



## Descriptions of Majors

**The Advertising and Design Major** prepares students for new and emerging technology in all aspects of commercial art. There is an emphasis on industry-current technology, including digital illustration and imaging, web design and multimedia. Students will gain experience and knowledge in the design and development of promotional materials such as newspaper and magazine advertisements, posters, letterheads, corporate symbols, brochures, photography, and electronic media.

**Industry Certifications and State Credentials offered: PrintED, Adobe Certified Associate and Adobe Photoshop**

**The Building Science and Construction Major** prepares students for many different kinds of construction activities, from building highways and bridges, to installing kitchen cabinets. Students will construct, erect, install, and repair structures and fixtures made from wood and other materials. Students will experience real-life application, decision-making, and problem solving opportunities through hands-on industry experience and project-based learning.

**Industry Certifications and State Credentials offered: Carpentry I, Carpentry II, Carpentry III, Construction Tech, Plumbing I, Plumbing II, Plumbing III, and Residential Carpentry**

**The Electrical Technology Major** prepares students to install electrical systems in residential and commercial structures. Students will learn to install wiring and other electrical components such as circuit breaker panels, switches, and light fixtures. Students will receive knowledge and experience in both residential and commercial wiring, blueprint reading, the *National Electrical Code*®, programmable logic controllers, and state and local codes.

**Industry Certifications and State Credentials offered: Electrical I, Electrical II, Electrical III, Electronics, Motor Controls, PLCs (Alan Bradley and Siemens)**

### Utility Line Worker Major



MPACT has been selected by Alabama Power to be a pilot host site for a new program to prepare students for successful careers in the Utility Line Worker field. Students completing this program will have the opportunity to earn a CRI if approved in Construction and Skilled Trades (CAST). This program will open up apprenticeship opportunities for students with Alabama Power and other Utility Line Worker companies and organizations.

**Students interested in this major should indicate Electrical Technology – ULW as their preferred major.**

**The Fire Science** gives students the knowledge and skills for careers in fire and public safety. Students in this major learn principles of public service, firefighting, fire prevention and control, consumer,

emergency care procedures, and effective communication. Students also receive hands-on experiences through partnerships with municipal fire departments, and emergency management agencies.

**Industry Certifications and State Credentials offered: CPR Certification, Check Point Certified Security Principles Associate Certification, Inspection and Testing Water-Based System I, and Volunteer Firefighter Certification**

**The HVAC/Mechanical Systems Major** prepares students for careers such as heating, air conditioning, and refrigeration technicians and installers. Students gain knowledge performing installations, repairs and maintenance on a variety of equipment including refrigeration, air conditioning, electric motors, heating units, heat pumps, hermetic compressors, light commercial furnaces, boilers, burners, intake and exhaust fans, economizers and humidifiers.

**Industry Certifications and State Credentials offered: EPA Section 608, HVAC I, HVAC II, HVAC III, and Universal R-410**

**The Industrial Systems Major** prepares students to install, adjust, troubleshoot, and repair a variety of industrial machinery used in manufacturing settings. Technicians may work in factories that manufacture, finish, or assemble many different types of products. Students study the basic operations common to production equipment used in industry today. Electricity and electronics are emphasized because most modern manufacturing equipment is electrically operated. Pneumatics, hydraulics, and mechanical power are also covered.

**Industry Certifications and State Credentials offered: Industrial Maintenance E&I Level I, Industrial Maintenance E&I Level II, Industrial Maintenance E&I Level III, Workforce Ready Mechatronics, and Workforce Ready Automated Manufacturing Technology**

**The Information Technology Major** prepares students for our technology-based environment through integration of basic technology skills with specialized training. Students are offered a wide range of subject areas crucial to future success in today's information economy. Industry-based network certifications and network systems architecture and design are included in student course work.

**Industry Certifications and State Credentials offered: Microsoft Technology Associate Networking Fundamentals, CompTIA Strata IT Fundamentals**

**The Medical Science Major** gives students a skills-based education in medical and allied health professions, e.g. Physician, Nursing, Veterinarian, Therapy, Technicians. Students gain knowledge of the structure and function of the human body, medical terminology, the disease process, first aid, and CPR. Students will have hands-on experiences for continued knowledge and skill development. The course may be taught by different methodologies such as clinical rotation and career preparation learning.

**Industry Certifications and State Credentials offered: AED, CPR Certification, First Aid, Patient Care Technician (CPCT), and Nursing Assistant (CNA)**

**The Public Safety Major** gives students the knowledge and skills for careers in law, public safety, security, and corrections. Students in this major learn principles of public service, consumer and contract law, emergency care procedures, the responsibilities of first responders, criminal investigation techniques, and effective communication skills. Students also receive hands-on experiences through partnerships with municipal, county and state law enforcement agencies.

**Industry Certifications and State Credentials offered: CPR, and Checkpoint Certified Security Principles Associate Certifications**

**The Plumbing Major** gives students the knowledge and skills of fundamental plumbing principles and practices. Topics include basic plumbing safety; plumbing tools; oxyfuel cutting; motorized equipment; and various pipes, fittings, and materials. Upon successful completion of this course, students apply basic plumbing principles. Students will learn to diagnose and repair commercial and residential piping systems alongside licensed Master Plumbers, design and install environmentally-friendly systems according to renewable energy regulations and build innovative and efficient boiler and gas systems.

**Industry Certifications and State Credentials offered: Plumbing I, Plumbing II, Plumbing III, and Workforce Ready- Plumbing**

**The Welding and Metal Fabrication Major** prepares students for a high-tech industry that can take you to places all over the world. From ladders to aircraft carriers, from NASCAR to national defense, and from the laboratory to sales and repair, the varied welding industry impacts virtually every other industry. Students will gain knowledge and experience in shielded metal arc welding, gas metal arc welding, gas tungsten arc welding, and flux cored arc welding. Students will also learn the safe operating procedures of oxyfuel cutting and plasma arc cutting.

**Industry Certification & State Credentials Offered: AWS Welding I, Welding II, Welding III, and Alabama Department of Labor Forklift**