

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: AUT 285 **Credits:** 4

Course Title: Electrical III (Advanced Technologies) - OEM

Course Description:

Studies the operation, inspection, diagnosis and service and repair of advanced technologies in electrical systems. Focuses on Hybrid/Electric vehicle diagnosis and repair, advanced driver assist systems, and/or other advanced technologies. Develops diagnostic strategies and the use of tools and equipment related to these advanced technologies. This course is intended for students in an original equipment manufacturer (OEM) training program. Part III of III. Lecture 2 hours. Laboratory 8 hours. Total 10 hours per week. 4 credits

General Course Purpose:

This course is intended for students in an OEM training program to provide specific instruction and hands-on practice on advanced technologies used on the manufacturer's vehicle and drivetrain platforms. The course focuses on the tools and equipment, strategies for diagnosis, and repair of manufacturer-specific powertrains.

Course Prerequisites and Co-requisites:

- **Prerequisite:**
 - Acceptance and good standing in the original equipment manufacturer (OEM) training program.
 - AUT 181 Electrical I - OEM or program head approval.
- **Co-Requisite:**
 - None

Student Learning Outcomes:

Upon completing the course, the student will be able to

- Prepare to sit for the L3 and L4 Advanced Technician Series ASE Exams
- Inspect, service, diagnose and repair various advanced technologies used on the manufacturer's vehicle platforms.
- Achieve OEM-level certification as an Hybrid/Electric Vehicle Specialist

Major Topics to Be Included:

- Hybrid/Electric vehicle diagnosis and repair
- Advanced driver assist systems
- Other advanced technologies as required by the OEM's specifications

Effective Date/Updated: January 1, 2023