AUTOMOTIVE TECHNICIAN

Certificate Program | Department of Engineering, Physics and Technology

Program Description

The Automotive Technician program is designed to develop basic automotive skills required for entry-level position in most automotive repair shops. The program integrates automotive theory with an emphasis on shop experience. Upon successful completion of this program, students receive a certificate and are encouraged to complete the requirements for the AAS degree in Automotive Technology.

The Automotive Technician Certificate program is accredited by the ASE Education Foundation (http://www.aseeducation.org/).

Learning Outcomes

Upon successful completion of the Automotive Technician program requirements, students will be able to:

1. Demonstrate proper safety procedures, accident prevention and shop procedures in an active garage.
2. Demonstrate understanding of fundamental internal combustion engines and be able to perform basic mechanical diagnosis and repair.
3. Calculate hydraulic pressures within a drum and disc brake system.
4. Demonstrate proficiency in the use of computer diagnostic equipment, such as proper use of a scan tool and oscilloscope.
5. Calculate gear ratios and for the purposes of understanding torque multiplication in transmissions.
6. Explain how alignment angles can affect a vehicle's handling performance and tire wear.
7. Demonstrate a working knowledge of manifold gauge set readings, and how they relate to air conditioning performance.
8. Use wiring schematics and electrical test equipment to diagnose electrical problems.
9. Diagnose proper automatic transmission issues including torque converter operation.
10. Recognize the different configurations of hybrid vehicles, and how to interact with them safely.
11. Demonstrate emissions diagnostics by utilizing knowledge of 5 gas analyzation, stoichiometry, and interaction with the OBD2 system.

AUTOMOTIVE TECHNICIAN CURRICULUM

30 Credits required for Certificate

Curriculum Coordinator: Clement Drummond

Certificate Requirements

- ACS 10 Introduction to Automotive Technology (1 Credit)
- ACS 11 Engine Repair (4 Credits)
- ACS 12 Brake Systems (3 Credits)
- ACS 13 Engine Performance (3 Credits)
- ACS 21 Steering and Suspension (3 Credits)
- ACS 25 Automatic/Manual Transmission and Drive Trains *OR*
  ACS 38 Advanced Vehicle Diagnostics (4 Credits)
- ACS 23 Heating and Air-Conditioning (3 Credits)
- ACS 24 Electrical Systems (3 Credits)
- ACS 35 Alternate Fuel Technology *OR*
  ACS 36 Hybrid/Electric Vehicles (3 Credits)
- ACS 45 Diesel Technology (3 Credits)

For information regarding gainful employment, please visit: http://www.bcc.cuny.edu/Gainful-Employment-Disclosure/?page2=GedtAM