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
<table>
<thead>
<tr>
<th>Construct an open hydraulic system</th>
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<tr>
<td>Construct a closed center hydraulic circuit</td>
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<tr>
<td>Diagnose multiple types of hydraulic circuits</td>
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<td>Interpret schematics and apply interpretation to components on units</td>
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<td>Develop schematics related to wind energy</td>
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<td>Operate multiple hydraulic systems</td>
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**Is this course part of a transfer pathway:** Yes ☐ No ☒

Revised Date: 10/1/2021