

Automotive Technology

Degree Type Certificate

The goal of this program is to provide students with skills and knowledge required for entry-level technicians performing inspection, diagnostics, maintenance and repair on automobiles and light trucks. Students will use investigative skills as they learn to locate problems, use a variety of power tools as well as hand tools and diagnostic tools as they work on parts, and work with technical reference materials. Applied math and computer skills will be incorporated throughout the curriculum. Students will prepare for Student Certification ASE exams in some areas and entry level employment in the field. This program is offered at an off-premises location and can be completed in 3 semesters. Please contact Admissions for more information.

Program Outcomes

The goal of the Automotive Technician program is to prepare the student to work in the increasingly sophisticated and complex field of automotive technology through a combination of classroom instruction and hands-on skill development. Technicians must be able to work with electronic diagnostic equipment, read and understand technical manuals, investigate to find the cause of a problem, and connect effectively with the customer. They use a variety of tools, including both manual and high-tech equipment, to perform repairs.

After successful completion of the program, students will be able to:

- Demonstrate skills and knowledge required for passing the Student Certification ASE exams, including inspection, diagnostics, maintenance and repair of vehicles.
- Demonstrate safe and appropriate use and care of tools and equipment in the automotive lab.
- Diagnose, repair and document automotive systems including electrical, brakes, engines, suspensions, and steering.
- Inspect a vehicle, use a diagnostic approach to determine cause of operating problems, and decide action to take; complete a NH State Vehicle Inspection.
- Compare and contrast alternate actions to determine whether to repair or replace a part.
- Use appropriate software for information retrieval, analysis, and reporting.
- Communicate effectively with coworkers and customers.

Admission Requirements

- Complete an application for the program.
- Provide proof of high school completion or equivalent.
- Provide an official copy of prior college transcripts, if appropriate.
- Must possess a valid driver's license.

Health, Safety, and Internship Considerations

This program includes work in an automotive lab where potentially hazardous equipment and materials are used. Students will be taught industry standards for safety and will be expected to follow all safety procedures. Personal protective equipment must be worn. Students will provide their own safety glasses and boots or shoes before the first class begins.

Automotive Technology Required Tool List

Anticipated Cost: \$1,800 to \$2,400

Tools are to be provided by the student and are not included in tuition or fees. Your instructor will discuss student-only discounts available from various vendors. Tools and tool storage are required no later than the 3rd week of class. Required tools list is subject to change.

Wrenches

Combination wrench set (8mm - 24mm)
Torque wrench (3/8 drive beam type)
Torque wrench (1/2" drive 250FT lb.)
Wrench (8" adjustable)

Pliers

Pliers (slip joint)
Pliers (needle nose)
Pliers (locking, vise grip)
Pliers (diagonal cutters)
Pliers (10" channel lock)

Hammers

Hammer (soft face)
Hammer ball peen (large)
Hammer ball peen (small)
Hammer Dead blow

Screwdrivers

Screwdriver set (common)
Screwdriver set (Phillips)

Test Equipment

Test light (12 volt)
Fluke auto-ranging meter (88-V Required)
Electrical test leads
T-Pins
Thermometer

Ratchets and Sockets

1/2" drive sockets (6 point) 10-24mm
1/2" drive (6"-10") extension
1/2" deep impact sockets 10-27mm
1/2" drive to 3/8" adapter
1/2" drive universal impact
1/2" drive ratchet
3/8" drive sockets (6 point) 7-19mm
3/8" drive 3", 6" & 12" extensions
3/8" drive to 1/4" adapter
3/8" drive universal impact
3/8" ratchet
1/4" drive socket set with ratchet & extensions
Hex Key sockets 1.5mm - 10mm
Torx bit sockets (male & female) T8-60
Spark plug sockets (9/16", 5/8" & 13/16")
12 pt axle nut sockets

Other

Lockable seven-drawer bench tool box
Scraper (razor blade)
Feeler gauges (metric)
Steel rule (6")
Tire pressure gauge
Tire valve core remover
Safety glasses
1/2" drive pneumatic impact wrench with fitting
Pry-bar
Fender cover
Air chuck with "Tru-flate" fitting
Tape measure (standard/metric)
Telescoping magnet
LED work/drop light
Hearing protection
Work uniforms
Netbook/laptop computer with software
4GB flash drive

Technical Standards

This program includes work in an automotive lab and involves physically performing functions that require the following:

- Normal vision for reading instructions and for performing tasks, including inspecting parts for quality. (Corrective vision is acceptable.)
- Mobility and strength for performing tasks that require reaching, walking, standing, and safely lifting up to 20 lbs.
- Ability to hear sounds of equipment, for equipment operation and safety.

Transfer Credit Policy

- Students with certificates in technical fields (in areas in which Great Bay does not offer a degree) may complete the Associate's Degree in Technical Studies.
- Students enrolled in the Automotive Technology Certificate program may elect to enroll in the Associate Degree in Technical Studies. Dual enrollment is contingent upon current matriculation or completion of the certificate. Completing the Automotive Technology Certificate satisfies the 24 credits required for the technical specialty core of the Technical Studies degree.

Certificate Requirements

Fall Semester

Item #	Title	Theory Hours	Lab Hours	Credits
AUTO110G	Automotive Maintenance and Light Repair	2	4	4
AUTO125G	Automotive Electronics I	3	3	4
Sub-Total Credits		5	7	8

Spring Semester

Item #	Title	Theory Hours	Lab Hours	Credits
AUTO120G	Automotive Engines (Mechanical)	2	6	4
AUTO130G	Automotive Electronics II	2	4	4
Sub-Total Credits		4	10	8

Summer Semester

Item #	Title	Theory Hours	Lab Hours	Credits
AUTO140G	Braking Systems	2	4	4
AUTO150G	Suspension and Steering	2	6	4
Sub-Total Credits		4	10	8
Total Credits				24