

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

Course Prefix and Number: DSL 195

Credits: 3

Course Title: Transportation Electrical Systems

Course Description

Introduces electrical systems found on transportation vehicles and heavy duty equipment. Stresses function, construction, operation, troubleshooting procedures and servicing of the preheating, charging, cranking, and lighting systems. Provides experience in disassembly, testing, and assembly of the various units comprising the electrical system. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

General Course Purpose

This course is designed to examine the basic theory, operation, and certain repairs of preheating, charging, starting, lighting, and accessory systems found on various transportation vehicles.

Course Prerequisites/Co requisites

(Give entry-level competencies required for enrollment)

None

Major Topics to be Included

- a. Batteries
- b. Charging Systems
- c. Starting Systems
- d. Electrical Circuits

Course Objectives

Upon completing the course, the student will be able to:

1. define various electrical terms.
2. identify and demonstrate the proper use of standard testing tools and equipment.
3. explain how a storage battery works.
4. demonstrate the proper methods of removing, installing, testing, charging, and maintaining storage batteries.
5. demonstrate the proper test and repair procedures for alternators and generators.
6. demonstrate the proper test and repair procedures for starters and starter circuits.
7. demonstrate the proper test and repair procedures for basic light wiring.
8. demonstrate proper test and repair procedures for various accessory systems.

Effective Date of Course Content Summary (Month, Date Year): August 21, 2008