

AUTOMOTIVE TECHNOLOGY

Associates of Applied Science

About the Automotive Technology Program

Prepare to fill the growing need for highly professional, technically competent technicians in automotive dealerships and repair facilities. Automotive technicians test, diagnose and service electrical and mechanical systems and components found in today's automotive vehicles, including engines, transmissions/transaxles, fuel management systems, steering and suspension systems, climate control systems, brake systems, and hybrids.

PROGRAM OUTLINE

SEMESTER: 1		
Course #	Course Title	Credits
1044219500	Welding for Automotive This course introduces welding and cutting procedures used to repair and maintain automobiles. Emphasis will be placed on gas metal arc welding, shielded metal arc welding, oxyacetylene torch cutting processes welding techniques through a variety of different procedures.	1.00
1060210300	Engine Repair 1 Focuses on developing the skills needed to diagnose, service, and repair internal combustion engines. Emphasis is placed on in-vehicle repairs, including engine cooling and lubrication systems. Prerequisite(s): 1060210700 Auto Service Fundamentals (C or better) (concurrent enrollment allowed).	2.00
1060210400	Brake Systems Focuses on developing the skills needed to diagnose, service, and repair vehicle braking systems with an introduction to ABS. Prerequisite(s): 1060210700 Auto Service Fundamentals (C or better) (concurrent enrollment allowed).	3.00
1060210500	Introduction to Hybrid Autos Intended for both the entry level and experienced technician, introduces basic hybrid vehicle safety and maintenance. Upon completion, learners will be able to identify a hybrid vehicle, locate and identify the major components of a hybrid vehicle, and locate, identify, and remove the safety disconnect following manufacturer and industry standards. Prerequisite(s): 1060210700 Auto Service Fundamentals (C or better) (concurrent enrollment allowed).	2.00
1060210700	Auto Service Fundamentals Focuses on developing skills in professionalism, safety, and the use of basic hand and power tools in accordance with industry standards. Students are introduced to the automotive service industry and learn to use both comprehensive and manufacturer service information to perform basic under-hood and under-car services.	2.00
1060212500	Electrical and Electronic Systems 1 Focuses on developing the skills needed to diagnose, service, and repair electrical and electronic systems. Learners apply Ohm's Law to basic electrical circuit diagnosis. Prerequisite(s): 1060210700 Auto Service Fundamentals (C or better) (concurrent enrollment allowed).	2.00
1080119500	Written Communication Develops writing skills which include prewriting, drafting, revising, and editing. A variety of writing assignments is designed to help the learner analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Also develops critical reading and thinking skills through the analysis of a variety of written documents.	3.00

SEMESTER: 2

Course #	Course Title	Credits
1060212300	Engine Repair 2 Focuses on developing the skills needed to diagnose, service, and repair internal combustion engines. Emphasis is placed on out-of-vehicle engine repair, including overhaul procedures. Prerequisite(s): 1060210300 Engine Repair 1 (C or better).	3.00
1060212400	Steering and Suspension Systems Focuses on developing the skills needed to diagnose, service, and repair steering and suspension systems, including wheel alignment procedures. Prerequisite(s): 1060210700 Auto Service Fundamentals (C or better).	3.00
1060212700	Electrical and Electronic Systems 2 Focuses on developing the skills needed to diagnose, service, and repair electrical and electronic systems, including batteries, starting, charging, and lighting systems, and computer control systems. Prerequisite(s): 1060212500 Electrical and Electronic Systems 1 (C or better).	3.00
1060219600	Climate Control Systems Focuses on developing the skills needed to diagnose, service, and repair climate control systems, including heating, cooling, and air distribution. Upon successful completion of the Mobile Refrigerant Handling unit (EPA Section 609 of the Clean Air Act of 1990), a certificate from the Mobile Air Conditioning Society will be issued. Prerequisite(s): 1060212500 Electrical and Electronic Systems 1 (C or better).	3.00
1080413400	Mathematical Reasoning An activity based approach is used to explore numerical relationships, graphs, proportional relationships, algebraic reasoning, and problem solving using linear, exponential and other mathematical models. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. This course is not designed for Science, Technology, Engineering, or Math (STEM) students and/or others who require calculus. Prerequisite(s): 7785478000 Principles of College Math (C or better) or Accuplacer Algebra score ≥ 35 or UW Math Placement Basic Math score ≥ 250 or ACT Math score ≥ 18 or Tailwind Math CMath Fund score ≥ 16 .	3.00

SEMESTER: 3

Course #	Course Title	Credits
1060212800	Electrical and Electronic Systems 3 Focuses on developing the skills needed to diagnose, service, and repair electrical and electronic systems, including driver information, horn, wiper/washer, power accessories, cruise control, air bag, anti-theft, and radio systems. Prerequisite(s): 1060212700 Electrical and Electronic Systems 2 (C or better).	3.00
1060214900	Manual Drive Train and Axles Focuses on developing the skills needed to diagnose, service, and repair clutches, manual transmissions/transaxle, differentials, four wheel drive/all-wheel drive, and drive axles. Prerequisite(s): 1060212700 Electrical and Electronic Systems 2 (C or better).	4.00
1060219700	Engine Performance 1 Focuses on developing the skills needed to diagnose, service, and repair powertrain control and ignition systems. Emphasis is placed on diagnostic procedures and the problem-solving techniques associated with automotive engine performance and drivability. Prerequisite(s): 1060212700 Electrical and Electronic Systems 2 (C or better) and 1060210300 Engine Repair 1 (C or better).	3.00

Course #	Course Title	Credits
1080613900	Survey of Physics Emphasizes understanding basic physics concepts through laboratory investigation and applications. Topics include kinematics, dynamics, work, energy, power, temperature, heat, waves, electricity, magnetism, electromagnetic waves, optics, and atomic and nuclear physics.	3.00
1080919900	Psychology of Human Relations Focuses on improving personal and job-related relationships through understanding and applying sound psychological principles. Topics include self-concept, motivation, emotions, stress management, conflict resolution, and human relation processes.	3.00
SEMESTER: 4		
Course #	Course Title	Credits
1060210900	Auto Transmission Transaxle Focuses on developing the skills needed to diagnose, service, and repair automatic transmission/transaxles including overhaul procedures. Prerequisite(s): 1060212700 Electrical and Electronic Systems 2 (C or better).	4.00
1060219500	Advanced Chassis Systems Focuses on developing the skills needed to diagnose, service, and repair antilock brakes, vehicle stability enhancement, and electronic steering and suspension systems. Prerequisite(s): 1060210400 Brake Systems (C or better) and 1060212700 Electrical and Electronic Systems 2 (C or better) and 1060212400 Steering and Suspension Systems (C or better).	2.00
1060219800	Engine Performance 2 Focuses on developing the skills needed to diagnose, service, and repair fuel and emission control systems. Emphasis is placed on diagnostic procedures and the problem-solving techniques associated with automotive engine performance and drivability. Prerequisite(s): 1060219700 Engine Performance 1 (C or better).	4.00
1060219900	Capstone for Automotive Provides an opportunity for students to demonstrate workplace employability and employment seeking skills in the classroom, at the automotive workplace, and to develop a continuing education plan that will advance their career goals.	2.00
1080119600	Oral Interpersonal Communication Focuses upon developing speaking, verbal and nonverbal communications, and listening skills through individual presentations, groups activities, and other projects.	3.00
1080916600	Intro to Ethics Theory and Application Provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations.	3.00

Total Credits: 64.00

Talk with an Academic Advisor about the program outline. Together, you will determine if credits you've already earned satisfy any requirements, discuss possible alternative courses, and choose the best classes if you're thinking of transferring.

AT A GLANCE

Flexible Options



Term Start Dates

Fall 2019: September 4

Spring 2020: January 8

Summer 2020: May 8

Approximate Cost

\$8,588*

Financial Aid Eligible

*Based on 10-level courses - materials, books, and fees may be additional

What You'll Learn

- Demonstrate professionalism appropriate for the auto service industry.
 - Perform diagnosis, service, and repair of automotive internal combustion engines.
 - Perform diagnosis, service, and repair of automotive automatic transmission/transaxle systems.
 - Perform diagnosis, service, and repair of automotive manual drive train and axles systems.
 - Perform diagnosis, service, and repair of automotive steering and suspension steering systems.
 - Perform diagnosis, service, and repair of automotive brake systems.
 - Perform diagnosis, service, and repair of automotive electrical/electronic systems.
 - Perform diagnosis, service, and repair of automotive heating and air conditioning systems.
 - Perform diagnosis, service, and repair of automotive engine performance systems.
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Your Potential Careers

- Automotive Service Technician
 - Technical Specialist
 - Shop Foreman
 - Service Manager
 - Manufacturer's Representative
 - Automotive Parts Specialist
 - Automotive Service Advisor
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Median Annual Salary

\$41,309

\$54,642

\$51,106

Local

State

National

EMSI 2018.3

Get Started

Your application can be submitted online, it takes just a few minutes to complete.

[APPLY NOW](#)

