER 111
Corequisites: GER 182
This course is a continuation of GER 111 focusing on the fundamental elements of the German 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 German and demonstrate further cultural awareness. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

GER 181 German Lab 1 0 2 0 0 1
Corequisites: GER 111
This course provides an opportunity to enhance acquisition of the fundamental elements of the German language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written German and demonstrate cultural awareness. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

GER 182 German Lab 2 0 2 0 0 1
Prerequisites: GER 181
Corequisites: GER 112
This course provides an opportunity to enhance acquisition of the fundamental elements of the German language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written German and demonstrate cultural awareness. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

GER 211 Intermediate German I 3 0 0 0 3
Prerequisites: GER 112
This course provides a review and expansion of the essential skills of the German language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

GER 212 Intermediate German II 3 0 0 0 3
Prerequisites: GER 211
This course provides a continuation of GER 211. Emphasis is placed on the continuing study of authentic and representative

literary and cultural texts. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

GER 281 German Lab 3 0 2 0 0 1
Prerequisites: GER 182
This course provides an opportunity to enhance the review and expansion of the essential skills of the German language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

GER 282 German Lab 4 0 2 0 0 1
Prerequisites: GER 281
This course provides an opportunity to enhance the review and expansion of the essential skills of the German language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

GEOGRAPHICAL INFORMATION SYSTEMS

GIS 111 Introduction to GIS 2 2 0 0 3
This course introduces the hardware and software components of a Geographic Information System and reviews GIS applications. Topics include data structures and basic functions, methods of data capture and sources of data, and the nature and characteristics of spatial data and objects. Upon completion, students should be able to identify GIS hardware components, typical operations, products/applications, and differences between database models and between raster and vector systems.

HEALTH

HEA 112 First Aid and CPR 1 2 0 0 2
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 pre-major and/or elective course requirement.

HISTORY

HIS 111 World Civilizations I 3 0 0 0 3
Prerequisites: ENG 090 and RED 090
This course introduces world history from the dawn of civilization to the early modern era. Topics include Eurasian, African, American, and Greco-Roman civilizations and Christian, Islamic and Byzantine cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in pre-modern world civilizations. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

HIS 112 World Civilizations II 3 0 0 0 3
Prerequisites: ENG 090 and RED 090
This course introduces world history from the early modern era to the present. Topics include the cultures of Africa, Europe, India, China, Japan, and the Americas. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern world civilizations. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

HIS 131 American History I 3 0 0 0 3**Prerequisites: ENG 090 and RED 090**

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

HIS 132 American History II 3 0 0 0 3**Prerequisites: ENG 090 and RED 090**

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

HIS 151 Hispanic Civilization 3 0 0 0 3

This course surveys the cultural history of Spain and its impact on the New World. Topics include Spanish and Latin American culture, literature, religion, and the arts. Upon completion, students should be able to analyze the cultural history of Spain and Latin America. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

HIS 162 Women and History 3 0 0 0 3

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

HIS 221 African-American History 3 0 0 0 3

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

HIS 227 Native American History 3 0 0 0 3

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

HIS 231 Recent American History 3 0 0 0 3

This course is a study of American society from the post-Depression era to the present. Topics include World War II, the Cold War, social unrest, the Vietnam War, the Great Society, and current political trends. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in recent America. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

HIS 233 History of Appalachia 3 0 0 0 3

This course introduces the Appalachian region and its relationship to mainstream American history. Topics include regional

settlement patterns and a study of Appalachian culture. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in Appalachia. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

HIS 234 Cherokee History 3 0 0 0 3

This course is a survey of the history and culture of the Cherokees. Topics include origins, belief systems, contact and conflict with European settlers, removals, and contemporary problems faced by the Cherokees. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in Cherokee history. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

HIS 236 North Carolina History 3 0 0 0 3

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

HORTICULTURE**HOR 112 Landscape Design I 2 3 0 0 3**

This course covers landscape principles and practices for residential and commercial sites. Emphasis is placed on drafting, site analysis, and common elements of good design, plant material selection, and proper plant utilization. Upon completion, students should be able to read, plan, and draft a landscape design.

HOR 114 Landscape Construction 2 2 0 0 3

This course introduces the design and fabrication of landscape structures/features. Emphasis is placed on safety, tool identification and use, material selection, construction techniques, and fabrication. Upon completion, students should be able to design and construct common landscape structures/features.

HOR 116 Landscape Management I 2 2 0 0 3

This course covers information and skills necessary to analyze a property and develop a management schedule. Emphasis is placed on property measurement, plant condition, analysis of client needs, and plant culture needs. Upon completion, students should be able to analyze a property, develop management schedules, and implement practices based on client needs.

HOR 124 Nursery Operations 2 3 0 0 3

This course covers nursery site and crop selection, cultural practices, and production and marketing methods. Topics include site considerations, water availability, equipment, irrigation, fertilization, containers, media, and pest control. Upon completion, students should be able to design and implement a nursery operation and grow and harvest nursery crops.

HOR 134 Greenhouse Operations 2 2 0 0 3

This course covers the principles and procedures involved in the operation and maintenance of greenhouse facilities. Emphasis is placed on the operation of greenhouse systems, including the environmental control, record keeping, scheduling, and production practices. Upon completion, students should be able to demonstrate the ability to operate greenhouse systems and facilities to produce greenhouse crops.

HOR 160 Plant Materials I 2 2 0 0 3

This course covers identification, culture, characteristics, and use of plants. Emphasis is placed on nomenclature, identification, growth requirements, cultural requirements, soil preferences, and landscape applications. Upon completion, students should be able to demonstrate knowledge of the proper selection and utilization of plant materials.

HOR 162 Applied Plant Science 2 2 0 0 3

This course introduces the basic concepts of botany as they apply to horticulture. Topics include nomenclature, physiology, morphology, and anatomy as they apply to plant culture. Upon completion, students should be able to apply the basic principles of botany to horticulture.

HOR 164 Horticulture Pest Management 2 2 0 0 3

This course covers the identification and control of plant pests including insects, diseases, and weeds. Topics include pest identification and chemical regulations, safety, and pesticide application. Upon completion, students should be able to meet the requirements for North Carolina Commercial Pesticide Ground Applicators license.

HOR 166 Soils and Fertilizers 2 2 0 0 3

This course covers the physical and chemical properties of soils and soil fertility and management. Topics include soil formation, classification, physical and chemical properties, testing, fertilizer application, and other amendments. Upon completion, students should be able to analyze, evaluate, and properly amend soils/media.

HOR 168 Plant Propagation 2 2 0 0 3

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

HOR 213 Landscape Design II 2 2 0 0 3**Prerequisites: HOR 112**

This course covers residential and commercial landscape design, cost analysis, and installation. Emphasis is placed on job cost estimates, installation of the landscape design, and maintenance techniques. Upon completion, students should be able to read landscape design blueprints, develop cost estimates, and implement the design.

HOR 235 Greenhouse Production 2 2 0 0 3

This course covers the production of greenhouse crops. Emphasis is placed on product selection and production based on market needs and facility availability, including record keeping. Upon completion, students should be able to select and make production schedules to successfully produce greenhouse crops.

HOR 253 Horticulture Turfgrass 2 2 0 0 3**Prerequisites: HOR 162 or HOR 166**

This course covers information and skill development necessary to establish and manage landscape turfgrasses. Topics include grass identification, establishment, cultural requirements, application of control products, fertilization, and overseeding techniques. Upon completion, students should be able to analyze a landscape site and determine those cultural and physical activities needed to establish or manage a quality turf.

HOR 260 Plant Materials II 2 2 0 0 3

This course covers important landscape plants. Emphasis is placed on identification, plant nomenclature, growth characteristics, culture requirements, and landscape uses. Upon completion, students should be able to demonstrate knowledge of the proper selection and utilization of plant materials.

HOR 265 Adv Plant Materials 1 2 0 0 2

This course covers important landscape plants. Emphasis is placed on identification, plant nomenclature, growth characteristics, cultural requirements, and landscape uses. Upon completion, students should be able to correctly select plants for specific landscape uses.

HOR 273 Hor Mgmt and Marketing 3 0 0 0 3

This course covers the steps involved in starting or managing a horticultural business. Topics include financing, regulations, market analysis, employer/employee relations, formulation of business plans, and operational procedures in a horticultural business. Upon completion, students should be able to assume ownership or management of a horticultural business.

HUMANITIES**HUM 110 Technology and Society 3 0 0 0 3**

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

HUM 123 Appalachian Culture 3 0 0 0 3

This course provides an interdisciplinary study of the unique features of Appalachian culture. Topics include historical, political, sociological, psychological, and artistic features which distinguish this region. Upon completion, students should be able to demonstrate a broad-based awareness and appreciation of Appalachian culture. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

HUM 211 Humanities I 3 0 0 0 3**Prerequisites: ENG 111**

This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind's answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from ancient through early modern times. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

HUM 212 Humanities II 3 0 0 0 3**Prerequisites: ENG 111**

This course introduces the humanities as a record in literature, music, art, history, religion, and philosophy of humankind's answers to the fundamental questions of existence. Emphasis is placed on the interconnectedness of various aspects of cultures from early modern times to the present. Upon completion, students should be able to identify significant figures and cultural contributions of the periods studied. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

HYDRAULICS AND PNEUMATICS**HYD 110 Hydraulics/Pneumatics I 2 3 0 0 3**

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

INTERPRETER PREPARATION PROGRAM**IPP 111 Intro to Interpretation 2 0 0 0 2**

This course introduces the field of interpreting, interpretation models, cognitive processes associated with interpretation, professional ethical standards, employment opportunities, and working conditions. Topics include specialized jargon, code of ethics, interpreter assessments/qualifications, and protocol associated with various settings. Upon completion, students should be able to explain the rationale for placement of interpreters and apply ethical standards to a variety of working situations.

IPP 112 Comparative Cultures 3 0 0 0 3

This course introduces observable attributes of deaf and non-deaf individuals and the social, political, educational, vocational, and historical issues faced by each. Topics include value systems of deaf and non-deaf individuals, enculturation stages, sociolinguistic continuum of language use within the deaf community, and cross-cultural management. Upon completion, students should be able to compare deaf and non-deaf cultures and discuss how prejudices are reflected in and impact on communication interactions.

IPP 113 Orientation to Deafness 2 0 0 0 2

This course provides an overview of issues related to deaf people. Emphasis is placed on the history of deaf people, causes and measurements of deafness, communication modes, and attitudes toward deaf people in the United States. Upon completion, students should be able to discuss significant aspects related to deafness.

IPP 152 ASL/English Translation 3 0 0 0 3

Prerequisites: ASL 112

This course provides a study of the component parts of a cultural scheme and the manner in which ASL and English differ. Emphasis is placed on analyzing, discussing, and translating basic ASL and English texts. Upon completion, students should be able to discuss and apply techniques of cross-cultural communication and translation between deaf and non-deaf communities.

IPP 161 Consecutive Interpreting 2 6 0 0 5

Prerequisites: IPP 152

This course introduces the process of ASL/English consecutive interpreting in a variety of interview, meeting, and small conference settings. Emphasis is placed on generating equivalent messages between ASL and English. Upon completion, students should be able to discuss and apply the principles of the protocol of consecutive interpreting.

IPP 193 Selected Topics in Interpreter Ed 3 0 0 0 3

This course provides an opportunity to explore areas of 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.

IPP 221 Simultaneous Interpret I 2 6 0 0 5

Prerequisites: IPP 161

This course introduces simultaneous ASL/English interpreting through a variety of expository texts originating in-group, meeting, and conference settings. Emphasis is placed on analyzing expository texts, identifying registers, and applying principles of the protocol of interpreting. Upon completion, students should be able to apply the appropriate linguistic and/or cultural adjustments required to generate equivalent messages.

IPP 240 Ethical Standards and Practices 3 0 0 0 3

Corequisites: IPP 221

This course develops intellectual and ethical decision-making abilities and considers common ethical dilemmas that arise within the interpreting process. Topics include a model of ethical/intellectual development and the application of the model to interpreting practices. Upon completion, students should be able to discuss ethical resolution to various case studies and apply recognized principles of professional behavior to the interpreting process.

IPP 243 Religious Interpreting 2 2 0 0 3

Prerequisites: IPP 152

This course introduces various denominational philosophies to determine proper interpreting. Topics include ministries, music, sign selection, denominational programming, environmental setup, and ethical standards. Upon completion, students should be able to apply knowledge of various denominations to determine appropriate ASL/English equivalence in interpretation.

IPP 245 Educational Interpreting Issues 2 0 0 0 2

Prerequisites: IPP 111

This course provides an overview of educational interpreting in the US and discusses recent trends in the education of deaf students. Topics include history of deaf education, interpreter roles, and current employment practices for educational interpreters. Upon completion, students should be able to discuss current issues, apply professional/ethical standards to conflict resolution, and delineate interpreting roles in the educational setting.

INDUSTRIAL SCIENCE**ISC 111 Quality Control 2 0 0 0 2**

This course provides training in inspection, gaging methods, and statistical process control concepts. Topics include special gage design, production gaging, inspection, and statistical process control concepts. Upon completion, students should be able to design and use custom gaging and apply statistical process control concepts.

ISC 112 Industrial Safety 2 0 0 0 2

This course introduces the principles of industrial safety. Emphasis is placed on industrial safety, OSHA, and environmental regulations. Upon completion, students should be able to demonstrate knowledge of a safe working environment and OSHA compliance. This course is also available through the Virtual Learning Community (VLC).

LOW IMPACT DEVELOPMENT**LID 111 LID Design Principles 2 3 0 0 3**

This course introduces design principles of Low Impact Development (LID) which incorporate sustainable development and natural resources management as an alternative to traditional site design. Topics include science-based interdisciplinary design practices including tools from civil and environmental engineering, hydrology, horticulture, ecology, and architecture. Upon completion, students should be able to use multifaceted approaches to recommend site-specific LID design concepts for residential, public, and commercial sites.

LANDSCAPE GARDENING**LSG 123 Summer Gardening Lab 0 6 0 0 2**

This course provides basic hands-on experience in summer gardening techniques. Emphasis is placed on pruning, irrigation, planting, fertilizing, pest control, equipment operation, turf maintenance, landscape construction, and maintaining fruits and vegetables. Upon completion, students should be able to perform various techniques essential to maintaining the summer landscape.

MACHINING**MAC 111 Machining Technology I 2 12 0 0 6**

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

MAC 112 Machining Technology II 2 12 0 0 6

Prerequisites: MAC 111

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

MAC 113 Machining Technology III 2 12 0 0 6

Prerequisites: MAC 112

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

MAC 114 Intro to Metrology 2 0 0 0 2

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

MAC 121 Intro to CNC 2 0 0 0 2

This course introduces the concepts and capabilities of computer numerical control machine tools. Topics include setup, operation, and basic applications. Upon completion, students should be able

to explain operator safety, machine protection, data input, program preparation, and program storage.

MAC 122 CNC Turning 1 3 0 0 2
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 1 3 0 0 2
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 131 Blueprint Reading/Mach I 1 2 0 0 2
This course covers the basic principles of blueprint reading and sketching. Topics include multi-view drawings; interpretation of conventional lines; and dimensions, notes, and thread notations. Upon completion, students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.

MAC 132 Blueprint Reading/Mach II 1 2 0 0 2
Prerequisites: MAC 131
This course introduces more complex industrial blueprints. Emphasis is placed on auxiliary views, section views, violations of true project, special views, applications of GD and T, and interpretation of complex parts. Upon completion, students should be able to read and interpret complex industrial blueprints.

MAC 151 Machining Calculations 1 2 0 0 2
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 Adv Machining Calc 1 2 0 0 2
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 214 Machining Technology IV 2 12 0 0 6
Prerequisites: MAC 113
This course provides advanced applications and practical experience in the manufacturing of complex parts. Emphasis is placed on inspection, gaging, and the utilization of machine tools. Upon completion, students should be able to manufacture complex assemblies to specifications.

MAC 215 Machining Technology V 2 12 0 0 6
Prerequisites: MAC 214
This course provides an opportunity to apply skills acquired in previous course work. Emphasis is placed on the production of parts using modern machining and gaging techniques. Upon completion, students should be able to demonstrate problem-solving skills as they relate to advanced machining.

MAC 222 Advanced CNC Turning 1 3 0 0 2
Prerequisites: MAC 122
This course covers advanced methods in setup and operation of CNC turning centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC turning centers.

MAC 224 Advanced CNC Milling 1 3 0 0 2
Prerequisites: MAC 124
This course covers advanced methods in setup and operation of CNC machining centers. Emphasis is placed on programming and production of complex parts. Upon completion, students should be able to demonstrate skills in programming, operations, and setup of CNC machining centers.

MATHEMATICS

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

MAT 060 Essential Mathematics 3 2 0 0 4
Prerequisites: Star Center referral or satisfactory pre-enrollment placement test scores

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

MAT 070 Introductory Algebra 3 2 0 0 4
Prerequisites: MAT 060
Corequisites: RED 080 or ENG 085

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

MAT 080 Intermediate Algebra 3 2 0 0 4
Prerequisites: MAT 070
Corequisites: RED 080 or ENG 085

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

MAT 101 Applied Mathematics I 2 2 0 0 3
Prerequisites: MAT 060, MAT 070, MAT 080, MAT 090, or MAT 095

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

MAT 121 Algebra and Trigonometry I 2 2 0 0 3
Prerequisites: MAT 070, MAT 080, MAT 090, or MAT 095

This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include simplification, evaluation, and solving of algebraic and radical functions; complex numbers; right triangle trigonometry; systems of equations; and the use of technology. Upon completion, students should be able to demonstrate an understanding of the use of mathematics and technology to solve problems and analyze and communicate results.

MAT 122 Algebra/Trigonometry II 2 2 0 0 3
Prerequisites: MAT 121, MAT 161, MAT 171, or MAT 175

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

MAT 140 Survey of Mathematics 3 0 0 0 3
Prerequisites: MAT 070, MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175
Corequisites: MAT 140A (same section must be taken with MAT 140)

This course provides an introduction in a non-technical setting to selected topics in mathematics. Topics include, but are not limited to, sets, logic, probability, statistics, matrices, mathematical systems, geometry, topology, mathematics of finance, and modeling. Upon completion, students should be able to understand a variety of mathematical applications, think logically, and be able to work collaboratively and independently. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

MAT 140A Survey of Mathematics Lab 0 2 0 0 1
Prerequisites: MAT 070, MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175
Corequisites: MAT 140 (same section must be taken with MAT 140A)

This course is a laboratory for MAT 140. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course must be taken simultaneously with MAT 140.

MAT 141 Mathematical Concepts I 3 0 0 0 3
Prerequisites: MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175
Corequisites: MAT 141A (same section must be taken with MAT 141)

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

MAT 141A Mathematical Concepts I Lab 0 2 0 0 1
Prerequisites: MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175
Corequisites: MAT 141 (same section must be taken with MAT 141A)

This course is a laboratory for MAT 141. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

MAT 142 Mathematical Concepts II 3 0 0 0 3
Prerequisites: MAT 141
Corequisites: MAT 142A (same section must be taken with MAT 142)

This course is the second of a two-course sequence that develops a deeper understanding and appreciation of the basic concepts of mathematics. Emphasis is placed on probability, statistics, functions, introductory geometry, and mathematics of finance. Upon completion, students should be able to communicate orally and in writing these basic mathematical concepts and utilize technology as a mathematical tool. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirements in natural sciences/mathematics.

MAT 142A Mathematical Concepts II Lab 0 2 0 0 1
Prerequisites: MAT 141
Corequisites: MAT 142 (same section must be taken with MAT 142A)

This course is a laboratory for MAT 142. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

MAT 151 Statistics I 3 0 0 0 3
Prerequisites: MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 140, MAT 161, MAT 171, or MAT 175
Corequisites: MAT 151A (same section must be taken with MAT 151)

This course provides a project-based approach to the study of basic probability, descriptive and inferential statistics, and decision-making. Emphasis is placed on measures of central tendency and dispersion, correlation, regression, discrete and continuous probability distributions, quality control, population parameter estimation, and hypothesis testing. Upon completion, students should be able to describe important characteristics of a set of data and draw inferences about a population from sample data. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

MAT 151A Statistics I Lab 0 2 0 0 1
Prerequisites: MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 140, MAT 161, MAT 171, or MAT 175
Corequisites: MAT 151 (same section must be taken with MAT 151A)

This course is a laboratory for MAT 151. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course must be taken simultaneously with MAT 151.

MAT 155 Statistical Analysis 3 0 0 0 3
Prerequisites: MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175
Corequisites: MAT 155A (same section must be taken with MAT 155)

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

MAT 155A Statistics Analysis Lab 0 2 0 0 1
Prerequisites: MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175
Corequisites: MAT 155 (same section must be taken with MAT 155A)

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

MAT 161 College Algebra 3 0 0 0 3
Prerequisites: MAT 080, MAT 090, or MAT 095
Corequisites: MAT 161A (same section must be taken with MAT 161)

This course provides an integrated technological approach to algebraic topics used in problem solving. Emphasis is placed on

applications involving equations and inequalities; polynomial, rational, exponential and logarithmic functions; and graphing and data analysis/modeling. Upon completion, students should be able to choose an appropriate model to fit a data set and use the model for analysis and prediction. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics for the Associate in Arts Degree.

MAT 161A College Algebra Lab 0 2 0 0 1

Prerequisites: MAT 080, MAT 090, or MAT 095

Corequisites: MAT 161 (same section must be taken with MAT 161A)

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

MAT 165 Finite Mathematics 3 0 0 0 3

Prerequisites: MAT 161, MAT 171, or MAT 175

This course provides topics used to formulate models and to solve and interpret solutions using an algorithmic approach. Topics include linear algebra, linear programming, simplex method, sets and counting, probability, mathematics of finance, and logic. Upon completion, students should be able to demonstrate both an understanding of the theoretical concepts of finite mathematics and the ability to solve related problems. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

MAT 171 Pre-Calculus Algebra 3 0 0 0 3

Prerequisites: MAT 080, MAT 090, MAT 095, or MAT 161

Corequisites: MAT 171A (same section must be taken with MAT 171)

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

MAT 171A Pre-Calculus Algebra Lab 0 2 0 0 1

Prerequisites: MAT 080, MAT 090, MAT 095, or MAT 161

Corequisites: MAT 171 (same section must be taken with MAT 171A)

This course is a laboratory for MAT 171. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course must be taken simultaneously with MAT 171.

MAT 172 Pre-Calculus Trigonometry 3 0 0 0 3

Prerequisites: MAT 171

Corequisites: MAT 172A (same section must be taken with MAT 172)

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

MAT 172A Pre-Calculus Trig Lab 0 2 0 0 1

Prerequisites: MAT 171

Corequisites: MAT 172 (same section must be taken with MAT 172A)

This course is a laboratory for MAT 172. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course must be taken simultaneously with MAT 172.

MAT 175 Pre-Calculus 4 0 0 0 4

Prerequisites: None

Corequisites: MAT 175A (same section must be taken with MAT 175)

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

MAT 175A Pre-Calculus Lab 0 2 0 0 1

Prerequisites: None

Corequisites: MAT 175 (same section must be taken with MAT 175A)

This course is a laboratory for MAT 175. Emphasis is placed on experiences that enhance the materials presented in the class. Upon completion, students should be able to solve problems, apply critical thinking, work in teams, and communicate effectively. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. This course must be taken simultaneously with MAT 175.

MAT 252 Statistics II 3 0 0 0 3

Prerequisites: MAT 151 and either MAT 121 or MAT 161

Corequisites: MAT 252A (same section must be taken with MAT 252)

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

MAT 252A Statistics II Lab 0 2 0 0 1

Prerequisites: MAT 151 and either MAT 121 or MAT 161

Corequisites: MAT 252 (same section must be taken with MAT 252A)

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

MAT 271 Calculus I 3 2 0 0 4

Prerequisites: MAT 172 or MAT 175

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

MAT 272 Calculus II 3 2 0 0 4**Prerequisites:** MAT 271

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

MAT 273 Calculus III 3 2 0 0 4**Prerequisites:** MAT 272

This course covers the calculus of several variables and is the third calculus course in a three-course sequence. Topics include functions of several variables, partial derivatives, multiple integrals, solid analytical geometry, vector-valued functions, and line and surface integrals. Upon completion, students should be able to solve problems involving vectors and functions of several variables. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

MAT 285 Differential Equations 3 0 0 0 3**Prerequisites:** MAT 272

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

MECHANICAL**MEC 110 Intro to CAD/CAM 1 2 0 0 2**

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

MEC 111 Machine Processes I 1 4 0 0 3

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

MEC 180 Engineering Materials 2 3 0 0 3

This course introduces the physical and mechanical properties of materials. Topics include materials testing, pre and post-manufacturing processes, and material selection of ferrous and non-ferrous metals, plastics, composites, and non-conventional materials. Upon completion, students should be able to utilize basic material property tests and select appropriate materials for applications.

MEC 250 Statics and Strength of Materials 4 3 0 0 5

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

MEC 270 Machine Design 3 3 0 0 4**Prerequisites:** DFT 151, MEC 180, and MEC 250 or MEC 251 and MEC 252

This course covers the basic principles underlying design and selection of machine elements. Topics include stress analysis, selection of components, power transmission, and other design

considerations. Upon completion, students should be able to identify and solve mechanical design problems by applying basic engineering principles.

MEC 276 Capstone Design Project 0 3 0 0 1

This course provides an opportunity for students to utilize all facets of their educational experience to solve an engineering design problem in a multi-disciplinary environment. Topics include project planning and organization, engineering analysis and design, selection of materials and processes, economic analysis, communication, and project documentation. Upon completion, students should be able to demonstrate the ability to complete a comprehensive design project, concluding with a formal report.

MARKETING AND RETAILING**MKT 120 Principles of Marketing 3 0 0 0 3**

This course introduces principles and problems of marketing goods and services. Topics include promotion, placement, and pricing strategies for products. Upon completion, students should be able to apply marketing principles in organizational decision making. This course is also available through the Virtual Learning Community (VLC).

MKT 122 Visual Merchandising 3 0 0 0 3

This course introduces basic layout design and commercial display in retail and service organizations. Topics include an analysis of display as a visual merchandising medium and an examination of the principles and applications of display and design. Upon completion, students should be able to plan, build, and evaluate designs and displays. This course is a unique concentration requirement of the Marketing and Retailing concentration in the Business Administration program. This course is also available through the Virtual Learning Community (VLC).

MKT 123 Fundamentals of Selling 3 0 0 0 3

This course is designed to emphasize the necessity of selling skills in a modern business environment. Emphasis is placed on sales techniques involved in various types of selling situations. Upon completion, students should be able to demonstrate an understanding of the techniques covered. This course is also available through the Virtual Learning Community (VLC).

MKT 220 Advertising and Sales Promotion 3 0 0 0 3

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

MKT 222 Credit Procedures 3 0 0 0 3

This course covers areas of collection that provide an understanding of the expertise needed to manage collection operations. Topics include principles and practices in the extension of credit, collection procedures, and laws pertaining to credit extension and collection. Upon completion, students should be able to demonstrate an understanding of the concepts covered.

MKT 223 Customer Service 3 0 0 0 3

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

MKT 225 Marketing Research 3 0 0 0 3**Prerequisites:** MKT 120

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

MKT 226 Retail Applications 3 0 0 0 3

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

MAINTENANCE**MNT 111 Maintenance Practices** 2 2 0 0 3

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

MUSIC

Suffixes may be added to some music courses to denote the following instrument designations:

A - Voice	L - Clarinet
B - Piano	M- Saxophone
C - Organ	N - Violin
D - Trumpet	P - Viola
E - French Horn	R - Cello
F - Trombone	S - Double Bass
G - Tuba/Baritone	T - Percussion
H - Flute	U - Guitar
J - Oboe	V - Harp
K - Bassoon	

MUS 110 Music Appreciation 3 0 0 0 3

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

MUS 121 Music Theory I 3 2 0 0 4

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

MUS 122 Music Theory II 3 2 0 0 4

Prerequisites: MUS 121

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

MUS 141 Ensemble I 0 2 0 0 1

Corequisites: MUS 121, MUS 161

This course provides an opportunity to perform in any combination of instrumental, vocal, or keyboard groups of two or more. Emphasis is placed on the development of performance skills and the study of a

variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Enrollment is limited to music majors.

MUS 142 Ensemble II 0 2 0 0 1

Prerequisites: MUS 121, MUS 141

Corequisites: MUS 122, MUS 162

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

MUS 151 Class Music I 0 2 0 0 1

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

MUS 152 Class Music II 0 2 0 0 1

Prerequisites: MUS 151

This course is a continuation of MUS 151. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Colleges may use a letter suffix to designate a specific instrument or voice (see above table). This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MUS 161 Applied Music I 1 2 0 0 2

Corequisites: MUS 121, MUS 141

This course provides individual instruction in the skills and techniques of the particular instrument or voice. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Enrollment is limited to music majors; additional private lessons and practice hours required.

MUS 162 Applied Music II 1 2 0 0 2

Prerequisites: MUS 121, MUS 161

Corequisites: MUS 122, MUS 142

This course is a continuation of MUS 161. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Enrollment is limited to music majors; additional private lessons and practice hours required.

MUS 221 Music Theory III 3 2 0 0 4

Prerequisites: MUS 122

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

MUS 222 Music Theory IV 3 2 0 0 4**Prerequisites:** MUS 221

This course is a continuation of studies begun in MUS 221. Emphasis is placed on continued study of common practice era compositional techniques and forms, 20th century practices, ear training, and sight singing. Upon completion, students should be able to demonstrate proficiency in the recognition and application of the above. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MUS 241 Ensemble III 0 2 0 0 1**Prerequisites:** MUS 122, MUS 142**Corequisites:** MUS 221, MUS 261

This course is a continuation of MUS 142. Emphasis is placed on the development of performance skills and the study of a variety of styles and periods of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Enrollment is limited to music majors.

MUS 242 Ensemble IV 0 2 0 0 1**Prerequisites:** MUS 221, MUS 241**Corequisites:** MUS 222, MUS 262

This course is a continuation of MUS 241. Emphasis is placed on the development of performance skills and the study of styles of ensemble literature. Upon completion, students should be able to demonstrate skills needed to participate in ensemble playing leading to performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Enrollment is limited to music majors.

MUS 251 Class Music III 0 2 0 0 1**Prerequisites:** MUS 152

This course is a continuation of MUS 152. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Colleges may use a letter suffix to designate a specific instrument or voice (see above table). This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MUS 252 Class Music IV 0 2 0 0 1**Prerequisites:** MUS 251

This course is a continuation of MUS 251. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. Colleges may use a letter suffix to designate a specific instrument or voice (see above table). This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MUS 261 Applied Music III 1 2 0 0 2**Prerequisites:** MUS 122, MUS 162**Corequisites:** MUS 221, MUS 241

This course is a continuation of MUS 162. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Enrollment is limited to music majors; additional private lessons and practice hours required.

MUS 262 Applied Music IV 1 2 0 0 2**Prerequisites:** MUS 221, MUS 261**Corequisites:** MUS 222, MUS 242

This course is a continuation of MUS 261. Emphasis is placed on techniques and styles and the exploration and study of appropriate literature. Upon completion, students should be able to demonstrate proficiency in the studied skills and repertoire through performance. This course has been approved to satisfy the Comprehensive

Articulation Agreement pre-major and/or elective course requirement. Enrollment is limited to music majors; additional private lessons and practice hours required.

MUS 270 Music Literature 3 0 0 0 3**Prerequisites:** MUS 122

This course is a survey of music literature from the Middle Ages to the present. Emphasis is placed on selected works of representative composers. Upon completion, students should be able to trace important musical developments and demonstrate an understanding of the composers/E styles. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MUS 271 Music History I 3 0 0 0 3**Prerequisites:** MUS 122

This course is the first of a two-semester, in-depth study of music history. Emphasis is placed on the history and literature of music from Antiquity through the Baroque Period. Upon completion, students should be able to trace important musical developments and demonstrate an understanding of the composer's styles. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

MUS 272 Music History II 3 0 0 0 3**Prerequisites:** MUS 271

This course is the second of a two-semester, in-depth study of music history. Emphasis is placed on the history and literature of music from the Classical Period to the present. Upon completion, students should be able to trace important musical developments and demonstrate an understanding of the composer's styles. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

NETWORKING TECHNOLOGY**NET 125 Networking Basics 1 4 0 0 3**

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 1 4 0 0 3**Prerequisites:** NET 125

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 175 Wireless Technology 2 2 0 0 3**Prerequisites:** NET 110 or NET 125

This course introduces the student to wireless technology and interoperability with different communication protocols. Topics include Wireless Application Protocol (WAP), Wireless Markup language (WML), link manager, service discovery protocol, transport layer and frequency band. Upon completion, students should be able to discuss in written and oral form protocols and procedures required for different wireless applications.

NET 225 Routing and Switching I 1 4 0 0 3**Prerequisites:** NET 126

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 prerequisite 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 1 4 0 0 3**Prerequisites:** NET 225

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.

NET 289 Networking Project 1 4 0 0 3**Corequisites:** NET 226

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

NETWORKING OPERATING SYSTEMS**NOS 110 Operating System Concepts** 2 3 0 0 3

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

NOS 120 Linux/UNIX Single User 2 2 0 0 3**Prerequisites:** NOS 110

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

NOS 130 Windows Single User 2 2 0 0 3**Prerequisites:** NOS 110

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

NOS 220 Linux/UNIX Admin I 2 2 0 0 3**Prerequisites:** NOS 120

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

NOS 221 Linux/UNIX Admin II 2 2 0 0 3**Prerequisites:** NOS 220

This course includes skill-building in configuring common network services and security administration using Linux. Topics include server-side setup, configuration, basic administration of common networking services, and security administration using Linux. Upon completion, students should be able to setup a Linux server and configure common network services including security requirements.

NOS 230 Windows Admin I 2 2 0 0 3**Prerequisites:** NOS 130

This course covers the installation and administration of a Windows Server network operating system. Topics include managing and maintaining physical and logical devices, access to resources, the server environment, managing users, computers, and groups,

and Managing/Implementing Disaster Recovery. Upon completion, students should be able to manage and maintain a Windows Server environment.

NURSING**NUR 111 Intro to Health Concepts** 4 6 6 0 8**Prerequisites:** Listing on the Nurse Aide Registry**Corequisites:** BIO 165

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 3 0 6 0 5**Prerequisites:** NUR 111, BIO 165**Corequisites:** NUR 211, BIO 166, 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 3 0 6 0 5**Prerequisites:** NUR 111, NUR 112, NUR 114, and NUR 211**Corequisites:** NUR 212

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 3 0 6 0 5**Prerequisites:** NUR 111, NUR 112, and NUR 211**Corequisites:** BIO 175, 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, 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 3 0 6 0 5**Prerequisites:** NUR 111**Corequisites:** NUR 112, BIO 166, 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, 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 3 0 6 0 5**Prerequisites:** NUR 111, NUR 112, NUR 114, NUR 211**Corequisites:** NUR 113

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 4 3 15 0 10

Prerequisites: NUR 111, NUR 112, NUR 113, NUR 114, NUR 211, and NUR 212

This course is designed to assimilate the concepts within the three domains of the individual, healthcare, and nursing. Emphasis is placed on the concepts of fluid/electrolytes, metabolism, perfusion, mobility, stress/coping, violence, health-wellness-illness, professional behaviors, caring interventions, managing care, healthcare systems, and quality improvement. Upon completion, students should be able to demonstrate the knowledge, skills, and attitudes necessary to provide quality, individualized, entry level nursing care.

OFFICE SYSTEMS TECHNOLOGY**OST 131 Keyboarding 1 2 0 0 2**

This course covers basic keyboarding skills. Emphasis is placed on the touch system, correct techniques, and development of speed and accuracy. Upon completion, students should be able to key at an acceptable speed and accuracy level using the touch system. This course is considered developmental for a student with a typing speed of less than 20 wpm.

OST 134 Text Entry and Formatting 2 2 0 0 3

Prerequisites: OST 131 or typing speed of 20 wpm

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.

OST 136 Word Processing 2 2 0 0 3

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 137 Office Software Applications 2 2 0 0 3

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

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

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

OST 148 Med Coding Billing and Insurance 3 0 0 0 3

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 forms preparation. Upon completion, students should be able to accurately complete a standard claim form.

OST 149 Med Legal Issues 3 0 0 0 3

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

OST 162 Executive Terminology 3 0 0 0 3

This course is designed to increase and improve proficiency in word usage. Topics include root words, prefixes, suffixes, homonyms, synonyms, and specialized vocabularies. Upon completion, students should be able to use acquired vocabulary skills in the global workplace.

OST 164 Text Editing Applications 3 0 0 0 3

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

OST 171 Intro to Virtual Office 2 2 0 0 3

This course introduces the skills and abilities needed to conduct a variety of office administration activities using the latest technology. Students will learn the proper etiquette of communication electronically as well as the unique procedures and logistics for conducting business in the virtual office. Upon completion, students will know the vocabulary of the virtual office and will have a basic understanding of modern technical communication tools. This course is a unique requirement of the Virtual Office concentration in the Office Systems Technology program.

OST 181 Office Procedures 2 2 0 0 3

This course provides a working knowledge of modern office procedures. Emphasis is placed on scheduling, telephone procedures, travel arrangements, event planning, office design and ergonomics, financial procedures, and performing functions typical of today's offices. Upon completion, students should be able to function proficiently in an office environment.

OST 184 Records Management 2 2 0 0 3

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

OST 223 Admin Office Transcript I 2 2 0 0 3

Prerequisites: OST 164 and (OST 134 or OST 136)

This course provides experience in transcribing documents. Emphasis is placed on appropriate formatting, advanced text editing skills, and transcription techniques. Upon completion, students should be able to transcribe office documents.

OST 233 Office Publications Design 2 2 0 0 3

Prerequisites: OST 136

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

OST 236 Adv Word/Information Proc 2 2 0 0 3

Prerequisites: OST 136

This course develops proficiency in the utilization of advanced word/information processing functions. Emphasis is placed on advanced word processing features. Upon completion, students should be able to produce a variety of complex business documents.

OST 241 Med Office Transcription I 1 2 0 0 2

Prerequisites: OST 141

This course introduces machine transcription techniques as applied to medical documents. Emphasis is placed on accurate transcription, proofreading, and use of reference materials as well as vocabulary building. Upon completion, students should be able to prepare accurate and usable transcripts of voice recordings in the covered specialties.

OST 243 Med Office Simulation 2 2 0 0 3

Prerequisites: OST 148

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

OST 271 Office Web Technologies 2 2 0 0 3

This course provides a working knowledge of software and hardware tools used in the virtual office. Students will learn to use the Internet for research, planning, and decision making in an office environment.

Upon completion, students will be able to use current and emerging technologies to solve problems and complete projects in the virtual office. This course is a unique requirement of the Virtual Office concentration in the Office Systems Technology program.

OST 272 Virtual Office Capstone 1 2 0 0 2

This course requires students to plan, design, create and publish a Virtual Assistant Web site. Students will also develop a marketing strategy and promotional material for the virtual office. Upon completion, students will have prepared a professional portfolio. This course is a unique requirement of the Virtual Office concentration in the Office Systems Technology program.

OST 284 Emerging Technologies 1 2 0 0 2

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

OST 289 Administrative Office Management 2 2 0 0 3

Prerequisites: OST 164 and either OST 134 or OST 136

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

PROFESSIONAL CRAFTS: JEWELRY

PCJ 262 Hand Wrought Metals 1 3 0 0 2

This course covers the fundamental processes, techniques and tools for heating and forging ferrous and non-ferrous metals. Topics include fire control, use of hammers, tools and traditional techniques for metal shaping. Upon completion, students should be able to heat and use a variety of metals to create tools and shape basic metal projects. Students will study and apply basic blacksmithing skills.

PCJ 263 Advanced Wrought Metals 1 3 0 0 2

Prerequisites: PCJ 262

This course covers ideas and techniques for designing, heating and shaping metals. Topics include hammer control, use of power tools and advanced techniques such as metal lamination. Upon completion, students should be able to use traditional and contemporary techniques to make objects such as buckles, vessels, pendants, and blades. Students will study and apply advanced blacksmithing skills.

PCJ 267 Hand Wrought Joinery 1 3 0 0 2

Prerequisites: PCJ 262

This course introduces the use of traditional joinery techniques used in the hand wrought metal profession. Emphasis is placed on the history and processes of the traditional joinery using tenons, mortises, collars, rivets, and forge welded joints. Upon completion, students should be able to create joints for hand wrought metal work using mortise and tenon, collars, and hot wraps. Students will apply traditional blacksmithing joinery techniques to explore projects such as display panels, gates or park benches.

PROFESSIONAL CRAFTS: SCULPTURE

PCS 110 Intro to Metal Sculpture 2 9 0 0 5

Prerequisites: PCS 112

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

PCS 112 Beg. Welding for Artists 1 4 0 0 3

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

PHYSICAL EDUCATION

PED 110 Fit and Well for Life 1 2 0 0 2

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

PED 111 Physical Fitness I 0 3 0 0 1

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

PED 117 Weight Training I 0 3 0 0 1

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

PED 118 Weight Training II 0 3 0 0 1

Prerequisites: PED 117

This course covers advanced levels of weight training. Emphasis is placed on meeting individual training goals and addressing weight training needs and interests. Upon completion, students should be able to establish and implement an individualized advanced weight-training program. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

PED 119 Circuit Training 0 3 0 0 1

This course covers the skills necessary to participate in a developmental fitness program. Emphasis is placed on the circuit training method which involves a series of conditioning timed stations arranged for maximum benefit and variety. Upon completion, students should be able to understand and appreciate the role of circuit training as a means to develop fitness. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

PED 120 Walking for Fitness 0 3 0 0 1

This course introduces fitness through walking. Emphasis is placed on stretching, conditioning exercises, proper clothing, fluid needs, and injury prevention. Upon completion, students should be able to participate in a recreational walking program. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Parts of the course may be at an off-campus location.

PED 121 Walk, Jog, Run 0 3 0 0 1

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

PED 122 Yoga I 0 2 0 0 1

This course introduces the basic discipline of yoga. Topics include proper breathing, relaxation techniques, and correct body positions. Upon completion, students should be able to demonstrate the procedures of yoga. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

PED 123 Yoga II 0 2 0 0 1**Prerequisites: PED 122**

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 to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

PED 125 Self-Defense-Beginning 0 2 0 0 1

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

PED 128 Golf-Beginning 0 2 0 0 1

This course emphasizes the fundamentals of golf. Topics include the proper grips, stance, alignment, swings for the short and long game, putting, and the rules and etiquette of golf. Upon completion, students should be able to perform the basic golf shots and demonstrate knowledge of the rules and etiquette of golf. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Participation in off-campus activities required in the course may result in additional costs to the student.

PED 130 Tennis-Beginning 0 2 0 0 1

This course emphasizes the fundamentals of tennis. Topics include basic strokes, rules, etiquette, and court play. Upon completion, students should be able to play recreational tennis. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Participation in off-campus activities required in the course may result in additional costs to the student.

PED 137 Badminton 0 2 0 0 1

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

PED 139 Bowling-Beginning 0 2 0 0 1

This course introduces the fundamentals of bowling. Emphasis is placed on ball selection, grips, stance and delivery along with rules and etiquette. Upon completion, students should be able to participate in recreational bowling. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Participation in off-campus activities required in the course may result in additional costs to the student.

PED 143 Volleyball-Beginning 0 2 0 0 1

This course covers the fundamentals of volleyball. Emphasis is placed on the basics of serving, passing, setting, spiking, blocking, and the rules and etiquette of volleyball. Upon completion, students should be able to participate in recreational volleyball. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

PED 145 Basketball-Beginning 0 2 0 0 1

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

PED 147 Soccer 0 2 0 0 1

This course introduces the basics of soccer. Emphasis is placed on rules, strategies, and fundamental skills. Upon completion, students should be able to participate in recreational soccer. This course has

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

PED 148 Softball 0 2 0 0 1

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

PED 152 Swimming-Beginning 0 2 0 0 1

This course is designed for non-swimmers and beginners. Emphasis is placed on developing confidence in the water, learning water safety, acquiring skills in floating, and learning elementary strokes. Upon completion, students should be able to demonstrate safety skills and be able to tread water, back float, and use the crawl stroke for 20 yards. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Participation in off-campus activities required in the course may result in additional costs to the student.

PED 160 Canoeing-Basic 0 2 0 0 1**Prerequisites: PED 152**

This course provides basic instruction for the beginning canoeist. Emphasis is placed on safe and correct handling of the canoe and rescue skills. Upon completion, students should be able to demonstrate basic canoeing, safe-handling, and self-rescue skills. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Participation in off-campus activities required in the course may result in additional costs to the student.

PED 165 Sport Science as a Career 3 0 0 0 3**Prerequisites: ENG 090 and RED 090**

This course provides students with foundational knowledge about the study of physical activity and career opportunities within the discipline. Emphasis will be placed on the role of physical activity, the subdisciplines of the field, and possible career choices. Upon completion, students should have an understanding of the subdisciplines and employment opportunities within an Exercise and Sport Science Program. This course has been approved by the Transfer Advisory Committee to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

PED 173 Rock Climbing 0 2 0 0 1

This course teaches the fundamental skills and safety of rock climbing. Topics include rock climbing, bouldering, rappelling, the correct method of belaying for climbing and rappelling, and knowledge of equipment. Upon completion, students should be able to demonstrate strong and skillful techniques in climbing and rappelling. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Participation in off-campus activities required in the course may result in additional costs to the student.

PED 181 Snow Skiing-Beginning 0 2 0 0 1

This course introduces the fundamentals of snow skiing. Topics include basic techniques, safety, and equipment involved in snow skiing. Upon completion, students should be able to ski down a slope, enter and exit a ski lift, and perform basic maneuvers on skis. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement. Participation in off-campus activities required in the course may result in additional costs to the student.

PED 254 Coaching Basketball 1 2 0 0 2

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

PED 256 Coaching Baseball 1 2 0 0 2
 This course introduces the theory and methods of coaching baseball. Emphasis is placed on rules, game strategies, and selected techniques of coaching baseball. Upon completion, students should be able to demonstrate competent coaching skills in baseball. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

PED 259 Prev and Care Ath Injuries 1 2 0 0 2
 This course provides information on the prevention and care of athletic injuries. Topics include safety devices, taping, therapeutic techniques, and conditioning exercises. Upon completion, students should be able to demonstrate proper preventive measures and skills in caring for athletic injuries. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

PHILOSOPHY

PHI 210 History of Philosophy 3 0 0 0 3
Prerequisites: ENG 111
 This course introduces fundamental philosophical issues through an historical perspective. Emphasis is placed on such figures as Plato, Aristotle, Lao-Tzu, Confucius, Augustine, Aquinas, Descartes, Locke, Kant, Wollstonecraft, Nietzsche, and Sartre. Upon completion, students should be able to identify and distinguish among the key positions of the philosophers studied. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

PHI 230 Introduction to Logic 3 0 0 0 3
Prerequisites: ENG 111
 This course introduces basic concepts and techniques for distinguishing between good and bad reasoning. Emphasis is placed on deduction, induction, validity, soundness, syllogisms, truth functions, predicate logic, analogical inference, common fallacies, and scientific methods. Upon completion, students should be able to analyze arguments, distinguish between deductive and inductive arguments, test validity, and appraise inductive reasoning. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

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

PHYSICAL SCIENCE

PHS 130 Earth Science 3 2 0 0 4
 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 to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

PHYSICS

PHY 110 Conceptual Physics 3 0 0 0 3
 This course provides a conceptually based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles studied. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

PHY 110A Conceptual Physics Lab 0 2 0 0 1
Corequisites: PHY 110
 This course is a laboratory for PHY 110. Emphasis is placed on laboratory experiences that enhance materials presented in PHY 110. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in PHY 110. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

PHY 131 Physics-Mechanics 3 2 0 0 4
Prerequisites: MAT 121
 This algebra/trigonometry-based course introduces fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem-solving methods, graphical analysis, vectors, motion, forces, Newton's laws of motion, work, energy, power, momentum, and properties of matter. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.

PHY 151 College Physics I 3 2 0 0 4
Prerequisites: MAT 161 or MAT 171
 This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. Students in associate of applied science degree programs can enroll in this course after completing MAT 122 with a grade of C or higher.

PHY 152 College Physics II 3 2 0 0 4
Prerequisites: PHY 151
 This course uses algebra- and trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

PHY 251 General Physics I 3 3 0 0 4
Prerequisites: MAT 271
Corequisites: MAT 272
 This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vector operations, linear kinematics and dynamics, energy, power, momentum, rotational mechanics, periodic motion, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

PHY 252 General Physics II 3 3 0 0 4
Prerequisites: MAT 272 and PHY 251
 This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem-solving ability for the topics covered. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.

PLUMBING

PLU 110 Modern Plumbing 4 15 0 0 9
This course introduces the tools, equipment, and materials associated with the plumbing industry. Topics include safety, use and care of tools, recognition and assembly of fittings and pipes, and other related topics. Upon completion, students should be able to safely assemble various pipes and fittings in accordance with state code requirements.

PLU 150 Plumbing Diagrams 1 2 0 0 2
This course introduces sketching diagrams and interpretation of blueprints applicable to the plumbing trades. Emphasis is placed on plumbing plans for domestic and/or commercial buildings. Upon completion, students should be able to sketch plumbing diagrams applicable to the plumbing trades.

PLU 160 Plumbing Estimates 1 2 0 0 2
This course covers techniques for estimating quantities of materials and cost of installation for various types of plumbing systems. Topics include design of systems, codes, material take-offs, pricing, and public relations. Upon completion, students should be able to order materials needed for installation from a designed system.

POLITICAL SCIENCE

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

POL 130 State and Local Government 3 0 0 0 3
This course includes state and local political institutions and practices in the context of American federalism. Emphasis is placed on procedural and policy differences as well as political issues in state, regional, and local governments of North Carolina. Upon completion, students should be able to identify and discuss various problems associated with intergovernmental politics and their effect on the community and the individual. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

PSYCHOLOGY

PSY 135 Group Processes 3 0 0 0 3
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 3 0 0 0 3
Prerequisites: ENG 090 and RED 090
This course provides an overview of the scientific study of human behavior. Topics include history, methodology, biopsychology, sensation, perception, learning, motivation, cognition, abnormal behavior, personality theory, social psychology, and other relevant topics. Upon completion, students should be able to demonstrate a basic knowledge of the science of psychology. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

PSY 237 Social Psychology 3 0 0 0 3
Prerequisites: PSY 150 or SOC 210
This course introduces the study of individual behavior within social contexts. Topics include affiliation, attitude formation and change, conformity, altruism, aggression, attribution, interpersonal attraction, and group behavior. Upon completion, students should be able to demonstrate an understanding of the basic principles of social

influences on behavior. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

PSY 241 Developmental Psych 3 0 0 0 3
Prerequisites: PSY 150

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

PSY 281 Abnormal Psychology 3 0 0 0 3
Prerequisites: PSY 150

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

READING

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

RED 080 Introduction to College Reading 3 2 0 0 4
Prerequisites: STAR Center referral or satisfactory pre-enrollment placement test scores

This course introduces effective reading and inferential thinking skills in preparation for RED 090. Emphasis is placed on vocabulary, comprehension, and reading strategies. Upon completion, students should be able to determine main ideas and supporting details, recognize basic patterns of organization, draw conclusions, and understand vocabulary in context. This course does not satisfy the developmental reading prerequisite for ENG 111. A student must earn a "C" or better and pass a standardized exit reading test to progress to the next class.

RED 090 Improved College Reading 3 2 0 0 4
Prerequisites: RED 080

This course is designed to improve reading and critical thinking skills. Topics include vocabulary enhancement; extracting implied meaning; analyzing author's purpose, tone, and style; and drawing conclusions and responding to written material. Upon completion, students should be able to comprehend and analyze college-level reading material. This course satisfies the developmental reading prerequisite for ENG 111. A student must earn a "C" or better and pass a standardized exit reading test to progress to the next class.

RELIGION

REL 110 World Religions 3 0 0 0 3
This course introduces the world's major religious traditions. Topics include Primal religions, Hinduism, Buddhism, Islam, Judaism, and Christianity. Upon completion, students should be able to identify the origins, history, beliefs, and practices of the religions studied. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

REL 212 Intro to New Testament 3 0 0 0 3
This course is a survey of the literature of first-century Christianity with readings from the gospels, Acts, and the Pauline and pastoral letters. Topics include the literary structure, audience, and religious perspective of the writings, as well as the historical and cultural

context of the early Christian community. Upon completion, students should be able to use the tools of critical analysis to read and understand New Testament literature. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

REAL ESTATE

RLS 112 Broker Prelicensing 5 0 0 0 5
Prerequisites: RED 090 and MAT 060

This course provides basic instruction in real estate principles and practices. Topics include law, finance, brokerage, closing, valuation, management, taxation, mathematics, construction, land use, property insurance, and NC License Law and Commission Rules. Upon completion, students should be able to demonstrate basic knowledge and skills necessary for real estate sales.

INFORMATION SYSTEMS SECURITY

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

SEC 160 Secure Admin I 2 2 0 0 3
Prerequisites: SEC 110 and NET 110 or NET 125

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.

SIMULATION AND GAME DEVELOPMENT

SGD 111 Introduction to SGD 2 3 0 0 3
 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 2 3 0 0 3
 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 2 3 0 0 3
 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 114 3D Modeling 2 2 0 0 3
 This course introduces the tools required to create three dimensional (3D) models. Emphasis is placed on exploring tools used to create 3D models. Upon completion, students should be able to create and animate 3D models using 3D modeling tools.

SGD 122 SG Database Programming 2 3 0 0 3
 This course covers the creation and application of databases for simulation and game development. Emphasis is placed on various database and software development kits. Upon completion, students should be able to apply their knowledge of databases to the creation of simulations and games.

SGD 158 SGD Business Management 3 0 0 0 3
 This course introduces the business side of the interactive game industry. Emphasis will be placed on licenses, serious games, psychological profiling, publisher/developer relations, and contract negotiation skills. Upon completion, students should be able to understand how a game evolves from concept to the customer.

SGD 161 SG Animation 2 3 0 0 3
 This course introduces the fundamental principles of animation used in simulation and game development. Emphasis is placed on a historical survey of animation, aspects of the animation process and animation techniques. Upon completion, students should be able to produce character sketches, morph simple objects, create walk and run cycles and develop professional storyboards.

SGD 162 SG 3D Animation 2 3 0 0 3
 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 process and 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 163 SG Documentation 2 3 0 0 3
 This course introduces the techniques and methods used to create simulation and game production and design documents. Emphasis is placed on the design document to include scheduling, production plans, marketing and budgeting. Upon completion, students should be able to create design and produce documents for any simulation or game.

SGD 167 SG Ethics 3 0 0 0 3
 This course introduces principles of philosophy and ethics as they relate to simulation and game development. Topics include moral philosophy and ethics. Upon completion, students should be able to discuss philosophical and ethical issues related to simulation and game development.

SGD 174 SG Level Design 2 3 0 0 3
 This course introduces the tools used to create levels for real-time simulations 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 2 3 0 0 3
Prerequisites: SGD 112
 The 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 214 3D Modeling II 2 3 0 0 3
Prerequisites: SGD 114
 This course introduces the tools used to create and animate advanced 3 dimensional models. Emphasis is placed on identifying and utilizing the tools required to create and animate advanced 3D models. Upon completion, students should be able to create and animate advanced 3D models using 3D modeling tools.

SGD 285 SG Software Engineering 2 3 0 0 3
Prerequisites: SGD 212, SGD 213, or SGD 214
 This course introduces object oriented software engineering concepts related to simulation and game development. Topics include systematic approaches to the development, operation and maintenance of simulations and games. Upon completion, students should be able to apply software engineering techniques to the development of simulations and games.

SGD 289 SGD Project 2 3 0 0 3
Prerequisites: SGD 212, SGD 213, SGD 214, or SGD 285
 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.

SOCIOLOGY

SOC 210 Introduction to Sociology 3 0 0 0 3

Prerequisites: ENG 090 and RED 090

This course introduces the scientific study of human society, culture, and social interactions. Topics include socialization, research methods, diversity and inequality, cooperation and conflict, social change, social institutions, and organizations. Upon completion, students should be able to demonstrate knowledge of sociological concepts as they apply to the interplay among individuals, groups, and societies. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

SOC 213 Sociology of the Family 3 0 0 0 3

Prerequisites: ENG 090 and RED 090

This course covers the institution of the family and other intimate relationships. Emphasis is placed on mate selection, gender roles, sexuality, communication, power and conflict, parenthood, diverse lifestyles, divorce and remarriage, and economic issues. Upon completion, students should be able to analyze the family as a social institution and the social forces which influence its development and change. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

SOC 215 Group Processes 3 0 0 0 3

Prerequisites: ENG 090 and RED 090

This course introduces group processes and dynamics. Emphasis is placed on small group experiences, roles and relationships within groups, communication, cooperation and conflict resolution, and managing diversity within and among groups. Upon completion, students should be able to demonstrate the knowledge and skills essential to analyze group interaction and to work effectively in a group context. This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.

SOC 220 Social Problems 3 0 0 0 3

Prerequisites: ENG 090 and RED 090

This course provides an in-depth study of current social problems. Emphasis is placed on causes, consequences, and possible solutions to problems associated with families, schools, workplaces, communities, and the environment. Upon completion, students should be able to recognize, define, analyze, and propose solutions to these problems. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in social/behavioral sciences.

SPANISH INTERPERTER

SPA 110 Introduction to Spanish 2 0 0 0 2

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

SPA 111 Elementary Spanish I 3 0 0 0 3

Prerequisites: SPA 110 or high school Spanish

Corequisites: SPA 181

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

SPA 112 Elementary Spanish II 3 0 0 0 3

Prerequisites: SPA 111

Corequisites: SPA 182

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

SPA 120 Spanish for the Workplace 3 0 0 0 3

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

SPA 141 Culture and Civilization 3 0 0 0 3

This course provides an opportunity to explore issues related to the Hispanic world. Topics include historical and current events, geography, and customs. Upon completion, students should be able to identify and discuss selected topics and cultural differences related to the Hispanic world. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

SPA 161 Cultural Immersion 2 3 0 0 3

Prerequisites: SPA 111

This course explores Hispanic culture through intensive study on campus and field experience in a host country or area. Topics include an overview of linguistic, historical, geographical, sociopolitical, economic, and/or artistic concerns of the area visited. Upon completion, students should be able to exhibit first-hand knowledge of issues pertinent to the host area and demonstrate understanding of cultural differences. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

SPA 181 Spanish Lab 1 0 2 0 0 1

Corequisites: SPA 111

This course provides an opportunity to enhance acquisition of the fundamental elements of the Spanish language. Emphasis is placed on the progressive development of basic listening, speaking, reading, and writing skills through the use of various supplementary learning media and materials. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and demonstrate cultural awareness. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

SPA 182 Spanish Lab 2 0 2 0 0 1

Prerequisites: SPA 181

Corequisites: SPA 112

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

SPA 211 Intermediate Spanish I 3 0 0 0 3

Prerequisites: SPA 112

This course provides a review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts. Upon completion,

students should be able to communicate effectively, accurately, and creatively about the past, present, and future. This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in humanities/fine arts.

SPA 212 Intermediate Spanish II 3 0 0 0 3

Prerequisites: SPA 211

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

SPA 215 Spanish Phonetics/Structure 3 0 0 0 3

This course is designed to improve the understanding of Spanish phonetics and the structure of the Spanish language. Topics include the structure of the Spanish language, phonology, morphology, and syntax. Upon completion, students should have an understanding of the phonetics and structure of the Spanish language and be able to contrast the structure of the Spanish and English languages.

SPA 221 Spanish Conversation 3 0 0 0 3

Prerequisites: SPA 212

This course provides an opportunity for intensive communication in spoken Spanish. Emphasis is placed on vocabulary acquisition and interactive communication through the discussion of media materials and authentic texts. Upon completion, students should be able to discuss selected topics, express ideas and opinions clearly, and engage in formal and informal conversations. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

SPA 231 Reading and Composition 3 0 0 0 3

Prerequisites: SPA 212

This course provides an opportunity for intensive reading and composition in Spanish. Emphasis is placed on the use of literary and cultural materials to enhance and expand reading and writing skills. Upon completion, students should be able to demonstrate in writing an in-depth understanding of assigned readings. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

SPA 281 Spanish Lab 3 0 2 0 0 1

Prerequisites: SPA 182

Corequisites: SPA 211

This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate effectively, accurately, and creatively about the past, present, and future. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

SPA 282 Spanish Lab 4 0 2 0 0 1

Prerequisites: SPA 281

Corequisites: SPA 212

This course provides an opportunity to enhance the review and expansion of the essential skills of the Spanish language. Emphasis is placed on the continuing study of authentic and representative literary and cultural texts through the use of various supplementary learning media and materials. Upon completion, students should be able to communicate spontaneously and accurately with increasing complexity and sophistication. This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirement.

SPANISH INTERPRETING

SPI 113 Intro. to Spanish Inter. 3 0 0 0 3

This course introduces the field of interpreting, interpretation models, cognitive processes associated with interpretation, professional ethical standards, employment opportunities, and working conditions.

Topics include specialized jargon, code of ethics, interpreter assessments/qualifications, and protocol associated with various settings. Upon completion, students should be able to explain the rationale for placement of interpreters and apply ethical standards to a variety of working situations.

SPI 114 Analytical Skills Spanish Inter. 3 0 0 0 3

This course is designed to improve cognitive processes associated with interpreting, listening, short-term memory, semantic equivalence, visual/auditory processing, thought organization and logic. Emphasis is placed on developing skills necessary to generate equivalent messages between Spanish and English. Upon completion, students should be able to consecutively interpreting-technical, interactive messages between Spanish and English.

SPI 213 Review of Grammar 3 0 0 0 3

This course is designed to review the common elements of Spanish grammar in oral and written form. Emphasis is placed on the fundamental grammatical concepts of the Spanish language. Upon completion, students should be able to demonstrate comprehension and correct usage of specified grammatical concepts in both oral and written form.

SPI 214 Introduction to Translation 3 0 0 0 3

This course is designed to improve the quality of Spanish to English and English to Spanish translation. Emphasis is placed on the practice of Spanish to English and English to Spanish translation in a variety of prose styles. Upon completion, students should be able to demonstrate the usage and understanding of the processes involved in translating.

SUSTAINABILITY TECHNOLOGIES

SST 110 Intro to Sustainability 3 0 0 0 3

This course introduces sustainability issues and individual contributions toward environmental sustainability. Topics include management processes needed to maximize renewable/non-renewable energy resources, economics of sustainability, and reduction of environmental impacts. Upon completion, students should be able to discuss sustainability practices and demonstrate an understanding of their effectiveness and impacts.

SST 120 Energy Use Analysis 2 2 0 0 3

This course introduces the principles of analyzing energy use, energy auditing tools and techniques, conservation techniques, and calculating energy savings. Topics include building system control theory, calibrating digital controls, energy loss calculations, and applicable conservation techniques. Upon completion, students should be able to demonstrate an understanding of energy use, audits, and controls in the analysis of energy consumption.

SST 140 Green Building Concepts 1 3 0 0 2

This course introduces green building design, LEED® (Leadership in Energy and Environmental Design) and comparable certifications, and their significance in modern building construction. Topics include LEED certification or similar rating systems, energy efficiency, indoor environmental quality, and sustainable building materials. Upon completion, students should be able to incorporate ecological awareness and sustainable principles within the context of design and construction.

SURGICAL TECHNOLOGY

SUR 110 Intro to Surgical Tech 3 0 0 0 3

Prerequisites: Enrollment in the Surg Tech program

Corequisites: SUR 111 and BIO 163

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

SUR 111 Periop Patient Care 5 6 0 0 7**Prerequisites:** Enrollment in the Surg Tech program**Corequisites:** SUR 110 and BIO 163

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

SUR 122 Surgical Procedures I 5 3 0 0 6**Prerequisites:** SUR 110, SUR 111, and BIO 163**Corequisites:** BIO 175 and SUR 123

This course provides an introduction to selected basic and intermediate surgical specialties that students are exposed to the first clinical rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics to the clinical operative environment.

SUR 123 SUR Clinical Practice I 0 0 21 0 7**Prerequisites:** SUR 110, SUR 111, and BIO 163**Corequisites:** SUR 122 and BIO 175

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

SUR 134 Surgical Procedures II 5 0 0 0 5**Prerequisites:** SUR 122, and SUR 123**Corequisites:** SUR 135

This course provides a comprehensive study of intermediate and advanced surgical specialties that students are exposed to in the second clinical rotation. Emphasis is placed on related surgical anatomy, pathology, and procedures that enhance theoretical knowledge of patient care, instrumentation, supplies, and equipment. Upon completion, students should be able to correlate, integrate, and apply theoretical knowledge of the course topics to the clinical operative environment.

SUR 135 SUR Clinical Practice II 0 0 12 0 4**Prerequisites:** SUR 123, SUR 122, and BIO 175**Corequisites:** SUR 134 and SUR 137

This course provides clinical experience with a variety of perioperative assignments to build skills required for complex perioperative patient care. Emphasis is placed on greater technical skills, critical thinking, speed, efficiency, and autonomy in the operative setting. Upon completion, students should be able to function in the role of an entry-level surgical technologist.

SUR 137 Prof Success Prep 1 0 0 0 1**Prerequisites:** SUR 122 and SUR 123**Corequisites:** SUR 134 and SUR 135

This course provides job-seeking skills and an overview of theoretical knowledge in preparation for certification. Topics include test-taking strategies, resume preparation, and interviewing techniques. Upon completion, students should be able to prepare a resume, demonstrate appropriate interview techniques, and identify strengths and weaknesses in preparation for certification.

SUR 210 Adv SUR Clinical Practice 0 0 6 0 2**Prerequisites:** SUR 134, SUR 135, and SUR 137**Corequisites:** SUR 211

This course is designed to provide individualized experience in advanced practice, education, circulating, and managerial skills. Emphasis is placed on developing and demonstrating proficiency in skills necessary for advanced practice. Upon completion, students should be able to assume leadership roles in a chosen specialty area.

SUR 211 Adv Theoretical Concepts 2 0 0 0 2**Prerequisites:** SUR 134, SUR 135, and SUR 137**Corequisites:** SUR 210

This course covers theoretical knowledge required for extension of the surgical technologist role. Emphasis is placed on advanced practice in complex surgical specialties, educational methodologies, and managerial skills. Upon completion, students should be able to assume leadership roles in a chosen specialty area.

WEB TECHNOLOGIES**WEB 110 Internet/Web Fundamentals** 2 2 0 0 3

This course introduces basic markup language, various navigational tools and services of the Internet. Topics include creating Web pages, using internet protocols, search engines, file compression/decompression, FTP, e-mail, listservers, and other related topics. Upon completion, students should be able to deploy a Web site created with basic markup language, retrieve/decompress files, e-mail, FTP, and utilize other internet tools.

WEB 111 Intro to Web Graphics 2 2 0 0 3

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

WEB 115 Web Markup and Scripting 2 2 0 0 3

This course introduces client-side Internet programming using the current W3C-recommended presentation markup language and supporting elements. Topics include site management and development, markup elements, stylesheets, validation, accessibility, standards, browsers, and basic JavaScripting. Upon completion, students should be able to hand-code Web pages with various media elements according to current markup standards and integrate them into Web sites.

WEB 120 Intro Internet Multimedia 2 2 0 0 3

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

WEB 140 Web Development Tools 2 2 0 0 3

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

WEB 179 JAVA Web Programming 2 3 0 0 3

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

WEB 182 PHP Programming 2 2 0 0 3**Prerequisites:** CIS 115

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

WEB 210 Web Design 2 2 0 0 3

This course introduces intermediate to advanced Web page design techniques. Topics include effective use of graphics, fonts, colors, navigation tools, advanced markup language elements, as well as a study of bad design techniques. Upon completion, students should be able to employ advanced design techniques to create high impact and highly functional Web pages.

WEB 215 Adv Markup and Scripting 2 2 0 0 3**Prerequisites: WEB 115**

This course covers advanced programming skills required to design Internet applications. Emphasis is placed on programming techniques required to support network applications. Upon completion, students should be able to design, code, debug, and document network-based programming solutions to various real-world problems using an appropriate programming language.

WEB 220 Advanced Multimedia 2 2 0 0 3**Prerequisites: WEB 120**

This is the second of two courses covering Internet multimedia. Topics include use of advanced Internet multimedia applications. Upon completion, students should be able to create interactive Internet multimedia presentations.

WEB 230 Implementing Web Serv 2 2 0 0 3**Prerequisites: NET 110 or NET 125**

This course covers Web site and Web server architecture. Topics include installation, configuration, administration, and security of Web servers, services and sites. Upon completion, students should be able to effectively manage the Web services deployment lifecycle according to industry standards.

WEB 250 Database Driven Web sites 2 2 0 0 3**Prerequisites: DBA 110 and WEB 140**

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.

WEB 260 E-Commerce Infrastructure 2 2 0 0 3**Prerequisites: WEB 250**

This course introduces the concepts and tools to implement electronic commerce via the Internet. Topics include application and server software selection, securing transactions, use and verification of credit cards, publishing of catalogs, documentation, and site administration. Upon completion, students should be able to setup a working e-commerce Internet Web site.

WEB 285 Emerging Web Technologies 2 2 0 0 3

This course will explore, discuss, and research emerging technologies in the Web arena. Emphasis is placed on exposure to up-and-coming technologies relating to the Web, providing hands-on experience, and discussion of practical implications of these emerging fields. Upon completion, students should be able to articulate issues relating to these technologies.

WEB 289 Internet Technologies Project 1 4 0 0 3**Prerequisites: WEB 230 and WEB 250**

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

WELDING**WLD 110 Cutting Processes 1 3 0 0 2**

This course introduces oxy-fuel and plasma-arc cutting systems. Topics include safety, proper equipment setup, and operation of oxy-fuel and plasma-arc cutting equipment with emphasis on straight line, curve and bevel cutting. Upon completion, students should be able to oxy-fuel and plasma-arc cut metals of varying thickness.

WLD 112 Basic Welding Processes 1 3 0 0 2

This course introduces basic welding and cutting. Emphasis is placed on beads applied with gases, mild steel fillers, and electrodes and the capillary action of solder. Upon completion, students should be able to set up welding and oxy-fuel equipment and perform welding, brazing, and soldering processes. Upon completion, plumbing students should only be able to perform welding, brazing, and soldering processes.

WLD 113 Soldering and Brazing 1 2 0 0 2

This course covers procedures for cutting, soldering and brazing of pipe and tubing. Topics include safety, proper equipment setup, and operation of soldering and brazing equipment. Upon completion, students should be able to solder and braze pipe, tubing, and fittings in various positions.

WLD 115 SMAW (Stick) Plate 2 9 0 0 5

This course introduces the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, students should be able to perform SMAW fillet and groove welds on carbon plate with prescribed electrodes.

WLD 117 Industrial SMAW 1 4 0 0 3

This course introduces the SMAW (stick) process for joining carbon steel components for industrial applications. Topics include padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, student should be able to safely perform SMAW fillet and groove welds on carbon steel plate with prescribed electrodes.

WLD 121 GMAW (MIG) FCAW/Plate 2 6 0 0 4

This course introduces metal arc welding and flux core arc welding processes. Topics include equipment setup and fillet and groove welds with emphasis on application of GMAW and FCAW electrodes on carbon steel plate. Upon completion, students should be able to perform fillet welds on carbon steel with prescribed electrodes in the flat, horizontal, and overhead positions.

WLD 131 GTAW (TIG) Plate 2 6 0 0 4

This course introduces the gas tungsten arc (TIG) welding process. Topics include correct selection of tungsten, polarity, gas, and proper filler rod with emphasis placed on safety, equipment setup, and welding techniques. Upon completion, students should be able to perform GTAW fillet and groove welds with various electrodes and filler materials.

WLD 141 Symbols and Specifications 2 2 0 0 3

This course introduces the basic symbols and specifications used in welding. Emphasis is placed on interpretation of lines, notes, welding symbols, and specifications. Upon completion, students should be able to read and interpret symbols and specifications commonly used in welding.

WLD 212 Inert Gas Welding 1 3 0 0 2

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

WLD 261 Certification Practices 1 3 0 0 2**Prerequisites: WLD 115, WLD 121, and WLD 131**

This course covers certification requirements for industrial welding processes. Topics include techniques and certification requirements for pre-qualified 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 2 2 0 0 3

This course introduces destructive and non-destructive testing methods. Emphasis is placed on safety, types and methods of testing, and the use of testing equipment and materials. Upon completion, students should be able to understand and/or perform a variety of destructive and non-destructive testing processes.