



INDUSTRY CERTIFICATIONS

Light Duty Hybrid Electric Vehicle Technology

Total Credit Hours: 13

About Light Duty Hybrid Electric Vehicle Technology

The Light Duty Hybrid Electric Vehicle Technology Industry Certification program prepares students to become National Institute for Automotive Service Excellence (ASE) Certified Light Duty Hybrid Electric Vehicle Specialist by providing technical skills and competencies, based on the standards set by ASE, in hybrid engines, motor/generators, energy management systems, transaxles, power electronics, and hybrid electric vehicle support systems.

[REQUIREMENTS FOR INDUSTRY CERTIFICATION](#)

Technical Requirements

| Course # | Course Name | Credits |
|---------------------------|--|-----------|
| AST113 | Hybrid Engines and Motor/Generators | 4 |
| AST123 | Hybrid Electric Vehicle Energy Management and Transaxles | 3 |
| AST133 | Hybrid Electric Vehicle Batteries and Belted Alternator Starter (BAS) System | 3 |
| AST143 | Hybrid Electric Vehicle Power Electronics and Support Systems | 3 |
| | Total | 13 |
| Total Requirements | | 13 |

[Student Learning Outcomes](#)

1. Illustrate theory and operation of hybrid engines and motor/generators, perform diagnostics and execute needed repairs.
 2. Perform hybrid electric vehicle energy management and transaxle fault analysis.
 3. Analyze condition of hybrid electric vehicle battery and repair and/or replace if failed.
 4. Describe functionality of hybrid electric vehicle power electronics and support systems, perform diagnostics, and carry out needed repairs.
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You may also be interested in these related Programs...



[1]

[Certificate in Medium/Heavy Truck Diesel Technology](#) [1]

The Medium/Heavy Truck Diesel Technology program prepares graduates to work in the automotive field with special emphasis in diesel service. Graduates will be able to troubleshoot, maintain, and repair various types of diesel engines, trucks, boats, and other heavy equipment. Students will obtain knowledge and skills in Medium/Heavy Truck in a variety of areas to include: diesel engines; drive trains; brake systems; suspension and steering; heating, ventilation, air conditioning; hydraulics; electrical/electronic systems; and preventive maintenance.

[+ More Info](#) [1]



[2]

[Certificate in Automotive Service Technology - Master Service Technician](#) [2]

The Certificate program in Automotive Service Technology (AST) is a competency-based program designed to offer entry level training sufficient for employee success in automotive technician positions. Skills acquired in this program also apply directly to occupational areas including diesel mechanics, small engine repair, generator repair, marine engine service, fleet service, repair service order writing, and entry level automotive service management.

[+ More Info](#) [2]



[3]

[Certificate in Automotive Service Technology - General Service Technician](#) [3]

The Certificate program in Automotive Service Technology (AST) is a competency-based program designed to

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offer entry level training sufficient for employee success in automotive technician positions. Skills acquired in this program also apply directly to occupational areas including diesel mechanics, small engine repair, generator repair, marine engine service, fleet service, repair service order writing, and entry level automotive service management.

[+ More Info](#) [3]