

---

## SECTION HEADING

### AUTO 2108: Introduction to Hybrid Electric Vehicle

#### Description

Introduction to Hybrid Electric Vehicle discusses basic hybrid electric vehicle safety procedures, common hybrid electric component fundamentals, and current hybrid vehicle design. It provides an introduction to hybrid electric vehicle test equipment and procedures.

#### Credits

3

#### Prerequisite

AUTO 1100 and AUTO 1111

#### Corequisite

None

#### Topics to be Covered

1. Hybrid vehicle components
2. Hybrid safety protocols
3. Hybrid vehicle maintenance and repair

#### Learning Outcomes

1. Define series and parallel power flow
2. Identify common hybrid vehicle powertrain sub-systems
3. Describe Hybrid vehicle components and identify different manufactures' Hybrid Technology
4. Identify advantages of Hybrid vehicle technology
5. Identify and perform safe high voltage service disconnect procedures
6. Identify Hybrid vehicle repair tools
7. Analyze high voltage cables
8. Perform insulation checks
9. Evaluate high voltage batteries
10. Perform power law calculations
11. Analyze scan data
12. Comply with personal and environmental safety practices associated with clothing; eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations
13. \*The required outcomes follow the Auto Service Technician (AST) model of the National Automotive Technical Education Foundation (NATEF) certification program.

#### Credit Details

Lecture: 2

Lab: 1

OJT: 0

MnTC Goal Area(s): None