HIBBING COMMUNITY COLLEGE
COURSE OUTLINE

COURSE TITLE & NUMBER:  DSL 1502: Diesel Systems and Troubleshooting
CREDITS:  3 (Lec 2 / Lab 1)
PREREQUISITES:  DSL 1510: Basic Diesel Engines and DSL 1500: Orientation and Trade Knowledge

CATALOG DESCRIPTION:
Diesel Systems and Troubleshooting covers the operation, maintenance, and service procedures for the air, cooling, fuel, and lubrication systems. A complete tune-up of Diesel engines including troubleshooting, testing the air system, testing the lube 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. Engine tune up
4. Testing the systems
   A. Air and Exhaust
   B. Lubrication
   C. Cooling
   D. Engine Tune ups
   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 lubrication system components and their operation.
3. Students will explain preventive maintenance (PM) and oil analysis programs.
4. Students will perform cooling system service and testing.
5. Students will perform engine tune ups per manufacture recommendations.

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:
Text: CDX Medium and Heavy Duty Engines, Manufactures web sites and service manuals
Technical information and assignments will be from this manual.

AASC APPROVAL DATE: January 17, 2018
REVIEW DATE: January 2023