HIBBING COMMUNITY COLLEGE
COURSE OUTLINE

COURSE TITLE & NUMBER: DSL1531: Heavy Duty Air Brakes
CREDITS: 3 (Lec 2/Lab 1)
PREREQUISITES: None

CATALOG DESCRIPTION:
Heavy Duty Air Brakes focuses on the operation, repair and rebuild procedures of the air handling system and foundation brakes found on the Heavy Duty Trucks and Off-road Equipment.

OUTLINE OF MAJOR CONTENT AREAS:
1. Single/dual circuit systems
2. Discuss the effects of FMVSS 121
3. Identify major components
   A. Air compressor
   B. Air tank and lines
   C. Control devices
   D. Brake drums and shoes
   E. Cam and wedge brakes

COURSE GOALS/OBJECTIVES/OUTCOMES:
1. Students will identify the various air valves and their function that make up the air brake system
2. Students will identify single and dual circuit brake systems.
3. Students will identify, inspect, and measure brake components.
4. Students will explain and rebuild brake including s-cam assembly.
5. Students will describe ABS operation.
6. Students will identify pneumatic brake circuits.
7. Students will identify, adjust, and explain slack adjuster operation.
8. Students will identify parts of a compressor.
9. Students will describe air governor operations.
10. Students will identify air brake dryer.
11. Students will identify low-pressure indicator.
12. Students will identify primary reservoir.
13. Students will identify secondary reservoir.

HCC COMPETENCIES MET:
Working Productively & Cooperatively
Communicating Clearly & Effectively
Thinking Creatively & Critically Social Responsibility
STUDENT CONTRIBUTIONS:
Students are expected to attend all lectures and lab sessions, participate and contribute to class discussions, complete all assignments on time and request assistance when needed. Attendance is critical in this class.

METHODS FOR EVALUATING STUDENT LEARNING:
Performance objectives and exams will be translated to points and the points to grades. Methods of evaluation include tests, quizzes, class participation, assignments, attendance, and lab tasks.

ADDITIONAL INFORMATION: None

Curriculum Committee Approval Date: March 5, 2019

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