Course Prefix and Number: **AUT 282**  
**Credits:** 4

**Course Title:** Electrical II - OEM

**Course Description:**

Studies computer-controlled, multiplexed electrical systems and architecture, properties, operation, diagnostics, and service and repair. Develops diagnostic strategies to locate and repair electrical faults in computer-controlled and multiplexed systems. Focuses on performing voltage drop testing in computer-controlled circuits and digital oscilloscope testing of multiplexed systems. This course is intended for students in an original equipment manufacturer (OEM) training program. Part II 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 of the OEM's vehicle and chassis electrical systems. The course focuses on the tools and equipment, strategies for diagnosis, and repair of OEM-specific advanced-level electrical systems.

**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 A6 ASE – Electrical and Electronics Certification Examination
- Achieve OEM-level certification as an Electrical Diagnostic Specialist

**Major Topics to Be Included:**

- Computer Control Fundamentals
  - Computer control system construction, original equipment OEM architecture, and function
  - Output – current and voltage waveforms
- Computer networking and multiplexing
- Chassis Electrical Systems
  - Supplemental restraint systems
  - Keyless entry/smart key, immobilizer and anti-theft devices
  - Comfort and convenience features: back up camera, multi-media, etc.
- Other technologies as required by the OEM’s specifications

**Effective Date/Updated:** January 1, 2023