HIBBING COMMUNITY COLLEGE
COURSE OUTLINE

COURSE TITLE & NUMBER: DSL 1512: Diesel Sub Systems
CREDITS: 1 (Lec .5 / Lab .5)
PREREQUISITES: Pass DSL 1510: Basic Diesel Engines, DSL 1501: General Shop Practices, DSL 1511 Diesel Engines 2 with a minimum grade of a C

CATALOG DESCRIPTION:
Diesel Sub Systems covers the operation, maintenance, and service procedures for the air, cooling, EGR, and exhaust after treatment systems. Diesel sub systems will cover troubleshooting and testing the EGR system, testing the exhaust after treatment system, testing the cooling system, testing the air induction and exhaust system. Students work on “running engines” in the lab. Experiments on the engine including the four flow systems are done.

OUTLINE OF MAJOR CONTENT AREAS:
1. A study of the four flows
2. System troubleshooting
3. Testing the systems
   A. Air and Exhaust
   B. EGR
   C. Cooling
   D. Exhaust after treatment system
   E. Service reports

COURSE GOALS/OBJECTIVES/OUTCOMES:
1. Students will identify air induction and exhaust components and perform air induction system service and testing using proper tools.
2. Students will identify, locate, perform and test EGR components and their operation.
3. Students will explain preventive maintenance (PM) and troubleshooting exhaust after treatment systems.
4. Students will perform cooling system service and testing.
5. Students will complete service reports at the end of their lab exercise.

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 and working sessions.
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, lab reports, rubrics and logs.

ADDITIONAL INFORMATION:
None

Curriculum Committee Approval Date: March 5, 2019

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