Faculty members are required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT. MECH      COURSE NUMBER: 1131

NUMBER OF CREDITS: 1  Lecture: 0  Lab: 1

<table>
<thead>
<tr>
<th>Course Title:</th>
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<tbody>
<tr>
<td>Pneumatic Lab</td>
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<tr>
<th>Catalog Description:</th>
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<tr>
<td>Provides students with skills in plumbing, troubleshooting, and operation of basic pneumatic circuits. Concurrent with MECH 1120.</td>
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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:

<table>
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<tr>
<th>Prerequisites or Necessary Entry Skills/Knowledge:</th>
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### Topics to be Covered

1. Basic pneumatic circuits.
2. Cylinder sequencing circuits.
3. Air/oil circuits.
4. Dual supply pneumatic circuit.
5. Pneumatic speed control circuits.
6. Rodless cylinder circuits.
7. System pressure and cylinder speed tests.
8. Two-hand safety circuits.

### Student Learning Outcomes

1. Identify and control potential safety hazards and implement safe working practices.
2. Demonstrate the ability to test the basic functions of pneumatic components to determine proper operation.
3. Design and connect pneumatic circuits.
4. Troubleshoot basic pneumatic systems.

### Is this course part of a transfer pathway:  Yes ☐ No ☒

Revised Date: 05/2020