AUTOMOTIVE SERVICE TECHNOLOGY (AUTO), AAS

At Dunwoody College of Technology, the Automotive Service Technology program prepares graduates for a career as a technician in automotive repair facilities, such as independents, dealerships, fleets, or franchises. The program combines classroom, lab, and, in some cases, internship experiences in all aspects of automotive diagnosis and repair. Students use hands-on, applied learning with state-of-the-industry tools, equipment, and systems to acquire knowledge and skills, which foster the ability to continuously adapt to an ever-changing technology.

Arts & Sciences curriculum supports the technical skills students learn as well as enhances students' oral and written communication skills and critical thinking ability.

All instructors are National Institute for Automotive Service Excellence (ASE) certified technicians. The ASE Education Foundation (previously known as the National Automotive Technicians Education Foundation or NATEF), which certifies and accredits automotive education programs has accredited Dunwoody's Automotive Service Technology program in Master Automobile Service Technology — the highest level of achievement recognized by ASE.

Credits earned in the Automotive Service Technology AAS degree directly transfer into Dunwoody's Business Management & Leadership Bachelor of Science (https://catalog.dunwoody.edu/catalog-student-handbook/academic-programs/business/business-management-leadership-amgt-bs/) program.

Credential Earned: AAS
Length of Program: 2 years (4 semesters)
Classes Offered: Day
Available Starts: Fall Semester
Accreditation: ASE Education Foundation

Program Outcomes

- Identify and describe automobile components.
- Explain automotive systems' operations.
- Disassemble and assemble components.
- Diagnose vehicle conditions.
- Evaluate component condition and recommend action.
- Repair conditions and verify operation.
- Demonstrate effective customer satisfaction techniques.
- Demonstrate effective use of service information.

Degree Requirements

Code	Title	Credits
General Requirements		
Communications		3
Humanities		3
Natural Sciences/Mathematics		3
Social Sciences		3
General Electives		3
Technical Requirements		
AUTO1111	Fundamentals of Automotive Service I	6
AUTO1121	Fundamentals of Automotive Service II	6
AUTO1211	HVAC/Advanced Electrical	6
AUTO1221	Chassis Systems	6
AUTO2111	Engine Performance/Engine Repair	12
AUTO2212	Transmissions/Driveline	6
Technical Elective (Choose One Course):		
AUTO1251	Exploration of Automotive Systems	1
or AUTO1252	Exploration of Audi Automotive Systems	
or AUTO1253	Exploration of Mopar Automotive Systems	
or AUTO1254	Exploration of Honda Automotive Systems	
or AUTO1255	Exploration of Subaru Automotive Systems	
or AUTO1256	Exploration of Mercedes Benz Systems	
Experiential Learning (Choose One Course):		
AUTO2252	Hybrid/EV Technology & Production	6
or AUTO2511	Internship	
Total Credits		**64**

Courses

Descriptions

AUTO1111 | Fundamentals of Automotive Service I | Lecture/Laboratory (6 Credits)
Introduction to automotive service, maintenance and repair, Part 1: Use of tools and measuring instruments. Identify fasteners and fittings. Removed damaged fasteners. Research service procedures using automotive information systems. Examine theory of design, principles of operation, and repair procedures of automotive chassis steering, suspension, and brake systems. Perform maintenance and service procedures in the following areas: tire/wheel service, four-wheel alignments, drivetrain inspection and fluid maintenance.

AUTO1121 | Fundamentals of Automotive Service II | Lecture/Laboratory (6 Credits)
Introduction to automotive service, maintenance and repair, Part 2: Research service procedures using automotive information systems. Disassemble, assemble component engines. Describe engine parts, systems, and operation. Perform vehicle oil changes and vehicle inspections. Identify HVAC system components. Perform OBD II code scan. Examine electrical systems. Introduction to Ohm's Law, theory and principles, circuits, magnetism, electromagnetism, induction, and basic electronics including semiconductors. Test batteries, test and replace starters. Practice use of digital multimeters and wiring schematics to trace, test, and diagnose circuits.

AUTO1211 | HVAC/Advanced Electrical | Lecture/Laboratory (6 Credits)
Apply Ohm's Law theory and principles. Explore electrical circuit principles, batteries, cranking motors, charging systems, in addition to accessory operation, lighting system design, and instrumentation. Use digital multimeters and wiring schematics to trace, test, and diagnose circuits. Inspect, test starters and alternators. On vehicle diagnosis of body electrical systems, including diagnosis of battery, starting, and charging systems; heating/air conditioning component operation and physics. Control system diagnosis, service, repair procedures, and pressure diagnosis. On vehicle procedures for recovery/recycling equipment.
Prerequisite(s): AUTO1111 And AUTO1121

AUTO1221 | Chassis Systems | Lecture/Laboratory (6 Credits)
Examine theory of design and principles of operation, diagnosis, and repair procedures of automotive brake, steering and suspension systems. Practice performing service procedures, four-wheel alignments.
Prerequisite(s): AUTO1111 And AUTO1121

AUTO1251 | Exploration of Automotive Systems | Lecture (1 Credit)
Explore a variety of automotive mechanical and electrical systems through discussion and online training, using a variety of manufacturer and alternative resources.
Prerequisite(s): AUTO1111 And AUTO1121

AUTO1252 | Exploration of Audi Automotive Systems | Lecture (1 Credit)
Explore Audi mechanical and electrical systems through discussion and online self-studies, using Audi specific resources.
Prerequisite(s): AUTO1111 And AUTO1121

AUTO1253 | Exploration of Mopar Automotive Systems | Lecture (1 Credit)
Explore Mopar (Chrysler, Dodge, Jeep®, Ram, and Fiat) systems through discussion and online self-studies, using Mopar specific resources.
Prerequisite(s): AUTO1111 And AUTO1121

AUTO1254 | Exploration of Honda Automotive Systems | Lecture (1 Credit)
Explore Honda/Acura mechanical and electrical systems through discussion and online self-studies, using Honda/Acura PACT specific resources.
Prerequisite(s): AUTO1111 And AUTO1121

AUTO1255 | Exploration of Subaru Automotive Systems | Lecture (1 Credit)
Explore Subaru shop operations, vehicle telematics, and hybrid systems through discussion and online self-studies, using Subaru specific resources.
Prerequisite(s): AUTO1111 And AUTO1121

AUTO1256 | Exploration of Mercedes Benz Systems | Lecture (1 Credit)
Dunwoody's Mercedes Benz Campus program is specifically is an online, add-on credential for students who are already working at a Mercedes Benz dealership or would like to work at one. During the program, you will study Mercedes Benz information systems and various maintenance procedures. You will also gain knowledge of engine, transmission, chassis/brake, electronic, and basic electricity fundamentals. Students complete MB Campus online training modules on their own time. Access to the training modules is available 24/7 at no additional cost to the student. Training credentials come directly from Mercedes Benz, preparing students for employment at any Mercedes dealership nationwide. Students who complete the training are also prepared for Mercedes Benz Drive training while employed at a Mercedes Benz facility.

AUTO2111 | Engine Performance/Engine Repair | Lecture/Laboratory (12 Credits)
Analyze theory of operation, design, diagnosis, and repair procedures of engines, in addition to computerized engine control systems, electrical and electronic devices. Examine emerging engine performance and vehicle propulsion technology. Use standard and computerized test equipment on OBDII equipped vehicles to make a complete performance analysis and/or diagnose specific problems to determine work needed on vehicles. Make repairs to restore vehicle performance, emissions, and fuel economy to as near as possible to original factory and Environmental Protection Agency (EPA) standards.
Prerequisite(s): AUTO1111, AUTO1121, AUTO1211, And AUTO1221

AUTO2212 | Transmissions/Driveline | Lecture/Laboratory (6 Credits)
Theory and operation of gears, controls, and components relating to automatic and manual transmissions, transfer case, and differentials and all wheel drive systems. Explain the operation, diagnosis, disassembly, reassembly, and power flow of driveline components, as well as testing of hydraulic and electronic controls using service information.
Prerequisite(s): AUTO1111, AUTO1121, AUTO1211, And AUTO1221

AUTO2252 | Hybrid/EV Technology & Production | Lecture/Laboratory (6 Credits)
Hybrid/EV Operation, Safety and Service: In this course section, we will explore the operation, safety and service procedures for Hybrid and Electric vehicle systems, including HV batteries, traction motors and Power electronics in both lecture and lab settings. Production portion includes: Practical shop experience in all aspects of automotive repair on customer vehicles. Fundamentals of shop management, repair order writing, parts procurement, and customer service.
Prerequisite(s): AUTO1111, AUTO1121, AUTO1211, And AUTO1221

AUTO2511 | Internship | Internship (6 Credits)
Perform a paid internship at a sponsoring repair facility. Work under the supervision of service management. Student must ssecure their own employment. A Dunwoody Automotive faculty will oversee the internship. Need department director approval and must meet acceptance criteria. Application must be submitted at least eight weeks prior to the start of the internship. Must follow approved guidelines listed in the internship packet. This course can be taken in lieu of AUTO2252.
Prerequisite(s): AUTO1111, AUTO1121, AUTO1211, And AUTO1221