

Course Descriptions

DENTAL ASSISTING (DNT)

DNT 100 INTRODUCTION TO DENTAL ASSISTING (2T) 2 credits
PREREQUISITE: Admission to the Dental Assisting Program and Permission of Instructor
COREQUISITE: DNT 101, DNT 102, DNT 103, DNT 104, PSY 200
 This course is designed to provide an introduction to dentistry and the history of dentistry, dental equipment, dental auxiliaries, psychology application to dentistry, personal and certification requirements, legal and ethical considerations, and work ethics and communication skills. Emphasis is placed on the Alabama Dental Practice Act and OSHA Standards. Upon completion, students should be able to discuss basic aspects of dentistry.

DNT 101 PRE-CLINICAL PROCEDURES I (2T, 3S) 3 credits
FORMERLY: DNT 101 and 102
PREREQUISITE: Admission to the Dental Assisting Program and Permission of Instructor
COREQUISITES: DNT 100, DNT 102, DNT 103, DNT 104, PSY 200
 This course is designed to introduce chairside assisting including concepts of four-handed dentistry, sterilization techniques, dental instruments, anesthesia, and operative dentistry. Emphasis will be placed on preparation of the student for clinical dental assisting. Upon completion, the student should be able to perform dental assisting skills in a clinical setting.

DNT 102 DENTAL MATERIALS (2T, 3S) 3 credits
FORMERLY: DNT 116
PREREQUISITE: Admission to the Dental Assisting Program and Permission of Instructor
COREQUISITES: DNT 100, DNT 101, DNT 103, DNT 104, PSY 200
 This course is designed to study the characteristics, manipulation, and application of dental materials ordinarily used in the dental office. Students will be given intra and extra-oral technical tasks to perform. Upon completion, students should be able to take and pour alginate impressions, trim study models, construct custom trays and temporary crowns, prepare and place restorative material, and manipulate cements and impression materials.

DNT 103 ANATOMY AND PHYSIOLOGY FOR DENTAL ASSISTING (3T) 3 credits
FORMERLY: DNT 186 and BIO 141
PREREQUISITE: Admission to Dental Assisting Program and Permission of Instructor
COREQUISITE: DNT 100, DNT 101, DNT 102, DNT 104, PSY 200
 This course is designed to study dental anatomy and the structure of the head and neck with a basic understanding of body structure and function. Emphasis will be placed on tooth and root morphology, and embryological and histological correlations will provide a foundation essential to an understanding of dental health. Upon completion, students should be able to discuss and identify the basic structure and

function of the human body specifically the head, neck, and dentition.

DNT 104 BASIC SCIENCES FOR DENTAL ASSISTING (2T) 2 credits
FORMERLY: DNT 187 and BIO 142
PREREQUISITE: Admission to Dental Assisting Program and Permission of Instructor
COREQUISITE: DNT 100, DNT 101, DNT 102, DNT 103. PSY 200
 This course is designed to study basic microbiology, pathology, pharmacology, and medical emergencies. Emphasis is placed on the correlation of these sciences to the practice of dentistry. Upon completion, students should be able to apply basic science to the dental field.

DNT 111 CLINICAL PRACTICE I (1T, 12C) 5 credits
FORMERLY: DNT 173
PREREQUISITE: Admission to Dental Assisting Program or Permission of Instructor
COREQUISITE: DNT 112, DNT 113, DNT 116, DNT 124, MTH 100 or 112 or 116, SPH 107
 This course is designed to allow the student the opportunity for clinical observation and practical work experience in clinical settings under the supervision of a licensed dentist. Emphasis will be placed on the basic skills of chairside assisting. Upon completion, students should be able to demonstrate basic skills in the area of chairside assisting.

DNT 112 DENTAL RADIOLOGY (2T, 3S) 3 credits
FORMERLY: DNT 131 and DNT 132
PREREQUISITE: Admission to Dental Assisting Program or Permission of Instructor
COREQUISITE: DNT 111, DNT 113, DNT 116, DNT 124, MTH 100 or 112 or 116, SPH 107
 This course is designed to cover the essential knowledge of radiographic technique for the practice of dentistry. Students will be taught to produce diagnostically acceptable intra and extra-oral radiographs with emphasis being placed on x-ray properties, generation of x-rays, film processing, infection control, quality assurance, intraoral radiographic technique and image characteristics. Upon completion, students should be able to expose, process, and mount radiographs for diagnostic purposes under the direct supervision of a licensed dentist.

DNT 113 DENTAL HEALTH EDUCATION (2T) 2 credits
FORMERLY: DNT 146
PREREQUISITE: Admission to Dental Assisting Program and Permission of Instructor
COREQUISITE: DNT 111, DNT 112, DNT 116, DNT 124, MTH 100 or MTH 112 or MTH 116, SPH 107
 This course is designed to introduce the student to the basic principles of nutrition, preventive dentistry, and dental health education. Emphasis will be placed on philosophy of preventive dentistry including: oral hygiene, patient motivation and management, and methods of oral health education. Upon completion,

	students should be able to apply the basic principles of nutrition and preventive dentistry.	DNT 124	CLINICALLY APPLIED INFECTION CONTROL AND OSHA STANDARDS (3C) 1 credit PREREQUISITE: DNT 111 or Permission of Instructor COREQUISITE: DNT 111, DNT 112, DNT 113, DNT 116, SPH 107, MTH 100 or 112 or 116 This course is designed for the integration of previously acquired knowledge of OSHA Standards and Infection Control in a clinical setting. Emphasis will be placed on clinical application of Infection Control and Compliance of OSHA Standards as it relates to dental chairside assisting. Upon completion, students should be able to demonstrate skills in the area of Infection Control and OSHA Guidelines.
DNT 116	PRECLINICAL PROCEDURES II (2T) 2 credits FORMERLY: DNT 102 PREREQUISITE: DNT 101 Pre-Clinical Procedures I and permission of the instructor COREQUISITE: DNT 111, DNT 112, DNT 113, DNT 124, SPH 107 and MTH 100 or MTH 112 or MTH 116 This course is a continuation of Pre-Clinical Procedures I. Emphasis is placed on dental specialties. Upon completion, the student should be able to discuss and identify dental specialty procedures and instrumentation.	DNT 134	CLINIC/CO-OP (5 I) 1 credit PREREQUISITE: DNT 122 or Permission of Instructor This course is designed to enable the student who has completed the Certificate Program to gain hands-on experience at a work-site or by performing job-related activities. Emphasis will be placed on chairside assisting skills. Successful completion of student cognitive, psychomotor or affective domain competencies are required in this course.
DNT 121	DENTAL OFFICE PROCEDURES (4T) 4 credits FORMERLY: DNT 156 PREREQUISITE: Admission to Dental Assisting Program and Permission of Instructor COREQUISITE: DNT 122, DNT 123, ENG 101 This course is designed to address basic dental office procedures including appointment and recall systems, financial records, accounting procedures, insurance claims, filing systems, purchasing and inventory of supplies and equipment, and the utilization of computers to perform business office procedures. Emphasis is placed on the duties of a dental receptionist. Upon completion, students should be able to demonstrate efficiently in practice management.	DNT 135	CLINIC/CO-OP (10 I) 2 credits PREREQUISITE: DNT 122 or Permission of Instructor This course is designed to enable the student who has completed the Certificate Program to gain hands-on experience at a work-site or by performing job-related activities. Successful completion of student cognitive, psychomotor or affective domain competencies are required in this course.
DNT 122	CLINICAL PRACTICE II (12C) 4 credits FORMERLY: DNT 174 PREREQUISITE: Admission to Dental Assisting Program and Permission of Instructor COREQUISITE: DNT 121, DNT 123, ENG 101 This course is designed to provide the student the opportunity to develop advanced dental assisting skills in chairside dental assisting procedures, radiology, receptionist duties, team work, and communication skills. Emphasis will be placed on clinical procedures. Upon completion, students should be able to demonstrate proficiency in the area of chairside assisting.	DNT 136	CLINICAL/CO-OP (15 I) 3 credits PREREQUISITE: DNT 122 or Permission of Instructor This course is designed to enable the student who has completed the Certificate Program to gain hands-on experience at a work-site or by performing job-related activities. Successful completion of student cognitive, psychomotor or affective domain competencies are required in this course.
DNT 123	DENTAL ASSISTING SEMINAR (4T) 4 credits FORMERLY: DNT 196 PREREQUISITE: Admission to Dental Assisting Program and Permission of Instructor COREQUISITE: DNT 121 and DNT 122, ENG 101 This course is designed to discuss and evaluate the students' clinical experiences and the resume and interview process. Emphasis will be placed on new technology in dental practices as related to dental assisting and the certification exam review. Upon completion, students should be able to successfully complete the Dental Assisting National Board Examination to become a Certified Dental Assistant.	DNT 137	CLINICAL/CO-OP (20 I) 4 credits PREREQUISITE: DNT 122 or Permission of Instructor This course is designed to enable the student who has completed the Certificate Program to gain hands-on experience at a work-site or by performing job-related activities. Successful completion of student cognitive, psychomotor or affective domain competencies are required in this course.
		DNT 139	DIRECTED STUDIES IN DENTAL ASSISTING (1T) 1 credit PREREQUISITE: Permission of Instructor This course is designed to study specific areas of dentistry as chosen by the student and faculty member. Emphasis will be placed on the research and critique of a specific dental topic. Upon completion, students should be able to deliver a written and oral presentation on the chosen topic.

Course Descriptions

- DNT 140 DIRECTED STUDIES IN DENTAL ASSISTING (2T) 2 credits**
PREREQUISITE: Permission of Instructor
 This course is designed to study specific areas of dentistry as chosen by the student and faculty member. Emphasis will be placed on the research and critique of a specific dental topic. Upon completion, students should be able to deliver a written and oral presentation on the chosen topic.
- DNT 141 DIRECTED STUDIES IN DENTAL ASSISTING (3T) 3 credits**
PREREQUISITE: Permission of Instructor
 This course is designed to study specific areas of dentistry as chosen by the student and faculty member. Emphasis will be placed on the research and critique of a specific dental topic. Upon completion, students should be able to deliver a written and oral presentation on the chosen topic.
- DNT 296 SPECIAL TOPICS IN DENTISTRY (1T) 1 credit**
PREREQUISITE: Permission of Instructor
 This course is designed to address special topics in dentistry according to the criteria approved for continuing education by the code of Alabama. Emphasis is placed on chairside dental assisting, Infection Control/OSHA, treatment of special needs/medically compromised patients, oral pathology basic sciences, dental materials, medical emergencies, and ethics and jurisprudence. Upon completion, the student should be able to discuss the special topic addressed in the symposium as it relates to dentistry.
- DNT 297 SPECIAL TOPICS IN DENTISTRY (2T) 2 credits**
PREREQUISITE: Permission of Instructor
 This course is designed to address special topics in dentistry according to the criteria approved for continuing education by the code of Alabama. Emphasis is placed on chairside dental assisting, Infection Control/OSHA, treatment of special needs/medically compromised patients, oral pathology basic sciences, dental materials, medical emergencies, and ethics and jurisprudence. Upon completion, the student should be able to discuss the special topic addressed in the symposium as it relates to dentistry.
- DNT 298 SPECIAL TOPICS IN DENTISTRY (3T) 3 credits**
PREREQUISITE: Permission of Instructor
 This course is designed to address special topics in dentistry according to the criteria approved for continuing education by the code of Alabama. Emphasis is placed on chairside dental assisting, Infection Control/OSHA, treatment of special needs/medically compromised patients, oral pathology basic sciences, dental materials, medical emergencies, and ethics and jurisprudence. Upon completion, the student should be able to discuss the special topic addressed in the symposium as it relates to dentistry.

DESIGN DRAFTING TECHNOLOGY (DDT)

- DDT 103 INTRODUCTION TO COMPUTER AIDED DRAFTING (2T, 3M) 3 credits**
FORMERLY: DDT 152
 This course provides an introduction to basic Computer-Aided Design and Drafting (CAD) functions and techniques using "hands-on" applications. Topics include terminology, hardware, basic DOS and Windows functions, file manipulation, and basic CAD software applications in producing softcopy and hardcopy. Upon completion, students should be able to identify and select CAD hardware, employ basic DOS and Windows functions, handle basic text and drawing files, and produce acceptable hardcopy on a CAD system.
- DDT 111 FUNDAMENTALS OF DRAFTING AND DESIGN TECHNOLOGY (1T, 2E, 3M) 3 credits**
 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, students 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 112 INTRODUCTORY TECHNICAL DRAWING (1T, 2E, 3M) 3 credits**
PREREQUISITE: DDT 111, DDT 103, DDT 114
 This course covers drawing reproduction and orthographic projection and sectioning. Emphasis will be placed on the theory as well as the mechanics of orthographic projection and shape description, the relationship of orthographic planes and views, the views and their space dimensions, the application of the various types of sections, and drawing reproduction. Upon completion, students should have an understanding of orthographic projection and be able to identify orthographic planes, produce orthographic views of objects, and apply the various sectioning techniques and methods and reproduce drawings.
- DDT 114 INDUSTRIAL BLUEPRINT READING (3T) 3 credits**
 This course provides students with basic blueprint reading for various industrial applications. Topics include orthographic projection, dimensions and tolerances, symbols, industrial application, scales and notes. This course may be tailored to meet a specific industry need.
- DDT 115 BLUEPRINT READING FOR MACHINISTS (3T) 3 credits**
FORMERLY: DDT 151
 This course provides the students with terms and definitions, theory of orthographic projection, and other information required to interpret drawings used in the machine trades. Topics include multiview projection, pictorial drawings, dimensions and notes, lines and

	symbols, and sketching. Upon completion, students should be able to interpret blueprint drawings used in the machine trades.		
DDT 116	BLUEPRINT READING FOR CONSTRUCTION (3T) FORMERLY: DDT 150 This course provides the students with terms and definitions, theory of orthographic projection, and other information required to interpret drawings used in the construction trades. Topics include multiview projection, dimensions and notes, lines and symbols, sketching, foundation plans, site plans, elevations, sections, details, schedules, electrical plans and specifications. Upon completion, students should be able to interpret blueprint drawings used in the construction trades.	3 credits	
DDT 119	ADVANCED ELECTRONIC DRAFTING (1T, 2E, 3M) FORMERLY: DDT 229 PREREQUISITE: DDT 122 and DDT 123 This course introduces drafting and design techniques dealing with production of electronic equipment for consumer, commercial, and military applications. Emphasis is placed on schematic drawings, connection or wiring diagrams, industrial electronic diagrams, ladder schematics, flow block diagrams, and documentation types and techniques related to the power delivery industry. Upon completion, students should be able to prepare documentation specified by ANSI standards and be familiar with the techniques of composition and the unique symbols and practices of industry.	3 credits	
DDT 121	INTERMEDIATE TECHNICAL DRAWING (1T, 2E, 3M) PREREQUISITE: DDT 112 and DDT 103 This course is designed to develop a strong foundation in common drafting and design practices and procedures. Topics include auxiliary views, basic space geometry, pictorial drawings, and basic charts and graphs. Upon completion, students should be able to project and develop auxiliary views, locate and specify points, lines, and planes in space, develop axonometric, oblique, and perspective drawings and draw basic charts and graphs.	3 credits	
DDT 122	ADVANCED TECHNICAL DRAWING (1T, 2E, 3M) PREREQUISITE: DDT 112 AND DDT 103 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, students 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.	3 credits	
DDT 123	INTERMEDIATE CAD (2T, 2E, 3M) FORMERLY: DDT 153 PREREQUISITE: DDT 103 This course covers intermediate-level concepts and applications of CAD design and drafting. Emphasis will be placed on intermediate-level features, commands, and applications of CAD software. Upon completion, students should be able to develop and use external references and paper space, apply higher-level block creation techniques and usage, including attributes, and apply basic-level customization techniques to CAD software.	4 credits	
DDT 131	MACHINE DRAFTING BASICS (1T, 2E, 3M) FORMERLY: DDT 228 PREREQUISITE: DDT 122 and DDT 123 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, students 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.	3 credits	
DDT 132	ARCHITECTURAL DRAFTING (1T, 2E, 3M) PREREQUISITE: DDT 122 and DDT 123 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, students should be able to draw, dimension, and specify basic residential architectural construction drawings.	3 credits	
DDT 211	INTERMEDIATE MACHINE DRAFTING (1T, 2E, 3M) PREREQUISITE: DDT 131 This second course in machine drafting and design provides more advanced instruction in the largest specialty area of drafting. Topics include applications of previously developed skills in the organization and development of more complex working drawings, use of vendor catalogs and the <u>Machinery's Handbook</u> for developing specifications, and use of standardized abbreviations in working drawings.	3 credits	
DDT 212	INTERMEDIATE ARCHITECTURAL DRAFTING (1T, 2E, 3M) FORMERLY: DDT 234 PREREQUISITE: DDT 211 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	3 credits	

Course Descriptions

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, students should be able to draw and specify advanced-level plans including various architectural details.

DDT 213 CIVIL DRAFTING, PLAT MAPS (1T, 2E, 3M) 3 credits
FORMERLY: DDT 230
PREREQUISITE: DDT 122 AND DDT 123

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, students 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 224 STRUCTURAL CONCRETE DRAFTING (1T, 2E, 3M) 3 credits
PREREQUISITE: DDT 122 and DDT 123 (formerly DDT 153)

This course is designed to develop the knowledge and skills necessary to understand the basic components and terminology of pre-cast and poured-in-place concrete structures. Emphasis is placed on pre-cast concrete framing plans, sections, fabrication and connection details, poured-in-place concrete foundations, floor systems, and bills of material. Upon completion, students should be able to construct engineering and shop drawings of concrete beams, column, floor, roof, and wall framing plans using the A.I.S.C. Manual and incorporating safety practices.

DDT 225 STRUCTURAL STEEL DRAFTING (1T, 2E, 3M) 3 credits
PREREQUISITE: DDT 122 AND DDT 123

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, students 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 235 SPECIALIZED CAD (2T, 2E, 3M) 4 credits
PREREQUISITE: DDT 113 OR PERMISSION OF INSTRUCTOR

This course introduces alternative CAD application software and alternative platforms, and can serve as a means of introducing third party programs that work in conjunction with a specific CAD application. Topics include various Graphical User Interfaces (GUI's) and how to navigate them, as well as how to use a third party application to make working in a specific CAD



package easier and more productive. Upon completion, students should be able to use more than one CAD software package to produce hardcopy and use third party software to make certain tasks easier with a specific CAD program.

DDT 236 DESIGN PROJECT (1T, 2E, 3M) 3 credits
PREREQUISITE: DDT 122 and DDT 123

This course is designed for advanced students who aspire to more advanced and specialized skills in one certain drafting area. Emphasis will be placed on the student's ability to apply the principles learned in previous drafting classes in one special area, as approved by the instructor. The required project, as well as how the work is to be accomplished, must be agreed upon by the instructor and the student. Upon completion, students will further reinforce previously learned concepts by applying engineering principles and controls to a personal design project.

DDT 237 CURRENT TOPICS IN CAD (1T, 2E, 3M) 3 credits
FORMERLY: DDT 155
PREREQUISITE: DDT 123

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, students 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 their CAD proficiency.

DDT 239 INDEPENDENT STUDIES (2-8E) 1-4 credits
PREREQUISITE: DDT 122 and DDT 123

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 applications and problems.

and parallel circuits, complex circuits, magnetism and electromagnetism. Upon completion, students should be able to solve DC electrical quantity problems and use voltmeters, ohm meters, and amp meter.

ECONOMICS (ECO)

ECO 130 CONSUMER ECONOMICS (3T) 3 credits
This course explores the application of general economic principles and practices concerning personal consuming, saving, and investing. It also stresses the relationship of sound personal financial management with successful career goals. Topics covered will include: consumerism, income and family financial planning, insurance, and investments.

ECO 231 PRINCIPLES OF MACROECONOMICS (3T) 3 credits
FORMERLY: Principles of Economics I
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 (3T) 3 credits
PREREQUISITE: ECO 231
FORMERLY: Principles of Economics II
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.

EDUCATION

EDU 100 EXPLORING TEACHING AS A PROFESSION (1T, 2E) 2 credits
This course provides students with an opportunity to explore teaching as a career. The role of the teacher, the benefits of teaching, and the steps to becoming a teacher are some of the topics that will be explored. Students will be exposed to examples of good teaching and self-assess their personal and professional qualities.

ELECTRICAL TECHNOLOGY (ELT)

ELT 101 DC PRINCIPLES OF ELECTRICITY (2T, 3M) 3 credits
FORMERLY: ELT 111
PREREQUISITE: MTH 098 or Permission of Instructor
This course is a study of basic atomic structure, electron flow, Ohm's Law, electrical power and conductors and insulators. Topics include atomic theory, series

ELT 102 AC PRINCIPLES OF ELECTRICITY (2T, 3M) 3 credits
FORMERLY: ELT 121
PREREQUISITE: ELT 101, MTH 098 or Permission of Instructor

This course is a study of alternating current and its measurements, circuit analysis, resistive, inductive and capacitive circuits, vectors, AC power and AC test equipment. Emphasis is placed on sinewave generation and valves, circuit construction and analysis and test equipment. Upon completion, students should be able to construct AC circuits and use AC test equipment.

ELT 105 DC AND AC ELECTRICITY (4T, 6M) 6 credits
PREREQUISITE: MTH 098 or Permission of Instructor

This course is a study of basic atomic structure, electron flow, Ohm's Law, electrical power, conductors and insulators, alternating current and its measurements, circuit analysis, resistive, inductive and capacitive circuits, vectors, AC power and AC test equipment. Topics include atomic theory, series and parallel circuits, complex circuits, magnetism and electromagnetism, sinewave generation and valves, and circuit construction and analysis. Upon completion, students should be able to solve DC electrical quantity problems, use voltmeters, ohm meters and amp meters, and be able to construct AC circuits and use AC test equipment.

ELT 111 RESIDENTIAL WIRING METHODS I (2T, 3M) 3 credits
FORMERLY: ELT 132
PREREQUISITE: MTH 098, ELT 105 or Permission of Instructor

This course introduces the student to residential wiring practices and methods, use of hand and power tools, electrical safety, the NEC requirements and residential blueprint interpretations. Topics include standard residential wiring procedures and practices, grounding NEC requirements, wiring diagrams and wiring layouts. Upon completion, students should be able to read blueprints, understand code requirements, and wire lights and switches.

ELT 112 ADVANCED RESIDENTIAL WIRING METHODS (2T, 3M) 3 credits
FORMERLY: ELT 132
PREREQUISITE: ELT 111, MTH 098, ELT 105

This course provides the student with information on how to interpret electrical residential blueprints, wiring diagrams, layouts and will teach them to wire many different residential circuits in accordance with the National Electric Code. Emphasis is placed on applying the National Electric Code, actual wiring of panels, service and branch circuits. Upon completion, students should be able to interpret and wire most

Course Descriptions

aspects of a residential application to code.

- ELT 113 RESIDENTIAL WIRING (4T, 6M) 6 credits**
PREREQUISITE: ELT 105 or Permission of Instructor
 This course is a study of residential wiring practices and methods and introduces the student to the use of hand and power tools, electrical safety, the NEC requirements, and how to interpret electrical residential blueprints, wiring diagrams, and layouts. Students will also learn to wire many different residential circuits in accordance with the National Electric Code. Topics include standard residential wiring procedures and practices, grounding NEC requirements, wiring diagrams and wiring layouts. Emphasis will also be placed on applying the National Electric Code, actual wiring of panels, service and branch circuits. Upon completion, students should be able to read blueprints, understand code requirements, wire lights and switches, and be able to interpret and wire most aspects of a residential application to code.
- ELT 120 MOTORS (4T, 6M) 6 credits**
PREREQUISITE: ELT 105 or Permission of Instructor
 This course covers the theory and operation of single and three phase AC and DC motors. Emphasis is placed on the various types of single and three phase motors, wiring diagrams, starting devices, field wiring, troubleshooting AC and DC motors and using test equipment. Upon completion, students should be able to explain, wire and troubleshoot most all types of AC and DC motors.
- ELT 121 BASIC AC/DC MACHINES (2T, 3M) 3 credits**
FORMERLY: ELT 130
PREREQUISITE: ELT 105, MTH 098
 This course covers the theory and operation of 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. Upon completion, students should be able to explain, wire and troubleshoot most single and three phase AC motors.
- ELT 122 ADVANCED AC AND DC MACHINES (2T, 3M) 3 credits**
FORMERLY: ELT 130
PREREQUISITE: MTH 098, ELT 121 or Permission of Instructor
 This course focuses on single and three-phase motors and introduces students to DC motors. Emphasis is placed on field wiring, various types of AC and DC motors, troubleshooting AC and DC motors and using test instruments. Upon completion, students should be able to explain, wire, troubleshoot and test most all types of AC and DC electric motors.
- ELT 131 COMMERCIAL/INDUSTRIAL WIRING I (2T, 3M) 3 credits**
PREREQUISITE: MTH 098, ELT 102 or Permission of Instructor
 This course teaches the student the principles and applications of commercial and industrial wiring. Emphasis is placed on blueprint symbols, hand and
- ELT 132 COMMERCIAL/INDUSTRIAL WIRING II (2T, 3M) 3 credits**
FORMERLY: ELT 131
PREREQUISITE: MTH 098, ELT 131 or Permission of Instructor
 This course is a continuation of ELT 131 and includes the study of branch circuits, installation requirements for services, feeders and special equipment considerations including the NEC code requirements. Emphasis is placed on load calculations, conductors, service sizing, installation requirements, NEC code requirements, transformers, lighting, HVAC and special equipment considerations. Upon completion, students should be able to size complete electrical commercial/industrial systems and understand the NEC requirements for each system.
- ELT 133 COMMERCIAL/INDUSTRIAL WIRING (4T, 6M) 6 credits**
PREREQUISITE: ELT 105 or Permission of Instructor
 This course teaches the students the principles and applications of commercial and industrial wiring, including the study of branch circuits, installation requirements for services, feeders and special equipment considerations including the NEC requirements. Emphasis is placed on blueprint symbols, hand and power tools, electrical safety, calculations, NEC code requirements, load calculations, conductors, service sizing, installation requirements, transformers, lighting, HVAC and special equipment consideration. Upon completion, students should be able to read electrical symbols, calculate electrical loads for commercial industrial applications and interpret the NEC code requirements.
- ELT 206 OSHA SAFETY STANDARDS (3T) 3 credits**
 This course focuses on OSHA safety standards related to the job site. Emphasis is placed on overall safety practices, construction site safety practices and safety procedures required by federal and state laws. Upon completion, students should be able to apply OSHA safety standards.
- ELT 210 MOTOR CONTROLS (4T, 6M) 6 credits**
PREREQUISITE: ELT 105 or Permission of Instructor
 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 electronic

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.

will also be covered in the class. Upon completion, the student should be able to perform calculations relating to transformers, make proper Delta and WYE connections, and understand the basic polarity and voltage test for each application.

ELT 211 MOTOR CONTROLS I (2T, 3M) 3 credits
FORMERLY: ELT 201
PREREQUISITE: ELT 105 or Permission of Instructor
 This course introduces the use of motor control symbols, magnetic motor starters, running overload protection, push-button stations and sizing of magnetic motor starters and overload protection. Topics include sizing magnetic starters and overload protection and the use of push-button stations, ladder diagrams and magnetic motor starters in control of electric motors. Upon completion, students should be able to understand the operation of magnetic motor starters, overload protection and interpret ladder diagrams using push-button stations.

ELT 218 HYDRAULICS AND PNEUMATICS (4T, 6M) 6 credits
 This course is the study of fluid power systems including the theory and function of devices that pressurize, direct and control fluid power systems and a study of compressed air power systems and the theory and function of devices that pressurize, direct and control air systems. Emphasis is placed on setting up and operating hydraulic and pneumatic trainers in the correct manner with the aid of hydraulic and pneumatic prints. Upon completion, students should be able to explain and operate a typical hydraulic and pneumatic system.

ELT 212 MOTOR CONTROLS II (2T, 3M) 3 credits
FORMERLY: ELT 202
PREREQUISITE: ELT 211 or Permission of Instructor
 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 students 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 I (2T, 3M) 3 credits
FORMERLY: ELT 221
PREREQUISITE: ELT 105 or Permission of Instructor
 This course introduces students to 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, FET's and MOSFETs as they are used in electrical control circuits. Upon completion, students should understand the basic operation of solid state components and be able to perform basic troubleshooting tasks.

ELT 214 HYDRAULICS (2T, 3M) 3 credits
FORMERLY: INT 101
 This course is the study of fluid power systems including the theory and function of devices that pressurize, direct, and control fluid power systems. Lab will reinforce the principles and characteristics of hydraulic systems. Emphasis is placed on setting up and operating hydraulic trainers in the correct manner with the aid of hydraulic prints. Upon completion, students should be able to explain and operate a typical hydraulic system.

ELT 230 PROGRAMMABLE CONTROLS (4T, 6M) 6 credits
PREREQUISITE: ELT 105 or Permission of Instructor
 This state-of-the-art course includes the fundamental principles of programmable logic controls (PLCs) including hardware, programming and program design. Emphasis is placed on hardwiring associated with PLC, different options available with most PLCs, basic ladder logic programming, developing working programs, timers, counters, different special functions, and designing programs from existing hardwired systems. Upon completion, students should be able to develop programs, load programs into PLCs and troubleshoot the system.

ELT 215 PNEUMATICS (2T, 3M) 3 credits
FORMERLY: INT 102
 This course is the study of compressed air power systems and the theory and function of devices that pressurize, direct and control air systems. Labs will reinforce the principles and characteristics of pneumatic systems. Emphasis is placed on setting up and operating pneumatic trainers in the correct manner with the aid of pneumatic prints. Upon completion, students should be able to explain and operate a typical pneumatic system.

ELT 231 PROGRAMMABLE CONTROLS I (2T, 3M) 3 credits
FORMERLY: ELT 222
PREREQUISITE: ELT 105 or Permission of Instructor
 This state-of-the-art course includes the fundamental principles of programmable logic controls (PLCs) including hardware and programming. Emphasis is placed on hardwiring associated with PLC, different options available with most PLCs and basic ladder logic programming. Upon completion, students should be able to develop programs, load programs into PLCs and troubleshoot the system.

ELT 217 TRANSFORMERS (2T, 3M) 3 credits
PREREQUISITE: ELT 105
 This course is designed to train the student in the theory of operation, various connections, troubleshooting, and repair of single phase as well as three phase transformers. KVA load calculations and applications

Course Descriptions

<p>ELT 232</p>	<p>PROGRAMMABLE CONTROLS II (2T, 3M) 3 credits FORMERLY: ELT 262 PREREQUISITE: ELT 231 or Permission of Instructor This state-of-the-art course focuses on PLC hardware, programming and program design. Emphasis is placed on developing working programs, timers, counters, different special functions, and designing programs from existing hardwired systems. Upon completion, students should be able to develop programs, load programs into PLCs and troubleshoot the system.</p>	<p>EMS 103</p>	<p>FIRST AID (1T) 1 credit PREREQUISITE: Current training in CPR or program approval This course introduces students to initial first aid care. Topics include scene safety, universal precautions, activation of the EMS system, assessment, airway/breathing/circulation, shock/injuries/bleeding, medical emergencies, and altered level of consciousness. Upon course completion, students should have knowledge to manage various emergencies requiring first aid techniques.</p>
<p>ELT 241</p>	<p>NATIONAL ELECTRIC CODE (3T) 3 credits FORMERLY: ELT 135 PREREQUISITE: ELT 105 or Permission of Instructor This course introduces students to the National Electric Code. Emphasis is placed on locating and interpreting needed information within the NEC code manual. Upon completion, students should be able to locate code requirements for a specific electrical installation.</p>	<p>EMS 105</p>	<p>FIRST RESPONDER (3T) 3 credits This course provides theory in emergency procedures as contained in the current National Standard Training Curriculum (NSTC) for the First Responder. The course is an introduction to the emergency medical services system and provides fundamentals for students to improve the quality of emergency care provided as the first person to an emergency scene until emergency medical services arrive. Completion of specific student competencies, as outlined in the current NSTC for the First Responder, are required for successful course completion.</p>
<p>EMERGENCY MEDICAL SERVICES (EMS)</p>		<p>EMS 106</p>	<p>MEDICAL TERMINOLOGY FOR HEALTH PROFESSIONS (2T) 2 credits This course provides students with a survey of words, terms, and descriptions commonly used in health related professions. The course includes spelling, pronunciation, and meaning of prefixes, suffixes, roots and terms. Students may have the opportunity to utilize computer-assisted instruction for learning various medical terms. Upon course completion, students should have the knowledge to associate a variety of medical terms with their meaning and utilize medical terms to effectively communicate with other health professionals.</p>
<p>EMS 100</p>	<p>CARDIOPULMONARY RESUSCITATION I (1T) 1 credit This course provides students with concepts as related to areas of basic life support to include coronary artery disease, prudent heart living, symptoms of heart attack, adult one-and-two rescuer CPR, first aid for choking, pediatric basic life support, airway adjuncts, EMS system entry access, automated external defibrillation (AED), and special situations for CPR. Upon course completion, students should be able to identify situations requiring action related to heart or breathing conditions and effectively implement appropriate management for each condition. Students successfully completing this course will receive appropriate documentation of course completion.</p>	<p>EMS 107</p>	<p>EMERGENCY VEHICLE OPERATOR AMBULANCE (1T) 1 credit PREREQUISITE: Must present a valid driver's license and program approval The Emergency Vehicle Operator Course-Ambulance provides the student with training as contained in the current National Standard Training Curriculum (NSTC) for the Emergency Vehicle Operator Course (EVOC) Ambulance. The course provides the knowledge and skill practice necessary for individuals to learn how to safely operate all types of ambulances. Topics include introduction to the NSTC for ambulance operators; legal aspects of ambulance operation; communication and reporting; roles and responsibilities; ambulance types and operation; ambulance inspection, maintenance, and repair; navigation and route planning; basic maneuvers and normal operating situations; operations in emergency mode and unusual situations, special considerations in safety; and the run. Completion of specific student competencies, utilizing NSTC guidelines, are required for successful completion of this course. NOTE: To qualify for licensure status as an ambulance driver in the State of Alabama, students must successfully complete this course and meet additional requirements as required by the</p>
<p>EMS 101</p>	<p>CARDIOPULMONARY RESUSCITATION II (1T) 1 credit PREREQUISITE: EMS 100 or program approval This course provides students with a review of concepts learned in EMS-100. In addition, the course provides the student with theory and application of airway adjuncts as utilized with airway obstruction and maintenance as well as respiratory and cardiac arrest. Assessment and management of acute ischemic stroke will also be included. Upon completion of course, students should be able to identify situations requiring action related to heart or breathing conditions and effectively implement appropriate management for these conditions. Students successfully completing this course will receive appropriate documentation of course completion.</p>		

Alabama Department of Public Health.

- EMS 108 DIRECTED STUDIES IN EMS I (1T) 1 credit**
This course offers independent study or computer assisted instruction under faculty supervision and/or theory in an EMS subject relevant to the student's interest and need. Specific cognitive competencies required by the student are defined in writing at the first class period.
- EMS 109 DIRECTED STUDIES IN EMS II (1T) 1 credit**
This course offers independent study or computer assisted instruction under faculty supervision and/or theory in an EMS subject relevant to the student's interest and need. Specific cognitive competencies required by the student are defined in writing at the first class period.
- EMS 113 INFECTION CONTROL FOR HEALTH PROFESSIONS (1T) 1 credit**
This course is designed for students planning to enter a health-related field of study or public service occupations. The course focuses on the sources of communicable diseases and describes methods for prevention of transmission of bloodborne and airborne pathogens. Topics include prevention; universal precautions (body-substance isolation) and asepsis; immunization; exposure control; disposal; labeling; transmission; exposure determination; post-exposure reporting; and an exposure control plan. The course is taught following current guidelines set forth by the Occupational Safety and Health Administration (OSHA). Upon course completion, students should be able to participate in the clinical setting, identify potential sources of bloodborne and airborne pathogens, and use appropriate universal precautions.
- EMS 115 SPECIAL SKILLS FOR HEALTH RELATED PROFESSIONS (1T) 1 credit**
PREREQUISITE: Students enrolled in a health related professions program or program approval
This course is designed for students enrolled in a health related professions program. The course provides students with concepts related to peripheral venous anatomy and venipuncture techniques. Upon course completion, students should be able to identify veins of the extremities and perform basic venipuncture techniques of the upper extremities.
- EMS 120 VEHICLE EXTRICATION (2T) 2 credits**
FORMERLY: EMS 200
PREREQUISITE: Program Approval
This course provides students with theory in the development of concepts related to the removal of persons from damaged vehicles. Topics include gaining access, stabilization, packaging, patient removal, and basic hazardous situations. Upon course completion, students should be able to effectively extricate a person from a wrecked vehicle.

- EMS 140 EMT PREPARATORY AND PREHOSPITAL EMS OPERATIONS (1T, 2E) 2 credits**
PREREQUISITE: Admission to the Basic EMT program
This course is one of four courses (EMS 140, 141, 142, 143) required for successful completion of the EMT-Basic Program according to the current National Standard Curriculum for the EMT-Basic. Content areas include introduction to emergency medical care; the well-being of the EMT-Basic; medical/legal and ethical issues; the human body; baseline vitals and SAMPLE history; lifting and moving; airway management; ambulance operations; gaining access; an overview of hazardous materials, incident management systems, mass casualty situations, and triage; and state and local EMS rules and regulations. Computer use in simulated scenarios is also included in the course. Successful completion of student cognitive, psychomotor, and affective domain competencies are required in this course.
- EMS 141 EMT PATIENT ASSESSMENT & TRAUMA RELATED INJURIES (2T, 2E) 3 credits**
PREREQUISITE: Admission to the Basic EMT Program
This course is one of four courses (EMS 140, 141, 142, 143) required for successful completion of the EMT-Basic Program according to the current National Standard Curriculum for the EMT-Basic. Content areas include scene size-up; initial assessment; focused history and physical exam; medical and trauma; detailed physical exam; on-going assessment; communications; documentation; bleeding and shock; soft tissue injuries; musculoskeletal care; and injuries to the head and spine. Computer use in simulated scenarios is also included in the course. Successful completion of student cognitive, psychomotor, and affective domain competencies are required in this course.
- EMS 142 EMT MEDICAL EMERGENCIES AND PEDIATRIC CARE (2T, 2E) 3 credits**
PREREQUISITE: Admission to the EMT-Basic Program
This course is one of four courses (EMS 140, 141, 142, 143) required for successful completion of the EMT-Basic Program according to the current National Standard Curriculum for the EMT-Basic. Content areas include general pharmacology; respiratory emergencies; cardiovascular emergencies; diabetic emergencies (including the use of a digital glucometer)/altered mental status; allergic reactions; poisoning/overdose emergencies; environmental emergencies; behavioral emergencies; obstetrics; and infants/children. Computer use in simulated scenarios will also be included in the course. Successful completion of student cognitive, psychomotor, and affective domain competencies are required in this course.
- EMS 143 EMT BASIC CLINICAL COMPETENCIES (3P3) 1 credit**
PREREQUISITE: Admission to EMT-Basic Program
This course is one of four courses (EMS 140, 141, 142, 143) required for successful completion of the EMT-Basic Program according to the current National

Course Descriptions

- Standard Curriculum for the EMT-Basic. It provides students with clinical education experiences to enhance knowledge and skills learned in the EMT-Basic Program. Successful completion of student cognitive, psychomotor, and affective domain competencies are required in this course.
- EMS 145** **EMERGENCY DEPARTMENT PRECEPTORSHIP (1T, 3P3)** **2 credits**
PREREQUISITE: Admission to the EMT-Basic level of training or current Alabama licensure as an EMT-Basic
 This course provides students with clinical experiences in the emergency department to enhance knowledge and skills learned in the EMT-Basic training. Specific skills objectives, including patient assessment and management, are evaluated and students are required to complete patient care summaries and other written work. This course is optional for completing requirements for the EMT-Basic level of training.
- EMS 150** **EMT-BASIC REFRESHER (2T)** **2 credits**
PREREQUISITE: Completion of a NSTC course for EMT-Basic or program approval
 This course provides students with theory in review of the current National Standard Training Curriculum (NSTC) for the EMT-Basic. It also serves as a transition or bridge course when a new national curriculum is adopted. This course contains specific content areas as defined by the NSTC. Students are required to complete specific competencies, as outlined by the NSTC, for successful course completion.
- EMS 152** **DEFIBRILLATION (1T)** **1 credit**
PREREQUISITE: Current Alabama licensure as a EMT-Basic or program approval
 This course provides students with theory as contained in the National Standard Training Curriculum (NSTC) for the EMT-Defibrillation. Content areas include basic cardiac anatomy, electrocardiogram principles, rhythm recognition, monitoring techniques, and defibrillation procedures. Upon course completion, students should have an understanding of when and how to perform cardiac defibrillation.
- EMS 153** **EMS DISPATCHER (3T)** **3 credits**
PREREQUISITE: Program Approval
 This course provides students with theory as contained in the National Standard Training Curriculum (NSTC) for EMS Dispatcher. This course is designed to prepare EMS dispatcher personnel to operate a telecommunication base station for the purpose of receiving requests for emergency medical services and allocating community resources in response to such requests. Upon course completion, students should have an understanding of emergency medical services dispatch procedures and be able to receive a call and dispatch appropriate personnel, utilizing a scenario in a simulated situation.
- EMS 180** **PRE-HOSPITAL OPERATIONS FOR ADVANCED EMS PROVIDERS (2T, 2E)** **3 credits**
PREREQUISITE: Admission to the EMT-Intermediate Program
 This is one of eight courses (EMS 180, 181, 182, 183, 184, 185, 267, 269) required for successful completion of EMT-Intermediate in the State of Alabama. The course is taught in accordance with the current National Standard Curricula for the EMT-Intermediate, Paramedic, and requirements set forth by the Alabama Department of Public Health. Content areas include the following as related to the EMT-Intermediate and Paramedic; EMS operations/systems/roles and responsibilities; current Alabama EMS rules and regulations; the well-being of the advanced EMS provider; illness and injury prevention; medical/legal considerations and ethics; EMS and therapeutic communications; medical terminology, and patient assessment. Successful completion of student cognitive, psychomotor, and affective domain competencies are required in this course.
- EMS 181** **PREPARATORY MANAGEMENT FOR ADVANCED EMS PROVIDERS (2T, 2E)** **3 credits**
PREREQUISITE: Admission to the EMT-Intermediate Program
 This is one of eight courses (EMS 180, 181, 182, 183, 184, 185, 267, 269) required for successful completion of EMT-Intermediate in the State of Alabama. The course is taught in accordance with the current National Standard Curricula for the EMT-Intermediate, Paramedic, and requirements set forth by the Alabama Department of Public Health. Content areas include the following as related to the EMT-Intermediate and Paramedic: the respiratory system; airway and ventilation control; and physiology, assessment and management of shock (to include intravenous/intraosseous techniques and the use of Dextrose 50% in water). Successful completion of student cognitive, psychomotor, and affective domain competencies are required in this course.
- EMS 182** **CV ELECTROPHYSIOLOGY AND MANAGEMENT (2T, 2E)** **3 credits**
PREREQUISITE: Admission to the EMT-Intermediate Program
 Cardiovascular Electrophysiology and Management is one of eight courses (EMS 180, 181, 182, 183, 184, 185, 267, 269) required for successful completion of EMT-Intermediate in the State of Alabama. The course is taught in accordance with the current National Standard Curricula for the EMT-Intermediate, Paramedic, and requirements set forth by the Alabama Department of Public Health. Content areas include the following as related to the EMT-Intermediate and Paramedic: anatomy, physiology, and electrophysiology of the cardiovascular system; interpretation of lead II electrocardiograms; prehospital 12-lead EKG monitoring; and techniques of management for dysrhythmias. Successful completion of student cognitive, psychomotor, and affective domain competencies are required in this course.

EMS 183	<p>EMS ADVANCED PSYCHOMOTOR COMPETENCIES I (1T, 2E) 2 credits PREREQUISITE: Admission to the EMT-Intermediate Program</p> <p>This is one of eight courses (EMS 180, 181, 182, 183, 184, 185, 267, 269) required for successful completion of EMT-Intermediate in the State of Alabama. The course is taught in accordance with the current National Standard Curricula for the EMT-Intermediate, Paramedic, and requirements set forth by the Alabama Department of Public Health. Students validate knowledge and review and validate performance of psychomotor competencies as well as prehospital treatment protocols utilized in Alabama's EMS system. Computer use in simulated scenarios is also included in the course. Successful completion of student cognitive, psychomotor, and affective domain competencies are required in this course.</p>	EMS 190	<p>EMT – INTERMEDIATE REFRESHER (2T) 2 credits PREREQUISITE: Completion of a NSTC course for the EMT-Intermediate.</p> <p>This course provides students with a review of material contained in the National Standard Training Curriculum (NSTC) for the EMT-Intermediate. It also serves as a transition or bridge course when a new national curriculum is adopted. This course contains specific content areas as defined by the NSTC and the Alabama Department of Public Health. Students are required to complete specific competencies according to the NSTC for successful course completion.</p>
EMS 184	<p>EMS ADVANCED CLINICAL COMPETENCIES - I (1T, 9P3) 4 credits PREREQUISITE: Admission to the EMT-Intermediate Program</p> <p>This is one of eight courses (EMS 180, 181, 182, 183, 184, 185, 267, 269) required for successful completion of EMT-Intermediate in the State of Alabama. The course is taught in accordance with the current National Standard Curricula for the EMT-Intermediate, Paramedic, and requirements set forth by the Alabama Department of Public Health. The course provides students with opportunities to participate in clinical experiences in various areas of the hospital as well as completion of patient assessments and patient management discussions. Successful completion of student cognitive, psychomotor, and affective domain competencies are required in this course.</p>	EMS 265	<p>PARAMEDIC REFRESHER (3T) 3 credits PREREQUISITE: Completion of a NSTC course for the Paramedic or program approval</p> <p>This course provides students with a review of material contained in the current National Standard Training Curriculum (NSTC) for the Paramedic. It also serves as a transition or bridge course when a new national curriculum is adopted. This course contains specific content areas as defined by the NSTC. Students are required to complete specific competencies for successful course completion.</p>
EMS 185	<p>EMS ADVANCED LIFE SUPPORT FIELD PRECEPTORSHIP - I (1T, 6P3) 3 credits PREREQUISITE: Admission to the EMT-Intermediate Program</p> <p>This is one of eight courses (EMS 180, 181, 182, 183, 184, 185, 267, 269) required for successful completion of EMT-Intermediate in the State of Alabama. The course is taught in accordance with the current National Standard Curricula for the EMT-Intermediate, Paramedic, and requirements set forth by the Alabama Department of Public Health. The course provides students with opportunities to participate in field experiences in the prehospital area with advanced life support EMS units. Students validate competencies under the direction of a field preceptor and begin the process of providing leadership in patient care and management. Students will have opportunities to participate in review and discussion of patient care reports and begin the development of clinical decision making. Successful completion of student cognitive, psychomotor, and affective domain competencies are required in this course.</p>	EMS 266	<p>ADVANCED CV LIFE SUPPORT PROVIDER (1T) 1 credit PREREQUISITE: Program Approval</p> <p>The Advanced Cardiovascular Life Support Provider Course provides students with concepts related to advanced cardiovascular life support. Content areas include acute myocardial infarction, stroke, cardiovascular pharmacology, electrophysiology, various rhythm disturbances, and techniques of management of cardiovascular emergencies. The course is taught in accordance with national standards and requires specific student competencies. Students successfully completing this course will receive appropriate documentation of course completion.</p>
EMS 267	<p>BASIC TRAUMA LIFE SUPPORT PROVIDER (1T) 1 credit PREREQUISITE: LPN, RN, Intermediate EMT, or Paramedic or program approval.</p> <p>This is one of eight courses (EMS 180, 181, 182, 183, 184, 185, 267, 269) required for successful completion of EMT-Intermediate in the State of Alabama. This course provides students with theory and demonstration in advanced trauma care and management. Content areas include mechanism of trauma, trauma assessment, airway-breathing-circulation management, trauma to various portions of the body, multiple system trauma, and load-and-go situations. The course is taught in accordance with national standards and requires specific student competencies. Students successfully completing this course will receive appropriate documentation of course completion.</p>		

Course Descriptions

EMS 269	PEDIATRIC MEDICAL LIFE SUPPORT PROVIDER (1T) 1 credit PREREQUISITE: LPN, R.N., Intermediate EMT, Paramedic, or program approval This is one of eight courses (EMS 180, 181, 182, 183, 184, 185, 267, 269) required for successful completion of EMT-Intermediate in the State of Alabama. This course provides students with theory and simulated case studies in pediatric care. Content areas include recognition of pediatric pre-arrest conditions; shock; basic life support; oxygenation and airway control; newborn resuscitation; essentials in pediatric resuscitation, dysrhythmia recognition and management; vascular access; and use of medications. This course is taught in accordance with national standards and requires specific student competencies. Students successfully completing this course will receive appropriate documentation of course completion.	ENG 093	BASIC ENGLISH II (3T) 3 credits FORMERLY: ENG 092 PREREQUISITE: A grade of "C" or better in ENG 092 (Formerly ENG 091) or satisfactory placement score 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. Students will demonstrate these skills chiefly through the writing of paragraph blocks and short essays.
EMS 273	EKG INTERPRETATION (2T) 2 credits PREREQUISITE: Program Approval This course is designed for students in health related professions desiring the knowledge to interpret singular lead electrocardiograms. The course provides concepts in the interpretation of electrocardiograms to include an overview of the electrical conduction of the heart as well as the identification of all categories of dysrhythmias. Upon course completion, students should be able to identify various types of cardiac rhythms.	ENG 100	VOCATIONAL TECHNICAL ENGLISH I (3T) 3 credits FORMERLY: VTE 101 PREREQUISITE: Appropriate Placement Score or grade of "C" or better in ENG 092 This course includes communication and technical writing skills that prepare students for vocational areas. This course fulfills the ENG requirement only for certificate programs of study.
EMS 280	BASIC LIFE SUPPORT INSTRUCTOR (1T) 1 credit PREREQUISITE: Successful completion, within the past 12 months, of all areas of basic life support training (CPR) This course provides students with concepts as related to areas of basic life support instruction. Topics include history, concepts, and systems of emergency cardiac care; cardiopulmonary physiology, dysfunction, and actions for survival; introduction to the performance of CPR; foreign body airway obstruction management; pediatric basic life support; special techniques/resuscitation situations, pitfalls, and complications; teaching and learning in basic life support; teaching strategies, and basic provider course organizations. Students will also successfully participate in practice teaching of a cardiopulmonary resuscitation (CPR) class prior to course completion. Students successfully completing this course will receive appropriate documentation of course completion.	ENG 101	ENGLISH COMPOSITION I (3T) 3 credits PREREQUISITE: Grade of "C" or better in ENG 093 (Formerly ENG 092) or satisfactory ACT, SAT, or placement score 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.
		ENG 102	ENGLISH COMPOSITION II (3T) 3 credits PREREQUISITE: A grade of "C" or better in ENG 101 or equivalent 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.
		ENG 130	TECHNICAL REPORT WRITING (3T) 3 credits PREREQUISITE: A grade of "C" or better in ENG 101 or equivalent This course provides instruction in the production of technical and/or scientific reports. Emphasis is placed on research, objectivity, organization, composition, documentation, and presentation of the report. Students will demonstrate the ability to produce a written technical or scientific report by following the prescribed process and format.
ENGLISH (ENG)			
ENG 092	BASIC ENGLISH I (3T) 3 credits FORMERLY: ENG 091 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. Students will demonstrate these skills chiefly through the writing of well-developed, multi-sentence paragraphs.		

ENG 251 AMERICAN LITERATURE I (3T) 3 credits
PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent

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, students will 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 (3T) 3 credits
PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent

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 and in written composition, students will 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 (3T) 3 credits
PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent

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, students will 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 (3T) 3 credits
PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent

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, students will 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 (3T) 3 credits
PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent

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 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, students will 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 (3T) 3 credits
PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent

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, students will 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 297 AFRICAN AMERICAN LITERATURE (3T) 3 credits
PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent

This course is a study of literature produced by representative African Americans from the eighteenth century to the present. The course emphasizes the diversity of themes and techniques found in these works and examines the historical, cultural, literary and philosophical forces that shaped these works and that are reflected in them. Students will demonstrate the ability to interpret the literature and to relate the works to their historical and literary contexts.



Course Descriptions

**ENGLISH AS A SECOND LANGUAGE
ALABAMA LANGUAGE INSTITUTE (ALI)**

ALI 030 COMPOSITION I (3T) 3 credits
This course is the beginner course in writing for non-native English speakers. This course provides instruction in basic sentence patterns and progresses through fully developed essays. Upon completion, students will demonstrate improvement in use of standard written English.

ALI 040 READING AND VOCABULARY I (3T) 3 credits
This course is the beginning reading and comprehension course for non-native English speakers. This course provides instruction in a variety of technical, literary and recreational readings. Upon completion, students will demonstrate improvement in English and reading and comprehension.

ALI 050 CONVERSATIONAL ENGLISH I (3T) 3 credits
This course is the beginner course in oral communication for non-native English speakers. This course provides instruction in practice dialogues and grammatical exercises as well as free conversation. Upon completion, students will demonstrate improvement in oral communication skills.

FIRE SERVICES MANAGEMENT (FSC)

FSC 101 INTRODUCTION TO THE FIRE SERVICE (3T) 3 credits
This course is a survey of the philosophy and history of fire protection, loss of property and life by fire, review of municipal fire defenses, and the organization and function of federal, state, county, city, and private fire protection.

FSC 200 FIRE COMBAT TACTICS AND STRATEGY (3T) 3 credits
This course is a review of fire chemistry, equipment and manpower, basic fire fighting tactics and strategy, methods of attack and preplanning fire problems.

FSC 210 BUILDING CONSTRUCTION FOR THE FIRE SERVICE (3T) 3 credits
This course highlights and assesses the problems and hazards to fire personnel when a building is attacked by fire or is under stress from other factors dealing with collapse.

FSC 240 FIRE CAUSE DETERMINATION (3T) 3 credits
This course covers the burning characteristics of combustibles, interpretation of clues, burn patterns leading to points of origin, identification of incendiary indications, sources of ignition and ignited materials, and preservation of fire science evidence.

FSC 292 ELEMENTS OF SUPERVISION/FIRE SERVICE SUPERVISION (3T) 3 credits
This course covers the responsibility of supervisors, organization, human relations, grievance training, rating, promotion, quality-quantity control, and management-employee relations.

FRENCH (FRN)

FRN 101 INTRODUCTORY FRENCH I (4T) 4 credits
FORMERLY: FRN 103
This course provides an introduction to French. Topics include the development of basic communication skills and the acquisition of basic knowledge of the cultures of French-speaking areas.

FRN 102 INTRODUCTORY FRENCH II (4T) 4 credits
FORMERLY: FRN 104 and FRN 105
PREREQUISITE: FRN 101 (Formerly FRN 103) or equivalent.
This continuation course includes the development of basic communication skills and the acquisition of basic knowledge of the cultures of French-speaking areas.

FRN 201 INTERMEDIATE FRENCH I (3T) 3 credits
FORMERLY: FRN 203
PREREQUISITE: FRN 102 (Formerly FRN 104 and 105) or equivalent
This course includes a review and further development of communication skills. Topics include readings of literary, historical, and/or cultural texts.

FRN 202 INTERMEDIATE FRENCH II (3T) 3 credits
FORMERLY: FRN 204
PREREQUISITE: FRN 201 (Formerly FRN 203) or equivalent
This continuation course includes a review and further development of communication skills. Topics include readings of literary, historical, and/or cultural texts.

GEOGRAPHY (GEO)

GEO 100 WORLD REGIONAL GEOGRAPHY (3T) 3 credits
This course surveys various countries and major regions of the world with respect to location and landscape, world importance and political status, population, type of economy, external and internal organization and relations, problems and potentials.

GEO 101 PRINCIPLES OF PHYSICAL GEOGRAPHY I (3T, 2E) 4 credits
Physical Geography I 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 (3T, 2E) 4 credits
Physical Geography II 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 (3T) 3 credits
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.

GEO 201 PRINCIPLES OF HUMAN GEOGRAPHY (3T) 3 credits
PREREQUISITE: GEO 100
This course surveys the science of location, with emphasis on human activities as it relates to agricultural and industrial activities, and cities as market and production centers. Emphasis will be placed on human networks.

GEO 220 PRINCIPLES OF PHYSICAL GEOGRAPHY (3T) 3 credits
This course is an introduction to natural features of the earth. It concentrates on weather, climate, soil, and vegetation associations, on landforms and on the forces that have been active in shaping the earth's surface.

GERMAN (GRN)

GRN 101 INTRODUCTORY GERMAN I (4T) 4 credits
FORMERLY: GRN 103
This course provides an introduction to German. Topics include the development of basic communication skills and the acquisition of basic knowledge of the cultures of German-speaking areas.

GRN 102 INTRODUCTORY GERMAN II (4T) 4 credits
FORMERLY: GRN 104
PREREQUISITE: GRN 101 (Formerly GRN 103) or equivalent
This continuation course includes the development of basic communication skills and the acquisition of basic knowledge of the cultures of German-speaking areas.

GRN 201 INTERMEDIATE GERMAN I (3T) 3 credits
FORMERLY: GRN 203
PREREQUISITE: GRN 102 (Formerly GRN 104) or equivalent
This course includes a review and further development of communication skills. Topics include readings of literary, historical, and/or cultural texts.

GRN 202 INTERMEDIATE GERMAN II (3T) 3 credits
FORMERLY: GRN 204
PREREQUISITE: GRN 201 (Formerly GRN 203) or equivalent
This continuation course includes a review and further development of communication skills. Topics include readings in literary, historical and/or cultural texts.

HEALTH EDUCATION (HED)

HED 221 PERSONAL HEALTH (3T) 3 credits
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, death and dying.

HED 222 COMMUNITY HEALTH (3T) 3 credits
This course introduces principles and practices of community health. It includes drug use and abuse, communicable diseases, cardiovascular diseases, cancer, consumer health, health organization, and environmental concerns.

HED 226 WELLNESS (1-3T) 1- 3 credits
This course provides health-related education to those individuals seeking advancement in the area of personal wellness. This course has 5 major components: (1) fitness and health assessment, (2) physical work capacity, (3) education, (4) reassessment and (5) retesting.

HED 230 SAFETY AND FIRST AID (3T) 3 credits
HED 230 is divided into two parts. The first part concerns itself with the development of a safety education program within an organization (i.e. school, office, shop, etc.). The second part deals with physical injuries, emergency care, and treatment of those injuries. CPR certification and Standard Red Cross cards are given upon successful completion of American Red Cross requirements.

HED 231 FIRST AID (3T) 3 credits
This course provides instruction to the immediate, temporary care which should be given to the victims of accidents and sudden illnesses. It also includes standard and advanced requirements of the American Red Cross and/or the American Heart Association. CPR training also is included.

HED 232 CARE AND PREVENTION OF ATHLETIC INJURIES (3T) 3 credits
This course provides a study of specific athletic injuries, their treatment, and preventative measures.

HED 267 DRUG EDUCATION (3T) 3 credits
This course provides an examination of the drug scene with emphasis on the following: the pharmacological and sociological aspects of drug use; the rehabilitation

Course Descriptions

and treatment resources; and the law enforcement procedures.

HED 277 CPR RECERTIFICATION (1T) 1 credit
In this course, instruction and review of up-dated information concerning cardio-pulmonary 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.

HISTORY (HIS)

HIS 101 WESTERN CIVILIZATION I (3T) 3 credits
This course is a survey of social, intellectual, economic, and political developments which have molded the modern western world. The course covers the ancient and medieval periods and concludes in the era of the Renaissance and Reformation.

HIS 102 WESTERN CIVILIZATION II (3T) 3 credits
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.

HIS 111 TECHNOLOGY AND CIVILIZATION I (3T) 3 credits
This course introduces the interaction between technology and culture in World History from prehistoric times to 1750. While the course provides a basic survey of World History, primary emphasis is placed on technological change and its consequences.

HIS 112 TECHNOLOGY AND CIVILIZATION II (3T) 3 credits
This course is a continuation of HIS 111. It surveys technology and culture in World History from 1750 to the present. The course provides a basic survey of modern world history. The course places primary emphasis on technological change and its consequences.

HIS 121 WORLD HISTORY I (3T) 3 credits
This course surveys social, intellectual, economic, and political developments which have molded the modern world. Focus is on both non-western and western civilizations from the prehistoric to the early modern era.

HIS 122 WORLD HISTORY II (3T) 3 credits
This course is a continuation of HIS 121; it covers world history, both western and non-western, from the early modern era to the present.

HIS 201 UNITED STATES HISTORY I (3T) 3 credits
This course surveys United States history during colonial, Revolutionary, early national, and antebellum periods. It concludes with the Civil War and Reconstruction.

HIS 202 UNITED STATES HISTORY II (3T) 3 credits
This course is a continuation of HIS 201; it surveys United States history from the Reconstruction era to the present.

HIS 216 HISTORY OF WORLD RELIGIONS (3T) 3 credits
This course presents a comparison of the major religions of the world from an historical perspective. Emphasis is placed on the origin, development, and social influence of Christianity, Judaism, Islam, Hinduism, Buddhism, and others.

HIS 220 CONTEMPORARY STUDIES (3T) 3 credits
This course provides a survey of contemporary problems and issues within an historical context. Topics might include nationalism, the rise of Islam as a powerful influence in the post-Cold War environment, environmental issues, and the impact of colonialism on modern, Third World society.

HIS 256 AFRICAN-AMERICAN HISTORY (3T) 3 credits
This course focuses on the experience of Afro-American people in the Western Hemisphere, particularly in the United States. It surveys the period from the African origins of the slave trade during the period of exploration and colonization to the present. The course presents a comparison between the African experience in the United States and in Mexico and South America.

HIS 260 ALABAMA HISTORY (3T) 3 credits
This course surveys development of the state of Alabama from its prehistoric times to the present. The course presents material on the discovery, exploration, colonization, territorial period, antebellum Alabama, Reconstruction, and modern history.

HIS 299 DIRECTED STUDIES IN HISTORY (1-3T) 1-3 credits
This course affords students opportunities to study selected topics of an historical nature either as part of class or on an individual basis.

HEALTH SCIENCE (HPS)

HPS 100 SAFETY ISSUES FOR CLINICAL PRACTICE (1T) 1 credit
PREREQUISITE: ENG 101, SPH 107, PSY 200, MTH 100 or MTH 112 or MTH 116 (FOR NUR STUDENTS; ONLY) or Permission of Instructor
COREQUISITE: BIO 201, PSY 210, NUR 111, NUR 121, NUR 131, NUR 241 (FOR NUR STUDENTS ONLY)

This course focuses on microbial and physical safety for clinical practice. Emphasis is placed on guidelines established by the Occupational Safety and Health Administration (OSHA) and the Alabama State Department of Public Health: topics include prevention of transmission of blood-borne and air-borne pathogens as well as prevention of injuries during clinical practice. Upon completion of this course, the

student should be able to participate in the clinical setting implementing measures which will prevent injuries and using appropriate universal precautions.

HPS 103 **COMPUTER APPLICATIONS FOR THE HEALTH SCIENCES (3M)** **1 credit**
PREREQUISITE: Regular admission status
This course introduces computer applications relevant to use in the health sciences. Emphasis is placed on the use of Windows, health-related software, Internet, and basic word processing. Upon completion of this course, the student should be competent in the basic use of computers.

HPS 105 **MEDICAL TERMINOLOGY (2T, 2E)** **3 credits**
PREREQUISITE: Regular admission status
This course is an application to the language of medicine. Emphasis is placed on terminology associated with health care, spelling, pronunciation, and meanings associated with prefixes, suffixes, and roots as they relate to anatomical body systems. Upon completion of this course, the student should be able to correctly abbreviate medical terms and appropriately use medical terminology in verbal and written communication.

HPS 109 **ASEPSIS (3S)** **1 credit**
PREREQUISITE: Regular admission status
This interdisciplinary course provides the student the opportunity to study pathological organisms as they relate to health, illness, and maintenance of physiological integrity. The principles and skills of clean and sterile technique, universal precautions, medical isolation, and OSHA guidelines are included. Related medical terminology may be presented through computer assisted instruction. Upon completion of this course, students should be able to apply these principles in a variety of clinical settings.

INTERDISCIPLINARY STUDIES (IDS)

IDS 114 **INTERDISCIPLINARY SEMINAR: CURRENT TOPICS IN HUMAN CONCERNS (1-2T)** **1-2 credits**
PREREQUISITE: Permission of the instructor.
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.

INDUSTRIAL ELECTRONICS TECHNOLOGY

ILT 103 **INTRODUCTION TO INSTRUMENTATION TECHNOLOGY (1T, 6M)** **3 credits**
PREREQUISITE: ELT 105, ELT 120, ELT 210, ELT 218
This course introduces various hand and power tools, basic blueprint reading, basic rigging and basic math that will be used in the electronic, instrumentation and electrical trades. Emphasis is placed on basic hand tool and power tool safety and procedures for selecting, inspecting, using and maintaining these tools. Upon completion, students should be able to identify and use various hand and power tools, read a blueprint and know how to perform basic rigging.

ILT 104 **INDUSTRIAL INSTRUMENTATION (3T)** **3 credits**
PREREQUISITE: ILT 103, MTH 104
This course provides a study of instrumentation circuits/systems. Topics include the use of transducers, detectors, actuators, and/or other devices and equipment in industrial applications. Upon completion, the student should be able to apply principles of instrumentation circuits and systems.

ILT 105 **INDUSTRIAL INSTRUMENTATION LAB (6M)** **2 credits**
COREQUISITE: ILT 104
A companion to ILT 104, this lab includes the use of transducers, detectors, actuators, and/or other devices and equipment in industrial application. Upon completion of the course, the student should be able to apply principles of instrumentation circuits and systems.

ILT 108 **INTRODUCTION TO INSTRUMENTS AND PROCESS CONTROL (2T, 2E)** **3 credits**
PREREQUISITE: ILT 104, ILT 105
This course is an introductory study of the control devices and methods used in industry for the control and transmission of information pertaining to process variables. This study includes an introduction to instrumentation and control mathematics. This course also provides instruction in the fundamental concepts of pressure, force, weight, motion, liquid level, fluid flow and temperature.

ILT 109 **INSTRUMENTATION OPERATION AND CALIBRATION (2T, 2E)** **3 credits**
PREREQUISITE: ILT 108
This course is an in-depth study of the hardware used to measure and control process variables. The student learns the principles of operating, servicing, maintaining, calibrating and troubleshooting procedures used in mechanical, pneumatic, electronic and digital based industrial transmitters, recorders, controllers, valves and other control devices.

Course Descriptions

INDUSTRIAL MAINTENANCE TECHNOLOGY (INT)

INT 112 INDUSTRIAL MAINTENANCE SAFETY PROCEDURES (3T) 3 credits
This course is an in-depth study of the health and safety practices required for maintenance of industrial production equipment. Topics include traffic, ladder, electrical, and fire safety, safe work in confined spaces, electrical and mechanical lock-out procedures, emergency procedures, OSHA regulations, MSDS Right-to-Know law, hazardous materials safety, and safety equipment use and care. Upon course completion, students will be able to implement health and safety practices in an industrial setting.

INT 233 INDUSTRIAL MAINTENANCE METAL WELDING AND CUTTING TECHNIQUES (1T, 6M) 3 credits
This course provides instruction in the fundamentals of acetylene cutting and the basics of SMAW 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 plate and pipe, hand tools, types of metal welding machines, rod and welding joints, and common welding passes and beads. Upon course completion, students will demonstrate the ability to perform metal welding and cutting techniques necessary for repairing and maintaining industrial equipment.

LIBRARY SCIENCE (LBS)

LBS 100 INTRODUCTION TO LIBRARY USE (2T) 2 credits
This course provides instruction in the use of the library. Emphasis is placed on the use of the library catalog, periodical indexes, bibliographic sources and general reference materials.



LBS 101 INTRODUCTION TO LIBRARY USE I (1T) 1 credit
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 II (1T) 1 credit
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 101 BASIC MACHINING TECHNOLOGY (1T, 4E) 3 credits
FORMERLY: MTT 111
PREREQUISITE: MTT 121
This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, milling machines, bench grinders, and layout instruments. Upon completion, students should be able to safely perform the basic operations of measuring, layout, drilling, sawing, turning and milling.

MTT 102 INTERMEDIATE MACHINE TECHNOLOGY (1T, 4E) 3 credits
FORMERLY: MTT 112
PREREQUISITE: MTT 101
This course provides additional instruction and practice in the use of precision measuring tools, lathes, milling machines, and grinders. Emphasis is placed on setup and operation of machine tools including the selection and use of work holding devices, speeds, feeds, cutting tools, and coolants. Upon completion, students should be able to perform basic procedures on precision grinders and advanced operations of measuring, layout, drilling, sawing, turning and milling.

MTT 104 BASIC MACHINING CALCULATIONS (3T) 3 credits
PREREQUISITE: MTT 101
This course introduces basic calculations as they relate to machining occupations. Emphasis is placed on basic calculations and their applications in the machine shop. Upon completion, students should be able to perform basic shop calculations.

MTT 105 LATHE SET-UP AND OPERATIONS (2T, 8E) 6 credits
FORMERLY: MTT 113
PREREQUISITE: MTT 102
This course includes more advanced lathe practices such as taper turning, threading, boring, and set-up procedures. Emphasis is placed on safety procedures and machinist responsibility in the set-up and operation of lathes. Upon completion, students should be able to apply lathe techniques to produce machine tool projects.

MTT 106	<p>MILLING MACHINE OPERATIONS (2T, 8E) 6 credits FORMERLY: MTT 171 and MTT 272 PREREQUISITE: MTT 102, MTT 104 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, students should be able to apply milling techniques to produce machine tool projects.</p>	<p>projects in machine tool technology. Emphasis is placed on student needs. Upon completion, students should be able to demonstrate skills developed to meet specific needs.</p>
MTT 110	<p>HANDBOOK FUNCTIONS (3T) 3 credits PREREQUISITE: MTT 104 This course covers the use of the machinist's handbook. Emphasis is placed on formulas, tables, usage and related information. Upon completion, students should be able to use the handbook in the calculation and setup of machine tools.</p>	<p>MTT 200 INDUSTRIAL PROCESSES (3T) 3 credits PREREQUISITE: Permission of Instructor This course is the study of industrial processes as they pertain to manufacturing. Emphasis will be placed on classroom study of industrial practices and will be supplemented with field trips to manufacturing facilities. Upon completion, students should have knowledge of industrial practices and application.</p>
MTT 121	<p>BASIC BLUEPRINT READING FOR MACHINISTS (3T) 3 credits FORMERLY: MTT 101 This course covers the basic principles of blueprint reading and sketching. Topics include multi-view drawings; interpretation of conventional lines; and dimensions, notes, and thread notations. Upon completion, students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.</p>	<p>MTT 201 ADVANCED MACHINING TECHNOLOGY (2T, 8E) 6 credits FORMERLY: MTT 282 and MTT 283 PREREQUISITE: MTT 106 This course provides an introduction to advanced and special machining operations. Emphasis is placed on working to specified tolerances with special and advanced setups. Upon completion, students should be able to produce a part to specifications.</p>
MTT 131	<p>INTRODUCTION TO METROLOGY (2T, 2E) 3 credits FORMERLY: MTT 292 PREREQUISITE: MTT 121, 143 This course introduces the care and use of precision measuring instruments. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. Upon completion, students should be able to demonstrate the correct use of measuring instruments.</p>	<p>MTT 202 MACHINE MAINTENANCE AND REPAIR (3T) 3 credits PREREQUISITE: Permission of Instructor This course covers preventive maintenance as well as repair of machine tools. Emphasis is placed on safety, disassembly and assembly of lathes, grinders, saws, and milling machines. Upon completion, students should be able to perform machine maintenance and repair of machine tools.</p>
MTT 142	<p>ADVANCED MACHINING CALCULATIONS (2T) 2 credits PREREQUISITE: MTT 104 This course combines mathematical functions with practical machine shop applications and problems. Emphasis is placed on gear ratios, lead screws, indexing problems, and their applications in the machine shop. Upon completion, students should be able to calculate solutions to machining problems.</p>	<p>MTT 214 COMPUTER NUMERICAL CONTROL GRAPHICS PROGRAMMING TURNING (3T, 6M) 3 credits FORMERLY: MTT 261 PREREQUISITE: MTT 105, CNC 111, CNC 115 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 to develop tool path geometry and part geometry. Upon completion, students should be able to develop a job plan using CAM software, include machine selection, tool selection, operational sequence, speed, feed, and cutting depth.</p>
MTT 143	<p>GEOMETRIC DIMENSIONING AND TOLERANCING (2T) 2 credits FORMERLY: MTT 102 PREREQUISITE: MTT 121 This course serves as an introduction to geometric dimensioning and tolerancing for students who are pursuing careers in manufacturing technology or their related fields. Topics covered include fundamentals of symbols, terms used in applications, positional tolerance-coastal applications, data frame and conversion tables.</p>	<p>MTT 215 COMPUTER NUMERICAL CONTROL GRAPHICS PROGRAMMING MILLING (1T, 6M) 3 credits PREREQUISITE: MTT 106, CNC 111, CNC 115 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, students should be able to develop a complete job plan using CAM software to create a multi-axis CNC program.</p>
MTT 181	<p>SPECIAL TOPICS IN MACHINE TOOL TECHNOLOGY (1T, 3E, 3M) 2 credits FORMERLY: MTT 299 PREREQUISITE: Permission of Instructor This course is a guided independent study of special</p>	

Course Descriptions

- MTT 217** **ORIENTATION TO CNC (3T)** **3 credits**
PREREQUISITE: Permission of Instructor
 This course introduces the student to the concepts of Computerized Numerical Control as it relates to the modern industrial manufacturing workplace. Emphasis is placed on computer-aided manufacturing, basic computer operations, and the cartesian coordinate system. Upon completion, students should be able to perform basic computer operations and recognize fundamental machining operations.
- MTT 242** **CNC PROGRAMMING (3T)** **3 credits**
PREREQUISITE: CNC 111
 A study of the theory of transforming blueprints into computer commands when using a computer controlled mill.
- MTT 281** **SPECIAL TOPICS IN MACHINE TOOL TECHNOLOGY (1T, 3E, 3M)** **2 credits**
FORMERLY: MTT 191
PREREQUISITE: MTT 102, MTT 106, MTT 121
 This course is a guided independent study of special projects in machine tool technology. Emphasis is placed on student needs. Upon completion, students should be able to demonstrate skills developed to meet specific needs.

MASS COMMUNICATIONS (MCM)

- MCM 100** **INTRODUCTION TO MASS COMMUNICATIONS (3T)** **3 credits**
 This course provides the student with general study of mass communications and journalism. This course includes theory, development, regulation, operation, and effects upon society.
- MCM 113, 114, 115** **STUDENT PUBLICATIONS (1-2E)** **1-2 credits each**
 These courses offer practical experience in journalism skills through working on the staff of the student publications.
- MCM 130** **NEWS REPORTING (3E)** **3 credits**
PREREQUISITE: Typing ability.
 This course includes instruction and practice in news-gathering and newswriting techniques including methodology, observation, interviews, and use of sources.
- MCM 213, 214, 215** **STUDENT PUBLICATIONS (1-2E)** **1-2 credits each**
 These courses offer practical experience in journalism skills through working on the staff of the student publications.
- MCM 250** **MASS COMMUNICATIONS PRACTICUM (3T)** **3 credits**
 This course provides practical experience in media through supervised part or full-time employment with a newspaper, radio, or television station, or public relations/advertising agency.

MATHEMATICS (MTH)

MATHEMATICS COURSE NUMBERS DO NOT NECESSARILY REFLECT THE DIFFICULTY OF THE COURSE.

- MTH 090** **BASIC MATHEMATICS (3T)** **3 credits**
PREREQUISITE: None
 This is a developmental course reviewing arithmetical principles and computations designed to help the student's mathematical proficiency for selected curriculum entrance.
- MTH 091-MTH 092** **DEVELOPMENTAL ALGEBRA I AND II** **4 credits each**
PREREQUISITE: MTH 090 or appropriate mathematics placement score. (Placement score will determine where student begins in sequence.)
 This sequence of developmental courses provides the student with a review of arithmetic and algebraic skills designed to provide sufficient mathematical proficiency necessary for entry into Intermediate College Algebra.
- MTH 098** **ELEMENTARY ALGEBRA (4T)** **4 credits**
FORMERLY: MTH 108 Elementary Algebra
PREREQUISITE: MTH 090 (Basic Mathematics) or appropriate mathematics 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 (3T)** **3 credits**
PREREQUISITE: MTH 092 (Developmental Algebra II) or MTH 098 (Elementary Algebra) or appropriate mathematics placement score
 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 requirement for mathematics for AS degrees.
- MTH 101** **INTRODUCTORY MATHEMATICS I (2T, 2E)** **3 credits**
FORMERLY: VTM 101
PREREQUISITE: MTH 090 (Basic Mathematics) or satisfactory placement score.
 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, students should be able to solve practical problems in their specific occupational areas of study. This course fulfills MTH requirement only for certificate programs of study.

MTH 103 INTRODUCTION TO TECHNICAL MATHEMATICS (3T) 3 credits
PREREQUISITE: MTH 092 (Developmental Algebra II) or MTH 098 (Elementary Algebra) or appropriate mathematics placement score
 This course is designed for the student in technology needing simple arithmetic, algebraic, and right triangle trigonometric skills.

MTH 104 PLANE TRIGONOMETRY (3T) 3 credits
PREREQUISITE: MTH 100 (Intermediate College Algebra)
 This course emphasizes such topics as the solution of triangles, vectors, geometric concepts and complex numbers.

MTH 105 MATH FOR NURSING (2T, 2E) 3 credits
FORMERLY: VTM 103
PREREQUISITE: MTH 090 (Basic Mathematics) or satisfactory placement score
 This course is a comprehensive review of arithmetic with basic algebra and introduces calculations of solutions and systems of measurement to meet the practical nursing program requirement. Topics include a review of basic arithmetic, metric system conversions, ratio and proportion, and conversion among and between the metric, apothecaries, and household unit systems and intravenous infusion rates as well as ethical, cultural, and legal aspects of accurate mathematical skills. Upon completion, students will demonstrate proficiency in calculating drug dosages and IV infusion rates for adults and children.

MTH 110 FINITE MATHEMATICS (3T) 3 credits
PREREQUISITE: A minimum prerequisite of high school Algebra I, Geometry, and Algebra II with an appropriate mathematics placement score. An alternative to this is that the student should successfully pass with a "C" or higher (S if taken as pass/fail) MTH 100 - Intermediate College Algebra
 This course is intended to give an overview of topics in finite mathematics together with their applications, and is taken primarily by students who are 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 Bayes' 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 (3T) 3 credits
PREREQUISITE: A minimum prerequisite of high school Algebra I, Geometry, and Algebra II with an appropriate mathematics placement score. An alternative to this is that the student should successfully pass with a "C" or higher (S if taken as pass/fail) MTH 100- Intermediate College Algebra.

MTH 113 PRECALCULUS TRIGONOMETRY (3T) 3 credits
FORMERLY: MTH 123 Plane Trigonometry
PREREQUISITE: A minimum prerequisite of high school Algebra I, Geometry, and Algebra II with an appropriate mathematics placement score is required. An alternative to this is that the student should successfully pass with a "C" or higher (S if taken as a pass/fail) MTH 112-Precalculus Algebra
 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 115 PRECALCULUS ALGEBRA & TRIGONOMETRY (4T) 4 credits
FORMERLY: MTH 113 Precalculus with Trigonometry
PREREQUISITE: A minimum prerequisite of high school Algebra I, Geometry, and Algebra II, with an appropriate mathematics placement score is required. An alternative to this is that the student should successfully pass with a "C" or higher (S if taken as pass/fail) MTH 100 (Intermediate College Algebra) and receive permission from the department chairperson.
 This course is a one-semester combination of Precalculus Algebra and Precalculus Trigonometry intended for superior students. The course covers the following topics: the algebra of functions (including polynomial, rational, exponential, and logarithmic functions), systems of equations and inequalities, quadratic inequalities, and the binomial theorem, as well as the study of trigonometric (circular functions) and inverse trigonometric functions, and includes extensive work with trigonometric identities and trigonometric equations, vectors, complex numbers, DeMoivre's Theorem, and polar coordinates.

MTH 116 MATHEMATICAL APPLICATIONS (3T) 3 credits
PREREQUISITE: MTH 090 (Basic Mathematics) or appropriate mathematics placement score
 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 students seeking an AAS degree and does not meet the general core requirement for mathematics for AS degrees.

preparing the behavior of 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.

MTH 265 ELEMENTARY STATISTICS (3T) 3 credits
FORMERLY: MTH 261
PREREQUISITE: MTH 100 (Intermediate College Algebra) or appropriate mathematics placement score
 This course provides an introduction to methods of statistics, including the following topics: sampling, frequency distributions, measures of central tendency, graphic representation, reliability, hypothesis testing, confidence intervals, analysis, regression, estimation, and applications. Probability, permutations, combinations, binomial theorem, random variables, and distributions may be included.

MUSIC (MUL) (MUP) (MUS)

MUL 192-193A PIANO ENSEMBLE (2-4E) 1 credit
MUL 292-293A FORMERLY: MUE 132C, 232C
PREREQUISITE: Audition and Permission of Instructor
 This course provides an opportunity for students to participate in a performing ensemble. Emphasis is placed on rehearsing and performing literature appropriate to the mission and goals of the group. Performances are assigned.

MUL 101-02 CLASS PIANO I, II (2E) 1 credit each
FORMERLY: MUS 120, 121, 122, 220, 221, 222
 These courses, to be taken in sequence, present fundamentals of keyboard technique for students 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, students should be able to demonstrate a basic proficiency in playing and a knowledge of music fundamentals.

MUL 111-12 CLASS VOICE I, II, III, IV (2E) 1 credit each
MUL 211-12 FORMERLY: MUS 124, 125, 126, 224, 225, 226
 These courses must be taken in sequence. Emphasis is placed on fundamentals of correct breathing, tone production, and diction for students with little or no previous voice training. Literature appropriate for class level is studied. Upon completion of one or a sequence of courses, students should be able to demonstrate a basic proficiency in singing and a knowledge of music fundamentals. A minimum grade of "C" is required to progress to next level.

MUL 161-63 CLASS FRETTED INSTRUMENTS I, II, III (2E) 1 credit each
FORMERLY: MUS 141, 142, 143, 241, 242, 243
 These courses must be taken in sequence. These courses include basic techniques, chords, scales, fingering, rhythm, strumming, and playing simple melodies. They are designed for students 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, students should be able to

demonstrate a basic proficiency in playing and a knowledge of music fundamentals.

MUL 180-81 CHORALE (2-4E) 1-2 credits
MUL 280-81 FORMERLY: MUE 120A, 220A
PREREQUISITE: Permission of Instructor

These courses are selected performing ensembles open to all students. Chorale is required for voice majors and minors. Emphasis is placed on rehearsing and performing literature appropriate to the mission and goals of the group. Performances are assigned.

MUL 182-83 MADRIGAL SINGERS (2-4E) 1-2 credits
MUL 282-83 FORMERLY: MUE 120B, MUE 220B
PREREQUISITE: Permission of Instructor and audition

This course provides an opportunity for students to participate in a performing ensemble. Emphasis is placed on rehearsing and performing literature appropriate to the mission and goals of the group. This course is a select a cappella performing ensemble. Enrollment is limited. Performances are assigned.

MUL 184-85 CONNECTION (2-4E) 1-2 credits
MUL 284-85 FORMERLY: MUE 121, 221
PREREQUISITE: Permission of Instructor and Audition

This course provides an opportunity for students 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, students should be able to effectively participate in performances presented by ensemble. Performances are assigned.

MUL 192-93B GUITAR ENSEMBLE (2-4E) 1-2 credits
MUL 292-93B FORMERLY: MUE 132B, 232B
PREREQUISITE: Permission of Instructor

This course provides ensemble experience for guitar students in playing standard literature and arrangements and transcriptions for classical technique. Emphasis is placed on rehearsing and performing literature appropriate to the mission and goals of the group. Performances are assigned. This course is open to all students and is required for guitar majors.

MUL 196-97 JAZZ BAND (2-4E) 1-2 credits
MUL 296-97 FORMERLY: MUE 131, 231
PREREQUISITE: Permission of Instructor

This course provides an opportunity for students 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, students should be able to effectively participate in performances presented by the ensemble. Performances are assigned.

Course Descriptions

MUP 101 102, 201 202	<p>PIANO (1E) 2 credits PREREQUISITE: MUL 101, 102 or Permission of Instructor Individual study, minimum grade of "B" is required to progress to next level. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's educational goals. Students are required to practice a minimum of five hours per week for each credit hour. Upon completion, students should be able to effectively perform assigned repertoire and technical studies in an appropriate performance evaluation setting. At the conclusion of the last semester of study, a sophomore recital is required.</p>	MUP 143 144, 243 244	<p>CLARINET (0.5 – 1E) 1-2 credits Individual instruction to include the study of standard literature and technique. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's education goals. Students are required to practice a minimum of five hours per week for each credit hour. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to next level.</p>
MUP 103 104, 203, 204	<p>ORGAN (1E) 2 credits Individual study, minimum grade of "B" is required to progress to next level. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's educational goals. Students are required to practice a minimum of five hours per week for each credit hour. Upon completion, students should be able to effectively perform assigned repertoire and technical studies in an appropriate performance evaluation setting. At the conclusion of the last semester of study, a sophomore recital is required.</p>	MUP 145 146, 245 246	<p>CLARINET (0.5 – 1E) 1-2 credits Individual instruction to include the study of standard literature and technique. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's education goals. Students are required to practice a minimum of five hours per week for each credit hour. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to next level.</p>
MUP 111 112, 211 212	<p>VOICE (1E) 2 credits PREREQUISITE: MUL 111 Individual instruction to include the study of standard literature and technique. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's educational goals. Students are required to practice a minimum of five hours per week for each credit hour. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to the next level.</p>	MUP 151 152, 251 252	<p>OBOE (0.5 – 1E) 1-2 credits Individual instruction to include the study of standard literature and technique. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's education goals. Students are required to practice a minimum of five hours per week for each credit hour. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to next level.</p>
MUP 133 134, 233 234	<p>GUITAR (1E) 2 credits PREREQUISITE: MUL 161, 162 Individual instruction to include the study of standard literature and technique. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's education goals. Students are required to practice a minimum of five hours per week for each credit hour. At the conclusion of the last semester, a sophomore recital is required. Minimum grade of "B" is required to progress to next level.</p>	MUP 153 154, 253, 254	<p>BASSOON (0.5 – 1E) 1-2 credits Individual instruction to include the study of standard literature and technique. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's education goals. Students are required to practice a minimum of five hours per week for each credit hour. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to next level.</p>
MUP 141 142, 241 242	<p>FLUTE (0.5 – 1E) 1-2 credits Individual instruction to include the study of standard literature and technique. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's education goals. Students are required to practice a minimum of five hours per week for each credit hour. At the conclusion of the last semester, a sophomore recital is required. Minimum grade of "B" is required to progress to next level.</p>	MUP 161 162, 261 262	<p>TRUMPET (0.5 – 1E) 1-2 credits Individual instruction to include the study of standard literature and technique. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's education goals. Students are required to practice a minimum of five hours per week for each credit hour. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to next level.</p>
		MUP 163 164, 263 264	<p>FRENCH HORN (0.5 – 1E) 1-2 credits Individual instruction to include the study of standard literature and technique. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's education goals. Students are required to practice a minimum of five hours per week for each credit hour. At the conclusion of the last semester, a sophomore recital is required. A</p>

minimum grade of "B" is required to progress to next level.

MUP 171 **TROMBONE (0.5 – 1E)** **1-2 credits**
172, 271
272
Individual instruction to include the study of standard literature and technique. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's education goals. Students are required to practice a minimum of five hours per week for each credit hour. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to next level.

MUP 173 **EUPHONIUM (0.5 – 1E)** **1-2 credits**
174, 273
274
Individual instruction to include the study of standard literature and technique. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's education goals. Students are required to practice a minimum of five hours per week for each credit hour. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to next level.

MUP 175 **TUBA (0.5 – 1E)** **1-2 credits**
176, 275
276
Individual instruction to include the study of standard literature and technique. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's education goals. Students are required to practice a minimum of five hours per week for each credit hour. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to next level.

MUP 181 **PERCUSSION (0.5-1E)** **1-2 credits**
182, 281,
282
Individual instruction to include the study of standard literature and technique. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's education goals. Students are required to practice a minimum of five hours per week for each credit hour. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to next level.

MUS 101 **MUSIC APPRECIATION (3T)** **3 credits**
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 (3) stylistic periods, provide a multi-cultural perspective, and include both vocal and instrumental genres. Upon completion, students 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. This course is offered in a telecourse, self-paced and lecture format.

MUS 103 **SURVEY OF POPULAR MUSIC (1-2T)** **1-2 credits**
This course provides a study of the origins, development and existing styles of popular music. Topics include ragtime, jazz, rhythm and blues, rock, country,

and western, folk and world music. Upon completion, students should be able to demonstrate a knowledge, understanding and an aural perception of the stylistic characteristics of popular music. This course is offered in a self-paced and lecture format.

MUS 105 **READING/LISTENING IN MUSIC APPRECIATION** **1 credit**
FORMERLY: MUS 107

This course is an independent study reading and listening course in which the student will become familiar with selected musical works and eras. The student will meet periodically with the instructor to discuss or assess assigned materials.

MUS 110 **BASIC MUSICIANSHIP (3T)** **3 credits**

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, students should be able to read and understand musical scores and demonstrate basic sight singing and ear training skills for rhythm, melody and harmony. Required for music majors or acceptable score on placement test (75%).

MUS 111 **MUSIC THEORY I (3T)** **3 credits**
PREREQUISITE: Minimum grade of "C" in MUS 110 or acceptable score on placement test (75%)
COREQUISITE: MUS 113

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, students should be able to demonstrate a basic competency using diatonic harmony through analysis, writing, sight singing, dictation and keyboard skills. Open lab required. Spring; Decatur campus.

MUS 112 **MUSIC THEORY II (3T)** **3 credits**
PREREQUISITE: Minimum grade of "C" in MUS 111
COREQUISITE: MUS 114

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, students should be able to demonstrate competence using diatonic harmony through analysis, writing, sight singing, dictation and keyboard skills. Open lab required. Fall; Decatur campus.

MUS 113 **MUSIC THEORY LAB I (1E)** **1 credit**
PREREQUISITE: MUS 110 or suitable placement score or permission of instructor
COREQUISITE: MUS 111

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 step-wise meoldies, basic rhythmic patterns in simple and

Course Descriptions

compound meter and four-part triadic progressions in root position. Upon completion, students 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. Spring; Decatur campus.

MUS 114 **MUSIC THEORY LAB II (1E)** **1 credit**
PREREQUISITE: MUS 113
COREQUISITE: MUS 112

This course continues the practical application of diatonic musical materials through sight singing; meoldic, harmonic and rhythmic dictation; and keyboard harmony. Topics include intervals, scales, diatonic melodies with triadic arpeggiations, more complex rhythmic patterns in simple and compound meter and four-part diatonic progressions in all inversions. Upon completion, students should be able to write, sing and play all intervals, rhythmic patterns employing syncopations and beat divisions, diatonic melodies and four-part progressions. Fall; Decatur campus.

MUS 211 **MUSIC THEORY III (3T)** **3 credits**
PREREQUISITE: Minimum grade of "C" in MUS 112
COREQUISITE: MUS 213

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, students should be able to demonstrate competence using chromatic harmony through analysis, writing, sight singing, dictation and keyboard skills. Open lab required. Spring; Decatur campus.

MUS 213 **MUSIC THEORY LAB III (1E)** **1 credit**
PREREQUISITE: MUS 114
COREQUISITE: MUS 211

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, students should be able to write, sing and play modulating melodies, rhythmic patterns with beat subdivisions and four-part chromatic harmony. Spring; Decatur campus.

MUS 251 **INTRODUCTION TO CONDUCTING (3T)** **3 credits**
FORMERLY: MUS 281
PREREQUISITE: MUS 110 or acceptable score on placement test (75%)

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, students 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 (2-3T)** **2-3 credits**
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, students should be able to demonstrate how to plan, coordinate and administer a comprehensive church music program.

MUS 271 **CHURCH MUSIC LITERATURE (2-3T)** **2-3 credits**
FORMERLY: MUS 272

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, students should be able to demonstrate a knowledge and understanding of church music literature.

MUS 272 **THE CHILDREN'S CHOIR (2-3T)** **2-3 credits**
FORMERLY: MUS 276

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, students should be able to demonstrate how to plan, coordinate and administer a graded choir program in a church.

MUS 290 **INTRODUCTION TO COMMERCIAL MUSIC (2-3T)** **2-3 credits**

This course provides an introduction to the commercial music industry and the types of careers in commercial music. Topics include music publishing, recording, contracts, agents and managers, copyrights, unions, music companies and dealers. Upon completion, students should be able to demonstrate a basic knowledge and understanding of the different



components of the commercial music industry and the various career options.

MUS 291 MUSICAL ACOUSTICS (2-3T) 2-3 credits
FORMERLY: MUS 292
PREREQUISITE: Permission of Instructor
 This course is designed to acquaint the student with the nature of musical acoustics and the science of sound. Topics include terminology, symbols, the nature and transmission of sound, vibration, frequency, pitch, intervals, harmonies, resonance, consonance and dissonance. Upon completion, students should be able to demonstrate an understanding of the basic skills and concepts through the successful presentation of an individual project in musical acoustics.



MUSIC INDUSTRY COMMUNICATIONS (MIC)

MIC 100 INTRODUCTION TO MASS COMMUNICATIONS (3T) 3 credits
 This course provides the student with general study of mass communications and journalism. This course includes theory, development, regulation, operation, and effects upon society. Upon completion of this class, students should be able to decide which field of mass communications on which to focus.

MIC 153 INTRODUCTION TO RECORDING TECHNOLOGY (3T) 3 credits
 This course is designed to acquaint the student with basic recording fundamentals. Emphasis is placed on microphone techniques, recording principals, musician and recording engineers code. Upon completion, students should be able to do basic analog recordings.

MIC 201 PUBLISHING FOR THE RECORDING INDUSTRY (3T) 3 credits
 This course is an introduction to the operation and functions of publishing in the recording industry.

MIC 250 MASS COMMUNICATIONS PRACTICUM (3T) 3 credits
PREREQUISITE: MIC 153 or instructor approval
 This course provides practical experience in media through supervised part- or full-time employment with a newspaper, radio, or television station, recording studio, or public relations/advertising agency. Upon completion, students should be able to receive employment based on demonstration of their skills in their subject area.

MIC 251 RECORDING STUDIO PRODUCTION (3T) 3 credits
PREREQUISITE: MIC 153 or instructor approval
 This course is designed to acquaint the student with the functional roles of the commercial recording studio. Emphasis will be placed on studio production projects, and include a study of contracts, managers, agents, recording rights, copyright laws, unions, pub-

lishers, and music companies. Upon completion, students should be able to produce studio quality recordings and have an understanding of the music industry.

MIC 253 COMPUTER LITERACY FOR THE MUSICIAN I (3T) 3 credits
PREREQUISITE: MIC 153 or instructor approval
 This course is designed to teach musicians how to use computers for music writing, ear training, theory, and sequencing. Topics include an introduction to MIDI, sequencing, Master Tracks Pro, Studio 3.1 and 4.0, Cakewalk and Musicator. Upon completion, students should have an understanding of MIDI, Charting and Sequencing on the computer.

MIC 254 COMPUTER LITERACY FOR THE MUSICIAN II (3T) 3 credits
PREREQUISITE: MIC 253 or instructor approval
 This course is designed to teach advanced computer sequencing techniques. Emphasis is placed on projects and the use of computer sequencing software and hardware. Students should be able to sequence and perform advanced editing using MIDI.

MIC 255 DIGITAL RECORDING (3T) 3 credits
PREREQUISITE: MIC 253 or instructor approval
 This course is designed to teach Digital Recording using harddisk wave recording techniques. Emphasis is placed on projects and the use of Digital Recording software and hardware. Upon completion, students should be able to do recordings on the "Special Audio Engine" and other software with masters of digital quality.

MIC 293 MUSIC NOTATION (3T) 3 credits
PREREQUISITE: MIC 253 or instructor approval
 This course is designed to teach students the music program for charting and writing music. Emphasis will be placed on the use of the software program "FINALE". Upon completion, students should be able to chart and write music using industry standards.