

HEAVY/MEDIUM DUTY CLEAN VEHICLE TECHNOLOGY ASSOCIATE OF SCIENCE DEGREE

This degree is designed to provide students with the fundamentals of alternative fuel and electric vehicle technology as it applies to industrial. The curriculum prepares students for entry-level positions in Heavy-Duty Truck and electrical maintenance, field service, and networking, in the field of Hybrid/ Alternative fuel to include electrical power technology.

Code	Title	Units
Required Courses:		
AUTO 010	Introduction to Hybrid and Electric Vehicle Technology	4
ELECTR 110	Direct Current Circuit Analysis	3
ELECTR 111	Direct Current Circuit Laboratory	1
ELECTR 115	Alternating Current Circuit Analysis	3
ELECTR 116	Alternating Current Circuit Laboratory	1
TECALC 087	Technical Calculations	4
HMDT 034	Diesel Alternative Fuels	4
HMDT 042	Zero Emission Heavy Duty Truck	2
Total Units		22

To earn an SBVC Associate Degree students must complete one of the following general education patterns:

SBVC GE requirements (<https://www.valleycollege.edu/student-services/counseling/graduation-requirements/>)

CSU GE requirements (<https://www.valleycollege.edu/student-services/counseling/csuge/>)

IGETC requirements (<https://www.valleycollege.edu/student-services/counseling/igetc/>)

Program Learning Outcomes

At the completion of this program, students will be able to:

- Diagnose and repair malfunctions in electrical systems and components of alternative fuel systems.
- Disassemble, inspect and repair parts, which are reusable in a manner consistent with accepted trade practices.
- Assemble a diesel engine and/or a Direct Current (DC) or Alternating Current (AC) electric motor in accordance with manufacturer instructions and specifications.
- Perform routine servicing of heavy-duty vehicles by evaluating equipment conditions successfully in a manner consistent with industry practices and safety standards.
- Troubleshoot an electrical system failure, diagnose the cause and correctly repair that failure in accordance with accepted industry standards.