

# AUTOMOTIVE SERVICE TECHNOLOGY (AM)

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**AM-100 Automotive Fundamentals**  
3 credits, Fall/Winter/Spring/Summer

An introductory automotive service class intended to provide fundamental knowledge and basic experience about automobiles. Covers automotive systems, preventive maintenance and performing basic repairs. Also provides skill and knowledge for purchasing cars, choosing quality mechanics, and making good economic decisions about repairs and costs. Intended generally to enhance the overall satisfaction of being an automotive consumer and car owner.

**AM-101 Intro to Automotive Service Technology**  
2 credits, Fall/Winter/Spring

Introduction to Automotive Service Technology is a course that will prepare students for success in the Automotive Service Technology Program. Shop orientation and automotive industry safety training will be provided. Students can earn industry-recognized certificates. Students will be exposed to industry-recognized online service information. Students will also be introduced to tasks that align with the Auto Service Excellence Education Foundation (ASEEF) Master Automotive Service Technician (MAST) program accreditation.

Prerequisites: MTH-020 or placement in MTH-050, and WRD-080 or placement in WRD-090

Corequisites: AM-129 and AM-130, or AM-131 and AM-133, or AM-142 and AM-235

**AM-106 Fix Your Own Car**  
2 credits, Not Offered Every Term

A do-it-yourself course for students who want to work on their own cars. Includes: oil change, lubrication, fluid checks, brakes, cooling system, electrical system, safety, and other quick services. May be repeated for up to 12 credits.

**AM-118 Small Engine Repair**  
3 credits, Fall/Winter/Spring/Summer

This course is designed to provide an overview of basic small engine maintenance, operation and repair. It covers safety, small engine theory, electrical systems, and troubleshooting. Classroom instruction covering theory of operation, 2 cycle and 4 cycle designs and applications, combined with hands-on live projects provides the student the opportunity to learn basic principles of small engine operation, including outdoor equipment, motorcycles, and A.T.V.'s.

**AM-121 General Auto Repair I**  
3 credits, Not Offered Every Term

In this course students will experience working in an auto shop/lab as they repair customer vehicles. They will apply concepts such as shop and personal safety, tools and their usage, and customer service as they develop workplace employability skills and work habits. Required: Student Petition.

Prerequisites: AM-100

Recommended: 1st term students seeking the AAS degree in Automotive Service Technology should meet with instructor prior to the beginning of the term

**AM-122 General Auto Repair II**  
3 credits, Fall/Winter/Spring

Course material is coordinated with other auto courses. Includes live repair work and fundamentals such as safety, tools, measuring, and fasteners. For second term automotive students.

Prerequisites: AM-121

**AM-129 Electrical Systems I**  
5 credits, Fall

This course is designed to provide students with the entry-level skills necessary to repair automobile electrical systems. Students will learn about general electrical systems diagnosis; servicing and repair of batteries, starting systems, and charging systems.

Corequisites: AM-101 & AM-130

**AM-130 Brake Systems**  
5 credits, Fall

In this theory and lab course students will learn about the construction and operation of basic hydraulics, brake fluids, friction materials, seals, disc and drum brakes, hydraulic and vacuum brake boosters systems. Students will also learn to service and repair automotive brake systems.

Corequisites: AM-101 & AM-129

**AM-131 Chassis Systems**  
5 credits, Winter

In this theory and lab course, students will learn the design, construction, service, and repair of front and rear suspension systems, wheels and tires, steering systems, and alignments. Students will service and repair these systems in the hands-on lab.

Corequisites: AM-133. Not required for Certificate students

**AM-133 Engine Systems**  
5 credits, Winter

This course is designed to provide students with the entry-level skills necessary to repair automobile engines. Includes general engine diagnosis; cylinder head and valve train diagnosis and repair; engine block assembly diagnosis and repair; and lubrication and cooling systems diagnosis and repair.

Corequisites: AM-131

**AM-142 Engine Performance I**  
5 credits, Spring

This course is designed to provide students with the entry-level skills necessary to repair automobile fuel delivery and emission systems. Includes general engine diagnosis; fuel, air induction, and exhaust systems diagnosis and repair; emission control systems diagnosis and repair. Introduction to the diagnostic process, scan tools, and oscilloscopes.

Corequisites: AM-235

**AM-175 Advanced Mechanic Studies I**  
3 credits, Fall/Winter/Spring

Lab course for currently enrolled automotive students wishing to specialize in specific areas of automotive repair. Required: Student Petition.

Required: Second year Automotive Service Degree student or be previously enrolled in the Automotive Program

Prerequisites: AM-129, AM-130, AM-131, AM-133, AM-224, AM-235, AM-243, AM-244, and AM-245

Recommended: Work independently with minimal help

**AM-185 Advanced Mechanic Studies II**  
3 credits, Fall/Winter/Spring

Lab course for currently enrolled automotive students wishing to specialize in specific areas of automotive repair. Required: Student Petition.

Prerequisites: AM-129, AM-130, AM-131, AM-133, AM-224, AM-235, AM-243, AM-244, and AM-245

**AM-195** Advanced Mechanic Studies III

3 credits, Fall/Winter/Spring

Lab course for currently enrolled automotive students wishing to specialize in specific areas of automotive repair. Required: Student Petition.

Prerequisites: AM-129, AM-130, AM-131, AM-133, AM-224, AM-235, AM-243, AM-244, and AM-245

**AM-201** Automotive Internship

3 credits, Fall/Spring

Students will be completing a portfolio project to present to companies in the automotive industry. Students will learn best practices for interview preparedness and resume development. There will be a scheduled interview day with partners in industry to help place students in the workforce for internship. Students will prepare for Auto Service Excellence (ASE) certification tests.

Prerequisites: AM-101

**AM-223** Alternative Fuels Transportation Technology

5 credits, Spring

Provides students with knowledge of theory and physical description of hybrid, Electric, Fuel cell vehicles. The student will have the opportunity to acquire practical experience in the area of diagnosing and repairing alternative fuel transportation vehicles.

Prerequisites: AM-129

Corequisites: AM-225

**AM-224** Comfort Systems

5 credits, Fall

In this course, students will learn design, construction, testing, maintenance, and repair of automotive heating and air conditioning systems. Prepares a student to take the Section 609 Environmental Protection Agency certification test.

Prerequisites: AM-129

Corequisites: AM-229

**AM-225** Safety Systems

5 credits, Spring

In this course students will be introduced to existing vehicle on-board safety systems and Advanced Driver Assist Systems (ADAS) on today's vehicles. Safety systems such as Anti-lock brakes, Traction control, Air-bag systems, Stability control, and Advanced Driver Assist Systems will be explained, demonstrated, and tested.

Prerequisites: AM-129

Corequisites: AM-223

**AM-228** Service Shop Management

4 credits, Spring

Course designed to familiarize students with the responsibilities of the parts manager, service manager and service writer and the day to day responsibilities of operating a business.

Prerequisites: MTH-020 with a C or better, or placement in MTH-050 or higher

**AM-229** Electrical Systems II

5 credits, Fall

In this course students will learn fundamentals of electronics, diagnosis, and repair of general electrical including, lighting systems, instrument cluster and driver information systems, and body electrical systems.

Prerequisites: AM-129

Corequisites: AM-224

**AM-235** Power Transmission Systems

5 credits, Spring

In this course students will learn the construction, operation, service and repair of clutches, manual transmission, U-joints, drive lines, final drives, overdrive, and four wheel drives.

Corequisites: AM-142. Not required for Certificate students

**AM-242** Engine Performance II

5 credits, Winter

This course is the second of two engine performance courses. In this course the students will receive training in advanced lab scope diagnostics, advanced level scan tool usage, power train reprogramming and the opportunity to do real world diagnostics. On board diagnostics 2 (OBD2) readiness monitors and how they work will be discussed. Training and practical application of all monitored systems of the OBD2 system will be performed.

Prerequisites: AM-142

Corequisites: AM-245

**AM-245** Automatic Transmission Systems

5 credits, Winter

This course covers the theory and physical description of the automatic transmission. The student will have the opportunity to acquire practical experience and learn the proper procedures for overhaul, service, and diagnosis of an automatic transmission.

Prerequisites: AM-129

Corequisites: AM-242. Not required for Certificate students

**AM-280** Auto Mechanics/CWE

1-6 credits, Fall/Winter/Spring/Summer

Cooperative work experience. Work-related learning experience in an auto repair shop or auto dealership. Variable Credit: 1-6 credits. Required: Student Petition.

Corequisites: CWE-281