

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

Course Prefix and Number: DSL 143

Credits: 4

Course Title: Diesel Truck Electrical Systems

Course Description: Studies the theory and operation of various truck and tractor electrical systems. Covers preheating, starting, generating (charging), multiplexing, and lighting systems. Uses modern test equipment for measurement, adjustment, and troubleshooting electrical and electronic systems. Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.

General Course Purpose: This course serves as a requirement for the Diesel Mechanics Technology Certificate.

Course Prerequisites and Co-requisites:

None

Student Learning Outcomes:

Upon completing the course, the student will be able to

- a. Explain the operation of the diesel truck's electrical system;
- b. Demonstrate appropriate troubleshooting skills using the proper test equipment on the various electrical/electronic components; and
- c. Demonstrate proper repair techniques used on electrical/electronic systems.

Major Topics to Be Included:

- a. Fundamentals of electricity
- b. Fundamentals of electronics
- c. Batteries
- d. Charging systems
- e. Starting systems
- f. Chassis electrical systems
- g. Multiplexing

Effective Date of Course Content Summary: June 12, 2018