

AUTOMOTIVE MECHANICS, ASSOCIATE OF APPLIED SCIENCE (604)

About Our Program

This program prepares students for employment in the areas of computerized engine controls, air conditioning, transmissions, alignments, brakes, control systems diagnostics and engine service.

Nature of Work and Employment

Program graduates may find jobs repairing and servicing mechanical and electrical systems of passenger vehicles and light trucks. Job openings in the automotive field may be for general technicians or specialists in computer controlled systems diagnostics, engines, brakes, drive lines, transmissions, steering/suspension, electrical systems, tune-up/emission control, or heating and air conditioning. The outlook for employment in this occupation is excellent due to the increasing number of vehicles on the road and the growing complexity of automotive technology.

Special Considerations

Completion of this degree will provide all of the courses needed to help the student become an ASE (Automotive Service Excellence) Certified Automobile Service Technician. A workplace experience is encouraged and may be made available.

Requirements

First Semester		Hours
AUTM 120	Fundamentals of Engines ¹	2
AUTM 122	Engine Components/Construction ¹	3
AUTM 124	Fundamentals of Electricity ¹	4
AUTM 138	Automotive Servicing ¹	2
WELD 135 or WELD 130	Shield Arc/Oxyacetylene Weldng or Introduction to Welding	3
Select one of the following:		3
BUSN 141	Business Communications ¹	
COMM 101	Technical Communications ¹	
ENGL 121	Rhetoric and Composition I ¹	
Hours		17
Second Semester		Hours
AUTM 111	Suspension and Alignment ¹	5
AUTM 113	Brakes ¹	4
AUTM 115	Stand Transmsn/Final Drives ¹	3
Select one of the following:		3
MATH 111	Technical Math ¹	
BUSN 125	Math of Business ¹	
Hours		15

Third Semester

AUTM 231	Fundamentals of Electronics ¹	3
AUTM 233	Fuel Systems ¹	3
AUTM 235	Electronic Engine Controls ¹	3
AUTM 242	Automotive Body Electronics ¹	3
BUSN 225	Personal Finance ¹	3
General Education course with a diversity designation (see advisor)		3
Hours		18

Fourth Semester

AUTM 237	Engine Performance ¹	3
AUTM 238	Adv Automotive Data Analysis ¹	3
AUTM 240	Automatic Transmissions ¹	4
AUTM 248	Auto Heating/Air Conditioning ¹	3
BUSN 124 or BUSN 121	Introduction to Small Business ¹ or Intro to Business	3
Hours		16
Total Hours		66

¹ Course has a prerequisite. See course description.

Program Outcomes

Students who complete this program will be able to:

- Work safely in the shop environment.
- Demonstrate professionalism (work ethic, soft skills).
- Use the correct tool(s) for needed maintenance.
- Utilize problem solving skills to determine and perform basic vehicle maintenance and inspection, which includes:
 - Engine oil monitoring system reset
 - Tire pressure monitoring system diagnosis and reset
 - Anti-lock brake system diagnosis and repair
 - Vehicle fluid maintenance
- Perform vehicle safety inspections.
- Utilize diagnostic equipment to interpret system data and perform sub-system repairs
 - Powertrain control systems (engine and transmission)
 - Understanding vehicle network systems
 - Diagnosing computer and vehicle network systems
 - Electrical and electronic circuit repair
 - Heating and air conditioning systems
 - Final drive and AWD-4WD system

Program Contacts

Call Highland at 815-235-6121 for the following program contacts:

- Dr. Matt Magee, Dean of Agriculture, Business & Technology
- Kristin Akins, Automotive Technology Faculty
- David Albrecht, Automotive Technology Faculty
- Vicki Schulz, Student Advisor/Transfer Coordinator