

MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

COURSE OUTLINE

DEPT. ELWT

COURSE NUMBER: 1102

NUMBER OF CREDITS: 1

Lecture: 0 Lab: 1 OJT 0

Course Title:

Hydraulics Lab

Catalog Description:

Hydraulics Lab utilizes equipment and applies advanced fundamentals of hydraulic valves. The course will also cover advanced circuits and schematics.

Prerequisites or Necessary Entry Skills/Knowledge:

DSL1130 or MECH1103

FULFILLS MN TRANSFER CURRICULUM AREA(S)

- Goal 1: Communication: By meeting the following competencies:
- Goal 2: Critical Thinking: By meeting the following competencies:
- Goal 3: Natural Sciences: By meeting the following competencies:
- Goal 4: Mathematics/Logical Reasoning: By meeting the following competencies:
- Goal 5: History and the Social and Behavioral Sciences: By meeting the following competencies:
- Goal 6: The Humanities and Fine Arts: By meeting the following competencies:
- Goal 7: Human Diversity: By meeting the following competencies:
- Goal 8: Global Perspective: By meeting the following competencies:
- Goal 9: Ethical and Civic Responsibility: By meeting the following competencies:
- Goal 10: People and the Environment: By meeting the following competencies:

Topics to be Covered

Parallel and series circuits

Flow rates and pressure

Open hydraulic system

Closed center hydraulic circuit

Schematics

Student Learning Outcomes

Secure a parallel circuit on test trainer

Secure a series circuit on test trainer

Adjust flow rates on hydraulic circuits

Adjust pressures on hydraulic circuits

Construct an open hydraulic system
Construct a closed center hydraulic circuit
Diagnose multiple types of hydraulic circuits
Interpret schematics and apply interpretation to components on units
Develop schematics related to wind energy
Operate multiple hydraulic systems

Is this course part of a transfer pathway: Yes No

Revised Date: 10/1/2021