

Virginia Western Community College
AUT 241
Automotive Electricity I

Prerequisites

None

Course Description

Introduces electricity and magnetism, symbols and circuitry as applied to the alternators, regulators, starters, lighting systems, instruments, and gauges and accessories. Part I of II.

Semester Credits: 4 Lecture Hours: 3 Lab/Clinical/Internship Hours: 3

Required Materials**Textbook:**

Fundamentals of Automotive Technology, Principles, and Practice, 3rd Edition, ISBN: 978-1-284-23035-2

Other Required Materials:

- Safety Glasses
- Closed-toe shoes

Course Outcomes

At the completion of this course, the student should be able to:

- Explain Shop Safety
- Diagram, Explain, Automotive Electrical Systems
- Identify & Complete Repairs to Auto Electrical Components

- **Topical Description**

Electrical Fundamentals
Electrical Circuits and Ohm's Law
Series, Parallel Circuits
Circuit Testers, Digital Meters ,Oscilloscopes, and Graphing Meters
Automotive wiring and wire repair
Schematics and circuit testing
Capacitance and Capacitors
Magnetism
Electronic Fundamentals
CAN and Network Communications
Batteries Battery Testing and Service
Cranking systems, Cranking System Diagnosis and Service
Charging Systems, Charging System Diagnosis and Service
Lighting & Signaling Devices

[ADA Statement](#) (PDF)

[Title IX Statement](#) (PDF)