

DESL 1023 : Diesel Electrical

3 credit hours (2 lecture/2 lab)

This course is an introduction to the basic electricity and electronic principles that apply to diesel powered equipment. Systems and components covered include: starting, charging, lighting, wiring, instrumentation, DVOM operation, 12- and 24-volt systems and accessories. The course is a mixture of textbook, videos, lecture, hands-on exercises and on-site instruction at a local diesel repair facility. This course prepares students to complete the Snap On NC3 Electricity Introduction, Measurement , and Circuits and NC3 596F Multimeter Certifications.

Topical Outline

- Shop Safety
- Heavy duty starting and charging systems
- Multiple battery system testing
- Tractor and trailer lighting systems
- Electrical and electronic circuit diagnosis and repair
- Wiring and schematic reading and usage

Course Outcomes

At the end of this course, students will be able to:

1. Perform electrical circuit diagnosis using proper test equipment: DMM, Test Light, and Starting Charging system analyzer.
2. Repair electrical circuit faults such as wiring repair and component replacements.
3. Demonstrate safe shop practices while working with electrical systems.