HIBBING COMMUNITY COLLEGE
COURSE OUTLINE

COURSE NUMBER & TITLE: DSL 1529: Diesel Fuel Systems
CREDITS: 3 (2 Lec / 1 Lab)
PREREQUISITES: none

CATALOG DESCRIPTION:
Diesel Fuel Systems includes a study of the theory and principles of the pump line nozzle fuel system and its components including fuel pumps, injection nozzles, fuel injectors, and governors. Diagnosis, adjustments, and testing using both mechanical and electronic engines are used. Electronic diagnostic tools are used by students.

OUTLINE OF MAJOR CONTENT AREAS:
1. Theory and principles of the major current fuel systems
2. Identification of components
3. Testing of specified components
4. Electronic and Mechanical engines, Example:
   A. CAT C15 engine
   B. CAT C9 engine
   C. DDC 60 Series
   D. Cummins M11
   E. Cat 3126
   F. Cat C9
   G. Cat 3408
5. Diagnostic tools
   A. Electronic Technician (ET)
   B. Cummins Insite
   C. Detroit DDDL
   D. Trouble codes
   E. Multimeters
6. Application of theory to live engines
7. Component identification
8. Component inspection and analysis
9. Engine tune up and adjustment

COURSE GOALS/OBJECTIVES/OUTCOMES:
1. Students will identify and explain current fuel system components.
2. Students will identify and test fuel nozzles.
3. Students will service fuel tank and fuel filters.
4. Students will write service reports.
5. Students will explain fuel flow circuits.
6. Students will identify injectors.
7. Students will explain injector operation.

**MNTC GOASL AND COMPETENCIES MET:**
N/A

**HCC COMPETENCIES MET:**
Working Productively & Cooperatively
Communicating Clearly & Effectively
Thinking Creatively & Critically
Civic/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.

**STUDENT ASSESSMENT SHALL TAKE PLACE USING INSTRUMENTS SELECTED/DEVELOPED BY THE COURSE INSTRUCTOR.**

**SPECIAL INFORMATION:**
Manufactures service manuals and websites will be used along with Instructor material.
Notes and handouts. Slide presentations, films, and videos.

*Curriculum Committee Approval Date: February 7, 2018*

AASC APPROVAL DATE: February 21, 2018
REVIEW DATE: February 2023