AUTOMOTIVE TECHNOLOGY

Associate of Applied Science Degree

Basic Automotive Technician - Certificate of Completion

Intermediate Automotive Technician - Certificate of Completion

Advanced Automotive Technician - Certificate of Completion

The automobile has always created a steady demand for automotive technicians. Today, automotive service is one of the fastest-growing industries in the nation, and career opportunities are expanding rapidly.

The Automotive Technology program at Doña Ana Community College is certificated by ASE (Automotive Service Excellence) and is designed to prepare the student for an entry-level position as a line technician, shop foreman, service writer, service manager, or business owner. Completing courses, certificates, and/or degrees from an ASE certified school will enhance students' ability to gain employment as well as better prepare them to become ASE certified.

Students are trained using state-of-the-art equipment. In the laboratories, they practice the same service and repair techniques required of any professional service technician working in the real world. Each class includes a number of carefully selected competencies that must be mastered in order to successfully complete the program. Students are trained in:

- Engine Repair
- Suspension and steering
- Manual drive train and axles
- Electrical systems
- Brakes
- Heating and air conditioning
- Engine performance
- Automatic transmission
- Manual Drive Train and Axles

Classes are offered in the daytime and also at night to accommodate work schedules.

Full-time Automotive Technology students are required to purchase a personal set of automotive technician's tools at an approximate cost of approximately $1,500, an iPad at the approximate cost of $400, and to provide their own safety glasses. In addition, they are strongly encouraged to purchase medical/accident insurance. The tool set includes the basic tools that most employers require for an entry-level position. Part-time students are required to purchase only those tools required by the specific course(s) in which they are enrolled.

All Automotive Technology students are encouraged to join SkillsUSA, membership in which provides students an opportunity to develop their leadership skills and to become proficient in public speaking and parliamentary procedure. SkillsUSA also offers students an opportunity to demonstrate their occupational skills through competitions that are held annually on both the state and national level.

Whether taking classes or working on a job site, students enrolled in this program will be required to perform the same job duties and be able to meet the same physical requirements that they will as a graduate in the field. Graduates may be required to lift and carry 50 pounds safely, work safely using hand and power tools and electrical equipment, and stand, squat, stoop, or kneel for long periods of time on concrete floors.

NOTE: Students must achieve a cumulative grade-point average of 2.0 with a final grade of C- or better in ENGL 1110G Composition I and a final grade of C- or better in all required AUTO courses/Technical Requirements.

Automotive Technology - Associate of Applied Science (http://catalogs.nmsu.edu/dona-ana/academic-career-programs/automotive-technology/automotive-technology-associate-applied-science/)

Basic Automotive Technology - Certificate of Completion (http://catalogs.nmsu.edu/dona-ana/academic-career-programs/automotive-technology/basic-automotive-technician-ct/)

Intermediate Automotive Technician - Certificate of Completion (http://catalogs.nmsu.edu/dona-ana/academic-career-programs/automotive-technology/intermediate-automotive-technician-certificate/)

Advanced Automotive Technician - Certificate of Completion (http://catalogs.nmsu.edu/dona-ana/academic-career-programs/automotive-technology/advanced-automotive-technician-certificate/)

AUTO 102. Electrical Measuring Instruments
2 Credits (1+2P)
Selection, operation, and care of electrical measuring instruments.

AUTO 111. Automotive Mechanics Basics
4 Credits (4)
Basic maintenance procedures of the major components of the automobile using service repair manuals, hand and power tools, precision measurement equipment, fasteners and chemicals. Restricted to: Community Colleges only.

AUTO 112. Basic Gasoline Engines
5 Credits (2+6P)
Principles of gasoline engine operation. Identification, design, function of engine components; engine disassembly and reassembly; trouble shooting, and rebuilding heads.

AUTO 113. Automotive Electricity and Electronics PT I
4 Credits (2+4P)
Topics include mastery of DC electricity, use of digital multimeters, troubleshooting electrical problems in starting, charging and accessory systems. Restricted to Community Colleges only.

AUTO 114. Automotive Electricity and Electronics PT II
4 Credits (2+4P)
Advanced AC and DC automotive electronic circuits. Troubleshooting electronically controlled components including supplemental restraint systems and convenience accessories. Restricted to Community Colleges campuses only.
Prerequisite: AUTO 113.
Learning Outcomes
1. Understand and demonstrate safety rules related to electronically controlled automotive systems.
2. Diagnosis and demonstrate knowledge of series, parallel, and combination circuits, and their applications as applied to automotive repair.
3. Demonstrate use of wiring diagrams as a diagnostic aide.
4. Demonstrate use of meters, handheld labscopes, scan tools, and other diagnostic equipment.
5. Demonstrate use of repair manuals, both hard copy and electronic.
6. Demonstrate knowledge, diagnose and repair Air Bag Supplemental Inflatable Restraint systems
7. Demonstrate knowledge, diagnose and repair various convenience electronic systems.
8. Interpret customer concerns, create and complete a diagnostic routine and successfully repair an electrical problem.
9. Diagnose and repair starting and charging systems.

AUTO 115. Automotive Engine Repair
4 Credits (2+4P)
Principles of gasoline engine operation. Identification of engine parts, operation, and function. Disassembly and reassembly. Engine problem diagnoses (cooling system, lubrication system, engine noises). Restricted to Community Colleges only. May be repeated up to 5 credits.
Learning Outcomes
1. Understand internal combustion engine theory
2. Identify all components of an engine and their function
3. Identify worn engine components and determine necessary repairs
4. Effectively present engine issues and corrections using verbal and written communication
5. Diagnose cooling system issues and the effect on various components
6. Rebuild/ reassemble an engine to specifications
7. Understand the operation and rationale of forced induction
8. Identify methods of increasing engine efficiency

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