

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

**Course Prefix and Number:** DSL 131

**Credits:** 4

**Course Title:** Diesel Fuel Systems and Tune-Up

**Course Description (including lecture hours, lab hours, total contacts)**

Teaches maintenance, adjustment, testing, and general repair of the typical fuel injection components used on non- automotive diesel engines. Includes engine and fuel system tune-up procedures and troubleshooting using current diagnostic equipment. Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.

**Course Prerequisites/Corequisites** (*Entry-level competencies **required** for enrollment*)

None

**Course Objectives** (Each item should complete the following sentence.)

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

- a. List the basic characteristics of diesel fuel and understand and list recommended storage and hauling procedures
- b. List the basic types of governing devices used on diesel engines and understand their operation principles
- c. List the basic types of fuel injectors and understand and list their servicing and adjustment procedures
- d. List the tune-up and trouble-shooting procedures on diesel engines and understand and list anti-pollution control devices
- e. List complete diesel engine tune-up and trouble-shooting procedures according to manufacturer specifications

**Major Topics to be Included**

- a. Diesel fuels
- b. Governors operation
- c. Fuel injector nozzles and holders
- d. Fuel injection systems examined
- e. Tune-up procedures
- f. Trouble-shooting diesel engine fuel systems

**Effective Date of Course Content Summary (Month, Date Year):** 2/12/09