# AUTOMOTIVE TECHNOLOGY: ALTERNATIVE FUELS SERVICE TECHNICIAN (A.S.)

#### **ASSOCIATE OF SCIENCE**

The Alternative Fuels Service Technician Associate of Science option prepares students for employment as an entry-level alternative fuels service technician. Through courses focusing on electrical areas of the vehicles, students learn how to use specialty equipment and diagnostic tools found in automotive and alternative fuels service and repair facilities. Core topics include electric vehicle operation, three levels of automotive electrical, and a course in energy and transportation. Design, function, and operation of all these systems is also included in the certificate. Graduates are employed as entry-level technicians, general service technicians, fleet and municipality technicians, or apprentice technicians.

## **Program Student Learning Outcomes**

- Explain the advantages and disadvantages of various alternative fuels.
- Identify high voltage cables when servicing electrically powered vehicles.
- · Demonstrate how to use wiring diagrams to assist in diagnosis.

### **Program Requirements**

| Code Number             | Course Title                          | Units |
|-------------------------|---------------------------------------|-------|
| <b>Required Courses</b> |                                       |       |
| AUTO 103                | Introduction to High Voltage Vehicles | 3.0   |
| AUTO 108                | Energy and Transportation Systems     | 4.0   |
| AUTO 160                | Introduction to Automotive Electrical | 5.0   |
| AUTO 260                | Intermediate Automotive Electrical    | 4.0   |
| AUTO 265                | Advanced Automotive Electrical        | 1.0   |
| Total Units             |                                       | 17    |

#### ASSOCIATE OF SCIENCE DEGREE REQUIREMENTS

Complete a minimum of 60 units to include the above requirements, the General Education requirements, and electives as needed.

#### **Recommended Elective Courses**

| Code Number | Course Title                           | Units |
|-------------|--|-------|
| AUTO 100    | Automotive Maintenance and Operation   | 4.0   |
| AUTO 101    | Automotive Service Tools and Equipment | 4.0   |
| AUTO 182    | Introduction to Alternative Fuel       | 3.5   |