<table>
<thead>
<tr>
<th>COURSE DESCRIPTIONS INDEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Conditioning ACR 150</td>
</tr>
<tr>
<td>Air Force Studies AFS 153</td>
</tr>
<tr>
<td>Anthropology ANT 153</td>
</tr>
<tr>
<td>Art ART 154</td>
</tr>
<tr>
<td>Astronomy AST 158</td>
</tr>
<tr>
<td>Auto Body Repair ABR 158</td>
</tr>
<tr>
<td>Automotive Technology AUM 160</td>
</tr>
<tr>
<td>Basic Study Skills/ BSS</td>
</tr>
<tr>
<td>Personal Development 162</td>
</tr>
<tr>
<td>Biology BIO 163</td>
</tr>
<tr>
<td>Business BUS 164</td>
</tr>
<tr>
<td>Carpentry CAR 166</td>
</tr>
<tr>
<td>Chemistry CHM 168</td>
</tr>
<tr>
<td>Child Development CHD 170</td>
</tr>
<tr>
<td>Commercial Art CAT 172</td>
</tr>
<tr>
<td>Commercial Food Services CFS 174</td>
</tr>
<tr>
<td>Computerized Numerical CNC</td>
</tr>
<tr>
<td>Control 177</td>
</tr>
<tr>
<td>Computer Science CIS 178</td>
</tr>
<tr>
<td>Cosmetology COS 179</td>
</tr>
<tr>
<td>Cosmetology Instructor CIT</td>
</tr>
<tr>
<td>Training 185</td>
</tr>
<tr>
<td>Criminal Justice CRJ 186</td>
</tr>
<tr>
<td>Culinary Arts/ CUA</td>
</tr>
<tr>
<td>Chef Training 188</td>
</tr>
<tr>
<td>Dance DNC 193</td>
</tr>
<tr>
<td>Diesel Mechanics DEM 194</td>
</tr>
<tr>
<td>Drafting DDT 198</td>
</tr>
<tr>
<td>Economics ECO 203</td>
</tr>
<tr>
<td>eLearning ELO 204</td>
</tr>
<tr>
<td>Electrical Technology ELT 204</td>
</tr>
<tr>
<td>Engineering EGR 208</td>
</tr>
<tr>
<td>English ENG 209</td>
</tr>
<tr>
<td>Geography GEO 211</td>
</tr>
<tr>
<td>Health Education HED 211</td>
</tr>
<tr>
<td>Health Information HIT 212</td>
</tr>
<tr>
<td>Technologies 212</td>
</tr>
</tbody>
</table>
AIR CONDITIONING (ACR)

ACR 111  PRINCIPLES OF REFRIGERATION  3 Hrs.
COREQUISITE: ACR 112
This course emphasizes the fundamental principles for air conditioning and refrigeration. Instruction is provided in the theory and principles of refrigeration and heat transfer, HVAC/R system components, common, and specialty tools for HVAC/R, and application of the concepts of basic compression refrigeration. Upon completion, students should identify system components and understand their functions, identify and use common and specialty HVAC/R tools, and maintain components of a basic compression refrigeration system.

ACR 112  HVACR SERVICE PROCEDURES  3 Hrs.
COREQUISITE: ACR 111
This course covers system performance checks and refrigerant cycle diagnosis. Emphasis is placed on the use of refrigerant recovery/recycle units, industry codes, refrigerant coils and correct methods of charging and recovering refrigerants. Upon completion, students should be able to properly recover/recycle refrigerants and demonstrate safe, correct service procedures which comply with the no-venting laws.

ACR 113  REFRIGERATION PIPING PRACTICES  3 Hrs.
The course introduces students to the proper installation procedures of refrigerant piping and tubing for the heating, ventilation, air conditioning and refrigeration industry. This course includes various methods of working with and joining tubing. Upon completion, students should comprehend related terminology, and be able to fabricate pipe, tubing, and pipe fittings.

ACR 119  FUNDAMENTALS OF GAS HEATING SYSTEMS  3 Hrs.
This course provides instruction on general service and installation for common gas furnace systems components. Upon completion, the student should be able to install and service gas furnaces in a wide range of applications.

ACR 120  FUNDAMENTALS OF ELECTRIC HEATING SYSTEMS  3 Hrs.
This course covers the fundamentals of electric furnace systems. Emphasis is placed on components, general service procedures, and basic installation. Upon completion, students should be able to install and service electric furnaces, heat pumps, and solar and hydronics systems.

ACR 121  PRINCIPLES OF ELECTRICITY FOR HVACR  3 Hrs.
COREQUISITE ACR 122 & ACR 123
This course is designed to provide the student with the basic knowledge of electrical theory and circuitry as it pertains to air conditioning and refrigeration. This course emphasizes safety, definitions, symbols, laws, circuits, and electrical test instruments. Upon completion, the student should understand and be able to apply the basic principles of HVACR circuits and circuit components.

ACR 122  HVACR ELECTRIC CIRCUITS  3 Hrs.
COREQUISITE: ACR 121 & ACR 123
This course introduces the student to electrical circuits and diagrams. Electrical symbols and basic wiring diagrams are constructed in this course. Upon completion, student should understand standard wiring diagrams and symbols and be able to construct various types of electrical circuits.

ACR 123 HVACR ELECTRICAL COMPONENTS 3 Hrs.
COREQUISITE: ACR 121 & ACR 122
This course introduces students to electrical components and controls. Emphasis is placed on the operations on motors, relays, contactors, starters, and other HVAC electrical components. Upon completion, students should be able to install electrical components and determine their proper operation.

ACR 125 FUNDAMENTALS OF GAS AND ELECTRICAL HEATING SYSTEMS 6 Hrs.
This course provides instruction on general service and installation for common gas and electrical heating systems. Emphasis is placed on components, general service procedures, and basic installation. Upon completion, students will be able to install and service gas and electrical heating systems in a wide range of applications.

ACR 127 HVACR ELECTRIC MOTORS AND COMPONENTS 3 Hrs.
This course covers the basic maintenance of electric motors used in HVAC/R systems. Topics include types of motors, motor operations, motor installation, and troubleshooting motors. Upon completion student should be able to install and service HVAC/R electric motors.

ACR 132 RESIDENTIAL AIR CONDITIONING 3 Hrs.
PREREQUISITE: ACR 111 & ACR 122
This course introduces students to residential air conditioning systems. Emphasis is placed on the operation, service, and repair of residential air conditioning systems. Upon completion, the student should be able to service and repair residential air conditioning systems.

ACR 134 ICE MACHINES 3 Hrs.
This course introduces students to commercial ice machines. Emphasis is placed on components, electrical and mechanical operation sequences, control adjustment procedures, preventive maintenance, repairs, and installation procedures. Upon completion, student should be able to install, service and repair commercial ice machines.

ACR 138 CUSTOMER RELATIONS IN HVAC 3 Hrs.
This course covers the basic aspects of customer relations needed be the HVAC technician. Topics include employability skills associated with job performance, record keeping, service invoices, certification requirements, local ordinances, and business ethics. Upon completion, students should be able to get a job and keep it.
ACR 147  REFRIGERATION TRANSITION AND RECOVERY  3 Hrs.
This course is EPA-approved and covers material relating to the requirements necessary for Type I, II, III and universal certification. Upon completion, the student should be prepared to take the EPA 608 certification exam.

ACR 148  HEAT PUMP SYSTEMS I  3 Hrs.
PREREQUISITE:  ACR 111 & ACR 112
COREQUISITE:  ACR 149
Instruction received in this course centers around the basic theory and application of heat pump systems and components. Upon completion students will be able to install and service heat pumps in a wide variety of applications.

ACR 149  HEAT PUMP SYSTEMS II  3 Hrs.
PREREQUISITE:  ACR 111 & ACR 112
COREQUISITE:  ACR 148
This is a continuation course of the basic theory and application of heat pump systems. Topics include the electrical components of heat pumps and their function. Upon completion student should be able to install and service heat pumps.

ACR 181  SPECIAL TOPICS IN AIR CONDITIONING AND REFRIGERATION I  3 Hrs.
This course provides specialized instruction in various areas related to the air conditioning and refrigeration industry.

ACR 192  HVAC APPRENTICESHIP/INTERNSHIP  3 Hrs.
This course is designed to provide basic hands-on experiences in the work place. The student is provided with a training plan developed by the employer and instructor working together to guide the learning experience. Upon course completion, students should be able to work independently and apply related skills and knowledge. This course involves a minimum of 15 work hours per week.

ACR 203  COMMERCIAL REFRIGERATION  3 Hrs.
PREREQUISITE:  ACR 111 & ACR 112
This course focuses on commercial refrigeration systems. Emphasis is placed on evaporators, condensers, compressors, expansion devices, special refrigeration components, and application of refrigeration systems. Upon completion, the student should be able to service and repair commercial refrigeration systems.

ACR 205  SYSTEM SIZING AND AIR DISTRIBUTION  3 Hrs.
This course provides instruction in the load calculation of a structure and system sizing. Topics of instruction include heat loss, heat gain, equipment and air distribution sizing, and factors making acceptable indoor air quality. Upon completion, the student should be able to calculate system requirements.

ACR 210  TROUBLESHOOTING HVACR SYSTEMS  3 Hrs.
This course provides instruction in the use of various meters and gauges used
in the HVACR industry. Emphasis is placed on general service procedures, system diagnosis, and corrective measure, methods of leak detection, and system evacuation, charging and performance checks. Upon completion students should be able to perform basic troubleshooting of HVAC/R.

AIR FORCE STUDIES (AFS)

AFS 101  AIR FORCE TODAY I  1 Hr.
A survey course of topics relating to the Air Force and national defense. It includes a discussion of purpose, structure, and career opportunities in the United States Air Force and an introduction to effective written communication. The AFS 101 Leadership Laboratory is a co-curricular activity that includes a study of Air Force customs and courtesies, drill and ceremonies, and military commands.

AFS 102  AIR FORCE TODAY II  1 Hr.
An introduction to interpersonal communications. The seminar focuses on effective listening techniques, verbal and nonverbal communications. Practical exercises and group projects are designed to demonstrate barriers to effective communication and techniques to overcome barriers, development and presentation of oral communication, strategy, technique, and delivery of effective oral presentations. Student practicum is required. The AFS 102 Leadership Laboratory is a co-curricular activity that includes a study of Air Force customs and courtesies, drill and ceremonies, and military commands.

AFS 201  THE AIR FORCE WAY I  1 Hr.
A historical survey of technological innovation in warfare. Focus is on the emergence of air power and its significance in war and national security policy implementation. The AFS 201 Leadership Laboratory is a co-curricular activity that includes a study of Air Force customs and courtesies, drill and ceremonies, and military commands.

AFS 202  THE AIR FORCE WAY II  1 Hr.
An analysis of leadership and follower-ship traits in the context of a modern military force. The course includes discussions of ethical standards of military officers and Air Force core values and an introduction to total quality management as well as advanced practical application of oral communication skills, including organization, research, delivery and audience analysis for briefing and presentations. Group leadership problems are designed to enhance interpersonal communications. The AFS 202 Leadership Laboratory is a co-curricular activity that includes a study of Air Force customs and courtesies, drill and ceremonies, and military commands.

ANTHROPOLOGY (ANT)

ANT 200  INTRODUCTION TO ANTHROPOLOGY  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is a survey of physical, social, and cultural development and behavior of human beings.
ANT 210  PHYSICAL ANTHROPOLOGY 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is a study of the human evolution based upon fossil and archaeological records as well as analysis of the variation and distribution of contemporary human populations.

ANT 220  CULTURAL ANTHROPOLOGY 3 Hrs.
PREREQUISITE: ANT 200
This course is the application of the concept of culture to the study of both primitive and modern society.

ANT 230  INTRODUCTION TO ARCHAEOLOGY 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is an introduction to archaeological excavation techniques and post-excavation laboratory procedures.

ART (ART)

ART 100  ART APPRECIATION 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is designed to help the student find personal meaning in works of art and develop a better understanding of the nature and validity of art. Emphasis is on the diversity of form and content in original art work. Upon completion, the student should understand the fundamentals of art and of the materials used and have a basic overview of the history of art.

ART 109  ART MUSEUM SURVEY 3 Hrs.
This course covers the art experienced through supervised visits to museums and art galleries. Emphasis is placed on learning through critical study. Upon completion, the student should be able to write a critical analysis of the art work experienced that demonstrates an understanding of aesthetics.

ART 113  DRAWING I 3 Hrs.
This course provides the opportunity to develop perceptual and technical skills in a variety of media. Emphasis is placed on communication through experimenting with composition, subject matter, and technique. Upon completion, the student should demonstrate and apply the fundamentals of art to various creative drawing projects.

ART 114  DRAWING II 3 Hrs.
PREREQUISITE: ART 113
This course advances the student’s drawing skills in various art media. Emphasis is placed on communication through experimentation, composition, technique, and personal expression. Upon completion, the student should demonstrate creative drawing skills, the application of the fundamentals of art, and the communication of personal thoughts and feelings.

ART 121  TWO DIMENSIONAL COMPOSITION 3 Hrs.
This course covers the theories and practice of composing two-dimensional
images. Emphasis is placed on the relation between the basic elements and principles of design and their impact on the visual message. Upon completion, the student should, through personal expression, demonstrate an effective use of these elements and principles of design in creating two-dimensional compositions.

ART 127 THREE DIMENSIONAL COMPOSITION 3 Hrs.
PREREQUISITE: ART 113 or ART 121
This course introduces art materials and principles of design that acquaint the beginner with the fundamentals of three-dimensional art. Emphasis is placed on the use of art fundamentals and the creative exploration of materials in constructing three-dimensional art works. Upon completion, the student should demonstrate basic technical skills and a personal awareness of the creative potential inherent in three-dimensional art forms.

ART 133 CERAMICS I 3 Hrs.
This course introduces methods of clay forming as a means of expression. Topics may include hand building, wheel throwing, glazing, construction, design, and the functional and aesthetic aspects of pottery. Upon completion, the student should demonstrate through his or her work, knowledge of the methods, as well as an understanding of the craftsmanship and aesthetics involved in ceramics.

ART 134 CERAMICS II 3 Hrs.
PREREQUISITE: ART 133
This course develops the methods of clay forming as a means of expression. Topics may include hand building, glazing, design and the functional and aesthetic aspects of pottery, although emphasis will be placed on the wheel throwing method. Upon completion, the student should demonstrate improved craftsmanship and aesthetic quality in the production of pottery.

ART 143 CRAFTS II 3 Hrs.
This course is an introduction to various creative crafts, which may include work with fibers, metal, glass, or other media. Emphasis is placed on processes, techniques, materials, and creative expression. Upon completion, the student should be able to demonstrate creative uses of materials, knowledge of the fundamentals of art, and an understanding of craftsmanship and aesthetic quality.

ART 173 PHOTOGRAPHY I 3 Hrs.
NOTE: A 35mm single-lens reflex camera is required. This course is an introduction to the art of photography. Emphasis is placed on the technical and aesthetic aspects of photography with detailed instruction in darkroom techniques. Upon completion, the student should understand the camera as a creative tool, understand the films, chemicals and papers, and have knowledge of composition and history.

ART 174 PHOTOGRAPHY II 3 Hrs.
PREREQUISITE: ART 173
NOTE: A 35mm single-lens reflex camera is required. This course advances the students’ technical and aesthetic knowledge of photography beyond the introductory level. Emphasis is placed on photographic composition and darkroom techniques as a means of communication. Upon completion, the student should demonstrate through the photographic process his/her creative and communication skills.

ART 175  DIGITAL PHOTOGRAPHY  3 Hrs.
This course introduces students to digital imaging techniques. Emphasis is placed on the technical application of the camera, digital photographic lighting methods, and overall composition. Upon completion, students should be able to take digital images and understand the technical aspects of producing high quality photos.

ART 180  INTRODUCTION TO GRAPHIC DESIGN  3 Hrs.
This course is a general introduction to graphic design. Topics include history, processes, and production design. Upon completion, the student should understand the concepts used to create media graphics.

ART 203  ART HISTORY I  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course covers the chronological development of different forms of art, such as sculpture, painting, and architecture. Emphasis is placed on history from the ancient period through the early Renaissance. Upon completion, the student should be able to communicate a knowledge of time period and chronological sequence including a knowledge of themes, styles, and of the impact of society on the arts.

ART 204  ART HISTORY II  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course covers a study of the chronological development of different forms of art, such as sculpture, painting, and architecture. Emphasis is placed on history from the Renaissance and Baroque to the present. Upon completion, the student should be able to communicate a knowledge of time period and chronological sequence including a knowledge of themes, styles, and of the impact of society on the arts.

ART 231  WATERCOLOR PAINTING I  3 Hrs.
PREREQUISITE: ART 113 or ART 121
This course introduces materials and techniques appropriate to painting on paper with water-based medium. Emphasis is placed on developing the technical skills and the expressive qualities of watercolor painting. Upon completion, the student should be able to demonstrate a basic proficiency in handling the techniques of watercolor and how it can be used for personal expression.

ART 232  WATERCOLOR PAINTING II  3 Hrs.
PREREQUISITE: ART 231
This course advances the skills and techniques of painting on paper using water based medium. Emphasis is placed on exploring the creative uses of watercolor
and developing professional skills. Upon completion, the student should demonstrate and compile a body of original paintings that reflect a personal awareness of the media’s potential.

ART 233 PAINTING I 3 Hrs.
PREREQUISITE: ART 113 or ART 121
This course is designed to introduce the student to fundamental painting using acrylic paint. Topics include art fundamentals, color theory, and composition. Upon completion, the student should be able to demonstrate the fundamentals of art and discuss various approaches to the media and the creative processes associated with painting.

ART 234 PAINTING II 3 Hrs.
PREREQUISITE: ART 233
This course is designed to develop the student’s knowledge of the materials and procedures of painting beyond the introductory level. Emphasis is placed on the creative and technical problems associated with communicating through composition and style. Upon completion, the student should be able to demonstrate the application of the fundamentals of painting and the creative process to the communication of ideas.

ART 243 SCULPTURE I 3 Hrs.
PREREQUISITE: ART 127
This course provides a study of three-dimensional form by familiarizing students with sculpting media and techniques. Topics include the fundamentals of art, sculpting media with emphasis on the creative process. Upon completion, the student should understand the fundamentals of art and three-dimensional form, as well as the various media and processes associated with sculpture.

ART 244 SCULPTURE II 3 Hrs.
PREREQUISITE: ART 243
This course is designed to sharpen the student’s skills in the media and processes of sculpture. Emphasis is placed on personal expression through three-dimensional form. Upon completion, the student should be able to apply the fundamentals of art, his or her knowledge of form, and the sculptural processes to communicating ideas.

ART 275 ADVANCED DIGITAL PHOTOGRAPHY 3 hrs.
PREREQUISITE: ART 175
This course explores various uses of digital photography. Subjects may include studio, portrait, landscape and other areas of photography. Upon completion, the student should be able to apply the techniques necessary to produce professional photographs of a variety of subjects.

ART 291 SUPERVISED STUDY IN STUDIO ART I 1-4 Hrs.
PREREQUISITE: Permission of instructor
This course is designed to enable the student to continue studio experiences in greater depth. Topics are to be chosen by the student with the approval of the
instructor. Upon completion, the student should have a greater expertise in a particular area of art.

**ART 292  SUPERVISED STUDY IN STUDIO ART II 3 Hrs.**
**PREREQUISITE: ART 291**
This course is designed to enable the student to continue studio experiences in greater depth. Topics are to be chosen by the student with the approval of the instructor. Upon completion, the student should have greater expertise in a particular area of art.

**ASTRONOMY (AST)**

**AST 220  INTRODUCTION TO ASTRONOMY 4 Hrs.**
**PREREQUISITE: RDG 085 or ENG 093 or higher placement**
This course covers the history of astronomy and the development of astronomical thought leading to the birth of modern astronomy and its most recent development. Emphasis is placed on the coverage of astronomical instruments and measuring technologies, the solar system, the Milky Way galaxy, important extra galactic objects, and cosmology. Laboratory is required.

**AUTO BODY REPAIR (ABR)**

**ABR 111  NON-STRUCTURAL REPAIR 3 Hrs.**
Students are introduced to basic principles of non-structural panel repairs. Topics include shop safety, identification and use of hand/power tools, sheet-metal repairs, and materials. Upon completion, the student should be able to perform basic sheet-metal repairs.

**ABR 114  NON-STRUCTURAL PANEL REPLACEMENT 3 Hrs.**
Students are introduced to the principles of non-structural panel replacement. Topics include replacement and alignment of bolt on panels, full and partial panel replacement procedures, and attachment methods.

**ABR 122  SURFACE PREPARATION 3 Hrs.**
This course introduces students to methods of surface preparation for vehicular refinishing. Topics include sanding techniques, metal treatment, selection of undercoats, and proper masking procedures.

**ABR 123  PAINT APPLICATION AND EQUIPMENT 3 Hrs.**
This course introduces students to methods of paint application and equipment used for vehicular refinishing. Topics include spray gun and related equipment use, paint mixing, matching, and applying the final topcoat.

**ABR 151  SAFETY AND ENVIRONMENTAL PRACTICES 3 Hrs.**
This course is designed to instruct the student in safe work practices. Topics include OSHA requirements, EPA regulations, as well as state and local laws. Upon completion, the student should be knowledgeable in shop safety and environmental regulations.
ABR 154 AUTO GLASS AND TRIM 3 Hrs.
This course is a study of automotive glass and trim. Emphasis is placed on removal and replacement of structural glass, non-structural glass and auto trim. Upon completion, the student should be able to remove and replace automotive trim and glass.

ABR 156 AUTOMOTIVE CUTTING AND WELDING 3 Hrs.
Students are introduced to the various automotive cutting and welding processes. Emphasis is placed on safety, plasma arc and oxy-acetylene cutting, resistance type spot welding, and Metal Inert Gas (MIG) welding. Upon completion, the student should be able to safely perform automotive cutting and welding procedures.

ABR 157 AUTOMOTIVE PLASTIC REPAIRS 3 Hrs.
This course provides instruction in automotive plastic repairs. Topics include plastic welding (airless, hot and chemical), use of flexible repair fillers, identification of types of plastics, and determining the correct repair procedures for each. Upon completion, students should be able to correctly identify and repair the different types of automotive plastics.

ABR 182 SPECIAL TOPICS IN AUTO BODY 2 Hrs.
This course is guided independent study in special projects to give the student additional training in a specific area selected by the instructor. Emphasis is placed on individual student needs to improve or expand skills. Upon course completion, students should be able to demonstrate skills to meet specific needs.

ABR 213 AUTOMOTIVE STRUCTURAL ANALYSIS 3 Hrs.
Students learn methods of determining structural misalignment. Topics include methods of inspection, types of measuring equipment, data sheets, and identifying types of structural damage.

ABR 214 AUTOMOTIVE STRUCTURAL REPAIR 3 Hrs.
This course provides instruction in the correction of structural damage. Topics include types and use of alignment equipment, anchoring and pulling methods, and repair/replacement of structural components.

ABR 223 AUTOMOTIVE MECHANICAL COMPONENTS 3 Hrs.
This course provides instruction in collision related mechanical repairs. Emphasis is placed on diagnosis and repairs to drive train, steering/suspension components, and various other mechanical repairs.

ABR 255 STEERING AND SUSPENSION 3 Hrs.
This course introduces the student to the various types of suspension and steering systems used in the automotive industry. Emphasis is placed on system components, suspension angles, and effect of body/frame alignment on these components and angles. Upon completion, the student should be able to repair and/or replace damaged components and prepare the vehicle for alignment.
ABR 265  PAINT DEFECTS AND FINAL REPAIR  3 Hrs.
This course introduces the student to methods of identifying paint defects, causes, cures, and final detailing. The student will learn to troubleshoot and correct paint imperfections.

ABR 266  ALUMINUM WELDING IN COLLISION REPAIR  3 Hrs.
This course covers the principles and techniques of aluminum GMA (MIG) welding. The student will learn to set up and tune a welding machine, address safety issues, perform proper welding techniques, prepare metal surfaces, and identify and correct weld defects.

ABR 281  SPECIAL TOPICS IN AUTO BODY  3 Hrs.
This course is guided independent study in special projects to give the student additional training in a specific area selected by the instructor. Emphasis is placed on individual student needs to improve or expand skills. Upon completion, the student should be able to demonstrate skills to meet specific needs.

ABR 291  AUTO BODY REPAIR CO-OP  1 Hr.
This course is designed to provide practical shop experience for the advanced student through part-time employment in the collision repair industry. Emphasis is placed on techniques used in collision repair facilities. Upon completion, the student should have gained skills necessary for entry level employment.

ABR 292  AUTO BODY REPAIR CO-OP  2 Hrs.
PREREQUISITE: Instructor approval
This course is designed to provide practical shop experience for advanced students through part-time employment in the collision repair industry. Emphasis is placed on techniques used in collision repair facilities. Upon completion, the student should have gained skills necessary for entry level employment.

ABR 293  AUTO BODY REPAIR CO-OP  3 Hrs.
PREREQUISITE: Instructor approval
This course is designed to provide practical shop experience for advanced students through part-time employment in the collision repair industry. Emphasis is placed on techniques used in collision repair facilities. Upon completion, the student should have gained skills necessary for entry level employment.

AUTOMOTIVE TECHNOLOGY (AUM)

AUM 101  FUNDAMENTALS OF AUTOMOTIVE TECHNOLOGY  3 Hrs.
This course provides basic instruction in Fundamentals of Automotive Technology.

AUM 110  ELECTRICAL AND ELECTRONIC SYSTEMS I  3 Hrs.
This is an introductory course in automotive electrical and electronic systems. Emphasis is placed on troubleshooting and repair of systems, subsystems, and components.
AUM 121  BRAKING SYSTEMS  
This course provides instruction in automotive technology or auto mechanics. Emphasis is placed on the practical application of brakes.

AUM 122  STEERING AND SUSPENSION  
This course provides instruction in automotive technology or auto mechanics. Emphasis is placed on the practical application of steering and suspension.

AUM 124  ENGINE REPAIR I  
PREREQUISITE: AUM 101 or COREQUISITE AUM 101  
This course provides instruction on the operation, design, and superficial repair of automotive engines. Emphasis is placed on understanding the four stroke cycle, intake and exhaust manifolds and related parts, engine mechanical timing components, engine cooling and lubrication system principles and repairs, and basic fuel and ignition operation.

AUM 130  DRIVE TRAIN AND AXLES  
PREREQUISITE: AUM 101 or COREQUISITE: AUM 101  
This course provides basic instruction in automotive drive trains and axles. Emphasis is placed on the understanding and application of basic internal and external operation relating to proper operation and drivability.

AUM 133  MOTOR VEHICLE AIR CONDITIONING  
This course provides basic instruction in theory, operation, and repair of automotive heating and air conditioning systems. Emphasis is placed on the understanding and repair of vehicle air conditioning and heating systems, including but not limited to air management, electrical and vacuum controls, refrigerant recovery, and component replacement.

AUM 181/182/281 SPECIAL TOPICS  
PREREQUISITE: With Instructor Permission  
These courses are designed to allow the student to specialize in a particular area of study with minimum instruction in automotive mechanics application and with evaluation at the instructor’s discretion. Emphasis is placed on a topic/project that the student is interested in and may include any related area in automotive mechanics. Upon completion, the student should be able to work with minimum instruction and execute the necessary techniques to finish a live work project of his or her choice.

AUM 191/291 CO-OP  
PREREQUISITE: With Instructor Permission  
These courses constitute a series wherein the student works on a part-time basis in a job directly related to automotive mechanics. In these courses, the employer evaluates the student’s productivity, and the student submits a descriptive report of his work experiences. Upon completion, the student will demonstrate skills learned in an employment setting.
AUM 210  ELECTRICAL AND ELECTRONIC SYSTEMS II  3 Hrs.
PREREQUISITE: AUM 110
This course provides instruction in advanced automotive electrical and electronic systems. Emphasis is placed on advanced troubleshooting and repair of electrical systems, subsystems, and components.

AUM 220  ENGINE REPAIR II  3 Hrs.
PREREQUISITE: AUM 124. COREQUISITE: AUM 124
This course provides in depth instruction concerning internal engine diagnosis, overhaul and repair, including but not necessarily limited to the replacement of timing chains, belts, and gears, as well as the replacement or reconditioning of valve train components such as replacement of pistons, connecting rods, piston rings, bearings, lubrication system components, gaskets, and oil seals.

AUM 224  MANUAL TRANSMISSION AND TRANSAXLE  3 Hrs.
PREREQUISITE: AUM 130. COREQUISITE: AUM 130
This course covers basic instruction in manual transmission and transaxles. Emphasis is placed on the understanding and application of basic internal and external operation relating to proper operation and drivability.

AUM 230  AUTO TRANSMISSION AND TRANSAXLE  3 Hrs.
PREREQUISITE: AUM 130. COREQUISITE: AUM 130
This course provides basic instruction in automatic transmissions and transaxles. Emphasis is placed on the comprehension of principles and power flow of automatic transmissions and repairing or replacing internal and external components.

AUM 239  ENGINE PERFORMANCE I  3 Hrs.
PREREQUISITE: AUM 110 and AUM 210
This course provides basic instruction in engine performance with emphasis on fuel and ignition systems relating to engine operation.

AUM 244  ENGINE PERFORMANCE II  3 Hrs.
PREREQUISITE: AUM 239. COREQUISITE: AUM 239
This course provides advanced instruction in engine performance. Emphasis is placed on engine management and computer controls of ignition fuel, and emissions systems relating to engine performance and drivability.

AUM 246  AUTOMOTIVE EMISSIONS  3 Hrs.
PREREQUISITE: AUM 210 and AUM 244
This is an introductory course in automotive emission systems. Emphasis is placed on troubleshooting and repair of systems, subsystems, and components.

BASIC STUDY SKILLS (BSS)

BSS 090  BASIC STUDY SKILLS  3 Hrs.
This course is designed to introduce the student to the basic skills of “how to study.” The course includes activities such as an assessment through testing of
academic/study strengths and weaknesses, general information about effective study techniques, and applications of study techniques for specific courses. May be repeated for credit.

**BSS 118  COLLEGE STUDY SKILLS**  
1 Hr.  
This course covers skills and strategies designed to improve study behaviors. Topics include time management, note taking, test taking, memory techniques, active reading strategies, critical thinking, communication skills, learning styles, and other strategies for effective learning. Upon completion, the student should be able to apply appropriate study strategies and techniques to the development of an effective study plan.

### BIOLOGY (BIO)

**BIO 101  INTRODUCTION TO BIOLOGY I**  
4 Hrs.  
CREDIT TOWARD GRADUATION WILL NOT BE GIVEN FOR BOTH BIO 101 AND 103.  
PREREQUISITE: RDG 085 or ENG 093 or higher placement  
Introduction to Biology I is the first of a two-course sequence designed for non-science majors. It covers historical studies illustrating the scientific method, cellular structure, bioenergetics, cell reproduction, Mendelian and molecular genetics, and a survey of human organ systems. (Internet Only) A laboratory is required.

**BIO 102  INTRODUCTION TO BIOLOGY II**  
4 Hrs.  
PREREQUISITE: BIO 101  
Introduction to Biology II is the second of a two-course sequence for non-science majors. It covers evolutionary principles and relationships, environmental and ecological topics, classification, and a survey of biodiversity. (Internet Only) A laboratory is required.

**BIO 103  PRINCIPLES OF BIOLOGY I**  
4 Hrs.  
CREDIT TOWARD GRADUATION WILL NOT BE GIVEN FOR BOTH BIO 101 AND 103.  
PREREQUISITE: RDG 085 or ENG 093 or higher placement  
This is an introductory course for science and non-science majors. It covers physical, chemical, and biological principles common to all organisms. These principles are explained through a study of cell structure and function, cellular reproduction, basic biochemistry, cell energetics, the process of photosynthesis, and Mendelian and molecular genetics. Also included are the scientific method, basic principles of evolution, and an overview of the diversity of life with emphasis on viruses, prokaryotes, and protists. A laboratory is required.

**BIO 104  PRINCIPLES OF BIOLOGY II**  
4 Hrs.  
PREREQUISITE: BIO 103  
This course is an introduction to the basic ecological and evolutionary relationships of plants and animals and a survey of plant and animal diversity including classification, morphology, physiology, and reproduction. A laboratory is required.
BIO 120  MEDICAL TERMINOLOGY 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is a survey of words, terms, and descriptions commonly used in medical arts. Emphasis is placed on spelling, pronunciation, and meanings of prefixes, suffixes, and roots. No laboratory is required.

BIO 150  HUMAN BIOLOGY 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course introduces the human body with emphasis on structure, function, and pathology. No laboratory is required.

BIO 201  HUMAN ANATOMY AND PHYSIOLOGY I 4 Hrs.
PREREQUISITE: BIO 103
Human Anatomy and Physiology I covers the structure and function of the human body. Included is an orientation of the human body, basic principles of chemistry, a study of cells and tissues, metabolism, joints, the integumentary, skeletal, muscular, and nervous systems, and the senses. Dissection, histological studies, and physiology are featured in the laboratory experience. A laboratory is required.

BIO 202  HUMAN ANATOMY AND PHYSIOLOGY II 4 Hrs.
PREREQUISITE: BIO 103 and BIO 201 with a grade of C or better in BIO 201
Human Anatomy and Physiology II covers the structure and function of the human body. Included is a study of basic nutrition, basic principles of water, electrolyte, and acid-base balance, the endocrine, respiratory, digestive, excretory, cardiovascular, lymphatic, and reproductive systems. Dissection, histological studies, and physiology are featured in the laboratory experience. A laboratory is required.

BIO 220  GENERAL MICROBIOLOGY 4 Hrs.
PREREQUISITE: BIO 103, 201 OR 202 (ADDITIONALLY, 4 SEMESTER HOURS OF CHEMISTRY IS RECOMMENDED)
This course includes historical perspectives, cell structure and function, microbial genetics, infectious diseases, immunology, distribution, physiology, culture, identification, classification, and disease control of microorganisms. The laboratory experience includes micro-techniques, distribution, culture, identification, and control. A laboratory is required.

BUSINESS (BUS)

BUS 100  INTRODUCTION TO BUSINESS 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This is a survey course designed to acquaint the student with American business as a dynamic process in a global setting. Topics include the private enterprise system, forms of business ownership, marketing, factors of production, personnel, labor, finance, and taxation.

BUS 146  PERSONAL FINANCE 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is a survey of topics of interest to the consumer. Topics include budgeting, financial institutions, basic income tax, credit, consumer protection, insurance, house purchase, retirement planning, estate planning, investing, and consumer purchases.

**BUS 186  ELEMENTS OF SUPERVISION**  
3 Hrs.  
PREREQUISITE: RDG 085 or ENG 093 or higher placement  
This course is an introduction to the fundamentals of supervision. Topics include the functions of management, responsibilities of the supervisor, management-employee relations, organizational structure, project management, and employee training and rating.

**BUS 189  HUMAN RELATIONSHIPS**  
1-3 Hrs.  
PREREQUISITE: RDG 085 or ENG 093 or higher placement  
This course enables employees to better understand actions and motivations within the organizational structure. Topics include general principles of human behavior operating in the workplace.

**BUS 215  BUSINESS COMMUNICATION**  
3 Hrs.  
PREREQUISITE: RDG 085 or ENG 093 or higher placement  
This course covers written, oral and nonverbal communications. Topics include the application of communication principles to the production of clear, correct, and logically organized faxes, e-mail, memos, letters, resumes, reports, and other business communications.

**BUS 241  PRINCIPLES OF ACCOUNTING I**  
3 Hrs.  
PREREQUISITE: Grade of C or higher in MTH 100 or MTH 116, RDG 085 or ENG 093 or higher placement  
This course is designed to provide a basic theory of accounting principles and practices used by service and merchandising enterprises. Emphasis is placed on financial accounting, including the accounting cycle, and financial statement preparation analysis.

**BUS 242  PRINCIPLES OF ACCOUNTING II**  
3 Hrs.  
PREREQUISITE: BUS 241  
This course is a continuation of BUS 241. In addition to a study of financial accounting, this course also places emphasis upon managerial accounting, with coverage of corporations, statement analysis, introductory cost accounting, and use of information for planning, control, and decision making.

**BUS 260  STATISTICAL DATA ANALYSIS**  
3 Hrs.  
PREREQUISITE: CIS 146 and MTH 112 or equivalent placement score  
This course is an introduction to the use of basic statistical concepts in business applications. Descriptive statistics, index numbers, measures of central tendency and variation, probability, random variables, discrete and continuous probability distributions, sampling distributions, and point and interval estimation are covered. Computer software applications are utilized.
BUS 263 THE LEGAL AND SOCIAL ENVIRONMENT OF BUSINESS 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course provides an overview of the legal and social environment for business operations with emphasis on contemporary issues and their subsequent impact on business. Topics include the Constitution, the Bill of Rights, the legislative process, civil and criminal law, administrative agencies, trade regulations, consumer protection, contracts, employment, and personal property.

BUS 275 PRINCIPLES OF MANAGEMENT 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course provides a basic study of the principles of management. Topics include planning, organizing, staffing, directing, and controlling with emphasis on practical business applications.

BUS 276 HUMAN RESOURCE MANAGEMENT 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course provides an overview of the responsibilities of the supervisor of human resources. Topics include the selection, placement, testing, orientation, training, rating, promotion, and transfer of employees.

BUS 279 SMALL BUSINESS MANAGEMENT 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course provides an overview of the creation and operation of a small business. Topics include buying a franchise, starting a business, identifying capital resources, understanding markets, managing customer credit, managing accounting systems, budgeting systems, inventory systems, purchasing insurance, and the importance of appropriate legal counsel.

BUS 285 PRINCIPLES OF MARKETING 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course provides a general overview of the field of marketing. Topics include marketing strategies, channels of distribution, marketing research, and consumer behavior.

CARPENTRY (CAR)

CAR 111 CONSTRUCTION BASICS 3 Hrs.
COREQUISITE: CAR 114
This course introduces students to the opportunities in and requirements of the construction industry. Topics include economic outlook for construction, employment outlook, job opportunities, training, apprenticeship, entrepreneurship, construction tools, materials, and equipment, and job safety. Upon completion, the student should be able to identify the job market, types of training, knowledge of apprenticeship opportunities, construction tools, materials, equipment, and safety procedures.

CAR 112 FLOORS, WALLS, SITE PREP 3 Hrs.
COREQUISITE: CAR 113
This course introduces the student to floor and wall layout and construction. Topics include methods of house framing, components of floor framing, layouts, sub-flooring, connectors and fasteners, and site preparation. Upon completion, the student will be able to identify various types of floor framing systems, select the sizes of floor joists, identify types of house framing, list types of fasteners, and identify property lines, setbacks, and demonstrate a working knowledge of terrain and batter boards.

CAR 113  FLOORS, WALLS, SITE PREP LAB 3 Hrs.
COREQUISITE: CAR 112
The student will engage in applications of floor and wall construction, application of required tools, use of the builder transit, level rod, tape measure, and grade stakes. Emphasis is placed on cutting sill plates, floor joists, girders, header bridging, sub-flooring, stud wall partitions, door and window headers, wall bracing, leveling instruments, and batter boards. Upon completion, the student should be able to layout and construct a floor, including the sill, joist bridging and openings, install sub-flooring, construct interior and exterior walls, and layout property stakes of site plans.

CAR 114  CONSTRUCTION BASICS LAB 3 Hrs.
COREQUISITE: CAR 111
This course provides practical and safe application of hand, portable power, stationary and pneumatic tools, use of building materials, fasteners and adhesives, and job site safety. Emphasis is placed on the safe use of hand, power, and pneumatic tools, proper selection of lumber, plywood, by-products, nails, bolts, screws, adhesives, fasteners, construction materials, and job safety. Upon completion, the student should be able to identify hand, power, stationary and pneumatic tools and demonstrate their safe use; identify and properly select wood and non-wood building products; and properly use nails, fasteners and adhesives.

CAR 121  INTRODUCTION TO BLUEPRINT READING 3 Hrs.
This course introduces the student to the basic concepts of blueprint reading. Topics include scales, symbols, site plans, and notations. Upon completion, the student should be able to identify drawings, scale various drawings, and identify different types of lines, symbols, and notations.

CAR 122  CONCRETE AND FORMING 3 Hrs.
COREQUISITE: CAR 123
This course introduces the student to the properties and uses of concrete and to the procedures for designing concrete forms. Topics include making and pouring concrete, constructing concrete forms, reinforcement methods, finishing concrete, and job safety. Upon completion, the student should be able to list safety rules for the job site, identify components of concrete, describe how concrete forms are built and how concrete is poured, reinforced, and finished.

CAR 123  CONCRETE AND FORMING LAB 3 Hrs.
COREQUISITE: CAR 122
This course provides students with practical experience in concrete applications. Emphasis is placed on job site safety, concrete forming, mixing, pouring, finishing, and reinforcing. Upon completion, the student should be able to safely set forms, reinforce, mix, pour, and finish concrete.

CAR 131  ROOF AND CEILING SYSTEMS  3 Hrs.
PREREQUISITE: CAR 133
This course focuses on the design and installation of roof and ceiling systems. Emphasis is placed on rafters, trusses, ceiling joists, roof decking, and roofing materials. Upon completion, the student should be able to design a roof and ceiling system, identify proper installation methods of roofing materials, and describe applicable safety rules.

CAR 132  INTERIOR AND EXTERIOR FINISHING  3 Hrs.
This course introduces the student to interior and exterior finishing materials and techniques. Topics include interior trim of windows and doors, ceilings and wall moldings, exterior sidings, trim work, painting, and masonry finishes. Upon completion, the student should be able to identify different types of doors, windows and moldings and describe the uses of each, identify types of exterior sidings and trim, and describe the different types of paint and their proper application.

CAR 133  ROOF AND CEILING SYSTEMS LAB  3 Hrs.
COREQUISITE: CAR 131
The course provides students with practical experience in building and installing roof and ceiling systems. Emphasis is placed on job site safety, layout and cutting of rafters and joists, cutting and building trusses, installing roof decking, and roofing materials. Upon completion, the student should be able to cut and install rafters, joists and trusses, cut and apply roof decking and roofing materials, and apply safety rules for job site.

CAR 193  INTERNSHIP IN CARPENTRY  3 Hrs.
PREREQUISITE: Permission of Instructor
This course is designed to provide exposure to carpentry practices in non-employment situations. Emphasis is placed on techniques used in the carpentry profession. This course allows students to refine their skills necessary for entry-level employment.

CAR 203  SPECIAL TOPICS IN CARPENTRY  3 Hrs.
This course allows the student to plan, execute, and present results of individual projects in carpentry. Emphasis is placed on enhancing skills attainment in the carpentry field. This culminating course allows the student to independently apply skills attained in previous courses.

CHEMISTRY (CHM)

CHM 104  INTRODUCTION TO INORGANIC CHEMISTRY  4 Hrs.
PREREQUISITE: MTH 098 (Developmental Algebra II) or equivalent mathematics placement score, RDG 085 or ENG 093 or higher placement
This is a survey course of general chemistry for students who do not intend
to major in science or engineering and may not be substituted for CHM 111.
Lecture will emphasize the facts, principles, and theories of general chemistry
including math operations, matter and energy, atomic structure, symbols and
formulas, nomenclature, the periodic table, bonding concepts, equations,
reactions, stoichiometry, gas laws, phases of matter, solutions, pH, and
equilibrium reactions. Laboratory is required.

CHM 105  INTRODUCTION TO ORGANIC CHEMISTRY 4 Hrs.
PREREQUISITE: CHM 104 (Introduction to Inorganic Chemistry) or CHM 111 (College Chemistry I)
This is a survey course of organic chemistry and biochemistry for students who
do not intend to major in science or engineering. Topics will include basic
nomenclature, classification of organic compounds, typical organic reactions,
reactions involved in life processes, function of biomolecules, and the handling
and disposal of organic compounds. Laboratory is required.

CHM 111  COLLEGE CHEMISTRY I 4 Hrs.
PREREQUISITE: MTH 112 or equivalent math placement score, RDG 085 or
ENG 093 or higher placement
This is the first course in a two-semester sequence designed for the science or
engineering major who is expected to have a strong background in mathematics.
Topics in this course include measurement, nomenclature, stoichiometry, atomic
structure, equations and reactions, basic concepts of thermo-chemistry, chemical
and physical properties, bonding, molecular structure, gas laws, kinetic-molecular
theory, condensed matter, solutions, colloids, and some descriptive chemistry
topics. Laboratory is required.

CHM 112  COLLEGE CHEMISTRY II 4 Hrs.
PREREQUISITE: CHM 111
This is the second course in a two-semester sequence designed primarily for the
science and engineering student who is expected to have a strong background in
mathematics. Topics in this course include chemical kinetics, chemical equilibria,
acids and bases, ionic equilibria of weak electrolytes, solubility product principle,
chemical thermodynamics, electrochemistry, oxidation-reduction, nuclear
chemistry, an introduction to organic chemistry and biochemistry, atmospheric
chemistry, and selected topics in descriptive chemistry including the metals,
non-metals, semi-metals, coordination compounds, transition compounds, and
post-transition compounds. Laboratory is required.

CHM 221  ORGANIC CHEMISTRY I 4 Hrs.
PREREQUISITE: CHM 112
This is the first course in a two-semester sequence. Topics in this course include
nomenclature, structure, physical and chemical properties, synthesis, and
typical reactions for aliphatic, alicyclic, and aromatic compounds with special
emphasis on reaction mechanisms, spectroscopy, and stereochemistry. Laboratory
is required and will include the synthesis and confirmation of representative
organic compounds with emphasis on basic techniques.
CHM 222  ORGANIC CHEMISTRY II  4 Hrs.
PREREQUISITE: CHM 221
This is the second course in a two-semester sequence. Topics in this course include nomenclature, structure, physical and chemical properties, synthesis, and typical reactions for aliphatic, alicyclic, aromatic, and biological compounds, polymers and their derivatives, with special emphasis on reaction mechanisms, spectroscopy, and stereochemistry. Laboratory is required and will include the synthesis and confirmation of representative organic compounds with emphasis on basic techniques.

CHILD DEVELOPMENT (CHD)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD 100</td>
<td>INTRODUCTION TO EARLY CARE AND EDUCATION OF CHILDREN</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course introduces the child care profession including the six functional areas of the Child Development Associate (CDA) credential. Emphasis is placed on using positive guidance techniques, setting up a classroom, and planning a schedule. Upon completion, the student should be able to create and modify children’s environments to meet individual needs, use positive guidance to develop positive relationships with children, and promote children’s self-esteem, self-control, and self-motivation.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD 201</td>
<td>CHILD GROWTH AND DEVELOPMENT PRINCIPLES</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is a systematic study of child growth and development from conception through early childhood. Emphasis is placed on principles underlying physical, mental, emotional, and social development, and on methods of child study and practical implications. Upon completion, the student should be able to use knowledge of how young children differ in their development and approaches to learning to provide opportunities that support the physical, social, emotional, language, cognitive, and aesthetic development of children.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD 202</td>
<td>CHILDREN’S CREATIVE EXPERIENCES</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course focuses on fostering creativity in preschool children and developing a creative attitude in teachers. Topics include selecting and developing creative experiences in language arts, music, art, science, math, and movement with observation and participation with young children required. Upon completion, the student should be able to select and implement creative and age-appropriate experiences for young children.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD 203</td>
<td>CHILDREN’S LITERATURE AND LANGUAGE DEVELOPMENT</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course surveys appropriate literature and language arts activities designed to enhance young children’s speaking, listening, pre-reading, and writing skills. Emphasis is placed on developmental appropriateness as related to language. Upon completion, the student should be able to create, evaluate, and</td>
<td></td>
</tr>
</tbody>
</table>
demonstrate activities which support a language-rich environment for young children.

CHD 204 METHODS AND MATERIALS FOR TEACHING CHILDREN 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course introduces basic methods and materials used in teaching young children. Emphasis is placed on the student compiling a professional resource file of activities used for teaching math, language arts, science, and social studies concepts. Upon completion, the student should be able to demonstrate basic methods of creating learning experiences using appropriate techniques, materials, and realistic expectations.

CHD 205 PROGRAM PLANNING FOR EDUCATING YOUNG CHILDREN 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is designed to give students practice in lesson and unit planning, writing behavioral objectives, and evaluating activities taught to young children. Emphasis is placed on identifying basic aspects of cognitive development and how children learn. Upon completion, the student should be able to plan and implement developmentally appropriate curriculum and instructional practices based on knowledge of individual differences and the curriculum goals and content.

CHD 206 CHILDREN’S HEALTH AND SAFETY 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course introduces basic health, nutrition, and safety management practices for young children. Emphasis is placed on setting up and maintaining a safe, healthy environment for young children including specific procedures for infants and toddlers and procedures regarding childhood illnesses and communicable diseases. Upon completion, the student should be able to prepare a healthy, safe environment, plan nutritious meals and snacks, and recommend referrals if necessary.

CHD 208 ADMINISTRATION OF CHILD DEVELOPMENT PROGRAMS 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course includes appropriate administrative policies and procedures relevant to preschool programs. Topics include local, state, and federal regulations, budget planning, record keeping, personnel policies, and parent involvement. Upon completion, the student should be able to identify elements of a sound business plan, develop familiarity with basic record-keeping techniques, and identify elements of a developmentally appropriate program.

CHD 209 INFANT AND TODDLER EDUCATION PROGRAMS 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course focuses on child development from infancy to thirty months of age with emphasis on planning programs using developmentally-appropriate material. Emphasis is placed on positive ways to support an infant’s social, emotional, physical, and intellectual development. Upon completion, the student
should be able to plan an infant-toddler program and environment which is appropriate and supportive of the families and the children.

CHD 210  EDUCATING EXCEPTIONAL YOUNG CHILDREN  
PREREQUISITE: RDG 085 or ENG 093 or higher placement 
This course explores the many different types of exceptionalities found in young children. Topics include speech, language, hearing, and visual impairments, gifted and talented children, mental retardation, and emotional, behavioral, and neurological handicaps. Upon completion, the student should be able to identify appropriate strategies for working with young exceptional children.

CHD 211  CHILD DEVELOPMENT SEMINAR 
PREREQUISITE: RDG 085 or ENG 093 or higher placement 
A selection of topics relating to young children are addressed in this course. Subject matter will vary according to industry and student needs. Upon completion, the student should demonstrate competencies designed to assess course objectives.

CHD 215  SUPERVISED PRACTICAL EXPERIENCE IN CHILDHOOD DEVELOPMENT 
PREREQUISITE: CHD 202, CHD 204, and CHD 205 
This course provides a minimum of 90 hours of hands-on, supervised experience in an approved program for young children. Emphasis is placed on performance of daily duties which are assessed by the College instructor and the cooperating teacher. Upon completion, the student should be able to demonstrate competency in a child care setting.

COMMERCIAL ART (CAT)

CAT 118  DESIGN DRAWING 
This is an introductory course using pencil, Conte crayon, and drawing instruments. Topics include perspective, space, relationships of design elements, light, shadow, and depth. Still life, landscape, fundamental gesture drawing and page design are introduced. Upon completion, students should be able to apply the fundamentals of drawing and area composition.

CAT 126  TYPESETTING FUNDAMENTALS 
The course explores the history of type, the anatomy of type, current technical and aesthetic use of type as well as type’s relation to image as used in contemporary design. Emphasis is placed on the importance of type as a design element in the development of a graphic project.

CAT 130  PRINCIPLES OF DESIGN 
This course introduces students to the traditional principles and elements of design. It promotes creative thinking to solve visual communication problems. Emphasis is placed on alignment, contrast, repetition, and proximity. Design concepts include symmetrical and asymmetrical design, as well as the importance of line, shape, texture, value, and color. Upon completion, the student should be able to use conscious awareness of design principles to create successful projects.
CAT 132  BASIC ADVERTISING DESIGN  3 Hrs.  
This course focuses on design assignments related to the commercial art field and introduces students to graphic design techniques. Focus is placed on creating and producing advertising design pieces. Emphasis is placed on accuracy, sizing, and craftsmanship. Upon course completion, the student should be able to apply creative thinking in design communications and should be able to produce advertising design from concept to completion.

CAT 148  AIRBRUSH ARTISTRY  3 Hrs.  
This course is a study in airbrush artistry. Topics include paint mixing, airbrush maintenance, masking, and media. Projects include a variety of subject matter including technical illustrations, advertising, and creative art. Upon completion, the student should understand the professional aspects of creating designs using airbrush techniques.

CAT 152  DIGITAL PHOTOGRAPHY  3 Hrs.  
This course introduces the student to digital imaging techniques. Emphasis is placed on the technical application of the camera and on digital photographic lighting methods. Upon completion, the student should be able to determine the need for digital photography versus reproduction quality advertising photography and understand both concepts.

CAT 180  CURRENT TOPICS IN COMMERCIAL ART  3 Hrs.  
This course is a survey of current trends in the commercial art industry and provides specialized instruction in various areas using current professional techniques. Emphasis is placed on specialized areas of commercial art.

CAT 184  IMAGING I  3 Hrs.  
This course introduces the student to concepts involved in digital photography and the student's own work with the digital camera. Emphasis is placed on learning the principles of good composition and comprehending the commands and procedures.

CAT 202  ADVERTISING  3 Hrs.  
Through a variety of projects simulating various real-world advertising media, this course guides students in applying design to persuasive commercial communications. Students study understanding the target audience, psychology of advertising, advertising techniques, and working with clients. Emphasis is placed on creative thinking in order to identify the type of visual communication most likely to enhance positive consumer reactions.

CAT 232  INTERMEDIATE ADVERTISING DESIGN  3 Hrs.  
This course includes advance design concepts and assignments. Emphasis is placed on various design elements including artistic rendering, photo illustrations, typography, and computer layout as applied to advertising campaigns. Upon completion, the student should be able to use his or her graphic arts skills to produce professional art work.
CAT 242  ADVANCED ADVERTISING DESIGN  3 Hrs.  
This course allows students to create, design, and produce a corporate image project. Emphasis is placed on the development of the repetitive grids, using photographs as clip art, scanned images, and page layout software. Upon completion, the student should be able to apply manual and computer skills to advertising design projects.

CAT 260  PORTFOLIO  3 Hrs.  
This course provides the advanced student an opportunity to use previous commercial art training to design and produce a professional and marketable portfolio for final presentation. Emphasis is placed on a complete portfolio, resume, cover letter, and self-promotional piece. Upon completion, the student should be able to formulate portfolio qualify work for job interviews.

CAT 275  CREATIVE ILLUSTRATION  3 Hrs.  
This course introduces the student to the fundamentals of illustration using assorted media including pencil, watercolor, gouache, colored pencil, pastels, etc. Emphasis is placed on drawing and illustrating perception, color, and execution. Dynamic illustrations are pursued through layouts for print advertisements, articles, and books.

CAT 281  SPECIAL TOPICS IN COMMERCIAL ART  3 Hrs.  
This course provides specialized instruction in various areas related to the commercial art industry. Emphasis is placed on meeting students’ needs.

CAT 282  SPECIAL TOPICS IN COMMERCIAL ART  3 Hrs.  
These courses provide specialized instruction in various areas related to the commercial art industry. Emphasis is placed on meeting students’ needs.

CAT 291  COOPERATIVE WORK EXPERIENCE IN COMMERCIAL ART  3 Hrs.  
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, the student should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

COMMERCIAL FOOD SERVICES (CFS)  

CFS 101  ORIENTATION TO THE HOSPITALITY INDUSTRY  3 Hrs.  
This course is an introduction to the food service industry and employment opportunities. This course focuses on the different types of food service/hospitality outlets. Upon completion, the student should be knowledgeable of business and career opportunities within the food service industry.

CFS 102  CATERING  2 Hrs.  
This course includes the theory and practice of operating a catering business. Topics include food production and management related to catering and other special services. Upon completion, the student should have a working knowledge of the principles involved in operating a catering business.
CFS 110  BASIC FOOD PREPARATION 3 Hrs.
This course introduces the fundamental concepts, skills, and techniques involved in basic cookery. Topics include scientific principles of food preparation and the relationship of food composition and structure to food preparation. The student should develop competencies in food preparation as it relates to the food service industry.

CFS 111  FOUNDATIONS IN NUTRITION 3 Hrs.
This course focuses on nutrition and meal planning in relation to the food preparation industry. Topics include the science of food and nutrition, essential nutrients, and their relation to the growth, maintenance, and functioning of the body, nutritional requirements of different age levels, and economic and cultural influences on food selection. Upon completion, the student should be able to apply the basic principles of meal planning.

CFS 112  SANITATION, SAFETY, AND FOOD SERVICE 2 Hrs.
This course introduces the basic principles of sanitation and safety to food service handling including purchasing, storing, preparation and serving. Specific topics include the dangers of microbial contaminants, food allergens and foodborne illness, safe handling of food, the flow of food, and food safety management systems. At the conclusion of this course the student should be prepared to test for ServSafe© certification. The content of this course is foundational for all culinary arts classes.

CFS 113  TABLE SERVICE 2 Hrs.
This course is a guide for the modern wait staff. Topics include laying the cover, taking the order, surveying of different styles of table service from the casual to the very formal, tabulating and presenting the bill, and busing and turning the table. Upon completion, the student should be able to demonstrate proficiency in the art of table service.

CFS 114  MEAL MANAGEMENT 3 Hrs.
This course covers the principles of meal management. Topics include menu planning, food selection, recipe standardization, food preparation, and meal service for all phases of food service. Upon completion, the student should be able to apply efficient work habits, sanitation and safety in the kitchen.

CFS 132  FOOD PREPARATION AND THE HEALTH CARE INDUSTRY 3 Hrs.
This course introduces students to food preparation and service in the health care industry. Emphasis will be placed on using medical dictionaries and reading charts for therapeutic diet instruction and designing and creating menus and diet programs for special client populations. Upon completion, the student should be able to read and interpret medical terms, and demonstrate knowledge about food service in the health care industry.

CFS 141  FOOD PRODUCTION FOR SPECIAL OPERATIONS 2 Hrs.
This course covers menu planning principles, food preparation, food procurement, and food management skills needed to provide appealing and
profitable food service in special operations. Topics include fast food cookery, convenience-store food service, supermarkets, delicatessens, and take-out venue. Upon completion, the student should be able to plan, organize, and prepare food service items for special operations.

CFS 199  HEALTHY COOKING  1 Hr.
The student will become educated in the principles of sound nutrition for the prevention of disease through a lecture/lab course. Basic principles of nutrition will be discussed along with practical aspects of nutrition which will be applied through cooking demonstrations by the instructor.

CFS 201  MEAT PREPARATION AND PROCESSING  2 Hrs.
This course focuses on meat preparation and processing. The student will be responsible for the preparing of meats including beef, pork, poultry, fish, and seafood so they can be used for final preparations in the other stations of the kitchens. Upon completion, the student should be able to demonstrate an understanding of the principles in meat preparation and processing.

CFS 204  FOUNDATIONS OF BAKING  3 Hrs.
This course covers basic ingredients, weights and measures, baking terminology, and formula calculations. Topics include yeast-raised products, quick breads, pastry dough, various cakes and cookies, and appropriate filling and finishing techniques. Upon completion, the student should be able to prepare and evaluate baked products.

CFS 213  FOOD PURCHASING AND COST CONTROL  3 Hrs.
Emphasis is placed on procurement, yield tests, inventory control, specification, planning, forecasting, market trends, terminology, cost controls, pricing, and food service ethics. Upon completion, the student should be able to apply effective purchasing techniques based on the end-use of the product.

CFS 251  MENU DESIGN  2 Hrs.
This course introduces menu design. Topics include development of standardized recipes, layout, nutritional concerns, product utilization, demographics, and customer needs. Upon completion, the student should be able to write, lay out, and produce effective menus for a variety of hospitality settings.

CFS 260  INTERNSHIP FOR COMMERCIAL FOOD SERVICE  3 Hrs.
PREREQUISITE: Permission of instructor.
This course is designed to give students practical, on-the-job experiences in all phases of food service operations under the supervision of a qualified food service professional.

CFS 299  SPECIAL TOPICS IN COMMERCIAL FOOD PREPARATION  3 Hrs.
This course provides instruction in special topics in commercial food preparation. Emphasis is placed on timely topics related to commercial food preparation and service and may be repeated as subject matter varies. Upon completion, the student should have an understanding of timely topics relative to
the commercial food preparation industry.

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE TITLE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNC 101</td>
<td>INTRODUCTION TO CNC</td>
<td>6 Hrs.</td>
</tr>
<tr>
<td></td>
<td>This is an introductory course with emphasis placed on the basic concepts and terminology of numerical control. Topics include Cartesian coordinate system, CNC principles, and machine capabilities. Student will gain an understanding of CNC machine tools and their usage.</td>
<td></td>
</tr>
<tr>
<td>CNC 102</td>
<td>CNC TURNING OPERATIONS</td>
<td>6 Hrs.</td>
</tr>
<tr>
<td></td>
<td>This course is a study introducing the student to two-axis part programming. Applications of graphics programming and lathe set-up are also included. Students will learn to write CNC Turning programs, set-up, and operate the CNC lathe.</td>
<td></td>
</tr>
<tr>
<td>CNC 103</td>
<td>MANUAL PROGRAMMING</td>
<td>6 Hrs.</td>
</tr>
<tr>
<td></td>
<td>This course will emphasize calculations for CNC machine tools. Topics will include G and M codes, radius programming, and cutter compensations. Student will learn to write a variety of CNC programs which can be used on the job as reference programs.</td>
<td></td>
</tr>
<tr>
<td>CNC 104</td>
<td>CNC MILLING OPERATIONS</td>
<td>6 Hrs.</td>
</tr>
<tr>
<td></td>
<td>This is a course in programming and operation of the CNC Milling Machines. Applications include maintenance, safety, and production of machine parts through programming, set-up, and operation. Student will learn to produce finished parts on the CNC milling machines.</td>
<td></td>
</tr>
<tr>
<td>CNC 181/281</td>
<td>SPECIAL TOPICS IN COMPUTERIZED NUMERICAL CONTROL</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>These courses provide specialized instruction in various areas related to CNC. Emphasis is placed on meeting student’s needs.</td>
<td></td>
</tr>
<tr>
<td>CNC 215</td>
<td>QUALITY CONTROL AND ASSURANCE</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>This is an advanced course in parts inspection using Geometric Dimensioning and Tolerancing, and familiarization of the Coordinate Measuring Machine. Topics include part set-up, tolerance applications, maximum material and least material conditions, perpendicularity and point of intersection. Upon completion, the student should be able to inspect machined parts demonstrating an understanding of G.D.T. and C.M.M.</td>
<td></td>
</tr>
<tr>
<td>CNC 216</td>
<td>QUALITY CONTROL II</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>This course is a continuation of CNC 215. Topics include set-up and operation of a CNC coordinate measuring machine. Students will learn to program and set up a complex part for inspection.</td>
<td></td>
</tr>
<tr>
<td>CNC 217</td>
<td>TOOLING AND MACHINING DATA</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>This course focuses on technical applications in cutting tool technologies. Emphasis is placed on machining data for material removal parameters</td>
<td></td>
</tr>
</tbody>
</table>
on turning and milling machines. Students will learn tool selection, tool terminology, and material removal calculations.

**CNC 222  COMPUTER NUMERICAL CONTROL**  
**GRAPHICS: TURNING**  
3 Hrs.  
This course introduces Computer Numerical Control graphics programming and concepts for turning center applications. Emphasis is placed on the interaction of menus to develop a shape file in a graphics CAM system and to develop tool path geometry and part geometry. Upon completion, the student should be able to develop a job plan using CAM software, include machine selection, tool selection, operational sequence, speed, feed, and cutting depth.

**CNC 223  COMPUTER NUMERICAL CONTROL GRAPHICS**  
**PROGRAMMING: MILLING**  
3 Hrs.  
This course introduces Computer Numerical Control graphics programming and concepts for machining center applications. Emphasis is placed on developing a shape file in a graphics CAM system and transferring coded information from CAM graphics to the CNC milling center. Upon completion, the student should be able to develop a complete job plan using CAM software to create a multi-axis CNC program.

**CNC 230  COMPUTER NUMERICAL CONTROL**  
**SPECIAL PROJECTS**  
3 Hrs.  
This course is designed to allow the student to work in the lab with limited supervision. The student is to enhance his or her proficiency levels on various CNC machine tools. Upon completion, the student is expected to plan, execute, and present results of advanced CNC products.

**COMPUTER SCIENCE (CIS)**

**CIS 117  DATABASE MANAGEMENT SOFTWARE APPLICATIONS**  
3 Hrs.  
PREREQUISITE: MTH 098 or MTH 100 or equivalent placement score, RDG 085 or ENG 093 or higher placement  
This course provides students with hands-on experience using database management software. The student will develop skills common to most database management software by developing a wide variety of databases. Emphasis is on planning, developing, and editing functions associated with database management.

**CIS 146  MICROCOMPUTER APPLICATIONS**  
3 Hrs.  
PREREQUISITE: RDG 085 or ENG 093 or higher placement  
This course is an introduction to the most common software applications of microcomputers and includes “hands-on” use of microcomputers and some of the major commercial software. These software packages should include typical features of office suites, such as word processing, spreadsheets, database systems, and other features found in current software packages. Upon completion, the student should understand common applications and be able to utilize selected features of these packages.
CIS 196E  MICROSOFT EXCEL  
PREREQUISITE: OAD 101, RDG 085 or ENG 093 or higher placement
This course is designed to provide the student with a firm foundation in the use of computerized equipment and appropriate software in performing spreadsheet tasks through classroom instruction and outside lab. Emphasis is on spreadsheet terminology and design, common formulas, proper file and disk management procedures. Upon completion, the student should be able to use spreadsheet features to design, format, and graph effective spreadsheets. The State Department of Education refers to this course as Spreadsheet Applications.

CIS 203  INTRODUCTION TO THE INFORMATION HIGHWAY  
PREREQUISITE: CIS 146
This course introduces the student to the basic principles of the information highway. The student will be exposed to different network information tools such as electronic mail, network news, gophers, the World Wide Web, browsers, commercial information services and the use of appropriate editors or software to introduce construction of Web environments.

CIS 251C  PROGRAMMING  
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is an introduction to the C programming language. Included in this course are topics in an algorithmic approach to problem solving, structured programming techniques and constructs, using functions and macros, simple data structures, and using files for input and output. Upon completion, the student should be able to demonstrate knowledge of the topics through the completion of programming projects and appropriate tests.

CIS 286  COMPUTERIZED MANAGEMENT INFO SYSTEMS  
PREREQUISITES: MTH 100 placement and one of the following: CIS 146, CIS 251 or CIS 191
This course covers the nature of computerized management information systems, problems created by the computer relative to personnel, components of computer systems, programming, and application of computers to business problems.

CIS 299  DIRECTED STUDIES IN COMPUTER SCIENCE  
PREREQUISITE: Permission of instructor
This course allows independent study under the direction of an instructor. Topics to be included in the course material will be approved by the instructor prior to or at the beginning of the class. Upon completion, the student should be able to demonstrate knowledge of the topics as specified by the instructor.

COSMETOLOGY (COS)

COS 111  INTRO COSMETOLOGY  
COREQUISITE: COS 112, COS 125 and COS 143
This course is designed to provide students with an overview of the history and development of cosmetology and standards of professional behavior. Students receive basic information regarding principles and practices of infection control,
diseases, and disorders. Additionally students receive introductory information regarding hair design. The information presented in this course is enhanced by hands-on application performed in a controlled lab environment. Upon completion, the student should be able to apply safety rules and regulations and write procedures for skills identified in this course.

COS 112 INTRODUCTION TO COSMETOLOGY LAB 3 Hrs.
COREQUISITE: COS 111, COS 125, and COS 143
In this course, students are provided the practical experience for sanitation, shampooing, hair shaping, and hairstyling. Emphasis is placed on disinfection, shampooing, hair shaping, and hairstyling for various types of hair for men and women. This course offers opportunities for students to put into practice concepts learned in the theory component from COS 111.

COS 113 THEORY OF CHEMICAL SERVICES 3 Hrs.
PREREQUISITE: COS 111, COS 112, COS 125, and COS 143
COREQUISITE: COS 114, COS 115, and COS 116
During this course students learn concepts of theory of chemical services related to the chemical hair texturing. Specific topics include basics of chemistry and electricity, properties of the hair and scalp, and chemical texture services. Safety considerations are emphasized throughout this course. This course is foundational for other courses providing more detailed instruction on these topics.

COS 114 CHEMICAL SERVICES LAB 3 Hrs.
PREREQUISITE: COS 111, COS 112, COS 125 and COS 143
COREQUISITE: COS 113, COS 115, and COS 116
During this course students perform various chemical texturing activities. Emphasis is placed on cosmetologist and client safety, chemical use and handling, hair and scalp analysis, and client consulting.

COS 115 HAIR COLORING THEORY 3 Hrs.
PREREQUISITE: COS 111, COS 112, COS 125, and COS 143
COREQUISITE: COS 113, COS 114, and COS 116
In this course, students learn the techniques of hair coloring and hair lightening. Emphasis is placed on color application, laws, levels and classifications of color, and problem solving. Upon completion, the student should be able to identify all classifications of hair coloring and the effects on the hair.

COS 116 HAIR COLORING LAB 3 Hrs.
PREREQUISITE: COS 111, COS 112, COS 125, and COS 143
COREQUISITE: COS 113, COS 114 and COS 115
In this course, students apply hair coloring and hair lightening techniques. Topics include consultation, hair analysis, skin test, and procedures and applications of all classifications of hair coloring and lightening. Upon completion, the student should be able to perform procedures for hair coloring and hair lightening.

COS 117 BASIC SPA TECHNIQUES 3 Hrs.
PREREQUISITE: COS 111, COS 112, COS 113, COS 114, COS 115, COS 116,
COS 125 and COS 143.
COREQUISITE: COS 118, COS 144, and COS 158
This course is the study of cosmetic products, massage, skin care, and hair removal, as well as identifying the structure and function of various systems of the body. Topics include massage skin analysis, skin structure, disease and disorder, light therapy, facials, facial cosmetics, anatomy, hair removal, and nail care. Upon completion, the student should be able to state procedures for analysis, light therapy, facials, hair removal, and identify the structures, functions, disorders of the skin, and nail care.

COS 118 BASIC SPA TECHNIQUES LAB 3 Hrs.
PREREQUISITE: COS 111, COS 112, COS 113, COS 114, COS 115, COS 116, COS 125, and COS 143.
COREQUISITE: COS 117, COS 144, and COS 158
This course provides practical applications related to the care of the skin and related structure. Emphasis is placed on facial treatments, product application, skin analysis, massage techniques, facial make-up, hair removal, and nail care. Upon completion, the student should be able to prepare clients, assemble sanitized materials, follow procedures for product application, recognize skin disorders, demonstrate facial massage movement, cosmetic application, and hair removal using safety and sanitary precautions, and nail care.

COS 125 CAREER AND PERSONAL DEVELOPMENT 3 Hrs.
COREQUISITE: COS 111, COS 112, and COS 143
Esthetics Only: COREQUISITE: COS 134, COS 135 and COS 168
Nail Technician Only: COREQUISITE: COS 151 and COS 152
This course provides the study and practice of personal development and career building. Emphasis is placed on building and retaining clientele, communication skills, customer service, continuing education, and goal setting. Upon completion, the student should be able to communicate effectively and practice methods for building and retaining clientele.

COS 133 SALON MANAGEMENT TECHNOLOGY 3 Hrs.
PREREQUISITE: COS 111, COS 112, COS 113, COS 114, COS 115, COS 116, COS 117, COS 118, COS 125, COS 143, COS 144, and COS 158
COREQUISITE: COS 167, COS 182, and COS 191
This course is designed to develop entry-level management skills for the beauty industry. Topics include job-seeking, leader and entrepreneurship development, business principles, business laws, insurance, marketing, and technology issues in the workplace. Upon completion, the student should be able to list job-seeking and management skills and the technology that is available for use in the salon.

COS 134 ADVANCED AESTHETICS 3 Hrs.
COREQUISITE: COS 125, COS 135 and COS 168
This course includes an advanced study of anatomy and physiology relating to skin care, cosmetic chemistry, histology of the skin, and massage and facial treatments. Upon completion, the student should be able to discuss the functions of the skin, effects of chemicals on skin, different types of massage and benefits, and key elements of the basic facial treatment.
COS 135  ADVANCED ESTHETICS APPLICATIONS 3 Hrs.
COREQUISITE: COS 125, COS 134 and COS 168
This course provides advanced practical applications related to skin care. Principal topics include massage techniques, various facial treatments, proper product application through skin analysis, and introduction to ingredients and treatments used by the esthetician. Upon completion, the student should be able to perform various massage techniques, prescribe proper type of facial treatment and product, and demonstrate facials using any of the eight functions of the facial machine.

COS 143  SPECIALTY HAIR PREPARATION TECHNIQUES 3 Hrs.
COREQUISITE: COS 111, COS 112, and COS 125
This course focuses on the theory and practice of hair designing. Topics include creating styles using basic and advanced techniques of back combing, up sweeps, and braiding. Upon completion, the student should be able to demonstrate the techniques and procedures for hair designing.

COS 144  HAIR SHAPING AND DESIGN 3 Hrs.
PREREQUISITE: COS 111, COS 112, COS 113, COS 114, COS 115, COS 116, COS 125, and COS 143
COREQUISITE: COS 117, COS 118 and COS 158
In this course, students learn the art and techniques of hair shaping. Topics include hair sectioning, correct use of hair shaping implements, and elevations used to create design lines. Upon completion, the student should be able to demonstrate the techniques and procedures for creating hair designs.

COS 151  NAIL CARE 3 Hrs.
COREQUISITE: COS 125 and COS 152
This course focuses on all aspects of nail care. Topics include salon conduct, professional ethics, sanitation, nail structure, manicuring, pedicuring, nail disorders, and anatomy and physiology of the arm and hand. Upon completion, the student should be able to demonstrate professional conduct, recognize nail disorders and diseases, and identify the procedures for sanitation and nail care services.

COS 152  NAIL CARE APPLICATIONS 3 Hrs.
COREQUISITE: COS 151 and COS 125
This course provides practice in all aspects of nail care. Topics include salon conduct, professional ethics, bacteriology, sanitation and safety, manicuring and pedicuring. Upon completion, the student should be able to perform nail care procedures.

COS 153  NAIL ART 3 Hrs.
PREREQUISITE: COS 125, COS 151, and COS 152
COREQUISITE: COS 154, COS 162, and COS 191
This course focuses on advanced nail techniques. Topics include acrylic, gel, fiberglass nails, and nail art. Upon completion, the student should be able to identify the different types of sculptured nails and recognize the different
techniques of nail art.

COS 154  NAIL ART APPLICATIONS  3 Hrs.
PREREQUISITE: COS 125, COS 151, and COS 152
COREQUISITE: COS 153, COS 162, and COS 191.
This course provides practice in advanced nail techniques. Topics include acrylic, gel, fiberglass nails, and nail art. Upon completion, the student should be able to perform the procedures for nail sculpturing and nail art.

COS 158  EMPLOYABILITY SKILLS  3 Hrs.
PREREQUISITE: COS 111, COS 112, COS 113, COS 114, COS 115, COS 116, COS 125, and COS 143
COREQUISITE: COS 117, COS 118, and COS 144
This course provides the study of marketable skills to prepare the student to enter the workforce. Emphasis is placed on resumes, interviews, client and business relations, personality, computer literacy, and attitude. Upon completion, the student should be prepared to obtain employment in the field for which they have been trained.

COS 162  SPECIAL TOPICS IN COSMETOLOGY  3 Hrs.
PREREQUISITE: COS 125, COS 151, and COS 152
COREQUISITE: COS 153, COS 154, and COS 191.
This course is designed to allow students to explore issues relevant to the profession of cosmetology. Upon completion, the student should have developed new skills in areas of specialization for the cosmetology profession.

COS 163  FACIAL TREATMENTS  3 Hrs.
PREREQUISITE: COS 125, COS 134, COS 135, and COS 168
COREQUISITE: COS 164 and COS 169
This course includes all phases of facial treatments in the study of skin care. Topics include treatments for oily, dry, and special skin applications. Upon completion, the student should be able to apply facial treatments according to skin type.

COS 164  FACIAL MACHINE  3 Hrs.
PREREQUISITE: COS 125, COS 134, COS 135 and COS 168
COREQUISITE: COS 163, COS 164, and COS 169
This is a course designed to provide practical experience using the vapor and facial machine with hydraulic chair. Topics include the uses of electricity and safety practices, machine and apparatus, use of the magnifying lamp, and light therapy. Upon completion, the student should be able to demonstrate an understanding of electrical safety and skills in the use of facial machines.

COS 165  RELATED SUBJECTS ESTHETICIANS  3 Hrs.
PREREQUISITE: COS 125, COS 134, COS 135, COS 163, COS 164, COS 168, and COS 169
COREQUISITE: COS 181 and COS 191
This course includes subjects related to the methods for removing unwanted
hair. This course includes such topics as electrolysis information and definitions, safety methods of permanent hair removal, the practice of removal of superfluous hair, and the use of depilatories. Upon completion, the student should be able to apply depilatories and practice all safety precautions.

COS 167 STATE BOARD REVIEW 3 Hrs.
PREREQUISITE: COS 111, COS 112, COS 113, COS 114, COS 115, COS 116, COS 125, COS 117, COS 118, COS 143, COS 144, and COS 158
COREQUISITE: COS 133, COS 182, and COS 191
The student is provided a complete review of all procedures and practical skills pertaining to his or her training in the program. Upon completion, the student should be able to demonstrate the practical skills necessary to successfully complete the required State Board of Cosmetology examination and entry-level employment.

COS 168 BACTERIOLOGY AND SANITATION 3 Hrs.
COREQUISITE: COS 125, COS 134 and COS 135
In this skin care course, emphasis is placed on the decontamination, infection control, and safety practiced in the esthetics facility. Topics covered include demonstration of sanitation, sterilization methods, and bacterial prevention. Upon completion, the student should be able to properly sanitize facial implements and identify non-reusable items.

COS 169 SKIN FUNCTIONS 3 Hrs.
PREREQUISITE: COS 125, COS 134, COS 135, and COS 168
COREQUISITE: COS 163 and COS 164
This course introduces skin functions and disorders. Topics include practical application for skin disorder treatments, dermabrasion, and skin refining. Upon completion, the student should be able to demonstrate procedures for acne, facials, and masks for deeper layers and wrinkles.

COS 181 SPECIAL TOPICS 3 Hrs.
PREREQUISITE: COS 125, COS 134, COS 135, COS 163, COS 164, COS 168, and COS 169
COREQUISITE: COS 165 and COS 191
These courses provide for instruction unique to various areas of the cosmetology industry. Emphasis is on meeting individual student needs.

COS 182 SPECIAL TOPICS 3 Hrs.
PREREQUISITE: COS 111, COS 112, COS 113, COS 114, COS 115, COS 116, COS 117, COS 118, COS 125, COS 143, COS 144, and COS 158
COREQUISITE: COS 133, COS 167, and COS 191
These courses provide for instruction unique to various areas of the cosmetology industry. Emphasis is on meeting individual student needs.

COS 191 CO-OP 3 Hrs.
PREREQUISITE: COS 111, COS 112, COS 113, COS 114, COS 115, COS 116, COS 117, COS 118, COS 125, COS 143, COS 144, and COS 158
Esthetics Only: **PREREQUISITES:** COS 125, COS 134, COS 135, COS 163, COS 164, COS 168, and COS 169

Esthetics Only: **COREQUISITE:** COS 165, and COS 181 or COS 182

Nail Tech Only: **PREREQUISITES:** COS 125, COS 151, and COS 152

Nail Tech Only: **COREQUISITE:** COS 153, COS 154 and COS 162

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, the student should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

### COSMETOLOGY INSTRUCTOR TRAINING (CIT)

**CIT 211**  
**TEACHING AND CURRICULUM DEVELOPMENT**  
3 Hrs.  
**COREQUISITE:** CIT 212 and CIT 213  
This course focuses on principles of teaching, teaching maturity, professional conduct, and the development of cosmetology curriculum. Emphasis is placed on teacher roles, teaching styles, teacher challenges, aspects of curriculum development, and designing individual courses. Upon completion, the student should be able to describe the role of teacher, identify means of motivating students, develop a course outline, and develop lesson plans.

**CIT 212**  
**TEACHER MENTORSHIP**  
3 Hrs.  
**COREQUISITE:** CIT 211 and CIT 213  
This course is designed to provide the practice through working with a cosmetology instructor in a mentoring relationship. Emphasis is placed on communication, student assessment, and assisting students in the lab. Upon completion, the student should be able to communicate with students, develop a course of study, and apply appropriate teaching methods.

**CIT 213**  
**COSMETOLOGY INSTRUCTOR CO-OP**  
3 Hrs.  
**COREQUISITE:** CIT 211 and CIT 212  
This course provides students with additional opportunities to observe instructors and develop teaching materials and skills.

**CIT 221**  
**LESSON PLAN IMPLEMENTATION**  
3 Hrs.  
**PREREQUISITE:** CIT 211, CIT 212, and CIT 213  
**COREQUISITE:** CIT 222, CIT 223 and CIT 225  
This course is designed to provide practice in preparing and using lesson plans. Emphasis is placed on organizing, writing, and presenting lesson plans using the four-step teaching method. Upon completion, the student should be able to prepare and present a lesson using the four step teaching method.

**CIT 222**  
**AUDIO VISUAL MATERIALS AND METHODS**  
3 Hrs.  
**PREREQUISITE:** CIT 211, CIT 212, and CIT 213  
**COREQUISITE:** CIT 221, CIT 223 and CIT 225  
This course focuses on visual and audio aids and materials. Emphasis is placed on the use and characteristics of instructional aids. Upon completion, the student should be able to prepare teaching aids and determine their most
CIT 223  AUDIO VISUAL MATERIALS/METHODS APPLICATIONS  3 Hrs.
PREREQUISITE: CIT 211, CIT 212, and CIT 213
COREQUISITE: CIT 221, CIT 222, and CIT 225
This course is designed to provide practice in preparing and using visual and audio aids and materials. Emphasis is placed on the preparation and use of different categories of instructional aids. Upon completion, the student should be able to prepare and effectively present different types of aids for use with a four step lesson plan.

CIT 225  SPECIAL TOPICS IN COSMETOLOGY INSTRUCTION  3 Hrs.
PREREQUISITE: CIT 211, CIT 212, and CIT 213
COREQUISITE: CIT 221, CIT 222, and CIT 223
This course is designed to allow students to further develop their knowledge and skills as cosmetology instructors. Topics will be assigned based on individual student professional needs.

CRIMINAL JUSTICE (CRJ)

CRJ 100  INTRODUCTION TO CRIMINAL JUSTICE  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course surveys the entire criminal justice process from law enforcement to the administration of justice through corrections. It discusses the history and philosophy of the system and introduces various career opportunities.

CRJ 110  INTRODUCTION TO LAW ENFORCEMENT  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course examines the history and philosophy of law enforcement, as well as the organization and jurisdiction of local, state, and federal agencies. It includes the duties and functions of law enforcement officers.

CRJ 140  CRIMINAL LAW AND PROCEDURE  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course examines both substantive and procedural law. The legal elements of various crimes are discussed with emphasis placed on the contents of the Alabama Code. Areas of criminal procedure essential to the criminal justice profession are also covered.

CRJ 147  CONSTITUTIONAL LAW  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course involves constitutional law as it applies to criminal justice. It includes recent Supreme Court decisions affecting criminal justice professionals, such as right to counsel, search and seizure, due process, and civil rights.

CRJ 150  INTRODUCTION TO CORRECTIONS  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course provides an introduction to the philosophical and historical foundations of corrections in America. Incarceration and some of its alternatives are considered.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 177</td>
<td>CRIMINAL AND DEVIAN'T BEHAVIOR</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course analyzes criminal and deviant behavior systems. An emphasis is placed on sociological and psychological theories of crime causation.</td>
<td></td>
</tr>
<tr>
<td>CRJ 178</td>
<td>NARCOTICS/DANGEROUS DRUGS</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course surveys the history and development of drug abuse in society. Theories of drug abuse, identification and classification of drugs are covered. Strategies for combating the drug problem are discussed.</td>
<td></td>
</tr>
<tr>
<td>CRJ 216</td>
<td>POLICE ORGANIZATION AND ADMINISTRATION</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course examines the principles of organization and administration of law enforcement agencies. Theories of management, budgeting, and various personnel issues are covered.</td>
<td></td>
</tr>
<tr>
<td>CRJ 220</td>
<td>CRIMINAL INVESTIGATION</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course explores the theory and scope of criminal investigation. The duties and responsibilities of the investigator are included. The techniques and strategies used in investigation are emphasized.</td>
<td></td>
</tr>
<tr>
<td>CRJ 226</td>
<td>FINGERPRINT SCIENCE</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course involves the history, classification, and current procedures of handling latent fingerprints. Latent print examination, filing, and courtroom presentations are considered.</td>
<td></td>
</tr>
<tr>
<td>CRJ 227</td>
<td>HOMICIDE INVESTIGATION</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course covers the principles, techniques, and strategies of homicide investigation. Topics emphasized include ballistics, pathology, toxicology, immunology, jurisprudence, and psychiatry.</td>
<td></td>
</tr>
<tr>
<td>CRJ 230</td>
<td>CRIMINALISTICS</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course surveys the different techniques of scientific investigation. Emphasis is given to ballistics, photography, fingerprints, DNA, trace evidence, body fluids, casts, and the like.</td>
<td></td>
</tr>
<tr>
<td>CRJ 236</td>
<td>ADVANCED CRIMINALISTICS</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course covers the collection, handling, and analysis of evidence from crime scene to laboratory to courtroom. Topics include hair, fibers, body fluids, firearms, glass, paint, drugs, documents, etc. Laboratory experience may be utilized.</td>
<td></td>
</tr>
</tbody>
</table>
CRJ 238  CRIME SCENE INVESTIGATION  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course examines the fundamentals of crime scene investigation. Measuring and sketching the scene, photography, evidence collection and preservation, and courtroom procedures are considered.

CRJ 280  INTERNSHIP IN CRIMINAL JUSTICE  1–3 Hrs.
PREREQUISITE: CRJ 230
This course involves practical experience with a criminal justice agency under faculty supervision. Permission of the instructor is required. This course may be repeated with the approval of the department head.

CRJ 290  SELECTED TOPICS: SEMINAR IN CRIMINAL JUSTICE  1-3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course involves reading, research, writing, and discussion of selected subjects relating to criminal justice. Various contemporary problems in criminal justice are analyzed. This course may be repeated with approval from the department head.

CULINARY ARTS/CHEF TRAINING (CUA)

CUA 101  ORIENTATION TO THE HOSPITALITY PROFESSION  3 Hrs.
This course introduces various facets and opportunities within the hospitality profession. The intent is for students to gain a broad base of information relative to the hospitality industry. Emphasis is placed on having students comprehend their role as a hospitality industry professional. Topics include an overview of the hospitality profession, knowledge and skills necessary for successful employment, the impact of the hospitality profession on society, issues that impact on various segments of the hospitality profession, and emerging trends.

CUA 102  CATERING  2 Hrs.
This course includes the theory and practice of operating a catering business. Topics include food production and management related to catering and other special services. Upon completion, the student will have a working knowledge of the principles involved in operating a catering business.

CUA 111  FOUNDATIONS IN NUTRITION  3 Hrs.
This course focuses on nutrition and meal planning in relation to the food preparation industry. Topics include the science of food and nutrition, essential nutrients and their relation to the growth, maintenance and functioning of the body, nutritional requirements of different age levels and economic and cultural influences on food selection. Upon completion, the student should be able to apply the basic principles of meal planning.

CUA 112  SANITATION, SAFETY, AND FOOD SERVICE  2 Hrs.
This course introduces the basic principles of sanitation and safety to food service handling including purchasing, storing, preparation and serving. Specific topics include the dangers of microbial contaminants, food allergens and foodborne illness, safe handling of food, the flow of food, and food safety.
management systems. At the conclusion of this course, students should be prepared to test for ServSafe© certification. The content of this course is foundational for all culinary arts classes.

CUA 113  TABLE SERVICE  
2 Hrs.  
This course is a guide for the modern wait staff. Topics include laying the cover, taking the order, surveying of different styles of table service from the casual to the very formal, tabulating and presenting the bill, and busing and turning the table. Upon completion, the student should be able to demonstrate proficiency in the art of table service.

CUA 114  MEAL MANAGEMENT  
PREREQUISITE: CUA 125  
3 Hrs.  
This course covers the principles of meal management. Topics include menu planning, food selection, recipe standardization, food preparation, and meal service for all phases of food service. Upon completion, the student should be able to apply efficient work habits, sanitation and safety in the kitchen.

CUA 115  ADVANCED FOOD PREPARATION  
PREREQUISITE: CUA 125  
3 Hrs.  
In this course, students apply food preparation and meal management skills in all areas of food service. Emphasis is placed on management and technical skills needed to operate a restaurant. Upon completion, the student should develop advanced skills in food preparation and meal management.

CUA 122  FUNDAMENTALS OF QUANTITY COOKING  
PREREQUISITE: CUA 125  
3 Hrs.  
This course covers the principles and methods of quality cooking. Topics include weights and measures, costing and converting of recipes, vocabulary and standard abbreviations, health department regulations and inspection, and food production forms and records. Upon completion, the student should have a basic knowledge of the principles of quantity food production.

CUA 125  FOOD PREPARATION  
5 Hrs.  
This course allows students to acquire fundamental knowledge and skills in preparing a variety of basic foods. Specific topics include safety, the history of food service, professional standards of conduct and ethics, credentialing, the kitchen brigade, tools, and techniques for preparing various types of food items. At the conclusion of this course, students will demonstrate basic food preparation skills.

CUA 130  CHOCOLATE AND TRUFFLES  
PREREQUISITE: CUA 125  
3 Hrs.  
This course is a specialty hands-on course in chocolate, focusing on: tempering, chocolate candy making, and the use of chocolate as a centerpiece medium. The student will have competency in chocolate to apply in the industry.
CUA 132  FOOD PREPARATION AND THE HEALTH CARE INDUSTRY  3 Hrs.
This course introduces students to food preparation and service in the health care industry. Emphasis will be placed on using medical dictionaries and reading charts for therapeutic diet instruction, and designing and creating menus and diet programs for special client populations. Upon completion, the student should be able to read and interpret medical terms, and demonstrate knowledge about food service in the health care industry.

CUA 134  CULINARY FRENCH  2 Hrs.
This course covers classical French vocabulary and culinary terms. Emphasis is placed on basic French menu terms describing techniques and equipment. Upon completion, the student should have a basic understanding of French terminology as it relates to the food industry.

CUA 141  FOOD PRODUCTION FOR SPECIAL OPERATIONS  3 Hrs.
This course covers menu planning principles, food preparation, food procurement, and food management skills needed to provide appealing and profitable food service in special operations. Topics include fast food cookery, convenience store food service, supermarkets, delicatessens, and take-out venue. Upon completion, the student should be able to plan, organize, and prepare food service items for special operations.

CUA 142  SPECIALTY BREADS  3 Hrs.
PREREQUISITE: CUA 125
This course will allow the student to have a complete analysis of the different types of flour and leavening agents, as well as of the old, original method of making bread with naturally developed yeast present in pieces of previously fermented dough. Also, have a full understanding of the basic process of making bread; water, kneading, fermentation, temperature, and proofing. The student will also explore the art of fantasy breads, appliques, presentation assemblages, and decorative breads. The student will develop competencies in stockroom, scully, and supervision.

CUA 165  CAKE DECORATING AND DESIGN  3 Hours
PREREQUISITE CUA 204
This course focuses on preparing cakes, tortes, individual viennese cakes, and piping skills. Emphasis is placed on piping different mediums such as: chocolate, buttercream, royal icing; assembling cakes with different batters or dough such as: genoise, Japonaise, Bavarian, mousse, and marzipan. Upon completion the student should be able to plan, execute and evaluate whole cakes, dessert platters, and a show piece.

CUA 181/182  SPECIAL TOPICS IN CULINARY ARTS  3 Hrs.
These courses provide specialized instruction in various areas related to the culinary arts industry. Emphasis is placed on meeting the student’s needs.

CUA 183  CULINARY ART SCULPTURE  3 Hrs.
This course includes the notion of fantasies that accompany the sculpturing
motion with food. Work on centerpieces for all occasions will be included. The student will be exposed to a variety of three-dimensional edible mediums from walking cakes to salt dough.

CUA 201  MEAT PREPARATION AND PROCESSING 2 Hrs.
This course focuses on meat preparation and processing. Students will be responsible for the preparing of meats including beef, pork, poultry, fish, and seafood so they can be used for final preparations in other stations of the kitchens. Upon completion, the student should be able to demonstrate an understanding of the principles in meat preparation and processing.

CUA 202  AROMATIC AND FLAVORING COMBINATIONS 3 Hrs.
The student should learn the difference between spices and herbs. The student should further learn the categories of herbs and spices which enable them to create his or her finest dishes. The student should learn the world renowned spice blends, and dry seasonings rubs. A strong emphasis will be placed on the huge variety of chili peppers.

CUA 203  STOCKS AND SAUCES 3 Hrs.
This course challenges the student to the greatest tests of a chef’s skills. Whether they are classic or contemporary, good sauces demand the highest technical expertise. The student should learn why or why not a particular sauce will go with a particular dish. The student will focus on brown and white stocks; consomme’s, fumets and essences; glazes and roux’s. The student should further develop mother sauces and compound sauces.

CUA 204  FOUNDATIONS OF BAKING 3 Hrs.
This course covers basic ingredients, weights and measures, baking terminology, and formula calculations. Topics include yeast-raised products, quick breads, pastry dough, various cakes and cookies, and appropriate filling and finishing techniques. Upon completion, the student should be able to prepare and evaluate baked products.

CUA 205  INTRO TO GARDE MANGER 3 Hrs.
PREREQUISITE: CUA 125
This course is designed to develop skills in the art of Garde Manger. Topics include pates, terrines, galantines, ice and tallow carving, chaud-froid/aspic work, charcuterie, smoking, canapés, hor d’oeuvres, and related food items. Upon completion, the student should be able to design, set up, and evaluate a catering function to include a classical cold buffet with appropriate show pieces.

CUA 206  ADVANCED GARDE MANGER 1-3 Hrs.
PREREQUISITE: CUA 205
This course is a continuation of skill development in the art of Garde Manger. Major topics to be covered include preparation of gourmet foods, application of cold food fabrications and display, sausage making, ice carving, and carving decorative substances to produce buffets. Upon completion, the student should be able to lay out a basic cold food display and exhibit an understanding of the
cold kitchen and its related terminology.

CUA 208 ADVANCED BAKING 2 Hrs.
PREREQUISITE: CUA 204
This course is a continuation of CUA 204. Topics include specialty breads, pastillage, marzipan, chocolate, pulled-sugar, confections, classic desserts, pastries, and cake decorating. Upon completion, the student should be able to demonstrate pastry preparation and plating, cake decorating, and show-piece production skills.

CUA 210 BEVERAGE MANAGEMENT 2 Hrs.
This is a survey course of basic alcoholic and non-alcoholic beverages as they relate to food service. Topics include wine and food appreciation and laws related to alcohol services. Upon completion, the student should be able to determine what beverages compliment various cuisines and particular tastes.

CUA 213 FOOD PURCHASING AND COST CONTROL 3 Hrs.
Emphasis is placed on procurement, yield tests, inventory control, specification, planning, forecasting, market trends, terminology, cost controls, pricing, and food service ethics. Upon completion, the student should be able to apply effective purchasing techniques based on the end-use of the product.

CUA 214 INTERNATIONAL CUISINE 3 Hrs.
PREREQUISITE: CUA 110 or CUA 125
This course focuses on various cuisines from countries and regions throughout the world. Students will prepare complete menus reflective of the culture and goods of these countries and regions with emphasis on ingredients and authentic preparation methods. Upon completion, the student should be able to research and execute international menus.

CUA 215 REGIONAL CUISINES OF THE AMERICAS 3 Hrs.
PREREQUISITE: CUA 125
This course provides a brief history of the ancient American foods that enhanced the world’s cuisines. Emphasis is placed on how these foods influenced the “American Cuisines” of today. Upon completion, the student should be able to research and execute regional American cuisines.

CUA 216 PLATED DESSERT DESIGN 3 Hrs.
PREREQUISITE: CUA 125
This course focuses on plated dessert designs. Emphasis will be placed on complex presentations with two or more main items using decorative garnishes. Upon completion, students should be able to plate and serve attractive presentations of desserts with appropriate sauces and garnishes.

CUA 220 INTRODUCTION TO PATISSERIE 3 Hrs.
This is an introductory course to patisserie. Emphasis is placed on individual desserts, blown sugars, pulled sugar, pastillage gum paste, nougat. Upon
completion, the student should be able to plan, execute, and evaluate dessert platters, individual plated desserts, and show pieces.

CUA 251 MENU DESIGN 2 Hrs.
This course introduces menu design. Topics include development of standardized recipes, layout, nutritional concerns, product utilization, demographics, and customer needs. Upon completion, the student should be able to write, lay out, and produce effective menus for a variety of hospitality settings.

CUA 260 INTERNSHIP FOR CULINARY APPRENTICE 3 Hrs.
PREREQUISITE: CUA Majors
This course is designed to give students practical, on-the-job experiences in all phases of food service operations under the supervision of a qualified chef and coordinated with the College instructor. This course may be repeated for credit.

CUA 271 MANAGEMENT OF FOOD AND BEVERAGE SERVICE 3 Hrs.
This course covers the practical skills and knowledge for effective food and beverage service in a variety of settings. Topics include reservations, greeting and service of guests, styles of service, handling complaints and sales and merchandising. Upon completion, the student should be able to demonstrate competence in human relations and technical skills required in the service of foods and beverages.

DANCE (DNC)

DNC 110 INTRODUCTION TO DANCE STYLES 2 Hrs.
This course is an introduction to dance styles.

DNC 121 ELEMENTARY BALLET 2 Hrs.
This course is a studio course in classical ballet at the elementary level. Offered the fall semester.

DNC 143/144 BALLET I and II 3 Hrs.
PREREQUISITE: Previous training is essential before taking these courses. These courses offer intensive training in classical ballet for students intending to major in dance. Intermediate level technique is studied, emphasizing posture and placement. The student is evaluated on his or her ability to perform the work to the required standard.

DNC 160 DANCE WORKSHOP I 1-2 Hrs.
This course provides practical experience in the production and performance of a dance presentation, including sound, lighting, choreography, rehearsal, costuming, make-up, and other aspects of dance presentation.

DNC 161 DANCE WORKSHOP II 1-2 Hrs.
PREREQUISITE: DNC 160
This course is a continuation of DNC 160.
DNC 243/244 BALLET III and IV  3 Hrs.
PREREQUISITE: DNC 144 or permission of instructor
This course covers ballet technique at advanced level emphasizing performance quality, musicality, and classical style.

DIESEL MECHANICS (DEM)

DEM 104 BASIC ENGINES  3 Hrs.
This course is designed to give the student knowledge of the diesel engine components and auxiliary systems, the proper way to maintain them, and the proper procedures for testing and rebuilding components. Emphasis is placed on safety, theory of operation, inspection, and measuring and rebuilding diesel engines according to factory specifications. Upon completion, the student should be able to measure, diagnose problems, and repair diesel engines.

DEM 105 PREVENTIVE MAINTENANCE  3 Hrs.
This course provides instruction on how to plan, develop and install equipment surveillance and reliability strategies. Descriptions of various maintenance techniques for specialized preventive programs are discussed and computerized parts and equipment inventories and fleet management systems software are emphasized. Upon completion, the student should be able to set up and follow a preventive maintenance schedule as directed by manufacturers.

DEM 106 HEAVY EQUIPMENT OPERATIONS  3 Hrs.
This course provides instruction in heavy equipment operation. Emphasis is placed on the operation of graders, dozers, packers, pans, cranes, draglines, and other equipment. Upon completion, the student should be able to diagnose, adjust, or repair new or used heavy equipment.

DEM 110 DIESEL POWERED AUXILIARY EQUIPMENT  3 Hrs.
This course provides instruction in diesel powered auxiliary equipment. Topics covered include the application of diesel engines to generators, pumps, refrigeration, drilling, boring machines, and marine power units. Upon completion, the student should be able to test, troubleshoot, diagnose, and repair diesel powered auxiliary equipment.

DEM 111 EQUIPMENT SAFETY/MECHANICAL FUNDAMENTALS  3 Hrs.
This course provides instruction in the fundamentals of vehicle operation and safety when basic service work is to be performed in the shop. Topics include service manuals, mechanical fundamentals, preventive maintenance, and component adjustment. Upon completion, students should be able to demonstrate knowledge of the fundamentals of vehicle operation and safety in the shop.

DEM 114 FLUID POWER COMPONENTS  3 Hrs.
This course is designed to provide the fundamental knowledge of hydraulic and pneumatic components currently in use on mobile as well as stationary equipment. Instruction is provided in the identification and repair of various pumps, motor, valves, heat exchangers, and cylinders. Upon completion, the
DEM 116  TRACK VEHICLE DRIVE TRAINS  3 Hrs.
This course provides instruction in track vehicles and drive trains. Emphasis is placed on track frame roller, rail, steering clutch, axle, and driveline building and repair. Upon completion, the student should be able to identify, research specifications, repair, and adjust drive train components.

DEM 119  BEARINGS AND LUBRICANTS  3 Hrs.
This course focuses on roller, ball and shell bearing design and application. Topics include vehicle and industrial bearings and lubrication requirements. Upon completion, the student should be able to diagnose related problems and service and replace bearings.

DEM 122  HEAVY VEHICLE BRAKES  3 Hrs.
This course covers the theory and repair of braking systems used in medium and heavy duty vehicles. Topics include air, hydraulic, and ABS system diagnosis, and repair. Upon completion, the student should be able to troubleshoot, adjust, and repair braking systems on medium and heavy duty vehicles.

DEM 123  PNEUMATICS AND HYDRAULICS  3 Hrs.
This course provides instruction in the identification and repair of components found in hydraulic systems. Topics include schematics, circuits, and symbols used in fluid power transmission and the troubleshooting of components in these systems. Upon completion, the student should be able to diagnose, adjust, and repair hydraulic system components.

DEM 124  ELECTRONIC ENGINE SYSTEMS  3 Hrs.
This course introduces the principles of electronically controlled diesel engines. Emphasis is placed on testing and adjusting diesel engines in accordance with manufacturers’ specifications. Upon completion, the student should be able to diagnose, test, and calibrate electronically controlled diesel engines.

DEM 125  HEAVY VEHICLE DRIVE TRAINS  3 Hrs.
This course introduces the operating principles of mechanical medium and heavy duty truck transmissions. Topics include multiple counter shafts, power take-offs, slider idler clutches, friction clutches, mechanical transmission power components, and hydraulics. Upon completion, the student should be able to diagnose, inspect, and repair mechanical transmissions.

DEM 126  ADVANCED ENGINE ANALYSIS  3 Hrs.
This course provides instruction in the disassembly, inspection, and rebuilding of diesel and heavy-duty gas engines. Emphasis is placed on the manufacturer’s standards and factory recommended service tools and equipment. Upon completion, the student should be able to disassemble, inspect, and rebuild engines according to the manufacturer’s specifications.
DEM 127 FUEL SYSTEMS 3 Hrs.
This course is designed to provide practice in troubleshooting, fault code diagnosis, information retrieval, calibration, repair, and replacement of fuel injectors, nozzles, and pumps. Emphasis is placed on test equipment, component functions, and theory. Upon completion, the student should be able to diagnose, service, and repair fuel systems and governors.

DEM 130 ELECTRICAL/ELECTRONIC FUNDAMENTALS 3 Hrs.
This course introduces the student to basic electrical/electronic concepts and fundamentals.

DEM 134 COMPUTER CONTROLLED ENGINE AND POWER TRAIN SYSTEMS 3 Hrs.
This course introduces the student to the fundamentals of operation of computer controlled engine and power train systems.

DEM 135 HEAVY VEHICLE STEERING AND SUSPENSION 3 Hrs.
This course introduces the theory and principles of medium and heavy duty steering and suspension systems. Topics include wheel and tire problems, frame members, fifth wheel, bearings, and coupling systems. Upon completion, the student should be able to troubleshoot, adjust, and repair suspension and steering components on medium and heavy duty vehicles.

DEM 154 VEHICLE MAINTENANCE AND SAFE OPERATING PRACTICES 3 Hrs.
This course provides instruction in basic entry level driving skills relating to the maintenance and safe operation of a commercial motor vehicle. Topics include preventive maintenance and safe vehicle operations. Upon completion, the student should have the skill and knowledge to safely operate a commercial motor vehicle.

DEM 156 CDL LICENSE TEST PREPARATION 3 Hrs.
This is a course designed to prepare students for the Alabama Commercial Driver’s License written examination. The course includes a review of major topics, sample tests, as well as basic CDL information and test-taking procedures.

DEM 158 PNEUMATICS AND HYDRAULICS II 3 Hrs.
This course provides instruction in the identification and repair of components found in hydraulic systems. Topics include schematics, circuits, and symbols used in fluid power transmission and the troubleshooting of components in these systems. Upon completion, the student should be able to diagnose, adjust, and repair hydraulic system components.

DEM 159 HEAVY VEHICLE DRIVE TRAINS II 3 Hrs.
This course introduces the operating principles of mechanical medium and heavy duty truck transmissions. Topics include multiple counter shafts, power take-odds, slider idler clutches, friction clutches, mechanical transmission power components, and hydraulics. Upon completion, the student should be able to
diagnose, inspect, and repair mechanical transmissions.

DEM 170  HEAVY VEHICLE AIR BRAKES  3 Hrs.
This course covers the theory and repair of air braking systems used in medium and heavy duty vehicles. Topics include air, and ABS system diagnosis and repair. Upon completion, the student should be able to troubleshoot, adjust, and repair air braking systems on medium and heavy duty vehicles.

DEM 180  SPECIAL PROJECTS IN COMMERCIAL VEHICLES  3 Hrs.
This course provides specialized instruction in various areas related to the diesel mechanics industry. Emphasis is placed on meeting student’s needs.

DEM 181/182  SPECIAL TOPICS IN DIESEL MECHANICS  3 Hrs.
These courses provide specialized instruction in various areas related to the diesel mechanics industry. Emphasis is placed on meeting student’s needs.

DEM 183  SPECIAL TOPICS IN POWER TRAIN  3 Hrs.
This course provides specialized instruction in various areas related to the power train in the diesel mechanics industry. Emphasis is placed on meeting student’s needs.

DEM 184  SPECIAL TOPICS IN HEAVY DUTY BRAKES, STEERING, AND SUSPENSION  3 Hrs.
This course provides specialized instruction in various areas related to heavy duty brakes, steering, and suspension systems in the diesel mechanics industry. Emphasis is placed on meeting student’s needs.

DEM 185  SPECIAL TOPICS IN HYDRAULICS  3 Hrs.
This course provides specialized instruction in various areas related to hydraulic systems in the diesel mechanics industry. Emphasis is placed on meeting student’s needs.

DEM 186  SPECIAL PROJECTS IN COMMERCIAL VEHICLES  3 Hrs.
This course provides specialized instruction in various areas related to the diesel mechanics industry. Emphasis is placed on meeting student’s needs.

DEM 191  SPECIAL PROJECTS IN DIESEL MECHANICS  3 Hrs.
This course provides information on current trends in diesel mechanics as they relate to employment responsibilities. Topics may vary by term to reflect relevant training needs by the industry.

DEM 192  CO-OP ELECTIVE  3 Hrs.
This course allows the student to work parallel in a job closely related to the student’s major while attending college. The grade is based on the employer’s evaluation of the student’s productivity, an evaluation work report submitted by the student, and the student’s learning contract.
DEM 194 CO-OP ELECTIVE 3 Hrs.
This course allows the student to work parallel in a job closely related to the student’s major while attending college. The grade is based on the employer’s evaluation of the student’s productivity, an evaluation work report submitted by the student, and the student’s learning contract.

DEM 195 CO-OP ELECTIVE 3 Hrs.
This course allows the student to work parallel in a job closely related to the student’s major while attending college. The grade is based on the employer’s evaluation of the student’s productivity, an evaluation work report submitted by the student, and the student’s learning contract.

DEM 196 CO-OP ELECTIVE 1 Hr.
This course allows the student to work parallel in a job closely related to the student’s major while attending college. The grade is based on the employer’s evaluation of the student’s productivity, an evaluation work report submitted by the student, and the student’s learning contract.

DEM 197 CO-OP ELECTIVE 2 Hrs.
This course allows the student to work parallel in a job closely related to the student’s major while attending college. The grade is based on the employer’s evaluation of the student’s productivity, an evaluation work report submitted by the student, and the student’s learning contract.

DRAFTING (DDT)

DDT 104 BASIC COMPUTER-AIDED DRAFTING 3 Hrs.
This course provides an introduction to basic Computer Aided Drafting and Design (CADD) functions and techniques, using “hands’ on” applications. Topics include terminology, hardware, basic CADD and operating system functions, file manipulation, and basic CADD software applications in producing softcopy and hardcopy.

DDT 111 FUNDAMENTALS OF DRAFTING AND DESIGN TECHNOLOGY 3 Hrs.
This course serves as an introduction to the field of drafting and design and provides a foundation for the entire curriculum. Topics include safety, lettering, tools and equipment, geometric constructions, and orthographic sketching. Upon completion, the student should develop and use safe work habits, identify and properly use common drafting tools and equipment, construct geometric figures, and sketch basic orthographic views of objects.

DDT 118 BASIC ELECTRICAL DRAFTING 3 Hrs.
PREREQUISITE: DDT 104, DDT 111, and DDT 124
This course covers the universal language of electrical drafting, including electrical lines, symbols, abbreviations, and notation. Emphasis is placed on typical components such as generators, controls, transmission networks, and lighting, heating, and cooling devices. Upon completion, the student should be able to draw basic diagrams of electrical and electronic circuits using universally
accepted lines and symbols.

DDT 122  ADVANCED TECHNICAL DRAWING  3 Hrs.
PREREQUISITE: DDT 128
This course covers the methods of providing size description and manufacturing information for production drawings. Emphasis will be placed on accepted dimensioning and tolerancing practices including Geometric Dimensioning and Tolerancing for both the Customary English System and the ISO System. Upon completion, the student should be able to apply dimensions, tolerances, and notes to drawings to acceptable standards, including Geometric Dimensioning and Tolerancing, and produce drawings using and specifying common threads and various fasteners, including welding methods.

DDT 124  BASIC TECHNICAL DRAWING  3 Hrs.
This course covers sections, auxiliary views, and basic space geometry. Emphasis will be placed on the theory as well as the mechanics of applying sections, basic dimensioning, auxiliary views and basic space geometry. Upon completion, the student should have an understanding of orthographic projection and be able to identify orthographic planes, produce orthographic views of objects, apply various sectioning techniques and methods, and reproduce drawings.

DDT 125 SURFACE DEVELOPMENT  3 Hrs.
This course covers surface intersections and developments. Emphasis is placed on the basic types of intersections using simple geometric forms. Upon completion, students should be able to draw common concepts learned in this class.

DDT 126 SECTIONS AND CONVENTIONAL PRACTICE  3 Hrs.
PREREQUISITE: DDT 111 and DDT 124
This course provides techniques for representing more or less complicated interiors of parts that cannot be shown clearly by means of hidden lines. Topics include visualization and development of all standard sectional views, section lining, and associated conventional practices used by the drafter. Upon completion, the student should be able to select appropriate sectional views to represent more or less complex interior detail and execute detailed drawings as selected using orthographic multi-view projection and conventional practices.

DDT 127 INTERMEDIATE COMPUTER AIDED DRAFTING AND DESIGN  3 Hrs.
PREREQUISITE: DDT 104
This course covers intermediate-level concepts and applications of CADD. Emphasis will be placed on intermediate-level features, commands, and applications of CADD software.

DDT 128 INTERMEDIATE TECHNICAL DRAWING  3 Hrs.
PREREQUISITE: DDT 111 and DDT 124
This course is designed to develop a strong foundation in common drafting and design practices and procedures. Topics include dimensioning concepts and
pictorial drawings, auxiliary view, basic space geometry, and pictorial drawings. Upon completion, the student should be able to project and develop auxiliary views, locate and specify points, lines and planes in space, develop axonometric, oblique, and perspective drawings.

DDT 131 MACHINE DRAFTING BASICS 3 Hrs.
PREREQUISITE: DDT 111 and DDT 124
This course in machine drafting and design provides instruction in the largest specialty area of drafting in the United States, in terms of scope and job opportunities. Emphasis will be placed on the applications of multi-view drawings, including drawing organization and content, title blocks and parts lists, assembly drawings, detail drawings, dimensioning and application of engineering controls in producing industrial-type working drawings. Upon completion, the student should be able to organize, layout, and produce industrial-type working drawings, including the application of title blocks, parts lists, assemblies, details, dimensions, and engineering controls.

DDT 132 ARCHITECTURAL DRAFTING 3 Hrs.
PREREQUISITE: DDT 111 and DDT 124
This course in architectural design and drafting introduces basic terminology, concepts, and principles of architectural design and drawing. Topics include design considerations, lettering, terminology, site plans, and construction drawings. Upon completion, the student should be able to draw, dimension, and specify basic residential architectural construction drawings.

DDT 133 BASIC SURVEYING 3 Hrs.
This course covers the use of surveying instruments, mathematical calculations, and the theory of land surveying. Topics include USGS benchmarks, measuring horizontal and vertical angles and distances, terms, and recording, and interpreting field notes. Upon completion, the student should be able to recognize benchmarks and measure, specify, and record field notes.

DDT 134 DESCRIPTIVE GEOMETRY 3 Hrs.
PREREQUISITE: DDT 111 and DDT 124
This course is designed to teach the fundamental concepts of descriptive geometry through an emphasis on logical reasoning, visualization, and practical applications. Topics include orthographic projection, points and lines in space, auxiliary views, plane representation, intersecting and non-intersecting lines, piercing and intersecting planes, plane development, and calculations. Upon completion, the student should be able to project and intersect points, lines, and planes, with their relationships in space, as well as develop surfaces of an object for fabrication purposes.

DDT 150 THEORY OF RESIDENTIAL DRAWING AND DESIGN 3 Hrs.
PREREQUISITE: DDT 111 and DDT 124
This course provides the theory of residential drawing and design. Topics include architectural styles, house design, site and space planning, climate, drawing requirements, construction materials and process, terminology, and specific
types of drawings required to complete a full set of construction documents. Introductory, intermediate, and advanced topics are covered. Emphasis is placed on an understanding of the issues.

DDT 181/182 SPECIAL TOPICS IN DRAFTING AND DESIGN TECHNOLOGY  3 Hrs.
These courses provide specialized instruction in various areas related to the drafting industry. Emphasis is placed on meeting students’ needs.

DDT 191  DRAFTING INTERNSHIP  1 Hr.
PREREQUISITE: Completed a minimum of 12 credit hours of DDT
This course is designed for those who are involved in a structured employment situation that is directly related to the field of drafting and design and is coordinated with the drafting instructor. The student must spend at least five hours per week in an activity planned and coordinated jointly by the instructor and the employer. Upon completion, the student should have gained valuable work experience in a well-planned, coordinated training/work situation.

DDT 192  DRAFTING INTERNSHIP  2 Hrs.
PREREQUISITE: Completed a minimum of 12 credit hours of DDT.
This course is limited to those who are involved in a structured employment situation that is directly related to the field of drafting and design and is coordinated with the drafting instructor. The student must spend at least 10 hours per week in an activity planned and coordinated jointly by the instructor and the employer. Upon completion, the student should have gained valuable work experience in a well-planned, coordinated training/work situation.

DDT 193  DRAFTING INTERNSHIP  3 Hrs.
PREREQUISITE: Completed a minimum of 12 credit hours of DDT
This course is limited to those who are involved in a structured employment situation that is directly related to the field of drafting and design and is coordinated with the drafting instructor. The student must spend at least 15 hours per week in an activity planned and coordinated jointly by the instructor and the employer. Upon completion, the student should have gained valuable work experience in a well-planned, coordinated training/work situation.

DDT 212  INTERMEDIATE ARCHITECTURAL DRAFTING  3 Hrs.
PREREQUISITE: DDT 132 and DDT 150
This second course in architectural design and drafting continues with more advanced and detailed architectural plans. Topics include floor construction and detailing, foundation, wall, and roof construction and detailing, use of standards manuals, perspective drawings, electrical plans, plumbing plans, and building materials, with emphasis on residential and some light commercial applications. Upon completion, the student should be able to draw and specify advanced-level plans including various architectural details.

DDT 213  CIVIL DRAFTING, PLAT MAPS  3 Hrs.
PREREQUISITE: DDT 111 and DDT 124
This course introduces the drafting practices, symbols, conventions, and standards utilized in civil engineering contract documents. Topics include site planning, land surveying, topographic surveys, along with civil terminology. Upon completion, the student should be able to draw accurate plat maps giving legal descriptions of land parcels, draw simple site plans, and identify and use proper symbols and conventions on civil engineering drawings.

DDT 214 PIPE DRAFTING 3-4 Hrs.
PREREQUISITE: DDT 111 and DDT 124
This course covers the theory and practical application needed to understand piping fundamentals as used in refineries and petrochemical plants. Topics include process and mechanical flow diagrams, plant equipment, isometric drawings, instrumentation symbols, pipe symbols, flanges, fittings, and applications of basic math and trigonometry. Upon completion, the student should be able to demonstrate pipe drafting techniques and fundamentals in order to prepare working drawings used in refineries and the petrochemical industrial environment.

DDT 222 ADVANCED ARCHITECTURAL DRAFTING 3 Hrs.
PREREQUISITE: DDT 104 and DDT 132
This third course in architectural design and drafting continues with advanced architectural plans, including a slant toward light commercial construction. Topics include climate control plans, application of building codes, building materials, and finish specifications, cost estimating, and bid specifications. Upon completion, the student should be able to apply current techniques in producing advanced-level architectural plans, including residential and light commercial applications.

DDT 225 STRUCTURAL STEEL DRAFTING 3 Hrs.
PREREQUISITE: DDT 111 and DDT 124
This course covers the theory and practical applications necessary to understand the basic design and terminology of structural steel components used in light commercial buildings. Emphasis is placed on structural steel drafting techniques, bolted and welded connections, framing plans, sections, fabrication and connection details, and bills of material. Upon completion, the student should be able to produce engineering and shop drawings incorporating standard shapes, sizes, and details using the A.I.S.C. Manual and incorporating safety practices.

DDT 231 ADVANCED COMPUTER AIDED DRAFTING (CAD) 3-4 Hrs.
PREREQUISITE: DDT 127
This course covers the advanced applications of CAD software to engineering projects in various applications, including architectural, civil, mechanical, and environmental engineering, with consideration for advanced principle of CAD. These principles will be applied toward CAD customization and programming principles, for the expressed purpose of increasing productivity and improving the performance of the CAD operator, thereby, making CAD much more productive in an engineering environment. Emphasis will be placed on using intelligent CAD techniques to increase the quality of output and 3-D modeling and rendering.

2011-2012 Catalog 202
will be introduced. Upon completion, the student should be able to apply advanced CAD techniques in solving complex problems related to all engineering applications.

**DDT 233 THREE DIMENSIONAL MODELING**  
**PREREQUISITE:** DDT 231  
4 Hrs.  
This course provides instruction in 3-D Design Modeling utilizing the 3-D capabilities of CAD software. Emphasis is placed on 3-D wire-frame, surface and solids modeling along with the development of 2-D detail drawings from 3-D models. Upon completion, the student should be able to generate 3-D surface and solid models and 2-D orthographic production drawings from created solid models.

**DDT 237 CURRENT TOPICS IN CAD**  
3 Hrs.  
This course serves to introduce changing technology and current CAD subjects and software and the computing hardware needed to utilize new products. Topics include current trends in how industries use CAD applications, new developments, improvements and progressions within specific CAD applications as well as the necessary hardware. Upon completion, the student should be able to use more updated software in a specific CAD application and be more aware of improvements in CAD software and how to apply advancing technology in improving his or her CAD proficiency.

**DDT 238 SPECIAL TOPICS IN COMPUTER AIDED DRAFTING (CAD)**  
**PREREQUISITE:** DDT 231  
3 Hrs.  
This course in special CAD and multimedia topics covers special capabilities possible with CAD software, especially in conjunction with other graphical software, such as virtual “walk-throughs” or multimedia presentations. Topics include but are not limited to combining CAD software, imaging editing software, authoring software, and 3-D software into one harmonious relationship to produce multimedia presentations. Upon completion, the student should be aware of and understand how to utilize several software packages to produce multimedia presentations.

**DDT 239 INDEPENDENT STUDIES**  
1-4 Hrs.  
This course provides practical application of prior attained skills and experiences as selected by the instructor for the individual student. Emphasis is placed on applying knowledge from prior courses toward the solution of individual drafting and design problems. With completion of this course, the student will demonstrate the application of previously attained skills and knowledge in the solution of typical drafting application and problems.

**ECONOMICS (ECO)**

**ECO 231 PRINCIPLES OF MACROECONOMICS**  
**PREREQUISITE:** RDG 085 or ENG 093 or higher placement  
3 Hrs.  
This course is an introduction to macroeconomic theory, analysis, and policy applications. Topics include the following: scarcity, demand and supply, national income analysis, major economic theories concerning monetary and fiscal...
policies as stabilization measures, the banking system, and other economic issues or problems including international trade.

ECO 232  PRINCIPLES OF MICROECONOMICS  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is an introduction of the microeconomic theory, analysis, and applications. Topics include scarcity, the theories of consumer behavior, production and cost, markets, output and resource pricing, and international aspects of Microeconomics.

eLEARNING (ELO)

ELO 100  eLEARNING ORIENTATION  0 Hrs.
This course is designed to ensure that the student is prepared for the online teaching/learning environment. Emphasis is placed on self motivation, time management skills, individual learning styles, and technical skills needed in an online environment. This course is a prerequisite to all online classes, and there is no charge for this course.

ELCTRICAL TECHNOLOGY (ELT)

ELT 110  WIRING METHODS  3 Hrs.
PREREQUISITE: ELT 111 and ELT 112
This course is a study of various tasks, wiring methods, materials, and associated NEC requirements that students will be required to work with in residential and commercial wiring courses.

ELT 111  CONCEPTS OF DIRECT CURRENT  5 Hrs.
This course provides a study of basic concepts and application of direct current (DC). Specific topics include but are not limited to: an introduction to electrical theory, units of electrical measurement, DC electrical components, and constructing various types of DC circuits. Students gain hands-on experience through various laboratory problems. Emphasis is placed on the use of scientific calculators and the operation of common test equipment used to analyze and troubleshoot DC circuits and to prove the theories taught during classroom instruction. This course may serve as a substitute core for DC Fundamentals.

ELT 112  CONCEPTS OF ALTERNATING CURRENT  5 Hrs.
This course provides a study of basic concepts and application of alternating current (AC). Specific topics include but are not limited to: an introduction to AC electrical theory, AC electrical measurements, and constructing and measuring various types of AC circuits. Students gain hands-on experience through various laboratory problems. Emphasis is placed on the use of scientific calculators and the operation of various test equipment used to analyze and troubleshoot AC circuits. This course may serve as a substitute core for AC Fundamentals.

ELT 114  RESIDENTIAL WIRING METHODS  3 Hrs.
This course is a study of residential wiring practices and methods, the NEC requirements and residential blueprint interpretations.
ELT 115  RESIDENTIAL WIRING METHODS II 3 Hrs.
PREREQUISITE: ELT 114
This course is a study of residential wiring practices and methods, the NEC requirements and residential blueprint interpretations.

ELT 117  AD/DC MACHINES 3 Hrs.
PREREQUISITE: ELT 111 and ELT 112
This course covers the theory and operation of DC motors single and three phase AC motors and the labs will reinforce this knowledge. Emphasis is placed on the various types of single and three phase motors, wiring diagrams, starting devices, and practical application in the lab.

ELT 118  COMMERCIAL/INDUSTRIAL WIRING I 3 Hrs.
PREREQUISITE: ELT 111 and ELT 112
This course focuses on principles and applications of commercial and industrial wiring. Topics include, electrical safety practices, an overview of National Electric Code requirements as applied to commercial and industrial wiring, conduit bending, circuit design, pulling cables, transformers, switch gear, and generation principles.

ELT 122  ADVANCED AC/DC MACHINES 3 Hrs.
PREREQUISITE: ELT 111 and ELT 112
This course focuses on single and three-phase motors and also introduces students to DC motors. Emphasis is placed on field wiring, various types of AC and DC motors, troubleshooting procedures, and utilization of test equipment. Upon completion, the student should be able to explain, wire, troubleshoot, and test all types of AC and DC electric motors.

ELT 181  SPECIAL TOPICS IN ELT TECHNOLOGY 3 Hrs.
This course provides specialized instruction in various areas related to electrical technology. Emphasis is placed on meeting students’ needs.

ELT 192  PRACTICUM/INTERN/CO-OP 1 Hr.
PREREQUISITE: Complete at least 15 hours in electrical classes
This course provides practical experience in the field early in the student’s training as an electrician’s helper on the job, working a special project or conducting research/study in a directed area of the field. Emphasis is placed on gaining hands-on experience with tools of the trade as well as a better understanding of NEC directives. Upon completion, the student should possess a higher state of proficiency in the basic skills of connecting electrical wiring and conduit; this course may be repeated with the instructor’s permission.

ELT 193  PRACTICUM/INTERN/CO-OP 2 Hrs.
PREREQUISITE: Complete at least 15 hours in electrical classes
This course provides practical experience in the electrical craft as an electrician’s helper on the job, working a special project or conducting research/study in a directed area of the field. Emphasis is placed on gaining hands-on experience with tools of the trade as well as a better understanding of NEC directives. Upon
completion, the student should possess a higher state of proficiency in the basic skills of connecting electrical wiring and conduit; this course may be repeated with the instructor’s permission.

ELT 194  PRACTICUM/INTERN/CO-OP  3 Hrs.
PREREQUISITE: Complete at least 15 hours in electrical classes
This course provides practical experience in the electrical craft as an electrician’s helper or higher level working more advanced special projects or conducting more advanced research/study in a directed area of the field. Emphasis is placed on gaining hands-on experience with tools of the trade as well as a better understanding of NEC directives while studying in the classroom one hour per week. Upon completion, the student should possess a higher state of proficiency in the basic skills and a better knowledge of testing for the Electrical Journeyman’s Block Test.

ELT 200  SPECIAL PROJECTS  3 Hrs.
PREREQUISITE: Complete at least 15 hours in electrical classes
This course provides additional time and/or practice for the electrical technology major on a project which will enhance his/her abilities to perform required tasks. Emphasis is placed on the upgrading of the students skills and abilities. Upon completion, the student should be able to perform at a higher ability within his/her chosen field of study.

ELT 206  OSHA SAFETY STANDARDS  3 Hrs.
This course provides the student with the knowledge of OSHA safety standards as required by this organization, and as it relates to the job site. Emphasis is placed on overall safety practices, construction site safety practices, and safety procedures required by Federal/State laws. Upon completion, the student should be able to understand the requirements of OSHA as it relates to general and specific construction sites.

ELT 209  MOTOR CONTROLS I  3 Hrs.
PREREQUISITE: ELT 111 and ELT 112
This course covers the use of motor control symbols, magnetic motor starters, running overload protection, push button stations, sizing of magnetic motor starters and overload protection, and complex ladder diagrams of motor control circuits. Topics include sizing magnetic starters and overload protection, the use of push-button stations, ladder diagrams, and magnetic motor starters in control of electric motors, wye-delta starting, part start winding, resistor starting and electric starting devices. Upon completion, students should be able to understand the operation of motor starters, overload protection, interpret ladder diagrams using push-button stations and understand complex motor control diagrams.

ELT 212  MOTOR CONTROL II  3 Hrs.
PREREQUISITE: ELT 111 and ELT 112
This course covers complex ladder diagrams of motor control circuits and the uses of different motor starting techniques. Topics include wye-delta starting, part
start winding, resistor starting, and electronic starting devices. Upon completion, the student should be able to understand and interpret the more complex motor control diagrams and understand the different starting techniques of electrical motors.

ELT 221  ELECTRONICS FOR ELECTRICIANS  3 Hrs.  
PREREQUISITE: ELT 111 and ELT 112  
This course introduces the basic principles of solid state electronic equipment as found in many electrical and motor control circuits. Emphasis is placed on fundamental concepts of diodes, transistors, FETs and MOSFETs as they are used in electrical control circuits. Upon completion, the student should be able to explain the basic operation of these solid state components and be able to perform basic troubleshooting tasks.

ELT 224  SECURITY AND ALARM SYSTEMS  3 Hrs.  
PREREQUISITE:  
This course introduces the basic operation and installation of home and business security and fire alarm systems as well as low voltage (under 30v) systems such as lighting, door chimes and intercom systems. Emphasis is placed on installation of home and business security and fire alarm systems. Upon completion, students should be able to install residential and commercial security systems in accordance with code and directives.

ELT 231  PROGRAMMABLE CONTROLS I  3 Hrs.  
PREREQUISITE: ELT 111 and ELT 112  
This state-of-the art course includes the fundamental principles of programmable logic controls (PLCs) including hardware and programming. Emphasis is placed on but not limited to the following: hardwiring associated with the PLC, different options available with most PLCs, and basic ladder logic programming. Upon completion, the student must demonstrate his or her ability by developing programs, loading programs into real world PLCs, and troubleshooting the system if necessary.

ELT 232  PROGRAMMABLE CONTROLS II  3 Hrs.  
PREREQUISITE: ELT 111, ELT 112, and ELT 231  
This state-of-the-art course includes the principals of PLC’s, including hardware, programming, and program design. Emphasis is placed on, but not limited to the following: developing working programs, timers, counters, different special functions, and designing programs from existing hardwired systems. Upon completion, the student must demonstrate his or her ability by developing programs, loading programs into real world PLCs, and troubleshooting the system if necessary.

ELT 233  APPLIED PROGRAMMABLE CONTROLS  3 Hrs.  
PREREQUISITE: ELT 232  
This state-of-the-art course covers the more advanced topics of PLC’s. Emphasis is placed on, but not limited to the following: high-speed devices, analog programming, designing complete working systems, start-up and troubleshooting
techniques, and special projects. Upon completion, the student must demonstrate his or her ability by developing programs, loading programs into PLC’s, and troubleshooting the system if necessary.

ELT 241 NATIONAL ELECTRIC CODE 3 Hrs.
This course introduces the students to the National Electric Code and text and teaches the student how to find needed information within this manual. Emphasis is placed on locating and interpreting needed information within the NEC code manual. Upon completion, the student should be able to locate the NEC code requirements for a specific electrical installation.

ELT 242 JOURNEYMAN-MASTER PREP EXAM 3 Hrs.
This course is designed to help prepare a student to take either the Journeyman or Master Certification Exam. Emphasis is placed on review of electrical concepts and/or principals, practice tests, and test taking procedures. Upon completion, the student should be able to pass the Journeyman/Masters Certifying Exam.

ELT 243 ELECTRICAL COST ESTIMATING 3 Hrs.
PREREQUISITE: ELT 110 and ELT 114
This course provides an in-depth study of calculating wiring materials required and labor needed by man hours to complete a job. Emphasis is placed on how to document the scope of work required, sue various take-off sheets, and correct means by which to arrive at total job costs. Upon completion, the student should be able to perform actual calculations of sample jobs including overhead and operating costs.

ELT 244 CONDUIT BENDING AND INSTALLATION 3 Hrs.
This course provides the student the knowledge to properly bend electrical metallic tubing, rigid galvanized and intermediate metal conduit, and PVC conduit. Emphasis is placed on the theory and practical application of conduit bending methods. Upon completion, the student should be able to get measurements, layout, and successfully bend conduit using hand type, mechanical, and hydraulic benders.

ENGINEERING (EGR)

EGR 125 MODERN GRAPHICS FOR ENGINEERS 3 Hrs.
This course provides an introduction to manual and computer-assisted techniques of graphic communication employed by professional engineers. Topics include: lettering; instrumental and computer-aided drafting, technical sketching, orthographic projection, pictorial, sectional, and auxiliary views and dimensioning.

EGR 156 COMPUTER METHODS FOR ENGINEERS 3 Hrs.
This course consists of engineering applications using the FORTRAN IV computer programming language.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 092</td>
<td>BASIC ENGLISH I</td>
<td>4 Hrs.</td>
</tr>
<tr>
<td></td>
<td>This course is a review of basic writing skills and basic grammar. Emphasis is placed on the composing process of sentences and paragraphs in standard American written English. The student should demonstrate these skills chiefly through the writing of well-developed, multi-sentence paragraphs.</td>
<td></td>
</tr>
<tr>
<td>ENG 093</td>
<td>BASIC ENGLISH II</td>
<td>4 Hrs.</td>
</tr>
<tr>
<td>PREREQUISITE: ENG 092 or equivalent placement score</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is a review of composition skills and grammar. Emphasis is placed on coherence and the use of a variety of sentence structures in the composing process and on standard American written English usage. The student should demonstrate these skills chiefly through the writing of paragraph blocks and short essays.</td>
<td></td>
</tr>
<tr>
<td>COM 100</td>
<td>INTRODUCTORY TECHNICAL ENGLISH I</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td>PREREQUISITE: ENG 092 or equivalent placement score</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is designed to enhance reading and writing skills for the workplace. Emphasis is placed on technical reading, job-related vocabulary, sentence writing, punctuation, and spelling with substantial focus on occupational performance requirements. Upon completion, the student should be able to identify main ideas with supporting details and produce mechanically correct short writings appropriate to the workplace.</td>
<td></td>
</tr>
<tr>
<td>ENG 101</td>
<td>ENGLISH COMPOSITION I</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>English Composition I provides instruction and practice in the writing of at least six (6) extended compositions and the development of analytical and critical reading skills and basic reference and documentation skills in the composition process. English Composition I may include instruction and practice in library usage.</td>
<td></td>
</tr>
<tr>
<td>ENG 102</td>
<td>ENGLISH COMPOSITION II</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td>PREREQUISITE: A grade of C or better in ENG 101</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>English Composition II provides instruction and practice in the writing of six (6) formal, analytical essays, at least one of which is a research project using outside sources and/or references effectively and legally. Additionally, English Composition II provides instruction in the development of analytical and critical reading skills in the composition process. English Composition II may include instruction and practice in library usage.</td>
<td></td>
</tr>
<tr>
<td>ENG 246</td>
<td>CREATIVE WRITING I</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td>PREREQUISITE: A grade of C or better in ENG 102</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course provides instruction and practice in the writing of critical analysis of imaginative forms of literature. Emphasis is placed on originality in the creative writing process, and this course may include instruction on publishing. The student will compose a significant body of imaginative literature, which may be read by or to the class.</td>
<td></td>
</tr>
</tbody>
</table>
ENG 251  AMERICAN LITERATURE I  3 Hrs.
PREREQUISITE: A grade of C or better in ENG 102
This course is a survey of American literature from its inception to the middle of the nineteenth century. Emphasis is placed on representative works and writers of this period and on the literary, cultural, historical, and philosophical forces that shaped these works and that are reflected in them. Upon completion and in written compositions, the student should be able to interpret the aesthetic and thematic aspects of these works, relate the works to their historical and literary contexts, and understand relevant criticism and research.

ENG 252  AMERICAN LITERATURE II  3 Hrs.
PREREQUISITE: A grade of C or better in ENG 102
This course is a survey of American literature from the middle of the nineteenth century to the present. Emphasis is placed on representative works and writers of this period and on the literary, cultural, historical, and philosophical forces that shaped these works and that are reflected in them. Upon completion, the student should be able to interpret the aesthetic and thematic aspects of these works, relate the works to their historical and literary contexts, and understand relevant criticism and research.

ENG 261  ENGLISH LITERATURE I  3 Hrs.
PREREQUISITE: A grade of C or better in ENG 102
This course is a survey of English literature from the Anglo-Saxon period to the Romantic Age. Emphasis is placed on representative works and writers of this period and on the literary, cultural, historical, and philosophical forces that shaped these works and that are reflected in them. Upon completion and in written compositions, the student should be able to interpret the aesthetic and thematic aspects of these works, relate the works to their historical and literary contexts, and understand relevant criticism and research.

ENG 262  ENGLISH LITERATURE II  3 Hrs.
PREREQUISITE: A grade of C or better in ENG 102
This course is a survey of English literature from the Romantic Age to the present. Emphasis is placed on representative works and writers of this period and on the literary, cultural, historical, and philosophical forces that shaped these works and that are reflected in them. Upon completion and in written compositions, the student should be able to interpret the aesthetic and thematic aspects of these works, relate the works to their historical and literary contexts, and understand relevant criticism and research.

ENG 271  WORLD LITERATURE I  3 Hrs.
PREREQUISITE: A grade of C or better in ENG 102
This course is a study of selected literary masterpieces from Homer to the Renaissance. Emphasis is placed on major representative works and writers of this period on the literary, cultural, historical, and philosophical forces that shaped these works and that are reflected in them. Upon completion and in written compositions, the student should be able to interpret the aesthetic and thematic aspects of these works, relate the works to their historical and literary contexts, and understand relevant criticism and research.
ENG 272  WORLD LITERATURE II  3 Hrs.
PREREQUISITE: A grade of C or better in ENG 102
This course is a study of selected literary masterpieces from the Renaissance to the present. Emphasis is placed on major representative works and writers of this period and on the literary, cultural, historical, and philosophical forces that shaped these works and that are reflected in them. Upon completion and in written compositions, the student should be able to interpret the aesthetic and thematic aspects of these works, relate the works to their historical and literary contexts, and understand relevant criticism and research.

GEOGRAPHY (GEO)

GEO 100  WORLD REGIONAL GEOGRAPHY  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course surveys various countries and major regions of the world with respect to location and landscape, world importance, political status, population, type of economy, and its external and internal organization problems and potentials.

GEO 101  PRINCIPLES OF PHYSICAL GEOGRAPHY I  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This is the first in a two part sequence including topics such as weather and climate relative to the earth and relationships between the earth and sun. Laboratory is required.

GEO 102  PRINCIPLES OF PHYSICAL GEOGRAPHY II  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This is the second in a two part sequence including topics such as landforms, landscapes, soil, and vegetation of the earth. Laboratory is required.

GEO 200  GEOGRAPHY OF NORTH AMERICA  3 Hrs.
PREREQUISITE: GEO 100
This course is a survey of the geography of the United States and Canada with special emphasis on land usage, mineral resources, industrial development, and social and economic adaptation of man and the natural environment.

HEALTH EDUCATION (HED)

HED 199  ECOLOGICAL APPROACH TO HEALTH AND FITNESS  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course examines a myriad of factors influencing health and fitness behavior. Intrapersonal, interpersonal, institutional, community, and public policy factors are examined.

HED 221  PERSONAL HEALTH  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course introduces principles and practices of personal and family health; it includes human reproduction, growth and development, psychological dimensions of health, human sexuality, nutrition and fitness, aging, and death and dying.
HED 231  FIRST AID 3 Hrs.
This course provides instruction to the immediate, temporary care which should be given to the victims of accidents and sudden illness. It also includes standard and advanced requirements of the American Red Cross, and/or the American Heart Association. CPR training is also included.

HED 232  CARE AND PREVENTION OF ATHLETIC INJURIES 3 Hrs.
This course provides a study of specific athletic injuries, their treatment, and preventive measures.

HED 277  CPR RECERTIFICATION 1 Hr.
PREREQUISITE: Prior certification in CPR
In this course, instruction and review of updated information concerning cardiopulmonary resuscitation (CPR) is presented. The student must satisfactorily execute skills needed to meet requirements for recertification in Basic Cardiac Life Support (BCLS) as required by the American Heart Association.

HED 299  SPECIAL TOPICS: STRESS MANAGEMENT 2 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course will permit the student to focus on, examine, and address current specific issues and topics in the general area of health and disease. Stress management techniques will be described and evaluated and the relationship between stress and disease will be discussed.

HEALTH INFORMATION TECHNOLOGIES (HIT)

HIT 230  MEDICAL CODING SYSTEMS I 3 Hrs.
PREREQUISITE: BIO 120 and BIO 150
This course is intended to develop an understanding of coding and classification systems in order to assign valid diagnostic and procedure codes. Instruction includes description of classification and nomenclature systems, coding diagnoses and procedures, sequencing codes, analyzing actual medical records to identify data elements to be coded, and validating coded clinical information. Student competency includes demonstration of coding principles, and applications (manual and/or computer assisted).

HIT 232  MEDICAL CODING SYSTEMS II 3 Hrs.
PREREQUISITE: HIT 230
This course is a continuation of Medical Coding Systems I which is intended to develop an understanding of coding and classification systems in order to assign valid diagnostic and procedure codes. Instruction includes coding diagnoses and procedures, sequencing codes, analyzing actual medical records to identify data elements to be coded, validating coded clinical information, DRG assignment and case mix/severity of illness data. Student competency includes demonstration of coding principles and applications (manual and/or computer assisted).

HIT 260  PROFESSIONAL PRACTICE EXPERIENCE 3 Hrs.
PREREQUISITE: HIT 232
This course allows the student to correlate the experience of previous courses with on-site and on-campus laboratory learning experience. Emphasis is placed on application of all previous course work and orientation to all aspects of practice in a health information management department of a health care facility. Student competency is demonstrated by application of skills covered in theory and laboratory classes.

### HISTORY (HIS)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS 101</td>
<td>WESTERN CIVILIZATION I</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is a survey of social, intellectual, economic, and political developments, which have molded the modern western world. This course covers the ancient and medieval periods and concludes in the era of the Renaissance and Reformation.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS 102</td>
<td>WESTERN CIVILIZATION II</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is a continuation of HIS 101. It surveys development of the modern western world from the era of the Renaissance and Reformation to the present.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS 201</td>
<td>UNITED STATES HISTORY I</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course surveys United States history during the colonial, Revolutionary, early national and antebellum periods. It concludes with the Civil War and Reconstruction.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS 202</td>
<td>UNITED STATES HISTORY II</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is a continuation of HIS 201. It surveys United States history from the Reconstruction era to the present.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS 260</td>
<td>ALABAMA HISTORY</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>This course surveys the development of the state of Alabama from prehistoric times to the present. The course presents material on the discovery, exploration, colonization, territorial period, antebellum Alabama, Reconstruction, and modern history.</td>
<td></td>
</tr>
</tbody>
</table>

### HOME ECONOMICS (HEC)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEC 140</td>
<td>PRINCIPLES OF NUTRITION</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course introduces students to the principles of nutrition and the role and functions of nutrients in man’s food. Basic information concerning food selection and nutrition as a factor in health, ecology, and economy is included. Implications of nutrition for children may be stressed.</td>
<td></td>
</tr>
</tbody>
</table>
HUMANITIES (HUM)

HUM 298  DIRECTED STUDIES IN HUMANITIES  1-3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course provides an opportunity for the student to study selected topics in
the area of the humanities under the supervision of a qualified instructor. The
specific topics will be determined by the interests of the students and faculty and
the course may be repeated for credit.

HUM 299-01 PTK HONORS COURSE I  1 Hr.
This course provides an opportunity for the student to study selected topics in
the area of the humanities under the supervision of a qualified instructor. The
specific topics will be determined by the interests of the students and faculty and
the course may be repeated for credit.

HUM 299-02 PTK HONORS COURSE II  1 Hr.
This course provides an opportunity for the student to study selected topics in
the area of the humanities under the supervision of a qualified instructor. The
specific topics will be determined by the interests of the students and faculty and
the course may be repeated for credit.

HUM 299-03 PTK HONORS COURSE III  1 Hr.
This course provides an opportunity for the student to study selected topics in
the area of the humanities under the supervision of a qualified instructor. The
specific topics will be determined by the interests of the students and faculty and
the course may be repeated for credit.

INDUSTRIAL ELECTRONICS (ILT)

ILT 100  APPLIED ELECTRONIC COMPUTATIONS  3 Hrs.
This course is an applied mathematics and algebra course for students in
electronics or similar programs. Topics include decimals, fractions, negative
numbers, powers and roots, the metric systems, logarithms, applied trigonometry,
and algebra. Upon completion, the student should be able to perform applied
mathematics calculations needed in electronics.

ILT 106  CONCEPTS OF DIRECT CURRENT  5 Hrs.
This course provides a study of basic concepts and application of direct current
(DC). Specific topics include but are not limited to: an introduction to electrical
theory, units and electrical measurement, DC electrical components, and
constructing various types of DC circuits. Students gain hands-on experience
through various laboratory problems. Emphasis is placed on the use of scientific
calculators and the operation of common test equipment used to analyze and
troubleshoot DC circuits and to prove the theories taught during classroom
instruction.

ILT 107  CONCEPTS OF ALTERNATING CURRENT  5 Hrs.
COREQUISITE: ILT 106
This course provides a study of basic concepts and application of alternating
current (AC). Specific topics include but are not limited to: an introduction
to AC electrical theory, AC electrical measurements, and constructing and measuring various types of AC circuits. Students gain hands-on experience through various laboratory problems. Emphasis is placed on the use of scientific calculators and the operation of various test equipment used to analyze and troubleshoot AC circuits.

**ILT 111  CONCEPTS OF SOLID STATE ELECTRONICS** 5 Hrs.  
**PREREQUISITE:** ILT 107  
This course is an introduction to semiconductor fundamentals and applications to the electronic devices. Course covers the basic operations and applications to include rectifier circuits, transistors, and thyristors. Coverage is given to safety, use, and care with hazardous materials and personal as well as material and environmental considerations. Upon completion, the student should be able to construct and test for proper operation of various types of solid state devices.

**ILT 112  CONCEPTS OF DIGITAL ELECTRONICS** 5 Hrs.  
**PREREQUISITE:** ILT 113  
This course provides instruction in digital electronics. Topics include: number systems and codes, a review of Boolean algebra, logic elements, digital circuits, programmable logic circuits, and memory and computing circuits. This course provides laboratory exercises to analyze, construct, test, and troubleshoot digital circuits.

**ILT 113  CONCEPTS OF ELECTRONIC CIRCUITS** 5 Hrs.  
**PREREQUISITE:** ILT 107  
This course covers the commonly utilized circuits found in all areas of electronics. These include various rectifiers, filters, voltage regulating circuits, operational amplifier circuits, ICs, and oscillator circuits. Upon completion, the student should be able to construct and test various types of electronic circuits.

**ILT 115  ADVANCED INDUSTRIAL CONTROLS** 3 Hrs.  
**PREREQUISITE:** ILT 107.  
**COREQUISITE:** ILT 116  
This course emphasizes the fundamentals and applications of solid state motor starters. Topics include DC drives, AC variable frequency drives, thyristers, sequences circuits and closed loop control including PID process control. Upon completion, the student should be able to apply principles of solid state motor starters.

**ILT 116  ADVANCED INDUSTRIAL CONTROLS LAB** 2 Hrs.  
**PREREQUISITE:** ILT 107.  
**COREQUISITE:** ILT 115  
This lab emphasis DC drives, AC variable frequency drives, thyristors, sequences circuits and closed loop control including PID process control. Upon completion, the student should be able to apply principles of solid state motor starters.
ILT 148  AUTOMATIC CONTROLS SYSTEMS  3 Hrs.
PREREQUISITE: ILT 107
COREQUISITE: ILT 149
This course emphasizes automated control systems and sub-systems. Topics include robotics, programmable hydraulics, pneumatic, microprocessor, variable-speed drives, transducers, and related control circuitry with emphasis on troubleshooting the total system. Upon completion, the student should be able to apply principles of automated control systems.

ILT 149  AUTOMATIC CONTROLS SYSTEMS LAB  2 Hrs.
PREREQUISITE: ILT 10
COREQUISITE: ILT 148
This lab emphasizes robotics, programmable hydraulics/pneumatic, microprocessors, variable-speed drives, transducers, and related control circuitry with emphasis on troubleshooting the total system. Upon completion, the student should be able to apply principles of automated control systems.

ILT 164  CIRCUIT FABRICATION  1 Hr.
PREREQUISITE: ILT 107
This course provides instruction in fabrication of functional circuits and is an introduction to device construction and fabrication. Utilizing discrete components, students will fabricate functional circuits. Topics include soldering, cable construction, coaxial cable connection and termination, component mounting cases, and chassis, printed circuit board design, layout, fabrication, and repair, as well as soldering techniques, care of tools, wire splicing, wire wrapping, connector maintenance, and related shop safety. Upon completion of this course, the student should be able to perform basic circuit and project construction.

ILT 167  AC/DC MACHINERY AND CONTROLS I  3 Hrs.
PREREQUISITE: ILT 107
This course provides the student with knowledge in AC/DC machinery and controls. Topics include the characteristics and operating principles of the different types of AC/DC generators and motors, manual and automatic starters and controllers. The lab enables students to test, troubleshoot and repair AC/DC machinery and controls. Upon completion, the student should be able to apply practical skills in AC/DC machinery.

ILT 169  HYDRAULICS/PNEUMATICS  3 Hrs.
This course provides an introduction to hydraulics/pneumatics. Topics include hydraulic pumps, pneumatic compressors work and system components such as valves, filters, regulators, actuators, accumulators, and lubricators. The lab enables students to test, troubleshoot and repair hydraulic pumps, pneumatic compressors work and system components such as valves, filters, regulators, actuators, accumulators, and lubricators. Upon completion, students will be able to apply principles of hydraulic/pneumatics.

ILT 176  ELEMENTS OF INDUSTRIAL CONTROL  3 Hrs.
COREQUISITES: ILT 177
This course covers the basics of automatic control of industrial systems using the programmable logic controller. Topics include relay logic, ladder logic, motor controls, and the development of ladder logic using software. Upon completion of this course and the associated lab, a student should be able to configure and program a PLC.

ILT 177  ELEMENTS OF INDUSTRIAL CONTROL LAB  2 Hrs.
COREQUISITES: ILT 176
This course covers the basics of automatic control of industrial systems using the programmable logic controller. Topics include relay logic, ladder logic, motor controls, and the development of ladder logic using software. Upon completion of this course and the associated theory course, a student should be able to configure and program a PLC.

ILT 180  SPECIAL TOPICS  3 Hrs.
PREREQUISITE: ILT 113
This course is designed to allow students an opportunity to study directly-related topics of particular interest which require the application of technical knowledge and technical skills. Emphasis is placed on the application of skills and knowledge with practical experiences. Upon completion, the student should be able to solve job-related problems using technical skills and knowledge.

ILT 194  INTRODUCTION TO PROGRAMMABLE LOGIC CONTROLLERS  3 Hrs.
PREREQUISITE: ILT 107
COREQUISITE: ILT 197
This course focuses on the use of PLCs. Topics include operation, programming procedures, fault isolation procedures, and methods of entering, executing, debugging, and changing programs. This lab enables students to practice operations, programming procedures, fault isolation procedures, and methods of entering, executing, debugging, and changing programs. Upon completion, the student should be able to apply principles of operations and programming of programmable logic controllers.

ILT 195  TROUBLESHOOTING TECHNIQUES I  3 Hrs.
PREREQUISITE: ILT 107, ILT 169, ILT 194, ILT 197
This course focuses on the systematic approach to solving problems. Emphasis is placed on the instrument failures and their interaction with process downtime. Upon completion, the student should be able to solve problems on a process simulator or in an actual setting.

ILT 196  ADVANCED PROGRAMMABLE LOGIC CONTROLLERS  3 Hrs.
This course includes the advanced principals of PLC’s including hardware, programming, and troubleshooting. Emphasis is placed on developing advanced working programs and troubleshooting hardware and software communication problems. Upon completion, the student should be able to demonstrate their ability in developing programs and troubleshooting the system.
ILT 197  MOTOR CONTROLS I  
PREREQUISITE: ILT 107  
3 Hrs.
This course covers the use of motor control symbols, magnetic motor starters, running overload protection, push-button stations, sizing of magnetic motor starters and overload protection, and complex ladder diagrams of motor control circuits. Topics include sizing magnetic starters and overload protection, the use of push-button stations, ladder diagrams, and magnetic motor starters in control of electric motors, wye-delta starting, part start winding, and resistor starting and electric starting devices. Upon completion, the student should be able to understand the operation of motor starters, overload protection, interpret ladder diagrams using push-button stations, and understand complex motor control diagrams.

ILT 200  SURVEY OF VARIOUS MANUFACTURERS OF PROGRAMMABLE LOGIC CONTROLLERS  
3 Hrs.
This course provides an introduction to various manufacturers of programmable logic controllers. The student will learn how the various manufacturers differ on their approaches to manufacturing and programming their PLCs and they will learn how they are similar. Upon completion, the student will have been exposed to various PLCs and will be able to confidently enter a PLC work environment and perform maintenance procedures on the PLCs used there.

ILT 211  TROUBLESHOOTING TECHNIQUES  
3 Hrs.
This course focuses on the systematic approach to solving problems. Emphasis is placed on instrument failures and their interaction with process down-time. Upon completion, the student should be able to solve problems on a process simulator or in an actual setting.

ILT 216  INDUSTRIAL ROBOTICS  
PREREQUISITE: ILT 107  
COREQUISITE: ILT 217  
3 Hrs.
This course covers principles of electro-mechanical devices. Topics include the principles, concepts, and techniques involved in interfacing microcomputers to various electro-mechanical devices to produce geographical movement. Upon completion, the student should be able to apply the principles of electromechanical devices.

ILT 217  INDUSTRIAL ROBOTICS LAB  
PREREQUISITE: ILT 107  
COREQUISITE: ILT 216  
2 Hrs.
This lab covers the principles, concepts, and techniques involved in interfacing microcomputers to various electro-mechanical devices to produce geographical movement. Upon completion, the student should be able to apply the principles of electro-mechanical devices.

ILT 224  ELECTRONIC COMMUNICATIONS  
3 Hrs.
This course provides the student with knowledge in electronic circuits used in amplitude, frequency, and phase modulation communication systems. Topics
include modulation and detection techniques, antennas and transmission lines. Upon completion, the student should be able to apply principles of filters, oscillators, classes of amplifiers, and resonance.

ILT 225 ELECTRONIC COMMUNICATIONS LAB 2 Hrs.
This lab focuses on electronic circuits used in amplitude, frequency, and phase modulation communication systems. Topics include modulation and detection techniques, antennas and transmission lines. Upon completion, the student should be able to apply principles of filters, oscillators, classes of amplifiers, and resonance.

ILT 239 CERTIFICATION PREPARATION 3 Hrs.
This course includes the review necessary before attempting technician certification examinations given by various non-government certifying organizations and pre-employment tests given by employers. Upon completion of this course students should understand the preparations necessary to successfully complete the exam process.

ILT 251 RF COMMUNICATIONS 3 Hrs.
PREREQUISITE: ILT 113
This course provides a study of the transmission and receiving of analog communication signals that are used in radio, television, and radio frequency (RF) communication applications. Emphasis is placed on circuits that produce, transmit, and receive RF signals used in radio, television, and RF communication. Upon completion, the student should be able to apply RF communication principles in the transmission and receiving of radio, television, and RF communication signals.

ILT 252 DIGITAL COMMUNICATIONS 3 Hrs.
PREREQUISITE: ILT 251
This course provides a study of the transmission and receiving digital communication signals that are used in radio, television, and digital communication applications. Emphasis is placed on circuits that produce, transmit, and receive digital signals used in radio, television, and digital communication. Upon completion, the student should be able to apply digital communication principles in the transmission and receiving of radio, television, and digital communication signals.

ILT 262 CERTIFICATION PREPARATION 3 Hrs.
PREREQUISITE: ILT 112
This course provides an overview of electrical/electronics principles to prepare the student for the CET exam. Upon completion, the student should be able to pass the CET exam and be classified as a national certified electronic technician.

ILT 271 INDEPENDENT STUDY 2 Hrs.
This course is designed to allow the student to independently study various topics related to instrumentation technology. Emphasis is placed on the refinement or advancement of a particular skill or skills. Upon completion, the
student should be able to perform specific job related functions according to standard operating procedures.

ILT 276  ELEMENTS OF INDUSTRIAL CONTROL II  3 Hrs.
PREREQUISITE: ILT 194
COREQUISITE: ILT 277
This course includes the advanced principals of PLCs including hardware, programming, variable speed drives, and troubleshooting. Emphasis is placed on developing advanced working programs, and troubleshooting hardware and software communication problems. Upon completion, the student should be able to demonstrate their ability in developing programs and troubleshooting the system.

ILT 277  ELEMENTS OF INDUSTRIAL CONTROL II LAB  2 Hrs.
PREREQUISITE: ILT 194
COREQUISITE: ILT 276
This course includes the advanced principals of PLCs including hardware, programming, variable speed drives, and troubleshooting. Emphasis is placed on developing advanced working programs, and troubleshooting hardware and software communication problems. Upon completion, the student should be able to demonstrate their ability in developing programs and troubleshooting the system.

ILT 280  SPECIAL TOPICS  3 Hrs.
PREREQUISITE: ILT 113
This course is designed to allow students an opportunity to study directly-related topics of particular interest which require the application of technical knowledge and technical skills. Emphasis is placed on the application of skills and knowledge with practical experiences. Upon completion, the student should be able to solve job related problems using technical skills and knowledge.

ILT 281  SPECIAL TOPICS FOR INDUSTRIAL ELECTRONICS I  3 Hrs.
This course is designed to allow students an opportunity to study directly-related topics of particular interest which require the application of technical knowledge and technical skills. Emphasis is placed on the application of skills and knowledge with practical experiences. Upon completion, students should be able to solve job related problems using technical skills and knowledge.

ILT 282  SPECIAL TOPICS FOR INDUSTRIAL ELECTRONICS II  3 Hrs.
This course is designed to allow students an opportunity to study directly-related topics of particular interest which require the application of technical knowledge and technical skills. Emphasis is placed on the application of skills and knowledge with practical experiences. Upon completion, students should be able to solve job related problems using technical skills and knowledge.

ILT 289  COOPERATIVE EDUCATION  1 Hrs.
This course provides students work experience with a College-approved employer in an area directly related to the student’s program of study. Emphasis is placed
on integrating classroom experiences with work experience. Upon completion, the student should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

ILT 290  COOPERATIVE EDUCATION  2 Hrs.
This course provides the student work experience with a College-approved employer in an area directly related to the student’s program of study. Emphasis is placed on integrating classroom experiences with work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

ILT 291  COOPERATIVE EDUCATION  3 Hrs.
This course provides students work experience with a College-approved employer in an area directly related to the student’s program of study. Emphasis is placed on integrating classroom experiences with work experience. Upon completion, the student should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

ILT 292  COOPERATIVE EDUCATION  3 Hrs.
This course provides students work experience with a College-approved employer in an area directly related to the student’s program of study. Emphasis is placed on integrating classroom experiences with work experience. Upon completion, the student should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

ILT 293  COOPERATIVE EDUCATION  3 Hrs.
This course provides students work experience with a College-approved employer in an area directly related to the student’s program of study. Emphasis is placed on integrating classroom experiences with work experience. Upon completion, the student should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

INDUSTRIAL MAINTENANCE TECHNOLOGY (INT)

INT 117  PRINCIPLES OF INDUSTRIAL MECHANICS  3 Hrs.
This course provides instruction in basic physics concepts applicable to mechanics of industrial production equipment. Topics include the basic application of mechanical principles with emphasis on power transmission, specific mechanical components, alignment, and tension. Upon completion, the student should be able to perform basic troubleshooting, repair and maintenance functions on industrial production equipment.

INT 118  FUNDAMENTALS OF INDUSTRIAL HYDRAULICS AND PNEUMATICS  3 Hrs.
This course includes the fundamental concepts and theories for the safe operation of hydraulic and pneumatic systems used with industrial production equipment. Topics include the physical concepts, theories, laws, air flow characteristics, actuators, valves, accumulators, symbols, circuitry, filters, servicing safety, and preventive maintenance and the application of these concepts to
perform work. Upon completion, the student should be able to service and perform preventive maintenance functions on hydraulic and pneumatic systems.

INT 126  PREVENTIVE MAINTENANCE  3 Hrs.
This course focuses on the concepts and applications of preventive maintenance. Topics include the introduction of alignment equipment, job safety, tool safety, preventive maintenance concepts, procedures, tasks, and predictive maintenance concepts. Upon completion, the student should demonstrate the ability to apply proper preventive maintenance and explain predictive maintenance concepts.

INT 127  PRINCIPLES OF INDUSTRIAL PUMPS AND PIPING SYSTEMS  3 Hrs.
This course provides instruction in the fundamental concepts of industrial pumps and piping systems. Topics include pump identification, operation, and installation, maintenance and troubleshooting, and piping systems, and their installation. Upon course completion, the student should be able to install, maintain, and troubleshoot industrial pumps and piping systems.

INT 221  DC FUNDAMENTALS  3 Hrs.
This course provides a study of atomic theory, direct current (DC), properties of conductors and insulators, direct current characteristics of series, parallel, and series parallel circuits. Inductors and capacitors are introduced and their effects on DC circuits are examined. Upon completion, the student should be prepared to analyze complex DC circuits, solve for unknown circuits variables and to use basic electronic test equipment.

INT 223  AC FUNDAMENTALS  3 Hrs.
This course provides a study of the theory of alternating current (AC). Students are prepared to analyze complex AC circuit configurations with resistor, capacitors, and inductors in series and parallel combinations. Upon completion, the student should be able to design AC circuits and explain the function of alternating circuits such as RLC, impedance, phase relationships and power factor.

INT 234  PRINCIPLES OF INDUSTRIAL MAINTENANCE WELDING AND METAL CUTTING TECHNIQUES  3 Hrs.
This course provides instruction in the fundamentals of acetylene cutting and the basics of welding needed for the maintenance and repair of industrial production equipment. Topics include oxy-fuel safety, choice of cutting equipment, proper cutting angles, equipment setup, cutting place and pipe, hand tools, types of metal welding machines, rod and welding joints, and common welding passes and beads. Upon completion, the student should demonstrate the ability to perform metal welding and cutting techniques necessary for repairing and maintaining industrial equipment.

INTERDISCIPLINARY STUDIES (IDS)
IIDS 114  INTERDISCIPLINARY SEMINAR: CURRENT TOPICS IN HUMAN CONCERNS  1-2 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is a seminar/discussion course designed to provide an opportunity for the student to conduct an in-depth investigation of selected topics. The particular topic selected will include issues from two or more disciplines and is determined by faculty and student interest. Classroom experiences emphasize and help develop skills in organizing and presenting information as well as explaining and defending ideas and conclusions. An oral seminar presentation is required. IDS 114 may be repeated for credit.

IDS 299  DIRECTED STUDIES IN LEADERSHIP  1-2 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement.
This course provides training and experience in leadership techniques and practice. The student is required to serve in leadership positions on campus or in the community. IDS 299 may be repeated for credit.

LIBRARY SCIENCE (LBS)

LBS 101  INTRODUCTION TO LIBRARY USE II  1 Hr.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course provides instruction in the use of the library. Emphasis is placed on basic library skills, including use of library catalogs, reference sources, current information sources, and indexes.

LBS 102  INTRODUCTION TO LIBRARY USE III  1 Hr.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course builds on basic library skills offered in LBS 101, with particular emphasis on library resources involved in writing the research paper.

MACHINE TOOL TECHNOLOGY (MTT)

MTT 100  MACHINING TECHNOLOGY I  6 Hrs.
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, the student should be able to perform the basic operation of measuring, layout, drilling, sawing, turning, and milling.

MTT 103  MACHINING TECHNOLOGY II  6 Hrs.
This course provides additional instruction and practice in the use of measuring tools, lathes, milling machines, and grinders. Emphasis is placed on setup and operation of machine tools including the selection of work holding devices, speeds, feeds, cutting tools and coolants. Upon completion, the student should be able to perform basic procedures of precision grinding and advanced operations of measuring, layout, drilling, sawing turning and milling.

MTT 107  MACHINING CALCULATIONS I  3 Hrs.
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, the student should be able to perform basic shop calculations.
MTT 108  MACHINE HANDBOOK FUNCTIONS I  3 Hrs.
This course covers the machinists' handbook. Emphasis is placed on formulas, tables, usage, and related information. Upon completion, the student should be able to use the handbook in the calculation and set up of machine tools.

MTT 121  BASIC BLUEPRINT READING FOR MACHINISTS  3 Hrs.
This course covers the basic principles of blueprint reading and sketching. Topics include multiview drawings, interpretation of conventional lines; and dimensions, notes, and thread notations. Upon completion, the student should be able to interpret basic drawings, visualize parts, and make pictorial sketches.

MTT 127  METROLOGY  3 Hrs.
This course introduces the 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 correct use of measuring instruments.

MTT 129  LATHE OPERATIONS  6 Hrs.
This course includes more advanced lathe practices such as taper turning, threading, boring, and set-up procedures. Emphasis is placed on safety procedures and the machinist responsibility in the set-up and operation of lathes. Upon completion, the student should be able to apply lathe techniques to produce tool projects.

MTT 131  INTERMEDIATE BLUEPRINT READING  3 Hrs.
The purpose of this course is for students to further apply knowledge and skills with reading and interpreting blue prints for machining operations. Specific topics include: calculating missing dimensions from drawings, drawing different views of an object, knowledge of features and types of threads and fasteners used in mechanical objects, types of surface requirements on blueprints, and interpreting blueprints for casting and weldments.

MTT 136  MILLING OPERATIONS  6 Hrs.
This course provides basic knowledge of milling machines. Emphasis is placed on types of milling machines and their uses, cutting speed, feed calculations, and set-up procedures. Upon completion, the student should be able to apply milling techniques to produce machine tool projects.

MTT 146  PRECISION GRINDING MACHINES I  6 Hrs.
This course is the study of precision grinding machines and their operations. The course will also focus on the different types of grinding machines, different setup procedures, grinding wheel characteristics and selection, and surface finish requirements and characteristics.

MTT 154  METALLURGY  3 Hrs.
This course covers the production, properties, testing, classification, microstructure, and heat treating effects of ferrous and non-ferrous metals. Topics
include the iron-carbon phase diagram, ITT diagram, ANSI code, quenching, senescing, and other processes concerning metallurgical transformations. Upon completion, the student should be able to understand the iron-carbon phase diagram, ITT diagram, microstructure images, and other phenomena concerning the behavior of metals.

MTT 181/182/281/282
SPECIAL TOPICS IN MACHINE TOOL TECHNOLOGY 3 Hrs.
This course is a guided independent study of special projects in machine tool technology. Emphasis is placed on the student's needs. Upon completion, the student should be able to demonstrate skills developed to meet specific needs.

MTT 291  COOPERATIVE EDUCATION IN MACHINE TOOL TECHNOLOGY 3 Hrs.
Students work on a part-time basis in a job directly related to machine tool technology. The employer and supervising instructor evaluate students' progress. Upon completion, the student should be able to apply skills and knowledge in an employment setting.

MASS COMMUNICATIONS (MCM)

MCM 100  INTRODUCTION TO MASS COMMUNICATION 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course provides the student with general study of mass communication and journalism. This course includes theory, development, regulation, operation, and effects upon society.

MCM 113-114-115, 213-214-215
STUDENT PUBLICATIONS 1-2 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
These courses offer practical experience in journalism skills through working on the staff of student publications.

MCM 120  INTRODUCTION TO JOURNALISM 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
A first writing course in journalism, this course features journalistic style, copy reading, story types, headlines, typography, and page make-up.

MCM 130  NEWS REPORTING 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course includes instruction and practice in news gathering and news writing techniques, including methodology, observation, interviews, and use of sources.

MCM 200  NEWS PHOTOGRAPHY 3 Hrs.
COREQUISITE: ENG 101
This course includes practice in camera techniques, film developing, and print making for newspapers and other publications.
MCM 230  SURVEY OF ADVERTISING 3 Hrs.
COREQUISITE: ENG 101
This course includes instruction in the structure and functions of the advertising agency and the elements of effective advertisement.

MCM 240  INTRODUCTION TO PUBLIC RELATIONS 3 Hrs.
COREQUISITE: ENG 101
This course is an introduction to public relations techniques, including the grouping of publics, publication strategies, and preparation of publicity for various media.

MATHEMATICS (MTH or MAH)

MAH 101  INTRODUCTORY MATHEMATICS I 3 Hrs.
This course is a comprehensive review of arithmetic with basic algebra designed to meet the needs of certificate and diploma programs. Topics include business and industry related arithmetic and geometric skills used in measurement, ratio and proportion, exponents and roots, applications of percent, linear equations, formulas, and statistics. Upon completion, the student should be able to solve practical problems in his or her specific occupational areas of study. This is a course designed for the student seeking a certificate and does not meet the general core requirement for mathematics.

MTH 090  BASIC MATHEMATICS 2-4 Hrs.
This is a developmental course reviewing arithmetical principles and computations designed to help the student’s mathematical proficiency for selected curriculum entrance.

MTH 098  ELEMENTARY ALGEBRA 4 Hrs.
PREREQUISITE: MTH 090 or equivalent placement score
This course is a review of the fundamental arithmetic and algebra operations. The topics include the numbers of ordinary arithmetic and their properties, integers and rational numbers, the solving of equations, polynomials and factoring, and an introduction to systems of equations and graphs.

MTH 100  INTERMEDIATE COLLEGE ALGEBRA 3 Hrs.
PREREQUISITE: MTH 098 or equivalent placement score, RDG 085 or ENG 093 or higher placement
This course provides a study of algebraic techniques such as linear equations and inequalities, quadratic equations, systems of equations, and operations with exponents and radicals. Functions and relations are introduced and graphed with special emphasis on linear and quadratic functions. This course does not apply toward the general core requirements for mathematics.

MTH 110  FINITE MATHEMATICS 3 Hrs.
PREREQUISITE: A grade of C or better in MTH 100 or equivalent placement score, RDG 085 or ENG 093 or higher placement
This course is intended to give an overview of topics in finite mathematics together with their applications, and is taken primarily by the student who
is not majoring in science, engineering, commerce, or mathematics (i.e., students who are not required to take Calculus). This course will draw on and significantly enhance the student’s arithmetic and algebraic skills. The course includes sets, counting, permutations, combinations, basic probability (including Baye’s Theorem), and introduction to statistics (including work with Binomial Distributions and Normal Distributions), matrices and their applications to Markov chains and decision theory. Additional topics may include symbolic logic, linear models, linear programming, the simplex method, and applications.

MTH 112  PRECALCULUS ALGEBRA  
PREREQUISITE: A grade of C or better in MTH 100 or equivalent placement score, RDG 085 or ENG 093 or higher placement  
This course emphasizes the algebra of functions including polynomial, rational, exponential, and logarithmic functions. The course also covers systems of equations and inequalities, quadratic inequalities, and the binomial theorem. Additional topics may include matrices, Cramer’s Rule, and mathematical induction.

MTH 113  PRECALCULUS TRIGONOMETRY  
PREREQUISITE: A grade of C or better in MTH 112 or equivalent placement score, RDG 085 or ENG 093 or higher placement  
This course includes the study of trigonometric (circular functions) and inverse trigonometric functions, and includes extensive work with trigonometric identities and trigonometric equations. The course also covers vectors, complex numbers, DeMoivre’s Theorem, and polar coordinates. Additional topics may include conic sections, sequences, and using matrices to solve linear systems.

MTH 116  MATHEMATICAL APPLICATIONS  
PREREQUISITE: A grade of S in MTH 090 or equivalent placement score, RDG 085 or ENG 093 or higher placement  
This course provides practical applications of mathematics and includes selected topics from consumer math and algebra. Some topics included are integers, percent, interest, ratio and proportion, metric system, probability, linear equations, and problem solving. This is a terminal course designed for the student seeking an AAS degree and does not meet the general core requirement for mathematics.

MTH 120  CALCULUS AND ITS APPLICATIONS  
PREREQUISITE: A grade of C or better in MTH 112 or equivalent placement score, RDG 085 or ENG 093 or higher placement  
This course is intended to give a broad overview of calculus and is taken primarily by the student majoring in Commerce and Business Administration. It includes differentiation and integration of algebraic, exponential, and logarithmic functions and applications to business and economics. The course should include functions of several variables, partial derivatives (including applications), Lagrange Multipliers, L’Hopital’s Rule, and multiple integration (including applications).
MTH 125  CALCULUS I  4 Hrs.
PREREQUISITE: A grade of C or better in MTH 113 or equivalent placement score, RDG 085 or ENG 093 or higher placement
This is the first of three courses in the basic calculus sequence taken primarily by students in science, engineering, and mathematics. Topics include the limit of a function; the derivative of algebraic, trigonometric, exponential, and logarithmic functions; and the definite integral and its basic applications to area problems. Applications of the derivative are covered in detail, including approximations of error using differentials, maximum and minimum problems, and curve sketching using calculus.

MTH 126  CALCULUS II  4 Hrs.
PREREQUISITE: A grade of C or better in MTH 125 or equivalent placement score, RDG 085 or ENG 093 or higher placement
This is the second of three courses in the basic calculus sequence. Topics include vectors in the plane and in space, lines and planes in space, applications of integration (such as volume, arc length, work and average value), techniques of integration, infinite series, polar coordinates, and parametric equations.

MTH 227  CALCULUS III  4 Hrs.
PREREQUISITE: A grade of C or better in MTH 126 or equivalent placement score, RDG 085 or ENG 093 or higher placement
This is the third of three courses in the basic calculus sequence. Topics include vector functions, functions of two or more variables, partial derivatives (including applications), quadric surfaces, multiple integration, and vector calculus including Green’s Theorem, Curl and Divergence, surface integrals, and Stokes’ Theorem.

MTH 231  MATH FOR THE ELEMENTARY TEACHER I  3 Hrs.
PREREQUISITE: A grade of C or better in MTH 100 or higher level mathematics course, RDG 085 or ENG 093 or higher placement
This course is designed to provide appropriate insights into mathematics for the student majoring in elementary education and to ensure that students going into elementary education are more than proficient at performing basic arithmetic operations. Topics include logic, sets and functions, operations and properties of whole numbers and integers including number theory; use of manipulatives by teachers to demonstrate abstract concepts; and by students while learning these abstract concepts as emphasized in the class. Upon completion, the student is required to demonstrate proficiency in each topic studied as well as to learn teaching techniques that are grade level and subject matter appropriate, and test for mathematical proficiency and the learning of teaching concepts.

MTH 232  MATH FOR THE ELEMENTARY TEACHER II  3 Hrs.
PREREQUISITE: A grade of C or better in MTH 231
This course is the second of a three-course sequence and is designed to provide appropriate insights into mathematics for students majoring in elementary education and to ensure that students going into elementary education are more proficient at performing basic arithmetic operations. Topics include
numeration skills with fractions, decimals and percentages, elementary concepts of probability and statistics, and analytic geometry concepts associated with linear equations and inequalities. The use of manipulatives and calculators in the teaching and learning process is stressed. Upon completion, the student will test for mathematical proficiency and the learning of teaching concepts. The student also should demonstrate an appropriate teaching technique by preparing a lesson and teaching it to the class for their final exam grade.

MTH 238  APPLIED DIFFERENTIAL EQUATIONS I  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement.
COREQUISITE: MTH 227.
An introduction to numerical methods, qualitative behavior of first order differential equations, techniques for solving separable and linear equations analytically, and applications to various models (e.g. populations, motion, chemical mixtures, etc.); techniques for solving higher order linear differential equations with constant coefficients (general theory, undetermined coefficients, reduction of order and the method of variation of parameters), with emphasis on interpreting the behavior of the solutions, and applications to physical models whose governing equations are of higher order; the Laplace transform as a tool for the solution of initial value problems whose inhomogeneous terms are discontinuous.

MUSIC (MUL) (MUP) (MUS)

MUL  SEE LIST CLASS PERFORMANCE INSTRUCTION  1 Hr.
Group instruction is available in voice, piano, strings, woodwinds, brass, percussion, and fretted instruments for the student with little or no previous training. Emphasis is placed on the rudiments of music, basic performance technique, and general musicianship skills. Upon completion of one or a sequence of courses, the student should be able to demonstrate a basic proficiency in singing or playing and a knowledge of music fundamentals.

CLASS PIANO I, II, III, IV
MUL 101  PREREQUISITE: None
MUL 102  PREREQUISITE: MUL 101
MUL 201  PREREQUISITE: MUL 102
MUL 202  PREREQUISITE: MUL 201

CLASS VOICE I, II, III, IV
MUL 111  PREREQUISITE: None
MUL 112  PREREQUISITE: MUL 111
MUL 211  PREREQUISITE: MUL 112
MUL 212  PREREQUISITE: 211

CLASS BRASS I, II, III, IV
MUL 141  PREREQUISITE: None
MUL 142  PREREQUISITE: MUL 141
MUL 241  PREREQUISITE: MUL 142
MUL 242  PREREQUISITE: MUL 241
CLASS PERCUSSION I, II, III, IV
MUL 151  PREREQUISITE: None
MUL 152  PREREQUISITE: MUL 151
MUL 251  PREREQUISITE: MUL 152
MUL 252  PREREQUISITE: MUL 251

CLASS FRETTE INSTRUMENTS I, II, III, IV
MUL 161  PREREQUISITE: None
MUL 162  PREREQUISITE: MUL 161
MUL 261  PREREQUISITE: MUL 162
MUL 262  PREREQUISITE: MUL 261

CLASS FRETTE INSTRUMENTS I, II, III, IV
MUL 170  PREREQUISITE: None
MUL 171  PREREQUISITE: MUL 170
MUL 270  PREREQUISITE: MUL 171
MUL 271  PREREQUISITE: MUL 270

MUSIC WORKSHOP I, II, III, IV  1-3 Hrs.
PREREQUISITE: Permission of the instructor
This course is a seminar clinic in advanced rehearsal/performance techniques. Emphasis is placed on intensive rehearsal techniques required for advanced or specialized performance groups. Upon completion, the student should be able to effectively participate in performances presented by this type of ensemble.

MUL 172-73; 272-73 MUSICAL THEATRE WORKSHOP I, II, III, IV  1-2 Hrs.
PREREQUISITE: Permission of the instructor
This course includes the study of musical theatre history, styles, performance, and technical production. Emphasis is placed on the supervised study, preparation, production, and performances of scenes or complete works of musical theatre. Upon completion, the student should be able to effectively participate in a public presentation of the prepared scenes or work in an assigned performance or technical role.

MUL 174-75; 274-75 OPERA WORKSHOP I, II, III, IV  1-2 Hrs.
PREREQUISITE: Permission of the instructor
This course includes the study of opera history, styles, performance, and technical production. Emphasis is placed on the supervised study, preparation, production, and performance of scenes or complete works of opera. Upon completion, the student should be able to effectively participate in a public presentation of the prepared scenes or work in an assigned performance or technical role.

MUL SEE LIST MUSIC ENSEMBLES  1-2 Hrs.
PREREQUISITE: Permission of the instructor
This course provides an opportunity for the student to participate in a performing ensemble. Emphasis is placed on rehearsing and performing literature appropriate to the mission and goals of the group. Upon completion,
the student should be able to effectively participate in performances presented by the ensemble.

CHORUS I, II, III, IV
MUL 180 PREREQUISITE: Permission of the instructor
MUL 181 PREREQUISITE: MUL 180
MUL 280 PREREQUISITE: MUL 181
MUL 281 PREREQUISITE: MUL 280

VOCAL ENSEMBLE I, II, III, IV
MUL 182 PREREQUISITE: Permission of the instructor
MUL 183 PREREQUISITE: MUL 182
MUL 282 PREREQUISITE: MUL 183
MUL 283 PREREQUISITE: MUL 282

JAZZ/SOIR CHOIR I, II, III, IV
MUL 184 PREREQUISITE: Permission of the instructor
MUL 185 PREREQUISITE: MUL 184
MUL 284 PREREQUISITE: MUL 185
MUL 285 PREREQUISITE: MUL 284

CONCERT BAND I, II, III, IV
MUL 190 PREREQUISITE: Permission of the instructor
MUL 191 PREREQUISITE: MUL 190
MUL 290 PREREQUISITE: MUL 191
MUL 291 PREREQUISITE: MUL 290

INSTRUMENTAL ENSEMBLE I, II, III, IV
MUL 192 PREREQUISITE: Permission of the instructor
MUL 193 PREREQUISITE: MUL 192
MUL 292 PREREQUISITE: MUL 193
MUL 293 PREREQUISITE: MUL 292

ORCHESTRA I, II, III, IV
MUL 194 PREREQUISITE: Permission of the instructor
MUL 195 PREREQUISITE: MUL 194
MUL 294 PREREQUISITE: MUL 195
MUL 295 PREREQUISITE: MUL 294

JAZZ/SOIR BAND I, II, III, IV
MUL 196 PREREQUISITE: Permission of the instructor
MUL 197 PREREQUISITE: MUL 196
MUL 296 PREREQUISITE: MUL 197
MUL 297 PREREQUISITE: MUL 296

MARCHING BAND I, II, III, IV
MUL 198 PREREQUISITE: Permission of the instructor
MUL 199 PREREQUISITE: MUL 198
MUL 298  PREREQUISITE: MUL 199  
MUL 299  PREREQUISITE: MUL 298  

MUP  SEE LIST INDIVIDUAL PERFORMANCE INSTRUCTION  1-2 Hrs.  
Applied study in voice and instrumental areas is limited to four semesters of study. Additional study for students may be requested of the instructor. 
Individual performance instruction is available in keyboard instruments, voice, strings, woodwinds, brass, percussion, and fretted instruments. Emphasis is placed on developing technique, repertoire, and performance skills commensurate with the student’s educational goals. The student is required to practice a minimum of five hours per week for each credit hour. Upon completion, the student should be able to effectively perform assigned repertoire and technical studies in an appropriate performance evaluation setting. 

PRIVATE PIANO I, II, III, IV  
MUP 101  PREREQUISITE: Permission of the instructor  
MUP 102  PREREQUISITE: MUP 101  
MUP 201  PREREQUISITE: MUP 102  
MUP 202  PREREQUISITE: MUP 201  

PRIVATE VOICE I, II, III, IV  
MUP 111  PREREQUISITE: Permission of the instructor  
MUP 112  PREREQUISITE: MUP 111  
MUP 211  PREREQUISITE: MUP 112  
MUP 212  PREREQUISITE: MUP 211  

PRIVATE GUITAR I,II,III, IV  
MUP 133  PREREQUISITE: Permission of the instructor  
MUP 134  PREREQUISITE: MUP 133  
MUP 233  PREREQUISITE: MUP 134  
MUP 234  PREREQUISITE: MUP 233  

PRIVATE FLUTE I,II, III, IV  
MUP 141  PREREQUISITE: Permission of the instructor  
MUP 142  PREREQUISITE: MUP 141  
MUP 241  PREREQUISITE: MUP 142  
MUP 242  PREREQUISITE: MUP 241  

PRIVATE CLARINET I,II,III, IV  
MUP 143  PREREQUISITE: Permission of the instructor  
MUP 144  PREREQUISITE: MUP 143  
MUP 243  PREREQUISITE: MUP 144  
MUP 244  PREREQUISITE: MUP 243  

PRIVATE SAXOPHONE I, II, III, IV  
MUP 145  PREREQUISITE: Permission of the instructor  
MUP 146  PREREQUISITE: MUP 145  
MUP 245  PREREQUISITE: MUP 146  

---

2011–2012 Catalog
MUP 246  PREREQUISITE: MUP 245

PRIVATE OBOE I, II, III, IV
MUP 151  PREREQUISITE: Permission of the instructor
MUP 152  PREREQUISITE: MUP 151
MUP 251  PREREQUISITE: MUP 152
MUP 252  PREREQUISITE: MUP 251

PRIVATE TRUMPET I, II, III, IV
MUP 161  PREREQUISITE: Permission of the instructor
MUP 162  PREREQUISITE: MUP 161
MUP 261  PREREQUISITE: MUP 162
MUP 262  PREREQUISITE: MUP 261

PRIVATE FRENCH HORN I,II,III, IV
MUP 163  PREREQUISITE: Permission of the instructor
MUP 164  PREREQUISITE: MUP 163
MUP 263  PREREQUISITE: MUP 164
MUP 264  PREREQUISITE: MUP 263

PRIVATE MELLOPHONE I,II,III, IV
MUP 165  PREREQUISITE: Permission of the instructor
MUP 166  PREREQUISITE: MUP 165
MUP 265  PREREQUISITE: MUP 166
MUP 266  PREREQUISITE: 265

PRIVATE TROMBONE I, II, III, IV
MUP 171  PREREQUISITE: Permission of the instructor
MUP 172  PREREQUISITE: MUP 171
MUP 271  PREREQUISITE: MUP 172
MUP 272  PREREQUISITE: MUP 271

PRIVATE EUPHONIUM I, II, III, IV
MUP 173  PREREQUISITE: Permission of the instructor
MUP 174  PREREQUISITE: MUP 173
MUP 273  PREREQUISITE: MUP 174
MUP 274  PREREQUISITE: MUP 273

PRIVATE TUBA I, II, III, IV
MUP 175  PREREQUISITE: Permission of the instructor
MUP 176  PREREQUISITE: MUP 175
MUP 275  PREREQUISITE: MUP 176
MUP 276  PREREQUISITE: MUP 275

PRIVATE PERCUSSION I,II, III, IV
MUP 181  PREREQUISITE: Permission of the instructor
MUP 182  PREREQUISITE: MUP 181
MUP 281  PREREQUISITE: MUP 182
MUP 282 PREREQUISITE: MUP 281

MUS 100 CONVOCATION 1 Hr.
This course (required for music majors/minors each semester) is designed to expose the student to a variety of repertory styles and to give the student an opportunity to practice individual performance skills. Emphasis is placed on exposure to performances and lectures by guest artists, faculty, or students, and on personal performance(s) in class each semester.

MUS 101 MUSIC APPRECIATION 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is designed for non-music majors and requires no previous musical experience. It is a survey course that incorporates several modes of instruction including lecture, guided listening, and similar experiences involving music. The course will cover a minimum of three stylistic periods, provide a multi-cultural perspective, and include both vocal and instrumental genres. Upon completion, the student should be able to demonstrate a knowledge of music fundamentals, the aesthetic/stylistic characteristics of historical periods, and an aural perception of style and structure in music.

MUS 110 BASIC MUSICIANSHIP 3 Hrs.
PREREQUISITE: None
This course is designed to provide rudimentary music knowledge and skills for the student with a limited music background. Topics include a study of notation, rhythm, scales, keys, intervals, chords, and basic sight singing and ear training skills. Upon completion, the student should be able to read and understand musical scores and demonstrate basic sight singing and ear training skills for rhythm, melody, and harmony.

MUS 111 MUSIC THEORY I 3 Hrs.
PREREQUISITE: MUS 110 or permission of the instructor
COREQUISITE: MUS 113, if ear training lab is a separate course
This course introduces the student to the diatonic harmonic practices in the Common Practice Period. Topics include fundamental musical materials (rhythm, pitch, scales, intervals, diatonic harmonies) and an introduction to the principles of voice leading and harmonic progression. Upon completion, the student should be able to demonstrate a basic competency using diatonic harmony through analysis, writing, sight singing, dictation, and keyboard skills.

MUS 112 MUSIC THEORY II 3 Hrs.
PREREQUISITE: MUS 111
COREQUISITE: MUS 114, if ear training lab is a separate course
This course completes the study of diatonic harmonic practices in the Common Practice Period and introduces simple musical forms. Topics include principles of voice leading used in three- and four-part triadic harmony and diatonic seventh chords, non-chord tones, cadences, phrases, and periods. Upon completion, the student should be able to demonstrate competence using diatonic harmony through analysis, writing, sight singing, dictation, and keyboard skills.
MUS 113  MUSIC THEORY LAB I  1 Hr.
PREREQUISITE: MUS 110 or permission of the instructor
COREQUISITE: MUS 111, if ear training lab is a separate course
This course provides the practical application of basic musical materials through
sight singing; melodic, harmonic, and rhythmic dictation; and keyboard
harmony. Topics include intervals, simple triads, diatonic stepwise melodies,
basic rhythmic patterns in simple and compound meter, and four-part triadic
progressions in root position. Upon completion, the student should be able to
write, sing, and play intervals, scales, basic rhythmic patterns, diatonic stepwise
melodies, simple triads, and short four-part progressions in root position.

MUS 114  MUSIC THEORY LAB II  1 Hr.
PREREQUISITE: MUS 113
COREQUISITE: MUS 112, if ear training lab is a separate course
This course continues the practical application of diatonic musical materials
through sight singing; melodic, harmonic, and rhythmic dictation; and keyboard
harmony. Topics include intervals, scales, diatonic melodies with triadic
arpeggiation, more complex rhythmic patterns in simple and compound meter,
and four-part diatonic progressions in all inversions. Upon completion, the
student should be able to write, sing, and play all intervals, rhythmic patterns
employing syncopations and beat divisions, diatonic melodies, and four-part
diatonic progressions.

MUS 115  FUNDAMENTALS OF MUSIC  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is designed to teach the basic fundamentals of music and develop
usable musical skills for the classroom teacher. Topics include rhythmic notation,
simple and compound meters, pitch notation, correct singing techniques,
phrases, keyboard awareness, key signatures, scales, intervals, and harmony using
I, IV, and V with a choral instrument. Upon completion, the student should be
able to sing a song, harmonize a simple tune, demonstrate rhythmic patterns, and
identify musical concepts through written documentation.

MUS 116  COMPUTER APPLICATIONS IN MUSIC  2 Hrs.
PREREQUISITE: MUS 111 or equivalent
This course introduces the history and use of computer applications in music.
Topics include an introduction to computer skills, MIDI and the application
of notation, and sequencing software programs (i.e. Finale, Performer). Upon
completion, the student should be able to demonstrate basic competency in the
use of computers in music.

MUS 161  DICTION FOR SINGERS  2-3 Hrs.
PREREQUISITE: Permission of the instructor
This course introduces the basic rules of diction in Italian, French, and German
for singers. Emphasis is placed on the use of the International Phonetic
Alphabet. Upon completion, the student should be able to sing art songs in
Italian, French, and German with correct diction.
MUS 170 INTRODUCTION TO CHURCH MUSIC 2-3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course provides an overview of church music as a career choice, and includes the organization and operation of a graded church choir program. Topics include an introduction to conducting, rehearsal techniques, administrative skills, and may include a supervised practicum field experience. Upon completion, the student should be able to select, prepare, teach, and conduct a simple anthem for a graded church choir and demonstrate a knowledge of church music administration through written documentation.

MUS 211 MUSIC THEORY III 3 Hrs.
PREREQUISITE: MUS 112
COREQUISITE: MUS 213, if ear training lab is a separate course
This course introduces the student to the chromatic harmonic practices in the Common Practice Period. Topics include secondary functions, modulatory techniques, and binary and ternary forms. Upon completion, the student should be able to demonstrate competence using chromatic harmony through analysis, writing, sight singing, dictation, and keyboard skills.

MUS 212 MUSIC THEORY IV 3 Hrs.
PREREQUISITE: MUS 211
COREQUISITE: MUS 214, if ear training lab is a separate course
This course completes the study of chromatic harmonic practices in the Common Practice Period and introduces the student to twentieth-century practices. Topics include the Neapolitan and augmented sixth chords, sonata form, late nineteenth-century tonal harmony, and twentieth-century practices and forms. Upon completion, the student should be able to demonstrate competence using chromatic harmony and basic twentieth-century techniques through analysis, writing, sight singing, dictation, and keyboard skills.

MUS 213 MUSIC THEORY LAB III 1 Hr.
PREREQUISITE: MUS 114
COREQUISITE: MUS 211, if ear training lab is a separate course
This course provides the practical application of chromatic musical materials through sight singing; melodic, harmonic, and rhythmic dictation; and keyboard harmony. Topics include melodies with simple modulations, complex rhythms in simple and compound meter, and secondary function chords. Upon completion, the student should be able to write, sing, and play modulating melodies, rhythmic patterns with beat subdivisions, and four-part chromatic harmony.

MUS 214 MUSIC THEORY LAB IV 1 Hr.
PREREQUISITE: MUS 213
COREQUISITE: MUS 212, if ear training lab is a separate course
This course provides the practical application of chromatic musical materials and simple twentieth-century practices through sight singing; melodic, harmonic, and rhythmic dictation; and keyboard harmony. Topics include chromatic and atonal melodies; complex rhythmic patterns in simple, compound, and asymmetric meters; chromatic chords, and twentieth-century harmony. Upon completion,
the student should be able to write, sing, and play chromatic and atonal melodies, complex rhythms and meters, four-part chromatic harmony, and simple twentieth-century chord structures.

MUS 215 COMPOSITION I 1-2 Hrs.
PREREQUISITE: MUS 112 or permission of the instructor
This course introduces the basic techniques and applications of musical composition. Emphasis is placed on creativity and original thought processes in music. Upon completion, the student should be able to create an original musical composition.

MUS 251 INTRODUCTION TO CONDUCTING 3 Hrs.
PREREQUISITE: MUS 110 or permission of the instructor
This course introduces the fundamentals of conducting choral and/or instrumental ensembles. Topics include a study of simple and compound meters, score reading, and techniques for conducting effective rehearsals. Upon completion, the student should be able to prepare and conduct a choral and/or instrumental score in a rehearsal or performance setting.

MUS 270 ORGANIZATION OF THE CHURCH MUSIC PROGRAM 2 Hrs.
This course is designed to explore administrative models of a comprehensive church music program. Topics include leadership, administrative structure, music personnel, facilities, equipment, vestments, music library, budgeting, planning, vocal and instrumental ensembles, and scheduling for a music program. Upon completion, the student should be able to demonstrate how to plan, coordinate, and administer a comprehensive church music program.

MUS 271 CHURCH MUSIC LITERATURE 2 Hrs.
PREREQUISITE: MUS 170
This course provides an historic survey of traditional church music from the 17th century to the present and introduces contemporary Christian styles. Topics include criteria for choosing appropriate music for graded church choirs at easy, medium, and advanced levels of difficulty, and a survey of publishing resources, and cataloging systems. Upon completion, the student should be able to demonstrate a knowledge and understanding of church music literature.

MUS 272 THE CHILDREN'S CHOIR 2 Hrs.
PREREQUISITE: Permission of the instructor
This course is designed to provide techniques for working with the child’s voice in a choral setting. Topics include working with children’s voices, rehearsal techniques, selecting literature, vestments, and organizing a graded choir program. Upon completion, the student should be able to demonstrate how to plan, coordinate, and administer a graded choir program in a church.

MUS 279 CHURCH MUSIC PRACTICUM 1 Hr.
PREREQUISITE: Permission of the instructor
This course is designed to provide supervised experience in the various areas of church music through directed study, practice, observation, and other supervised
experiences. Emphasis is placed on designing, implementing, and documenting a Practicum project related to a particular area of church music. Upon completion, the student should be able to produce documentation that demonstrates the scope of the project.

### NURSING ASSISTANT (NAS)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAS 100</td>
<td>LONG TERM CARE NURSING ASSISTANT</td>
<td>4 Hrs.</td>
</tr>
<tr>
<td></td>
<td>This course fulfills the 75-hour Omnibus Budget Reconciliation Act (OBRA) requirements for training of long-term care nursing assistants in preparation for certification through competency evaluation. Emphasis is placed on the development of the knowledge, attitudes, and skills required of the long-term care nursing assistant. Upon completion, the student should demonstrate satisfactory performance on written examinations and clinical skills. (Clinical laboratory required)</td>
<td></td>
</tr>
<tr>
<td>NAS 115</td>
<td>CPR AND BASIC FIRST AID</td>
<td>2 Hrs.</td>
</tr>
<tr>
<td></td>
<td>COREQUISITE: NAS 120 and NAS 121</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is designed to help the student feel more confident and act appropriately in an emergency situation. Emphasis is placed on providing the student with theoretical concepts to develop skills in basic first aid and cardiopulmonary resuscitation. Upon completion, which includes specific competencies in basic life support, the student will receive appropriate course completion documentation.</td>
<td></td>
</tr>
<tr>
<td>NAS 120</td>
<td>FUNDAMENTALS OF NURSING ASSISTANT/HOME HEALTH AIDE</td>
<td>7 Hrs.</td>
</tr>
<tr>
<td></td>
<td>COREQUISITE: NAS 115 and NAS 121</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course provides the student with the necessary theory and laboratory experiences for the development of skills required to qualify as a long-term care Nursing Assistant/Home Health Aide. Emphasis is placed on the acquisition of skills in communication, observation, safety, mobility/body mechanics, personal and restorative care, and infection control necessary to care for patients and clients of all ages. Upon completion of this course, the student will be able to apply concepts and skills in areas required by the Omnibus Budget Reconciliation Act (OBRA) and the National Association of Home Care. (Laboratory required)</td>
<td></td>
</tr>
<tr>
<td>NAS 121</td>
<td>FUNDAMENTALS OF NURSING ASSISTANT/HOME HEALTH AIDE CLINICAL</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>COREQUISITE: NAS 115</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is designed for students to apply knowledge and skills needed to perform basic nursing care safely and efficiently in various supervised health care settings. Emphasis is placed on safety, therapeutic communication, infection control, critical thinking, and proper documentation. Upon completion of this course, the student will demonstrate beginning competency in the delivery of care to patients and clients in various health settings. (Clinical required)</td>
<td></td>
</tr>
</tbody>
</table>
NURSING (NUR)

NUR 102  FUNDAMENTALS OF NURSING 6 Hrs.
PREREQUISITE: Acceptance into Practical Nursing or Associate Degree Nursing Program
COREQUISITE: NUR 103, NUR 104, BIO 201 and MTH 116 or higher for PN Track and MTH 100 or higher for AD Track
This course provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Students learn concepts and theories basic to the art and science of nursing. The role of the nurse as a member of the health care team is emphasized. Students are introduced to the concepts of client needs, safety, communication, teaching/learning, critical thinking, ethical-legal, cultural diversity, nursing history, and the program’s philosophy of nursing. Additionally, this course introduces psychomotor nursing skills needed to assist individuals in meeting basic human needs. Skills necessary for maintaining microbial, physical, and psychological safety are introduced along with skills needed in therapeutic interventions. At the conclusion of this course, the student should demonstrate competency in performing basic nursing skills for individuals with common health alterations.

NUR 103  HEALTH ASSESSMENT 1 Hr.
PREREQUISITE: Acceptance into Practical Nursing or Associate Degree Nursing Program
COREQUISITE: NUR 102, NUR 104, BIO 201 and MTH 116 or higher for PN Track and MTH 100 or higher for AD Track
This course is designed to provide students the opportunity to learn and practice history taking and physical examination skills with individuals of all ages, with emphasis on the adult. The focus is on symptom analysis along with physical, psychosocial, and growth and development assessments. Upon completion of this course, the students should be able to utilize critical thinking skills in identifying health alterations, formulating nursing diagnoses and documenting findings appropriate to nursing.

NUR 104  INTRODUCTION TO PHARMACOLOGY 1 Hr.
PREREQUISITE: Acceptance into Practical Nursing or Associate Degree Nursing Program
COREQUISITE: NUR 102, NUR 103, BIO 201 and MTH 116 or higher for PN Track and MTH 100 or higher for AD Track
This course provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. This course introduces students to basic principles of pharmacology and the knowledge necessary to safely administer medication. Course content includes legal implications, pharmacokinetics, pharmacodynamics, calculations of drug dosages, medication administration, and an overview of drug classifications. Upon completion of this course, the student should be able to calculate and administer medications.
NUR 105  ADULT NURSING  
8 Hrs.
PREREQUISITE: BIO 201, NUR 102, NUR 103, NUR 104, and MTH 116 or higher for PN Track and MTH 100 or higher for AD Track.
COREQUISITE: ENG 101, BIO 202 and NUR 106
This course provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Emphasis is placed on providing care to individuals undergoing surgery, fluid and electrolyte imbalance, and common alterations in respiratory, musculoskeletal, gastrointestinal, cardiovascular and endocrine systems. Nutrition, pharmacology, communication, cultural, and community concepts are integrated.

NUR 106  MATERNAL AND CHILD NURSING  
5 Hrs.
PREREQUISITE: BIO 201, NUR 102, NUR 103, NUR 104, and MTH 116 or higher for PN Track and MTH 100 or higher for AD Track
COREQUISITE: ENG 101, BIO 202 and NUR 105
This course focuses on the role of the nurse in meeting the physiological, psychosocial, cultural, and developmental needs of the maternal and child client. Course content includes antepartal, intrapartal, and postpartal care; complications of pregnancy; newborn care; human growth and development; pediatric care; and selected pediatric alterations. Nutrition, pharmacology, cultural diversity, use of technology, communication, anatomy and physiology review, medical terminology, critical thinking, and application of the nursing process are integrated throughout this course. Upon completion of this course, the student should be able to provide and manage for maternal and pediatric clients in a variety of settings.

NUR 107  ADULT/CHILD NURSING  
8 Hrs.
PREREQUISITE: BIO 201 and BIO 202, NUR 102, NUR 103, NUR 104, NUR 105, NUR 106, MTH 116 or higher, and ENG 101
COREQUISITE: NUR 108 and NUR 109
This course provides students with opportunities to develop competencies necessary to meet the needs of individuals throughout the life span in a safe, legal, and ethical manner using the nursing process in a variety of settings. Emphasis is placed on providing care to individuals experiencing complex alterations in sensory/perceptual reproductive, endocrine, genitourinary, neurological, immune, cardiovascular, and lower gastrointestinal systems. Additional instruction is provided for care for clients experiencing burns, cancer, and emergent conditions. Nutrition, pharmacology, therapeutic communication, community, cultural diversity, health promotion, error prevention, critical thinking, and impacts on maternal and child clients are integrated throughout the course.

NUR 108  PSYCHOSOCIAL NURSING  
3 Hrs.
PREREQUISITE: BIO 201 and BIO 202, NUR 102, NUR 103, NUR 104, NUR 105, NUR 106, MTH 116 or higher, and ENG 10
COREQUISITE: NUR 107 and NUR 109
This course is designed to provide an overview of psychosocial adaptation and coping concepts used when caring for clients with acute and chronic alterations in...
mental health in a variety of settings. Topics include therapeutic communication skills, normal and abnormal behaviors, treatment modalities, and developmental needs. Upon completion of this course, the student should demonstrate the ability to assist clients in maintaining psychosocial integrity through the use of the nursing process.

NUR 109  ROLE TRANSITION FOR THE PRACTICAL NURSE 3 Hrs.
PREREQUISITE: BIO 201 and BIO 202, NUR 102, NUR 103, NUR 104,NUR 105, NUR 106, MTH 116 or higher, and ENG 101
COREQUISITE: NUR 107 and NUR 108
This course provides the student with opportunities to gain knowledge and skills necessary to transition from student to practicing nurse. Content includes a discussion of current issues in health care, practical nursing leadership and management, professional practice issues, and transition into the workplace. Emphasis is placed on NCLEX-PN test-taking skills, computer-assisted simulations and practice tests, development of a prescriptive plan for remediation, and review of selective content, specific to the practice of practical nursing.

NUR 200  NURSING CAREER MOBILITY ASSESSMENT 6 Hrs.
PREREQUISITE: MTH 100 or higher, BIO 201, BIO 202, and ENG 101 and acceptance to the Nursing Program
This course is designed to provide the LPN mobility student self-directed opportunities to prepare for placement into the third semester of the ADN program. Emphasis is on assessment and validation of selected theory, process, and skills covered in NUR 102, 103, 104, 105, and 106. Upon successful completion of assessments, the student is eligible for entry into NUR 201. Students who successfully complete this course are awarded 15 non-traditional hours at the completion of the LPN mobility curriculum.

NUR 201  NURSING THROUGH THE LIFESPAN I 5 Hrs.
PREREQUISITE Two-Year Track: BIO 201, BIO 202, NUR 102, NUR 103, NUR 104,NUR 105, NUR 106, MTH 100 or higher, and ENG 101
PREREQUISITE Mobility Track: MTH 100 or higher, BIO 201, BIO 202, ENG 101, and NUR 200
COREQUISITE: PSY 200 and BIO 220
This course provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Students manage and provide collaborative care to clients who are experiencing selected alterations in gastrointestinal, reproductive, sensory, and endocrine systems in a variety of settings. Additional instruction is provided for oncology, mental health, teaching/learning concepts, and advanced dosage calculations. Nutrition, pharmacology, communication, cultural, and community concepts are integrated.

NUR 202  NURSING THROUGH THE LIFESPAN II 6 Hrs.
PREREQUISITE Two-Year Track: BIO 201, BIO 202, BIO 220, NUR 102, NUR 103, NUR 104,NUR 105, NUR 106, MTH 100 or higher, ENG 101, and PSY 200.
PREREQUISITE Mobility Track: MTH 100 or higher, BIO 201, BIO 202, BIO 220, ENG 101, NUR 200, and PSY 200
COREQUISITE: SPH 106 or higher and PSY 210
This course builds upon previous instruction and provides additional opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Students manage and provide collaborative care to clients who are experiencing selected alterations in cardiovascular, hematologic, immune, and genitourinary systems in a variety of settings. Additional instruction is provided for psychiatric disorders, and high-risk obstetrics. Teaching/learning concepts, advanced dosage calculations, nutrition, pharmacology, communication, cultural, and community concepts are integrated.

NUR 203  NURSING THROUGH THE LIFESPAN III 6 Hrs.
PREREQUISITE Two-Year Track: BIO 201, BIO 202, BIO 220, NUR 102, NUR 103, NUR 104, NUR 105, NUR 106, MTH 100 or higher, ENG 101, SPH 106 or higher, PSY 200, and PSY 210
PREREQUISITE Mobility Track: MTH 100 or higher, BIO 201, BIO 202, BIO 220, ENG 101, NUR 200, SPH 106 or higher, PSY 200, and PSY 210
COREQUISITE: NUR 204
This course builds upon previous instruction and provides additional opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Students manage and provide collaborative care to clients who are experiencing selected alterations in cardiovascular, respiratory, and neurological systems in a variety of settings. Additional instruction is provided for selected mental health disorders, selected emergencies, multiple organ dysfunction syndrome and related disorders. Teaching/learning concepts, advanced dosage calculations, nutrition, pharmacology, communication, cultural, and community concepts are integrated.

NUR 204  ROLE TRANSITION FOR THE REGISTERED NURSE 4 Hrs.
PREREQUISITE Two-Year Track: BIO 201, BIO 202, BIO 220, NUR 102, NUR 103, NUR 104, NUR 105, NUR 106, MTH 100 or higher, ENG 101, SPH 106 or higher, PSY 200, and PSY 210
PREREQUISITE Mobility Track: MTH 100 or higher, BIO 201, BIO 202, BIO 220, ENG 101, NUR 200, SPH 106 or higher, PSY 200, and PSY 210
COREQUISITE: NUR 203
This course provides the student with the opportunity to gain knowledge and skills necessary to transition from student to registered nurse. Content includes current issues in health care, nursing leadership and management, professional practice issues for registered nurses, and transition into the workplace. Additional instruction is provided for preparing for the NCLEX-RN. Precepto experience is required.

OFFICE ADMINISTRATION (OAD)
OAD 101BEGINNING KEYBOARDING 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is designed to enable the student to use the touch method of keyboarding through classroom instruction and outside lab. Emphasis is on speed and accuracy in keying alphabetic, symbolic, and numeric information using the keyboard. Upon completion, the student should be able to demonstrate proper technique at an acceptable rate of speed and accuracy, as defined by the course syllabus, in the production of basic business documents such as memos, letters, reports, and tables.

OAD 103  INTERMEDIATE KEYBOARDING 3 Hrs.
PREREQUISITE: OAD 101
This course is designed to assist the student in increasing speed and accuracy using the touch method of keyboarding through classroom instruction and outside lab. Emphasis is on the production of business documents such as memorandums, letters, reports, and tables. Upon completion, the student should be able to demonstrate proficiency at an acceptable rate of speed and accuracy, as defined by the course syllabus, in the production of business documents.

OAD 125  WORD PROCESSING 3 Hrs.
PREREQUISITE: OAD 101
This course is designed to provide the student with basic word processing skills through classroom instruction and outside lab. Emphasis is placed on the utilization of software features to create, edit, and print common office documents. Upon completion, the student should be able to demonstrate the ability to use industry-standard software and generate appropriately formatted, accurate, and attractive business documents such as memos, letters, tables, and reports.

OAD 126  ADVANCED WORD PROCESSING 3 Hrs.
PREREQUISITE: OAD 125
This course is designed to increase student proficiency in using the advanced word processing functions through classroom instruction and outside lab. Emphasis is on the use of software to maximize productivity. Upon completion, the student should be able to demonstrate the ability to generate complex documents such as forms, newsletters, and multi-page documents.

OAD 130  ELECTRONIC CALCULATIONS 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is designed to teach the touch system and problem solving methods of machine calculators. Emphasis is on basic mathematical functions. Upon completion, the student should be able to demonstrate an acceptable rate of speed and accuracy, as defined by the course syllabus to solve problems based on typical business applications.

OAD 131  BUSINESS ENGLISH 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is designed to develop the student’s ability to use proper English. Emphasis is on grammar, spelling, vocabulary, punctuation, word usage, word division, and proofreading. Upon completion, the student should be able to
write and speak effectively.

OAD 137 ELECTRONIC FINANCIAL RECORD KEEPING 3 Hrs.
PREREQUISITE: MAH 101, MTH 116, MTH 098 or equivalent placement score
This course is designed, through classroom instruction and outside lab, to provide the student with skill in using the microcomputer to enter financial data. Emphasis is on the use of appropriate software in the preparation of journals, financial statements, and selected payroll records. Upon completion, the student should be able to demonstrate the ability to use a microcomputer system to record financial data.

OAD 138 RECORDS AND INFORMATION MANAGEMENT 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is designed to give the student knowledge about managing office records and information. Emphasis is on basic filing procedures, methods, systems, supplies, equipment, and modern technology used in the creation, protection, and disposition of records stored in a variety of forms. Upon completion, the student should be able to perform basic filing procedures, both manually and electronically.

OAD 200 BEGINNING MEDICAL TRANSCRIPTION 3 Hrs.
PREREQUISITE: OAD 103, BIO 120, and BIO 150.
This course is designed to orient students to operating a transcribing machine efficiently and on transcribing documents through classroom instruction and outside lab. Emphasis is placed on transcribing documents and operating a transcribing machine efficiently. Upon completion, the student should be able to accurately transcribe documents from dictated recordings.

OAD 212 INTERMEDIATE MEDICAL TRANSCRIPTION 3 Hrs.
PREREQUISITE: OAD 200
This course is designed to develop skill in the transcription of documents generated in the medical office through classroom instruction and outside lab. Emphasis is on transcribing medical records and operating a transcribing machine efficiently. Topics for reports include pathology, cardiology, and radiology. Upon completion, the student should be able to accurately transcribe medical documents from dictated recordings.

OAD 213 ADVANCED MEDICAL TRANSCRIPTION 3 Hrs.
PREREQUISITE: OAD 212
This course is designed to develop marketable skills in transcribing dictated material through classroom instruction and outside lab. Emphasis is on transcribing medical records and operating a transcribing machine efficiently. Topics include radiology, gastrointestinal, and orthopedics. Upon completion, the student should be able to demonstrate proficiency in the preparation of a variety of reports and forms used in the medical environment.
OAD 218 OFFICE PROCEDURES 3 Hrs.
This course is designed to develop an awareness of the responsibilities and opportunities of the office professional through classroom instruction. Emphasis is on current operating functions, practices, and procedures, work habits, attitudes, oral and written communications, and professionalism. Upon completion, the student should be able to demonstrate the ability to effectively function in an office support role.

OAD 230 ELECTRONIC PUBLISHING 3 Hrs.
PREREQUISITE: OAD 101
This course is designed to introduce the student to the elements and techniques of page design, layout, and typography through classroom instruction and outside lab. Emphasis is on the use of current commercial desktop publishing software, graphic tools, and electronic input/output devices to design and print professional publications such as newsletters, brochures, catalogs, forms, and flyers. Upon completion, the student should be able to utilize proper layout and design concepts in the production of attractive desktop published documents.

OAD 231 OFFICE APPLICATIONS 3 Hrs.
PREREQUISITE: OAD 101
This course is designed to provide the student with a foundation in the use of computerized equipment and application software as tools in the performance of a variety of office tasks through classroom instruction and lab exercises. Emphasis is on the role of the office professional in the selection and application of appropriate technology to the specific task or combination of tasks. Upon completion, the student should be able to demonstrate proficiency in the selection of appropriate computerized tools to complete designated tasks.

OAD 231(A) WORDPERFECT 3 Hrs.
PREREQUISITE: OAD 101
This course is designed to provide the student with basic word processing skills through classroom instruction and outside lab. Emphasis is placed on the utilization of software features to create, edit, and print common office documents. Upon completion, the student should be able to demonstrate the ability to use industry-standard software and generate appropriately formatted, accurate, and attractive business documents such as memos, letters, tables, and reports. The State Department of Education refers to this course as Office Applications.

OAD 231(B) QUICKBOOKS 3 Hrs.
PREREQUISITE: OAD 137, BUS 241 and BUS 242
This is a “hands-on” introduction of the Quickbooks program. Emphasis is primarily on the use of existing ledgers and accounts.

OAD 232 THE ELECTRONIC OFFICE 3 Hrs.
PREREQUISITE: OAD 125, OAD 231, OR CIS 146
Electronic Office is designed to work with each of the four Microsoft Office programs, Word, Excel, PowerPoint, and Access, to create meaningful projects.
and perform business tasks. The student will learn how to streamline specific applications by integrating two or more of the Office programs, and how to use the World Wide Web to gather information. Upon completion, the student should be able to demonstrate the ability to use industry-standard software and generate appropriately formatted, accurate, and attractive business documents.

OAD 242  OFFICE INTERNSHIP  3 Hrs.
PREREQUISITE: Permission of instructor, RDG 085 or ENG 093 or higher placement, and 75% of program completion
This course is designed to provide the student with an opportunity to work in an office environment. Emphasis is on the efficient and accurate performance of job tasks. Upon completion, the student should be able to demonstrate successful performance of skills required in an office support position.

OAD 243  MICROSOFT EXCEL  3 Hrs.
PREREQUISITE: MTH 100 or MTH 116
This course is designed to provide the student with a firm foundation in the use of computerized equipment and appropriate software in performing spreadsheet tasks through classroom instruction and outside lab. Emphasis is on spreadsheet terminology and design, common formulas, and proper file and disk management procedures. Upon completion, the student should be able to use spreadsheet features to design, format, and graph effective spreadsheets. The State Department of Education refers to this course as Spreadsheet Applications.

OAD 244  MICROSOFT ACCESS  3 Hrs.
PREREQUISITE: OAD 101
Access is a computer program used to enter, maintain, and retrieve related data in a format known as a database. Upon completion, the student should be able to create a database, organize and update the data, prepare queries to find the needed information, and choose attractive and functional methods for viewing the information on screen and in printed reports. The State Department of Education refers to this course as Database Applications.

ORIENTATION (ORI)
ORI 101  ORIENTATION TO COLLEGE  1-2 Hrs.
This course aids new students in their transition to the institution, exposes new students to the broad educational opportunities of the institution, and integrates new students into the life of the institution.

PARALEGAL (PRL)
PRL 101  INTRODUCTION TO PARALEGAL STUDY  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course introduces the paralegal profession and the legal system. Topics include an overview of major areas of legal practice, ethics, legal analysis and research, professional development including certification and employment, and related topics.
PRL 102  BASIC RESEARCH AND WRITING  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course introduces the techniques of legal research and writing. Emphasis is placed on locating, analyzing, applying, and validating sources of law. Topics include legal research, legal writing, proper citation, and electronic research.

PRL 103  ADVANCED LEGAL RESEARCH AND WRITING  3 Hrs.
PREREQUISITE: PRL 102
This course requires the student to apply research, analysis, and writing techniques to substantive legal issues. Assignments include preparation of legal memoranda and other documents and the more efficient use of electronic research methods.

PRL 160  CRIMINAL LAW AND PROCEDURE  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course introduces substantive and procedural criminal law including elements of state and federal crimes, defenses, constitutional issues, pre-trial process, and other related topics.

PRL 220  CORPORATE LAW  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course covers the legal aspects of creating, operating, and maintaining a business and includes a review of commonly used forms of business organization.

PRL 230  DOMESTIC LAW  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course covers laws governing domestic relations. Topics include marriage, separation, divorce, child custody, support, property division, adoption, and domestic violence.

PRL 240  WILLS, TRUSTS, AND ESTATES  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course covers wills, trusts, and inheritance. Topics include types of wills, the law of intestacy (inheritance), probating estates, and alternatives to probate. The course also covers trusts, medical directives, and associated litigation.

PRL 250  BANKRUPTCY AND COLLECTIONS  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course provides an overview of laws of bankruptcy and the rights of creditors and debtors. Topics include bankruptcy procedures and estate management, attachment, claim and delivery, repossession, foreclosure, collection, garnishment, and post-judgment collection procedure.

PRL 262  CIVIL LAW AND PROCEDURES  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course examines the Federal Rules of Civil Procedure, the Alabama Rules of Civil Procedure, and trial procedure.
PHILOSOPHY (PHL)

PHL 106  INTRODUCTION TO PHILOSOPHY  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is an introduction to the basic concepts of philosophy. The literary and conceptual approach of the course is balanced with emphasis on approaches to ethical decision making. The student should have an understanding of major philosophical ideas in an historical survey from the early Greeks to the modern era.

PHL 206  ETHICS AND SOCIETY  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course involves the study of ethical issues which confront individuals in the course of their daily lives. The focus is on the fundamental questions of right and wrong, human rights, and conflicting obligations. The student should be able to understand and be prepared to make decisions in life regarding ethical issues.

PHYSICAL EDUCATION (PED)

PED 101  SLIMNASTICS (BEGINNING)  1 Hr.
This course provides an individualized approach to physical fitness, wellness, and other health-related factors. Emphasis is placed on the scientific basis for setting up and engaging in personalized physical fitness programs. Upon completion, the student should be able to set up and implement an individualized physical fitness program. (Lecture will be provided with this activity.)

PED 102  SLIMNASTICS (INTERMEDIATE)  1 Hr.
This course is an intermediate-level slimnastics class. Topics include specific exercises contributing to fitness and the role exercise plays in developing body systems, nutrition, and weight control. Upon completion, the student should be able to implement and evaluate an individualized physical fitness program. (Lecture will be provided with this activity.)

PED 103  WEIGHT TRAINING (BEGINNING)  1 Hr.
This course introduces the basics of weight training. Emphasis is placed on developing muscular strength, muscular endurance, and muscle tone. Upon completion, the student should be able to establish and implement a personal weight training program. (Lecture will be provided with this activity.)

PED 104  WEIGHT TRAINING (INTERMEDIATE)  1 Hr.
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, the student should be able to establish and implement an individualized advanced weight training program. (Lecture will be provided with this activity.)

PED 105  PERSONAL FITNESS  1 Hr.
This course is designed to provide the student with information allowing participation in a personally developed fitness program. Topics include cardiovascular fitness, strength, muscular endurance, flexibility, and body
composition.

PED 106 AEROBICS 1 Hr.
This course introduces a program of cardiovascular fitness involving continuous, rhythmic exercise. Emphasis is placed on developing cardiovascular efficiency, strength, flexibility, and safety precautions. Upon completion, the student should be able to select and implement a rhythmic aerobic exercise program. (Lecture will be provided with this activity.)

PED 107 AEROBICS DANCE (BEGINNING) 1 Hr.
This course introduces the fundamentals of step and dance aerobics. Emphasis is placed on basic stepping up; basic choreographed dance patterns; cardiovascular fitness; and upper body, floor, and abdominal exercises. Upon completion, the student should be able to participate in basic dance aerobics. (Lecture will be provided with this activity.)

PED 108 AEROBICS DANCE (INTERMEDIATE) 1 Hr.
This course provides a continuation of step aerobics. Emphasis is placed on a wide variety of choreographed step and dance patterns; cardiovascular fitness; and upper body, abdominal, and floor exercises. Upon completion, the student should be able to participate in and design an aerobics routine. (Lecture with this activity.)

PED 109 JOGGING 1 Hr.
This course covers the basic concepts involved in safely and effectively improving cardiovascular fitness. Emphasis is placed on walking, jogging, and running as a means of achieving fitness. Upon completion, the student should be able to understand and appreciate the benefits derived from these activities.

PED 118 GENERAL CONDITIONING (BEGINNING) 1 Hr.
This course provides an individualized approach to general conditioning utilizing the five major components. Emphasis is placed on the scientific basis for setting up and engaging in personalized physical fitness and conditioning programs. Upon completion, the student should be able to set up and implement an individualized physical fitness and conditioning program. (Lecture will be provided with this activity.)

PED 119 GENERAL CONDITIONING (INTERMEDIATE) 1 Hr.
This course is an intermediate-level fitness and conditioning program class. Topics include specific exercises contributing to fitness and the role exercise plays in developing body systems. Upon completion, the student should be able to implement and evaluate an individualized physical fitness and conditioning program. (Lecture will be provided with this activity.)

PED 123 GOLF (BEGINNING) 1 Hr.
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, the student should be able to perform the basic golf shots and demonstrate a knowledge of the rules and
etiquette of golf.

PED 124 GOLF (INTERMEDIATE) 1 Hr.
PREREQUISITE: PED 123 or permission of instructor
This course covers the more advanced phases of golf. Emphasis is placed on refining the fundamental skills and learning more advanced phases of the game such as club selection, trouble shots, and course management. Upon completion, the student should be able to demonstrate the knowledge and ability to play a recreational round of golf.

PED 133 TENNIS (BEGINNING) 1 Hr.
This course emphasizes the fundamentals of tennis. Topics include basic strokes, rules, etiquette, and court play. Upon completion, the student should be able to play recreational tennis.

PED 134 TENNIS (INTERMEDIATE) 1 Hr.
PREREQUISITE: PED 133 or permission of instructor
This course emphasizes the refinement of playing skills. Topics include continuing the development of fundamentals, learning advanced serves, strokes, pace, and strategies in singles and doubles play. Upon completion, the student should be able to play competitive tennis.

PED 150 TAI CHI 1 Hr.
Tai Chi is an ancient martial art form which improves flexibility, balance, strength, and mental discipline. By learning the slow and deliberate movements of Tai Chi, the student will also develop proper breathing and relaxation techniques and enhance joint flexibility. Tai Chi skills are a combination of stretching, isometrics, and isotonic movements in combination with diaphragmatic breathing and postural maintenance. Upon completion, the student should be able to demonstrate the procedures of Tai Chi.

PED 155 SELF DEFENSE 1 Hr.
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 nonphysical means of self-defense. Upon completion, the student should be able to demonstrate basic self-defense techniques of a physical and non-physical nature.

PED 157 FENCING (BEGINNING) 1 Hr.
This course introduces the fundamentals of fencing. Emphasis is placed on grip, stance, and establishment of good techniques for attacks and parries. Upon completion, the student should be able to perform elementary foil techniques and demonstrate the basic skills of fencing.

PED 158 FENCING (INTERMEDIATE) 1 Hr.
PREREQUISITE: PED 157
This course covers more advanced fencing techniques. Topics include advanced foil techniques and elementary sabre techniques. Upon completion, the student
should be able to participate in competitive fencing.

PED 159  KICKBOXING  1 Hr.
This course develops cardiovascular muscular endurance and flexibility through the skill and techniques of kickboxing. The student will learn basic conditioning skills and fundamentals of kickboxing that will enhance total fitness.

PED 171  BASKETBALL (BEGINNING)  1 Hr.
This course covers the fundamentals of basketball. Emphasis is placed on skill development, knowledge of the rules, and basic game strategy. Upon completion, the student should be able to participate in recreational basketball.

PED 172  BASKETBALL  1 Hr.
PREREQUISITE: PED 171 or permission of instructor.
This course covers more advanced basketball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, the student should be able to play basketball at a competitive level.

PED 176  VOLLEYBALL (BEGINNING)  1 Hr.
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, the student should be able to participate in recreational volleyball.

PED 177  VOLLEYBALL (INTERMEDIATE)  1 Hr.
PREREQUISITE: PED 176 or permission of instructor
This course covers more advanced volleyball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, the student should be able to participate in competitive volleyball.

PED 178  SOCCER (BEGINNING)  1 Hr.
This course introduces the basics of soccer. Emphasis is placed on rules, strategies, and fundamental skills. Upon completion, the student should be able to participate in recreational soccer.

PED 179  SOCCER (INTERMEDIATE)  1 Hr.
PREREQUISITE: PED 178 or permission of instructor
This course covers more of the basics of soccer. Emphasis is placed on rules, strategies, and advanced techniques, skills, and strategies. Upon completion, the student should be able to participate in introductory competitive soccer.

PED 180  FLAG FOOTBALL  1 Hr.
This course introduces the fundamentals and rules of flag football. Emphasis is placed on proper techniques and strategies for playing in game situations. Upon completion, the student should be able to participate in recreational flag football.

PED 181  BASEBALL (BEGINNING)  1 Hr.
This course covers the fundamentals of baseball. Emphasis is placed on skill
development, knowledge of the rules, and basic game strategy. Upon completion, the student should be able to participate in recreational baseball.

PED 182  BASEBALL (INTERMEDIATE)  1 Hr.  
This course covers more advanced baseball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, the student should be able to play baseball at a competitive level.

PED 186  SOFTBALL (BEGINNING)  1 Hr.  
This course introduces the fundamental skills and rules of softball. Emphasis is placed on proper techniques and strategies for playing softball. Upon completion, the student should be able to participate in recreational softball.

PED 187  SOFTBALL (INTERMEDIATE)  1 Hr.  
This course presents advanced skills and competitive practice in softball. Emphasis is placed on proper techniques and strategies for playing softball. Upon completion, the student should be able to participate in competitive softball.

PED 216  SPORTS OFFICIATING  3 Hrs.  
This course surveys the basic rules and mechanics of officiating a variety of sports, including both team and individual sports. In addition to class work, the student will receive at least three hours of practical experience in officiating.

PED 223  METHODS OF INSTRUCTION  3 Hrs.  
PREREQUISITE: RDG 085 or equivalent placement score  
This course provides instruction for the student on specialized teaching techniques in becoming a wellness exercise instructor. The student will learn the basics of instruction in the area of aerobic types of exercise and weight training. This course will enable the student to instruct, as well as, supervise these types of programs. The student will learn basic anatomy and exercise physiology as it applies to the movement of the body during exercise. This course will address and explain safety and teaching methods for the exercise instructor in the development of a comprehensive fitness program.

PED 245  CYCLING  1 Hr.  
This course is designed to promote physical fitness through cycling. Emphasis is placed on selection and maintenance of the bicycle, gear shifting, pedaling techniques, safety procedures, and conditioning exercises necessary for cycling. Upon completion, the student should be able to demonstrate safe handling of a bicycle for recreational use.

PED 251  VARSITY BASKETBALL  1 Hr.  
PREREQUISITE: Permission of instructor  
This course covers advanced fundamentals of basketball. Emphasis is placed on skill development, knowledge of the rules, and basic game strategy. Upon completion, the student should be able to participate in competitive basketball.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PED 252</td>
<td>VARSITY BASEBALL</td>
<td>1 Hr.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: Permission of instructor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course covers advanced baseball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, the student should be able to play baseball at a competitive level.</td>
<td></td>
</tr>
<tr>
<td>PED 254</td>
<td>VARSITY SOFTBALL</td>
<td>1 Hr.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: Permission of instructor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course introduces the fundamental skills and rules of softball. Emphasis is placed on proper techniques and strategies for playing softball. Upon completion, the student should be able to play competitive softball.</td>
<td></td>
</tr>
<tr>
<td>PED 257</td>
<td>VARSITY CHEERLEADING</td>
<td>1 Hr.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: Permission of instructor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course covers advanced co-ed cheerleading techniques. Emphasis is placed on refining skills and improving all areas related to co-ed cheerleading including knowledge of safety techniques, partner stunts, tumbling, basket tosses, pyramids, motions, physical conditioning, and mental preparation. Upon completion, the student should be able to participate in a competitive program at the university level.</td>
<td></td>
</tr>
<tr>
<td>PED 258</td>
<td>VARSITY VOLLEYBALL</td>
<td>1 Hr.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: Permission of instructor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course covers more advanced volleyball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, the student should be able to participate in competitive volleyball.</td>
<td></td>
</tr>
<tr>
<td>PED 295</td>
<td>PRACTICUM IN PHYSICAL EDUCATION</td>
<td>1-3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: PED 223</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is designed to provide field experience in observation and assistance in the student’s area of specialization. The student will work under the supervision of trained physical education teachers.</td>
<td></td>
</tr>
</tbody>
</table>

**PHYSICAL SCIENCE (PHS)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHS 111</td>
<td>PHYSICAL SCIENCE I</td>
<td>4 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course provides the non-technical student with an introduction to the basic principles of astronomy and geology. Laboratory is required.</td>
<td></td>
</tr>
<tr>
<td>PHS 112</td>
<td>PHYSICAL SCIENCE II</td>
<td>4 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course provides the non-technical student with an introduction to the basic principles of chemistry and physics. Laboratory is required.</td>
<td></td>
</tr>
</tbody>
</table>

**PHYSICS (PHY)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 201</td>
<td>GENERAL PHYSICS I -TRIG BASED</td>
<td>4 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: MTH 113 OR equivalent mathematics placement score, RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
</tbody>
</table>
This course is designed to cover general physics at a level that assumes previous exposure to college algebra, and basic trigonometry. Specific topics include mechanics, properties of matter and energy, thermodynamics, and periodic motion. Laboratory is required.

**PHY 202 GENERAL PHYSICS II-TRIG BASED**

**PREREQUISITE: PHY 201**

This course is designed to cover general physics using college algebra and basic trigonometry. Specific topics include wave motion, sound, light optics, electrostatics, circuits, magnetism, and modern physics. Laboratory is required.

**PHY 213 GENERAL PHYSICS WITH CAL I**

**PREREQUISITE: MTH 125, RDG 085 or ENG 093 or higher placement**

This course provides a calculus-based treatment of the principle subdivisions of classical physics: mechanics and energy, including thermodynamics. Laboratory is required.

**PHY 214 GENERAL PHYSICS WITH CAL II**

**PREREQUISITE: PHY 213**

This course provides a calculus-based study in classical physics. Topics included are simple harmonic motion, waves, sound, light, optics, electricity, and magnetism. Laboratory is required.

**POLITICAL SCIENCE (POL)**

**POL 200 INTRODUCTION TO POLITICAL SCIENCE**

**PREREQUISITE: RDG 085 or ENG 093 or higher placement**

This course is an introduction to the field of political science through examination of the fundamental principles, concepts, and methods of the discipline, and the basic political processes and institutions of organized political systems. Topics include approaches to political science, research methodology, the state government, law, ideology, organized political influences, governmental bureaucracy, problems in political democracy, and international politics. Upon completion, the student should be able to identify, describe, define, analyze, and explain relationships among the basic principles and concepts of political science and political processes and institutions of contemporary political systems.

**POL 211 AMERICAN NATIONAL GOVERNMENT**

**PREREQUISITE: RDG 085 or ENG 093 or higher placement**

This course surveys the background, constitutional principles, organization, and operation of the American political system. Topics include the U.S. Constitution, federalism, civil liberties, civil rights, political parties, interest groups, political campaigns, voting behavior, elections, the presidency, bureaucracy, Congress, and the justice system. Upon completion, the student should be able to identify and explain relationships among the basic elements of American government and function as more informed participants of the American political system.
POL 236  SURVEY OF INTERNATIONAL RELATIONS  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is a survey of the basic forces affecting international relations.
Topics include bases of national power, balance of power, causes of war, the
international political economy, international law, international organization,
and possible futures of international relations. Upon completion, the student
should be able to identify and discuss relevant terms and concepts, and identify,
analyze, evaluate, and discuss the primary factors influencing the international
relations of selected states.

PSYCHOLOGY (PSY)

PSY 106  CAREER EXPLORATION  1 Hr.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is designed for the student to explore potential career fields. This
course includes an assessment, through testing of strengths and weaknesses,
general information about careers and job skills, value and decision making
techniques, and a career research.

PSY 107  STUDY SKILLS  1 Hr.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
In this course, emphasis is placed on the skills of “how to study.” The course
introduces the student to effective techniques for listening in class, note taking,
preparation for test taking, and an overall system of successful study.

PSY 108  STRESS MANAGEMENT  2 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is designed to improve the stress management skills of the student.
Stress management techniques will be described and evaluated and the relationship
between stress and disease will be discussed.

PSY 200  GENERAL PSYCHOLOGY  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is a survey of behavior with emphasis upon psychological processes.
This course includes the biological bases for behavior, thinking, emotion,
motivation, and the nature and development of personality.

PSY 207  PSYCHOLOGY OF ADJUSTMENT  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course provides an understanding of the basic principles of mental health
and an understanding of the individual modes of behavior.

PSY 210  HUMAN GROWTH AND DEVELOPMENT  3 Hrs.
PREREQUISITE: PSY 200 or Permission of Instructor
This course is the study of the psychological, social, and physical factors that
affect human behavior from conception to death.

PSY 220  HUMAN SEXUALITY  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is a comprehensive and integrated approach to human sexuality emphasizing biological, psychological, social, and emotional aspects.

**PSY 230  ABNORMAL PSYCHOLOGY  3 Hrs.**

**PREREQUISITE: PSY 200**

This course is a survey of abnormal behavior and its social and biological origins. The anxiety related disorders, psychoses, personality disorders, and mental deficiencies will be covered.

**READING (RDG)**

**RDG 083  DEVELOPMENTAL READING I  4 Hrs.**

This course is designed to assist the student whose placement test scores indicate difficulty with decoding skills, comprehension, vocabulary, and study skills.

**RDG 084  DEVELOPMENTAL READING II  4 Hrs.**

**PREREQUISITE: RDG 083 or equivalent placement score.**

This course is designed to assist the student whose placement test scores indicate difficulty with decoding skills, comprehension, vocabulary, and study skills.

**RDG 085  DEVELOPMENTAL READING III  4 Hrs.**

**PREREQUISITE: RDG 084 or equivalent placement score.**

This course is designed to assist the student whose placement test scores indicate difficulty with decoding skills, comprehension, vocabulary, and study skills.

**RDG 114  CRITICAL READING FOR COLLEGE  3 Hrs.**

**PREREQUISITE: RDG 085 or equivalent placement score.**

This course is designed to enhance critical reading skills. Topics include vocabulary enrichment, reading flexibility, metacognitive strategies, and advanced comprehension skills, including analysis and evaluation. Upon completion, the student should be able to demonstrate comprehension and analysis and respond effectively to material across disciplines.

**REAL ESTATE (RLS)**

**RLS 101  REAL ESTATE PRINCIPLES  4 Hrs.**

**PREREQUISITE: RDG 085 or ENG 093 or higher placement**

This is an introductory real estate course providing the necessary terminology, background, and understanding of real estate principles. Topics include history of property ownership, real estate finance, real estate law, and the mechanics of listing and closing the sale. This course is designed to assist those preparing for the real estate salesman’s licensing examination in Alabama.

**RECREATION (REC)**

**REC 231  HEALTH AND FITNESS CLUB MANAGEMENT  3 Hrs.**

**PREREQUISITE: RDG 085 or ENG 093 or higher placement**

This course is designed to introduce the student to all facets of proper management of a modern fitness facility.
REC 232  HEALTH AND FITNESS CLUB INTERNSHIP  3 Hrs.
PREREQUISITE: REC 231 or COREQUISITE: REC 231
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, the student should be able
to demonstrate an understanding of the concepts covered through application.

RELIGIOUS STUDIES (REL)

REL 100  HISTORY OF WORLD RELIGIONS  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement.
This course is designed to acquaint the student with the beliefs and practices of
the major contemporary religions of the world. This includes the religions of
Africa, the Orient, and the western world. Upon completion, the student should
have an understanding of the history and origins of the various religions in the
world.

REL 151  SURVEY OF THE OLD TESTAMENT  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement.
This course is an introduction to the content of the Old Testament with
emphasis on the historical context and contemporary theological and cultural
significance of the Old Testament. Upon completion, the student should have an
understanding of the significance of the Old Testament writings.

REL 152  SURVEY OF THE NEW TESTAMENT  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement.
This course is a survey of the books of the New Testament with special attention
focused on the historical and geographical setting. Upon completion, the student
should have an understanding of the books of the New Testament and the
cultural and historical events associated with these writings.

RESPIRATORY (RPT)

RPT 210  CLINICAL PRACTICE I  2 Hrs.
PREREQUISITE BIO 201, BIO 202, ENG 101, MTH 100, RPT 256 and
acceptance into the Respiratory Therapist Program
COREQUISITE RPT 211, RPT 212, RPT 213, & RPT 214
This clinical course provides for initial hospital orientation and development
of general patient assessment and communication skills required for safe and
effective patient care. Emphasis is placed upon application of classroom and
laboratory experiences within the clinical environment. Upon completion,
students should demonstrate adequate psychomotor skills and cognitive abilities
necessary for initial patient contact and safe and effective performance of basic
respiratory care procedures.

RPT 211  INTRODUCTION TO RESPIRATORY CARE  2 Hrs.
PREREQUISITE BIO 201, BIO 202, ENE 101, MTH 100, RPT 256 and accep-
tance into the Respiratory Therapist Program
COREQUISITE RPT 210, RPT 212, RPT 213, RPT 214
This course is designed to acquaint the student with responsibilities of the Respiratory Care Practitioner (RCP) as a member of the health care team. Areas of emphasis include: history of the profession, credentialing mechanism, licensure, medical ethics, communication skills, basic medical terminology, and patient assessment. Upon completion, students should be able to demonstrate effective communication skills, proper use of aseptic technique, deference to appropriate professional ethics and behavior, and be able to perform basic patient assessment.

RPT 212 FUNDAMENTALS OF RESPIRATORY CARE I 4 Hrs.
PREREQUISITE BIO 201, BIO 202, ENE 101, MTH 100, RPT 256 and acceptance into the Respiratory Therapist Program
COREQUISITE RPT 210, RPT 211, RPT 213, RPT 214
A fundamental course which presents the scientific basis for respiratory care procedures and application of basic chemistry and physics as related to compressed gases and respiratory care equipment operation. Experimental laboratory is required and emphasis includes: design, functional characteristics, and operation of commonly encountered respiratory care equipment, use of medical gases and applied chemistry, physics, and mathematics. Upon completion, the student should be able to demonstrate an adequate knowledge base concerning function and troubleshooting of respiratory care equipment and concepts of applied physics, chemistry, and mathematics.

RPT 213 ANATOMY AND PHYSIOLOGY FOR THE RCP 3 Hrs.
PREREQUISITE BIO 201, BIO 202, ENE 101, MTH 100, RPT 256 and acceptance into the Respiratory Therapist Program
COREQUISITE RPT 210, RPT 211, RPT 212, RPT 214
This course provides detailed lecture and audio-visual presentations which concentrate on the cardiopulmonary and renal systems. Emphasis is placed on structure, function, and physiology of the cardiopulmonary and renal systems and the role each plays in the maintenance of homeostasis. Upon completion, the student should be able to demonstrate adequate knowledge of the structure, function, and physiology of the cardiopulmonary and renal systems.

RPT 214 PHARMACOLOGY FOR THE RCP 2 Hrs.
PREREQUISITE BIO 201, BIO 202, ENE 101, MTH 100, RPT 256 and acceptance into the Respiratory Therapist Program
COREQUISITE RPT 210, RPT 211, RPT 213, RPT 214
This course is a detailed study of drugs encountered in respiratory care practice and the function of the autonomic nervous system. Areas of emphasis include: determination of drug dosage, applied mathematics, clinical pharmacology, indications, hazards, intended actions, and side-effects of agents used in respiratory care. Upon completion, the student should be able to complete a dosage calculation test with 90% proficiency and demonstrate an adequate understanding of the clinical pharmacology of respiratory care drugs, and the general principles of pharmacology.

RPT 220 CLINICAL PRACTICE II 2 Hrs.
PREREQUISITE RPT 210, RPT 211, RPT 212, RPT 213, RPT 214, RPT 256
COREQUISITE PSY 200, RPT 221, RPT 222, RPT 223, RPT 224
This course is a continuation of clinical practice and allows the student to further integrate classroom and laboratory instruction into the practice of...
respiratory care. Areas of emphasis include: bedside patient assessment techniques, airway management, hyperinflation therapy, protocol implementation, development of patient care plans, oxygen, humidity and aerosol administration, and an introduction to management of the mechanical ventilation of the adult. Upon completion, the student should be able to demonstrate appropriate psychomotor skills and cognitive abilities necessary to successfully function as primary care giver for routine respiratory care procedures.

**RPT 221 PATHOLOGY FOR THE RCP** 3 Hrs.
PREREQUISITE RPT 210, RPT 211, RPT 212, RPT 213, RPT 214, RPT 256
COREQUISITE PSY 200, RPT 220, RPT 222, RPT 223, RPT 224
This course is a survey of commonly encountered diseases and disorders which may affect the function of the cardiopulmonary system, and the clinical manifestations and treatment rationales as related to respiratory care practice. Practical laboratory is required and course emphasis is placed upon the application of sound diagnostic techniques in the gathering of data in support of diagnosis of specific disease entities as well as progression of pathological changes in cardiopulmonary function. Upon completion, the student should be able to demonstrate the ability to gather appropriate information from various sources in support of diagnosis of specific cardiopulmonary disease as well as an adequate understanding of cardiopulmonary pathology.

**RPT 222 FUNDAMENTALS OF RESPIRATORY CARE II** 4 Hrs.
PREREQUISITE RPT 210, RPT 211, RPT 212, RPT 213, RPT 214, RPT 256
COREQUISITE PSY 200, RPT 220, RPT 221, RPT 223, RPT 224
This course continues to present the fundamental scientific basis for selected respiratory care procedures. Experimental laboratory is required and areas of emphasis include: therapeutic techniques utilized in bronchial hygiene, hyperinflation therapy, mechanical ventilation of the adult, manual resuscitation equipment, the equipment utilized in bedside assessment, and mechanical ventilation. Upon completion, the student should be able to demonstrate the cognitive abilities and psychomotor skills required to perform the procedures presented.

**RPT 223 ACID BASE REGULATION AND ABG ANALYSIS** 2 Hrs.
PREREQUISITE RPT 210, RPT 211, RPT 212, RPT 213, RPT 214, RPT 256
COREQUISITE PSY 200, RPT 220, RPT 221, RPT 222, RPT 224
This course provides the student with lecture and audiovisual presentation of material essential to the understanding of acid/base physiology and arterial blood gas interpretation. Emphasis is placed upon Arterial Blood Gas (ABG) sampling technique, quality assurance, basic chemistry as related to acid/base balance, evaluation of oxygen transport, and the role of the respiratory and renal systems in maintenance of homeostasis. Upon completion, the student should be able to demonstrate appropriate psychomotor skills and cognitive abilities for the fundamental concepts of acid/base balance and regulation of homeostasis by the respiratory and renal systems.

**RPT 230 CLINICAL PRACTICE II** 2 Hrs.
PREREQUISITE: RPT 220, RPT 221, RPT 222, RPT 223 RPT 234, RPT 256
COREQUISITE: RPT 232, RPT 233, RPT 242, SPH 116
This is the third course in the clinical sequence, and is designed to allow the student to function in the role of primary care giver. Emphasis is placed upon mastery of basic respiratory care procedures, administration of aerosol drugs, and care of the patient receiving mechanical ventilation. Upon completion, the student should be able to demonstrate psychomotor skills and cognitive abilities necessary to function safely and effectively in the role of primary care giver.

**RPT 232  DIAGNOSTIC PROCEDURES FOR THE RCP**  
**2 Hrs.**
**PREREQUISITE:** RPT 220, RPT 221, RPT 222, RPT 223  
**COREQUISITE:** RPT 230, RPT 233, RPT 242, SPH 116

This course is designed to present the value of various procedures as an aid to diagnosis in cardiopulmonary disease. Course emphasis is placed upon procedures such as complete pulmonary function testing, bronchoscopy, cardiac diagnostic procedures, and ventilation/perfusion studies. Upon completion, the student should be able to demonstrate the psychomotor and cognitive abilities necessary to perform routine diagnostic procedures.

**PRT 233  SPECIAL PROCEDURES FOR THE RCP**  
**2 Hrs.**
**PREREQUISITE:** RPT 220, RPT 221, RPT 222, RPT 223  
**COREQUISITE:** RPT 230, RPT 232, RPT 242, SPH 116

This course identifies and presents special procedures and medical specialties for various tasks required of the RCP, while functioning in an assistive role to the physician. Course emphasis is placed upon phlebotomy, bronchoscopy, hemodynamic assessment, and advanced cardiopulmonary monitoring techniques. Upon completion, the student should be able to demonstrate cognitive abilities and understand the psychomotor skills necessary to perform assistive functions during the various procedures presented.

**RPT 234  MECHANICAL VENTILATION FOR THE RCP**  
**4 Hrs.**
**PREREQUISITE** RPT 210, RPT 211, RPT 212, RPT 213, RPT 214, RPT 256  
**COREQUISITE** PSY 200, RPT 220, RPT 221, RPT 222, RPT 223

This course continues and expands the presentation of material concerning mechanical ventilation as previously introduced including indications, modification, and discontinuance of mechanical ventilation. Laboratory is required and course emphasis is placed upon the application of scientific principles to the clinical use of various modes of mechanical ventilation. Upon completion, the student should be able to demonstrate the cognitive and psychomotor skills required to effectively institute and maintain various methods of mechanical ventilation.

**RPT 240  CLINICAL PRACTICE IV**  
**4 Hrs.**
**PREREQUISITE:** RPT 230, RPT 232, RPT 233, RPT 234  
**COREQUISITE:** RPT 241, RPT 243, RPT 244, RPT 266, RPT 268

This course, the last in the required clinical sequence, provides opportunities for the student to further refine clinical skills. Course emphasis is placed upon critical care, neonatal mechanical ventilation, home care and discharge planning. Upon completion, the student should be able to demonstrate the cognitive and psychomotor skills required to function in the role of advanced respiratory care practitioner.

**RPT 241  REHABILITATION AND HOME CARE FOR THE RCP**  
**2 Hrs.**
**PREREQUISITE:** RPT 230, RPT 232, RPT 233, RPT 234
This course presents special considerations which apply to rehabilitation and home care of the patient with cardiopulmonary disorders. Emphasis is placed upon the role of the RCP within the home care medical community and modification of techniques and procedures necessary for effective pulmonary management. Upon completion, the student should be able to demonstrate an understanding of discharge planning and disease management protocols as applied to rehabilitation and the continuation of effective respiratory care outside of an acute care facility.

RPT 242 PERINATAL/PEDIATRIC RESPIRATORY CARE 3 Hrs.
PREREQUISITE: RPT 210, RPT 211, RPT 212, RPT 213, RPT 214, RPT 220, RPT 221, RPT 222, RPT 223, RPT 234
COREQUISITE: RPT 230, RPT 232, RPT 233, SPH 116
This course presents the unique requirement for appropriate delivery of respiratory care to the neonatal and pediatric patient. Laboratory is required and course emphasis is placed upon a detailed outline of fetal lung development, fetal circulation, neonatal cardiopulmonary disorders, and specialized equipment and techniques, as well as general considerations of provision of care to neonatal and pediatric patients. Upon completion, the student should be able to demonstrate the cognitive and psychomotor skills required for safe and effective delivery of respiratory care to the neonatal and pediatric patient.

RPT 243 COMPUTER APPLICATIONS FOR THE RCP 2 Hrs.
PREREQUISITE: RPT 232, RPT 233, RPT 234, RPT 242, RPT 256
COREQUISITE: RPT 240, RPT 241, RPT 244, RPT 266, RPT 268
This course is designed to allow the student practice in utilizing computer asisted clinical simulation software as well as allow for a general program review in preparation for credentialing examinations. Emphasis is placed on development of critical thinking skills, specific to the discipline, and development of computer literacy. Upon completion, students should be able to demonstrate computer literacy and satisfactory performance on nationally standardized comprehensive self-assessment examinations.

RPT 244 CRITICAL CARE CONSIDERATIONS FOR THE RCP 2 Hrs.
PREREQUISITE: RPT 230, RPT 232, RPT 233, RPT 234, RPT 242, RPT 256
COREQUISITE: RPT 240, RPT 241, RPT 243, RPT 266, RPT 268
This course provides for continued discussion concerning the monitoring and maintenance of patients who are treated in the critical care area of an acute care hospital. Course emphasis is placed upon advanced monitoring and assessment techniques employed in the treatment of the critical care patient. Upon completion, the student should be able to demonstrate increased psychomotor and cognitive abilities as pertaining to critical care.

RPT 256 WRITINGS AND RESEARCH FOR THE RCP I 1 Hr.
PREREQUISITE: MTH 100 and ENG 101. (Permission of the instructor if taken during the fall semester)
COREQUISITE: RPT 210, RPT 211, RPT 212, RPT 213, RPT 214 (if taken during the fall semester)
This course is provided to allow for independent research on a topic of special
interest within the field of respiratory care. A written narrative of research activities or a literature research paper is required. Upon completion, students should be able to effectively communicate in written narrative form the results of independent study.

RPT 266  SEMINAR IN RESPIRATORY MEDICINE I  1 Hr.
PREREQUISITE:  RPT 230, RPT 232, RPT 233, RPT 234, RPT 242
COREQUISITE:  RPT 240, RPT 241, RPT 243, RPT 244, RPT 268
This course is a series of physician and/or guest lecturers designed to present topics of special interest to the student or practitioner. Emphasis is placed upon current medical practice within the field of pulmonary medicine and cardiology. Upon completion, the student should be able to demonstrate an increased knowledge base concerning the topics of special interest presented.

RPT 268  WRITING AND RESEARCH FOR THE RCP II  1 Hr.
PREREQUISITE:  RPT 230, RPT 232, RPT 233, RPT 234, RPT 242
COREQUISITE:  RPT 240, RPT 241, RPT 243, RPT 244, RPT 266
This course allows for independent research on a topic of special interest within the field of respiratory care. A written narrative of research activities or a literature research paper is required. Upon completion, students should be able to effectively communicate in written narrative form the results of independent study.

SOCIOMETRY (SOC)

SOC 200  INTRODUCTION TO SOCIOLOGY  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is an introduction to the vocabulary, concepts, and theory of sociological perspectives of human behavior.

SOC 207  INTRODUCTION TO THE FIELDS OF SOCIAL WORK PRACTICE  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course introduces the student to an overview of the many and varied roles in which social workers function in today’s society. It reviews the historical development of the fields of practice and the profession’s code of ethics, and covers current national and local issues. Fifteen hours of volunteer work outside of class are required. (Transfers to UA as SW 100 Introduction to the Fields of Social Work Practice)

SOC 210  SOCIAL PROBLEMS  3 Hrs.
PREREQUISITE: SOC 200
This course examines the social and cultural aspects, influences, incidences, and characteristics of current social problems in light of sociological theory and research.

SOC 247  MARRIAGE AND THE FAMILY  3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is a study of family structures and families in a modern society. It covers preparation for marriage, as well as sociological, psychological, biological, and financial factors relevant to success in marriage and family life.
SOC 296  DIRECTED STUDIES IN SOCIOLOGY  1-3 Hrs.
PREREQUISITE: SOC 200
This course provides the student with opportunities to have “hands-on”
experience with research methods used in the behavioral sciences or to complete
directed readings under faculty supervision.

<table>
<thead>
<tr>
<th>SPANISH (SPA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SPA 101</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

| **SPA 102**    | INTRODUCTORY SPANISH II | 4 Hrs. |
|                | PREREQUISITE: A grade of C or higher in SPA 101 |
|                | This course includes the continuing development of basic communication skills and the acquisition of basic knowledge of the cultures of Spanish-speaking areas. |

<table>
<thead>
<tr>
<th>SPEECH (SPH)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SPC 100</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

| **SPH 106**    | FUNDAMENTALS OF ORAL COMMUNICATION | 3 Hrs. |
|                | PREREQUISITE: RDG 085 or ENG 093 or higher placement |
|                | Communication is a performance course that includes the principles of human communication: intrapersonal, interpersonal, and public. This course surveys current communication theory and provides practical application. |

| **SPH 107**    | FUNDAMENTALS OF PUBLIC SPEAKING | 3 Hrs. |
|                | PREREQUISITE: RDG 085 or ENG 093 or higher placement |
|                | COREQUISITE: ENG 101, RDG 085 or equivalent placement score |
|                | This course explores principles of audience and environment analysis as well as the actual planning, rehearsing, and presenting of formal speeches to specific audiences. Historical foundations, communication theories, and student performances are emphasized. |

| **SPH 108**    | VOICE AND DICTION | 3 Hrs. |
|                | PREREQUISITE: RDG 085 or ENG 093 or higher placement |
|                | This course provides training for improvement in use of the speaking voice. Attention is focused on range, flexibility, clarity of articulation, and standards of pronunciation with individual help in the correction of faulty speech habits. A study of the International Phonetic Alphabet is included. |

| **SPH 116**    | INTRODUCTION TO INTERPERSONAL COMMUNICATION | 3 Hrs. |
|                | PREREQUISITE: RDG 085 or ENG 093 or higher placement |
COREQUISITE: ENG 101
This course is an introduction to the basic principles of interpersonal communication.

SPH 123-125 FORENSICS WORKSHOP I-II-III 1-3 Hrs.
PREREQUISITE: Permission of Instructor
These courses offer experience in speech activities such as debate, discussion, oral interpretation, extemporaneous speaking, and original oratory. The student is required to participate in scheduled intercollegiate speech tournaments.

SPH 206 ORAL INTERPRETATION 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
COREQUISITE: ENG 101
This course is designed to help students develop specific skills in the analysis and oral interpretation of poetry, prose, and drama. It includes a study of the elements of oral communication such as imagery, structure, and dramatic timing. Opportunity is given for public/classroom performance of literature.

SPH 217 ELEMENTS OF PERSUASION 3 Hrs.
PREREQUISITE: SPH 107
This course is an advanced study and practice of the elements of persuasive speaking begun in SPH 106 and SPH 107.

SPH 227 ARGUMENTATION AND DEBATE 3 Hrs.
PREREQUISITE: SPH 107
This course introduces argumentation and debate and methods of bringing reasoned discourse to bear on personal and social problems. It includes investigations into the various types of debates with emphasis on the use of evidence, logic, responsibility of the advocate, and the composition of language for oral controversy.

THEATRE (THR)

THR 113 THEATRE WORKSHOP I 1 Hr.
This is the first in a six-course sequence which provides practical experience in the production and performance of a dramatic presentation with assignments in scenery, lighting, props, choreography, sound, costumes, make-up, publicity, acting, directing, and other aspects of theatre production.

THR 114 THEATRE WORKSHOP II 1 Hr.
PREREQUISITE: THR 113.
This course is a continuation of THR 113

THR 115 THEATRE WORKSHOP III 1 Hr.
PREREQUISITE: THR 114.
This course is a continuation of THR 114

THR 120 THEATRE APPRECIATION 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is designed to increase appreciation of contemporary theater. Emphasis is given to the theater as an art form through the study of history, theory of drama and the contributions to modern media. This course places emphasis on playwright, actor, director, designer, and technician to modern media. Attendance at theater productions may be required.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR 126</td>
<td>INTRODUCTION TO THEATRE</td>
<td>3 Hrs.</td>
<td>RDG 085 or ENG 093 or higher placement</td>
</tr>
<tr>
<td></td>
<td>This course is designed to teach the history of the theater and the principles of drama. It also covers the development of theater production and the study of selected plays as theatrical presentations. Attendance at theater productions may be required.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR 131</td>
<td>ACTING TECHNIQUES I</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This is the first of a two-course sequence in which the student will focus on the development of the body and voice as the performing instruments in acting. Emphasis is placed on pantomime, improvisation, acting exercises, and building characterizations in short acting scenes.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR 132</td>
<td>ACTING TECHNIQUES II</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: THR 131</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is a continuation of THR 131.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR 213</td>
<td>THEATRE WORKSHOP IV</td>
<td>2 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: THR 115</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is a continuation of THR 113, 114, and 115.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR 214</td>
<td>THEATRE WORKSHOP V</td>
<td>2 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: THR 213</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is a continuation of THR 113, 114, and 115.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR 215</td>
<td>THEATRE WORKSHOP VI</td>
<td>2 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: THR 214</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is a continuation of THR 113, 114, 115, and 214.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR 216</td>
<td>THEATRICAL MAKE-UP</td>
<td>2 Hrs.</td>
</tr>
<tr>
<td></td>
<td>This course is a study of the materials and techniques of theatrical make-up.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR 236</td>
<td>STAGECRAFT</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>This course is a study of the principles, techniques, and materials in theatrical scenery and lighting.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR 241</td>
<td>VOICE AND SPEECH FOR THE PERFORMER</td>
<td>3 Hrs.</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: RDG 085 or ENG 093 or higher placement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This is a beginning course in the effective and healthy use of the vocal instrument for performance. It is designed to approach both the physical and mental processes of vocal production and includes the following: learning a</td>
<td></td>
</tr>
</tbody>
</table>
physical/vocal warmup, dialect reduction, articulation, class performance, and written exams.

THR 266  FUNDAMENTALS OF DIRECTING 3 Hrs.
PREREQUISITE: RDG 085 or ENG 093 or higher placement
This course is designed to cover the fundamentals of directing. Instruction will include lectures, demonstration, written and oral analysis of scripts, and performances.

THR 281  STAGE MOVEMENT I 1 Hr.
This is the first in a two-course sequence which offer the student a basic introduction to movement for the stage for those interested in acting or dance. The course also includes consideration of role development through movement.

THR 282  STAGE MOVEMENT II 1 Hr.
PREREQUISITE: THR 281
This course is a continuation of THR 281.

THR 296  DIRECTED STUDIES IN THEATRE 2 Hrs.
PREREQUISITE: Permission of instructor
This course deals with problems in theater and art management. Problems may be arranged in conjunction with other disciplines in the Fine Arts.

WELDING (WDT)

WDT 108  SMAW FILLET/OFC 3 Hrs.
COREQUISITE: WDT 122
This course provides the student with instruction on safety practices and terminology in the Shielded Metal Arc Welding (SMAW) process. Emphasis is placed on safety, welding terminology, equipment identification, set-up and operation, and related information in the SMAW process. This course also covers the rules of basic safety and identification of shop equipment, and provides the student with the skills and knowledge necessary for the safe operation of oxy-fuel cutting.

WDT 109  SMAW FILLET/PAC/CAC 3 Hrs.
COREQUISITE: WDT 123
This course provides the student with instruction on safety practices and terminology in the Shielded Metal Arc Welding (SMAW) process. Emphasis is placed on safety, welding terminology, equipment identification, set-up and operation, and related information in the SMAW process. This course also covers the rules of basic safety and identification of shop equipment, and provides the student with the skills and knowledge necessary for the safe operation of carbon arc cutting and plasma arc cutting.

WDT 110  INDUSTRIAL BLUEPRINT READING 3 Hrs.
This course provides students with the understanding and fundamentals of industrial blueprint reading. Emphasis is placed on reading and interpreting lines, views, dimensions, weld joint configurations and weld symbols. Upon
completion the student should be able to interpret welding symbols and blueprints as they apply to welding and fabrication.

WDT 119 GAS METAL ARC/FLUX CORED ARC WELDING 3 Hrs.
COREQUISITE: WDT 124
This course introduces the student to the gas metal arc and flux cored arc welding process. Emphasis is placed on safe operating practices, handling and storage of compressed gasses, process principles, component identification, various welding techniques and base and filler metal identification.

WDT 120 SHIELDED METAL ARC WELDING GROOVE THEORY 3 Hrs.
COREQUISITE: WDT 125
This course provides the student with instruction on joint design, joint preparation, and fit-up of groove welds in accordance with applicable welding codes. Emphasis is placed on safe operation, joint design, joint preparation, and fit-up. Upon completion, the student should be able to identify the proper joint design, joint preparation and fit-up of groove welds in accordance with applicable welding codes.

WDT 122 SMAW FILLET/OFCLAB 3 Hrs.
COREQUISITE: WDT 108
This course is designed to introduce the student to the proper set-up and operation of the shielded metal arc welding equipment. Emphasis is placed on striking and controlling the arc, and proper fit up of fillet joints. This course is also designed to instruct students in the safe operation of oxy-fuel cutting. Upon completion, the student should be able to make fillet welds in all positions using electrodes in the F-3 groups in accordance with applicable welding code and be able to safely operate oxy-fuel equipment and perform those operations as per the applicable welding code.

WDT 123 SMAW FILLET/PAC/CAC LAB 3 Hrs.
COREQUISITE: WDT 109
This course is designed to introduce the student to the proper set-up and operation of the shielded metal arc welding equipment. Emphasis is placed on striking and controlling the arc, and proper fit up of fillet joints. This course is also designed to instruct students in the safe operation of plasma arc and carbon arc cutting. Upon completion, students should be able to make fillet welds in all positions using electrodes in the F-4 groups in accordance with applicable welding code and be able to safely operate plasma arc and carbon arc equipment and perform those operations as per applicable welding code.

WDT 124 GAS METAL ARC/FLUX CORED ARC WELDING LAB 3 Hrs.
COREQUISITE: WDT 119
This course provides instruction and demonstration using the various transfer methods and techniques to gas metal arc and flux cored arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases.
WDT 125 SHIELDED METAL ARC WELDING GROOVE LAB 3 Hrs.
COREQUISITE: WDT 120
This course provides instruction and demonstrations in the shielded metal arc welding process on carbon steel plate with various size F3 and F4 group electrodes in all positions. Emphasis is placed on welding groove joints and using various F3 and F4 group electrodes in all positions. Upon completion, the student should be able to make visually acceptable groove weld joints in accordance with applicable welding codes.

WDT 180 SPECIAL TOPICS 3 Hrs.
This course allows the student to plan, execute, and present results of individual projects in welding. Emphasis is placed on enhancing skill attainment in the welding field. Upon completion, the student should be able to demonstrate and apply competencies identified and agreed upon between the student and instructor.

WDT 181 SPECIAL TOPICS LAB 3 Hrs.
This course provides specialized instruction in various areas related to the welding industry. Emphasis is placed on meeting students needs.

WDT 217 SMAW CARBON PIPE THEORY 3 Hrs.
COREQUISITE: WDT 257
This course introduces the student to the practices and procedures of welding carbon steel pipe using the shielded metal arc weld (SMAW) process. Emphasis is placed on pipe positions, electrode selection, joint geometry, joint preparation, and fit-up. Upon completion, the student should be able to identify pipe positions, electrodes, proper joint geometry, joint preparation, and fit-up in accordance with applicable code.

WDT 221 PIPEFITTING AND FABRICATION 3 Hrs.
This course provides the student with skills and practices for fabricating pipe plans using butt-welded fittings. Emphasis is placed on butt-welded fittings to include 45 and 90 degree angles, flanges, reducers, and tees. Upon completion, the student should be able to fit butt-welded fittings and cut and fabricate tees, laterals, and assorted angles.

WDT 228 GAS TUNGSTEN ARC FILLET THEORY 3 Hrs.
COREQUISITE: WDT 268
This course introduces the student to the gas tungsten arc welding process as described in AWS code D1.1 for fillet welds of ferrous and non-ferrous metals. Emphasis is placed on safe operating practices, handling of cylinders, process principles, tungsten types and shapes, and base and filler metal identification. Upon completion, the student should be able to explain safe operating practices and principles, identify various tungsten types and sizes, and recognize various base and filler metals.

WDT 257 SMAW CARBON PIPE LAB 3 Hrs.
COREQUISITE: WDT 21
This course is designed to provide the student with skills in welding carbon steel
pipe with the shielded metal arc weld (SMAW) process using electrodes in the F4 and F3 group. Emphasis is placed on welding pipe in the 2G, 5G, and 6G positions. Upon completion, the student should be able to perform shielded metal arc welding on carbon steel pipe with prescribed electrodes in the 2G, 5G, and 6G positions to the applicable code.

WDT 258 CERTIFICATION LAB 3 Hrs.
This course is designed to provide the student with the skills needed to perform welds using the prescribed welding process. Emphasis is placed on welding test joints in accordance with the prescribed welding code. Upon completion, the student should be able to pass an industry standard welding test in accordance with D1.1 code requirements.

WDT 268 GAS TUNGSTEN ARC LAB 3 Hrs.
COREQUISITE: WDT 228
This course provides student with skills needed to perform gas tungsten arc welds using ferrous and/or non-ferrous metals, according to applicable welding codes. Topics include safe operating practices, equipment identification and set-up, correct selection of tungsten type, polarity, shielding gas and filler metals. Upon completion, the student should be able to identify safe operating practices, equipment identification and setup, correct selection of tungsten type, polarity, shielding gas, filler metals, and various welds on ferrous and/or non-ferrous metals, using the gas tungsten arc welding process according to applicable welding codes.

WDT 292 COOPERATIVE EDUCATION 3 Hrs.
This course constitutes a series wherein the student works on a part-time basis in a job directly related to welding. In this course, the employer evaluates the student’s productivity and the student submits a descriptive report of his or her work experiences. Upon completion, the student should demonstrate skills learned in an employment setting.

WORKPLACE SKILLS ENHANCEMENT (WKO)

WKO 107 WORKPLACE SKILLS PREPARATION 1 Hr.
This course utilizes computer based instructional modules which are designed to access and develop skills necessary for workplace success. The instructional modules in the course include applied mathematics, applied technology, reading for information, and locating information. Upon completion of this course, the student should be assessed to determine if their knowledge of the subject areas has improved.