HIBBING COMMUNITY COLLEGE
COURSE OUTLINE

COURSE TITLE & NUMBER: Industrial Fluid Power 2: IST 2450
CREDITS: 3 (1 Lec / 2 Lab)
PREREQUISITES: IST 2050 Industrial Fluid Power 1

CATALOG DESCRIPTION:
Industrial Fluid Power 2 continues the study of pressure, flow, speed, and efficiency rating factors in fluid power systems design and operation. Students will troubleshoot simple hydraulic circuits and perform hands on applications of programmable and electrically controlled hydraulic systems.

OUTLINE OF MAJOR CONTENT AREAS:
1. Effect of temperature on flowmeter accuracy, flowrate, and pressure drop
2. Troubleshooting fluid power systems
3. Electrical controlled hydraulic systems
4. Identification of components used for electrical control of hydraulics
5. PLC circuits

COURSE GOALS/OBJECTIVES/OUTCOMES:
1. Students will demonstrate appropriate attitude and behavior: honesty, responsibility, respect and initiative.
2. Students will work cooperatively and understand the roles of leadership and supervision.
3. Students will identify occupational safety hazards and follow appropriate safety precautions.
4. Students will exhibit safe housekeeping procedures in the lab.
5. Students will use techniques and information learned in class to critically and logically complete projects.
6. Students will demonstrate knowledge of electrical symbols, simple PLC circuits, and actuator controls.
7. Students will interpret hydraulic/electrical diagrams.
8. Students will establish the relationship between flow rate and velocity.
9. Students will establish the relationship between force, work and power.
10. Students will calculate the work, power, and efficiency of hydraulic system.
11. Students will demonstrate simple safety control with hydraulic circuits.
12. Students will identify and resolve problems in hydraulic systems.

MNTC GOALS AND COMPETENCIES MET:
N/A

HCC COMPETENCIES MET:
Working Productively and Cooperatively

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

ADDITIONAL INFORMATION: None

Curriculum Committee Approval Date: March 13, 2018

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