

AUTOMOTIVE SERVICE TECHNICIAN

6 Week Day Program/9 Week Evening Program

180 HRS.

Program Objective

This program is designed to teach students the basic technical skills, abilities and work habits required to pursue an entry-level position as an Automotive Services Technician. Graduates of this program will be able to apply technical knowledge and skills to repair, service and maintain all types of automobiles. Graduates of this program may find entry-level employment as automotive service technicians and mechanics.

*Students will receive a Certificate of Completion at the satisfactory completion of these courses.

Course Descriptions

AUTO 101 - Orientation/Shop Procedures

This course provides students with an introduction and overview of the Automotive Repair and Maintenance Industry and includes demonstrations on general shop procedures. Students learn about the mechanical operation of today's automotive and related components. Students learn terminology, definitions and standards that can be applied in a workplace environment.

[Prerequisites: None]

AUTO 102 - Safety

General safety and shop rules are covered in this course offering. Presentations and course work cover safety training designed to prepare students to learn and practice key safety factors involved with the automotive service workplace/worksites. This includes: 1) Describing and demonstrating proper general and personal worksite safety that includes proper use of Personal Protective Equipment (PPE), learning basic safety principles to ensure for maximum back and fall protection, and personal safety working in confined spaces and maneuvering while working under lifts and raised vehicles. 2) Learning and understanding about the nature of information contained on Hazard Communication Labels and Material Safety Data Sheets, 3) Describing proper use and operation of fire extinguishers and compressed gas safety.

[Prerequisites: AMT 101 Orientation/Shop Procedures]

AUTO 103 - Hand Tools and Fasteners

Students learn tool identification, use and care, and basic automotive related fasteners. The course outlines the different types of tools for assembly and fasteners commonly used in the automotive industry.

[Prerequisites: AMT 102 Safety]

AUTO 104 - Automotive Lubrication System

Students will learn about the engine lubrication system which includes the lubricating oil, oil pump, oil filter and the oil passages. Students will learn about full film lubrication and the role and importance of oil as the primary barrier between rotating engine parts that prevents damage by friction. Upon completion of this subject, students will be able to change oil and an oil filter in an engine, identify different viscosities and oil and filter classifications.

[Prerequisites: AMT 103 Hand Tools and Fasteners]

AUTO 105 - Brake System

Students will learn the principles and concepts about the typical braking system and the different component parts engaged with the braking system. Students will learn about disc and drum brakes, tube and hoses/brake lines systems, master cylinders, brake fluids, brake pads, rotors and brake shoes. Classroom discussion and corresponding lab work will also cover parking brakes, power brake boosters and anti-lock brakes. At the completion of this course, students will be able to perform brake inspections and basic brake work.

[Prerequisites: AMT 104-Automotive Lubrication System]

AUTO 106 - Basic Tune Ups and Ignition Systems

Upon completion of this subject, students will have a thorough understanding of the automotive term “tune up” in today’s advanced automotive repair industry. Students will learn general maintenance operations that include replacing spark plugs, distributor points, inspecting or replacing the cap and rotor, PCV valves and replacing fuel and air filters. The course will also cover classroom discussion and lab work on adjustments that that may be necessary to complete an operation such as point gap, ignition timing, and idle mixture and dwell as well as discussing and learning about onboard computer systems that are in most of today’s newer vehicle lines. The course also covers classroom discussion and lab work related to learning about the different type of ignition systems including conventional breaker point types, electronic ignition and distributor-less ignition systems. General basic electricity concepts are included in learning and understanding a vehicle’s ignition system.

[Prerequisites: AMT 105 Brake Systems]

AUTO 107 - Suspension/Steering and Tire/Wheels

Students will learn about steering systems, both power and manually operated as well as suspension repairs, front-end alignment and wheel balancing. Students will also learn about tire classifications, tire rotation, tire tread wear patterns and adjusting tire pressure. At the completion of this course, students will be able to perform general inspections of the suspension and steering systems as well as inspection procedures for identifying potential zipper ruptures in steel cord radial medium and light truck tires, demountable rim service, maintenance and inspection procedures respectively.

[Prerequisites: AMT 106 Basic Tune Ups and Ignition Systems]

AUTO 108 - Engine Repair and Performance

Students will identify and learn principles and components of today's engine performance systems and perform general engine diagnosis. The course includes in depth study of design, operation, troubleshooting and service procedures for modern gasoline and diesel engines.

[Prerequisites: AMT 107-Suspension/Steering & Tires/Wheels]

AUTO 109 - Basic Electrical Theory

Students will learn and understand basic electrical principles, theories, and perform general electrical system diagnosis. Students will learn electrical fundamentals and practical lab activity. The course includes basic electronic devices, schematic user's information, test procedures test equipment and batteries.

[Prerequisites: AMT 108-Engine Repair and Performance]

AUTO 110 - Heating and Air Conditioning

Students will learn about refrigeration principles and theories and related components. Students will apply knowledge and skills learned to perform diagnosis and trouble shooting of a vehicle's heating and air conditioning system. This course incorporates substantial hands-on training with demonstrator unit vehicles.

[Prerequisites: AMT 109-Basic Electrical Theory]

AUTO 111 - Job Search Techniques

Students will learn to: 1) Demonstrate job search and retention techniques. 2) Identify career strategies to prepare for employment.

[Prerequisites: AMT 110-Heating and Air Conditioning]