COURSE TITLE & NUMBER: DSL 1510: Basic Diesel Engines  
CREDITS: 4  (Lecture 1 / Lab 3)  
PREREQUISITES: None

CATALOG DESCRIPTION:
Basic Diesel Engines covers the fundamentals of diesel engine construction and operating principles. A major disassembly of a Detroit Diesel two-cycle engine is performed by the students with a study of the internal components, their functions, and operation. Measurements and analyses of all parts are made.

OUTLINE OF MAJOR CONTENT AREAS:
1. Detroit Diesel 6-cylinder, 4-cycle engine  
   A. Specific models  
   B. Accessories and components  
   C. Disassemble engine  
      1. Measurement of engine parts for wear  
      2. Identification of failed parts  
      3. Re-usability of parts  
2. Assemble engine  
3. Tune up and adjustment  
   A. Run engine  
   B. Perform system tests  
4. Complete Service Report  
   A. Repairs/work done  
   B. Parts used and cost

COURSE GOALS/OBJECTIVES/OUTCOMES:
1. Students will analyze parts and part failures.  
2. Students will complete a service report with new and used parts details.  
3. Students will practice safety procedures.  
4. Students will explain the 2 and 4-cycle operating principle.  
5. Students will disassemble an engine.  
6. Students will measure and reassemble engine.  
7. Students will start and run engine and perform running system tests.

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.

SPECIAL INFORMATION:
Text: Manufactures website for service and technical information.

Curriculum Committee Approval Date: February 7, 2018
AASC APPROVAL DATE: February 21, 2018
REVIEW DATE: February 2023