

MASTER AUTOMOTIVE SERVICE TECHNICIAN

Inspect, maintain, and repair cars and light trucks. Students learn in the on-site auto shop, and earn an ASE student certification. Students are also prepared for industry based certifications: Ford Web Based Training, Hunter Alignment, SnapOn Certification, Toyota Web Based Training, Subaru Web Based Training, and Sp/2 Safety.

diagnostic testing | **repair & maintenance** | **engines** | **brakes**
electrical systems | **suspension systems** | **transmissions**

Suggested Abilities

- ▶ 8th grade English reading, writing, speaking, and listening
- ▶ Understand basic algebra
- ▶ Lift 50 pounds
- ▶ Sustained activity for 8 hours at a time

Prerequisites

- ▶ Must be 18 years old prior to graduation
- ▶ Must have a valid drivers license prior to graduation
- ▶ Successfully pass entrance exam or provide acceptable documentation of reading level
- ▶ *High School Students: Meet with counselor for eligibility requirements*

Class Hours

- ▶ Morning: 8:40am - 11:30am, Mon. - Fri.
- ▶ Afternoon: 12:10pm - 3:00pm, Mon. - Fri.

SEMESTER 1

ASE 1001 Auto Shop Orientation

2 credits

Shop and automotive safety, focusing on proper use and care of test and precision measuring tools, machining equipment, gaskets, adhesives, tubing, wiring, jacks, presses, and cleaning methods.

ASE 1002 Intro to the Automotive Shop

2 credits

Work in the shop safely and gain familiarity with the shop and common equipment.

ASE 1010 Brakes I

2 credits

Basic theory of automotive braking systems: operation, diagnosis, basic repair, and basic hydraulic braking systems. Meets MLR/AST/MAST program accreditation requirements.

ASE 1011 Auto Brakes II

2 credits

Diagnostics, test procedures, and repair to braking systems. Introduces antilock braking systems and traction control systems. Meets MLR/AST/MAST program accreditation requirements.

ASE 1040 Steering and Suspension I

2 credits

Lecture and related experiences in the diagnosis and service of suspensions and steering systems and their components.

ASE 1050 Manual Drive Tran Axle Maint

2 credits

Studies the operating principles and repair procedures relating to axle-shaft and universal joints. Includes maintenance of manual drivetrain and transaxle.

ASE 2050 Auto Transmission/Transaxle Service

1 credit

Diagnosis and service of electronic suspensions, steering systems, transmission, and transaxle.

ASE 2064 Intro to HVAC Systems

1 credit

Covers basic operation of the Heating and Air Conditioning components.

SEMESTER 2

ASE 1020 Basic Auto Electricity

2 credits

Introduces vehicle electricity, basic electrical theory, circuit designs, and wiring repair methods. This course focuses on multimeter usage and wiring diagrams.

ASE 1022 Automotive Electrical Safety Systems

1 credit

Teaches the student to identify operation of vehicle lighting systems, Supplemental Inflatable Restraints (SIR), windshield wiper, driver warning systems and vehicle accessories.

ASE 1023 Starting and Charging Systems

2 credits

Covers the operation, testing and servicing of vehicle battery, starting and charging systems. Includes voltage testing of starter and generator, load testing and maintenance of a battery

ASE 1030 General Engine Diagnosis

2 credits

Covers how to perform basic engine diagnosis to determine condition of engine including engine support systems.

ASE 1034 Automotive Fuel and Emission Systems I

2 credits

Focuses on the diagnosis and repair of automotive fuel emission control systems, filter systems, and spark plugs.

ASE 1060 Auto Engine Repair

2 credits

Covers engine sealing requirements and repair procedures; engine fasteners, bolt torque and repair of fasteners. Will also cover cooling systems and basic engine maintenance.

SEMESTER 3

ASE 1051 Man. Transmission/Transaxles & Clutches

2 credits

Focuses on lecture and related laboratory experiences in the diagnosis and repair of automotive manual transmissions, transaxles and clutches and related components.

ASE 1052 Man Trans/Transaxles/Clutch II

2 credits

Focuses on lecture and related laboratory experiences in the diagnosis and repair of differentials, driveshafts, and related components.

ASE 1062 Auto Engine Service

2 credits

Expands on ASE1060: Covers an advanced understanding of engine requirements and advanced engine repair and maintenance.

ASE 1070 Laboratory Experience I: MAST Lab

1 credit

Continues to build upon the principles that are expected to be understood by students.

ASE 2031 Automotive Computers and Ignition Systems

2 credits

Focuses on lecture and laboratory experiences in the inspection and testing of typical computerized engine control systems.

ASE 2033 Auto Fuel Injection/Emissions

4 credits

Focuses on lecture and related laboratory experiences in the diagnosis and repair of electronic fuel injection systems and modern exhaust systems.

ASE 2051 Automotive Transmission & Transaxle Repair

3 credits

Covers diagnosis, principles of hydraulics, principles of electronic components, power flow, theory of operation, remove and re-install transmission/transaxle, and replacement of components.

SEMESTER 4

ASE 1041 Suspension and Steering II

2 credits

Covers design, diagnosis, inspection, and service of suspension and steering systems used on light trucks and automobiles. The course includes power steering and SRS service.

ASE 2010 Auto Power/ABS Brake Systems

2 credits

Operation, diagnosis, service, and repair of the anti-lock braking systems, power assist units and machine operations of today's automobile.

ASE 2021 Auto/Diesel Body Electrical

4 credits

Provides a comprehensive study of the theory, operation, diagnosis, and repair of vehicle electronics.

ASE 2040 Suspension and Steering III

2 credits

Covers operation of steering and power steering systems. It will also include different alignment types and procedures.

ASE 2065 HVAC Systems

4 credits

Emphasizes lecture and related laboratory experiences in the diagnosis and service of vehicle heating and air conditioning systems and their components.

ASE 2085 Independent Study: PWR

3 credits

Meets the individual needs of students. Students engage in an internship under the direction of a qualified instructor.

Master Automotive Service Technician Certificate

2 Years

58 Credit Hours



Information Revised MAR'26. Information subject to change. Course listings have been paraphrased on this flyer, or full course info please see Pickens Catalog. This certificate is eligible for Financial Aid. If you have further questions, please call (303)344-4910.