COURSE TITLE & NUMBER:  DSL 1511: Diesel Engines 2
CREDITS:  4  (Lecture 2 / Lab 2)
PREREQUISITES:  Pass Diesel Engines 1 with a “C” or better.

CATALOG DESCRIPTION:
Diesel Engines 2 covers the maintenance practices, component repair, fuel and governing systems and diagnostics of a diesel engine.

OUTLINE OF MAJOR CONTENT AREAS:
1. Service literature
   A. Maintenance specifications including fluid change intervals
   B. Fluid specifications SAE/API
   C. Fuel specifications
   D. Filter replacement intervals
   E. Proper filter replacement procedures
2. Fluid analysis
   A. Fuel types and grades
   B. Bio-fuels
   C. Low Sulphur
   D. Ultra low Sulphur
3. Fuel and governing systems, mechanical and electronic systems.
   A. Fuel delivery and performance tests
   B. Priming/bleeding the basic system
   C. Injector/nozzle testing
   D. Injection pump replacement
   Diagnostics
   A. Troubleshooting
   B. Failure analysis
   C. Tools-including PC based and onboard diagnostic systems
5. Complete Service Report
   A. Repairs/work done
   B. Parts used and cost

COURSE GOALS/OBJECTIVES/OUTCOMES:
1. Students will locate specifications to properly service engine
2. Students will demonstrate how to take a fluid sample and interpret results.
3. Students will practice safety procedures
4. Students will demonstrate preventive maintenance procedures.
5. Students will perform basic maintenance and diagnostic procedures of various fuel system components.
6. Students will identify common diesel engine problems using proper diagnostic tools and procedures.
7. Students will complete a service report with new and used parts details

**HCC COMPETENCIES MET:**
Working Productively & Cooperatively
Communicating Clearly & Effectively
Thinking Creatively & Critically
Social Responsibility

**STUDENT CONTRIBUTIONS:**
The student is expected to
1. attend all lectures.
2. participate in class activities.
3. participate in class discussions.
4. hand in outside assignments when due.
5. ask questions if he/she does not understand any part of the instructions or procedures.

**METHODS FOR EVALUATING STUDENT LEARNING:**
Student learning is evaluated through exams, lab work, assignments, class participation, projects, service reports.

**ADDITIONAL INFORMATION:**
None

Curriculum Committee Approval Date: March 5, 2019

AASC APPROVAL DATE: March 20, 2019
REVIEW DATE: March 2024