

**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:** 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.

**General Course Purpose:**

**Course Prerequisites and Co-requisites:**

None

**Student Learning Outcomes:**

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; and
- 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

**Date Created/Updated (Month, Day, and Year):** January 24, 2019