

AUTOMOTIVE TECHNOLOGY (AUTO)

AUTO 1005 Safety

1.0 credit hours

15.0 Classroom Hours = 15.0 Lecture Hours

Specific safety practices for auto/diesel mechanic shops.

AUTO 1105 Gas Engine Design & Fund

3.0 credit hours

105.0 Classroom Hours = 15.0 Lecture Hours + 90.0 Lab Hours

Design and construction. Engine components, cooling, lubrication and ignition systems, engine classification and parts identification.

Prerequisite: AUTO 1005 and Corequisite: AUTO 1125. Fee \$30.

AUTO 1125 Automotive Engine Repair

4.0 credit hours

150.0 Classroom Hours = 15.0 Lecture Hours + 135.0 Lab Hours

Engine overhaul, disassembly, service of cylinder head valve train, valves, crankshaft, main bearing, connecting rods and bearings, camshaft, timing gear, engine block, cylinder and rings. Prerequisite: AUTO 1105. Fee \$50.

AUTO 1140 Automotive Applied Welding

2.0 credit hours

90.0 Classroom Hours = 90.0 Lab Hours

Students will be familiarized with all required personal protective equipment required for various welding processes. Students will have the ability to operate Arc, MIG, Oxy/Acetylene, as they apply to the Automotive repair field at the entry level. Prerequisite: AUTO 1005

AUTO 1170 Equipment Maintenance

1.0 credit hours

15.0 Classroom Hours = 15.0 Lecture Hours

Shop safety and equipment maintenance; selection, and use of tools, drill sizes, tap and dies, files and pipe and brass fitting.

AUTO 1200 Auto Suspension & Alignment Systems

2.5 credit hours

68.0 Classroom Hours = 23.0 Lecture Hours + 45.0 Lab Hours

Study operation, service, and trouble shooting of automotive suspension systems, front and rear, and operation of steering systems manual and power steering, balancing tires both on and off the vehicle. Prerequisite: AUTO 1005. Fee \$20.

AUTO 1215 Automotive Brake Systems

2.5 credit hours

98.0 Classroom Hours = 8.0 Lecture Hours + 90.0 Lab Hours

Study of the theory and fundamentals of brake systems, hydraulic systems, service maintenance, operation, and testing of anti-lock brake systems ABS. Study of drum brakes, disc brakes systems, and power booster systems. Prerequisite: AUTO 1005. Fee \$20.

AUTO 1230 Mechanics Electrical Systems

3.0 credit hours

75.0 Classroom Hours = 30.0 Lecture Hours + 45.0 Lab Hours

Basic electrical principles, automotive circuits, batteries, alternators, starters and other electrical systems. Prerequisite: AUTO 1005. Fee \$20.

AUTO 1265 Body Controls

2.0 credit hours

60.0 Classroom Hours = 15.0 Lecture Hours + 45.0 Lab Hours

Theory and repair of automotive accessory systems. Prerequisite: AUTO 1005 and Corequisite: AUTO 1230. Fee \$20.

AUTO 1500 Automotive Parts Management I

0.5 credit hours

23.0 Classroom Hours = 23.0 Lab Hours

This course will prepare the student for a possible career in the automotive parts sales field.

AUTO 1505 Automotive Parts Management II

0.5 credit hours

23.0 Classroom Hours = 23.0 Lab Hours

This course will prepare students for employment in the Automotive parts & supply's field.

AUTO 1710 Auto Mechanics

2.0 credit hours

45.0 Classroom Hours = 23.0 Lecture Hours + 22.0 Lab Hours

Shop procedure and automotive engine design and operation in relation to repair and reconditioning.

AUTO 1725 Auto Prev Maint & Minor Repair

2.0 credit hours

45.0 Classroom Hours = 23.0 Lecture Hours + 22.0 Lab Hours

This course is designed for students to learn fundamental maintenance and repair of an automobile accomplished with a basic set of hand tools. Fee \$20.

AUTO 1750 Auto Elec System Diagnosis & Repair

2.0 credit hours

60.0 Classroom Hours = 15.0 Lecture Hours + 45.0 Lab Hours

The electrical diagnosis of charging, starting and wiring systems of the automobile. Will work with wiring diagrams, show how to test battery, alternator, starters, and wiring shorts using volt-ohm meters and test lights. Learn how to rebuild alternators and starters and make wire repairs. Fee \$20.

AUTO 1775 Basic Auto Electricity/Electronics

2.0 credit hours

60.0 Classroom Hours = 15.0 Lecture Hours + 45.0 Lab Hours

Study fundamentals of automotive electrical and electronic systems. Study the theory and operation, troubleshooting and testing, repair and replacement of electrical components, individual circuit wiring, systems analysis, and basic scan tool operation. Prerequisite: AUTO 1005. Fee: \$20.

AUTO 2200 Auto Service Management I

0.5 credit hours

23.0 Classroom Hours = 23.0 Lab Hours

This course will prepare students for a career in the Automotive Service Advisory field.

AUTO 2205 Auto Service Management II

0.5 credit hours

23.0 Classroom Hours = 23.0 Lab Hours

This course will prepare students for a career in the Automotive Service Advisory field.

AUTO 2300 Adv Electronics & Computers

3.0 credit hours

105.0 Classroom Hours = 15.0 Lecture Hours + 90.0 Lab Hours

Discussion by lecture about the theory, fundamental, and operation with hands on experience with testing electronic sensors, actuators, and processors that control automotive systems. Prerequisite: AUTO 1005 & AUTO 1265 Fee: \$25

AUTO 2315 Automotive Drive Lines

2.0 credit hours

60.0 Classroom Hours = 15.0 Lecture Hours + 45.0 Lab Hours
Clutch systems design, diagnostics, and repair, rear axle design, diagnosis, and repair. Front wheel drive axle systems, design, diagnosis, and repair. Prerequisite: AUTO 1005 Fee \$25.

AUTO 2345 Engine Performance & Drivability

5.0 credit hours

135.0 Classroom Hours = 45.0 Lecture Hours + 90.0 Lab Hours
Study of fundamentals of automotive electronic systems. Emphasis on the theory and operation, as well as testing electronic sensors, actuators, and processors that control automotive systems. Prerequisites: AUTO 1005, AUTO 1265, and Corequisite: AUTO 2300. Fee \$25.

AUTO 2350 Adv. Automotive Diagnostics

5.0 credit hours

135.0 Classroom Hours = 45.0 Lecture Hours + 90.0 Lab Hours
Theory, operation, diagnosis, and repair of various systems which can affect performance and drivability of the automobile as a whole. Focus is on electronic scan tool use and diagnostic tools such as the oscilloscope. Prerequisite AUTO 1005

AUTO 2415 Automotive Transmissions

4.0 credit hours

120.0 Classroom Hours = 30.0 Lecture Hours + 90.0 Lab Hours
Automotive manual and automatic transmissions, transfer case, design, operation, maintenance, and repair. Theory and operation of transmissions and trans-axials, four-wheel drive, and all-wheel drive (AWD). Diagnostics, repair, and maintenance. Prerequisite: AUTO 1005. Fee \$50.

AUTO 2430 Auto Air Conditioning/Climate Cntr

3.0 credit hours

75.0 Classroom Hours = 30.0 Lecture Hours + 45.0 Lab Hours
Repair and troubleshooting of air conditioning and climate control systems. Prerequisite: AUTO 1005. Fee \$40.

AUTO 2460 Preparing For ASE Certification

3.0 credit hours

45.0 Classroom Hours = 45.0 Lecture Hours
This class will prepare students to take ASE certification exams. It will cover ASE (Automotive Service Excellence) history, types of questions, certification areas, and reasons for becoming a certified technician.

AUTO 2990 Special Topics

3.0 credit hours

45.0 Classroom Hours = 45.0 Lecture Hours
Special topic course description upon request.