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: 1120

NUMBER OF CREDITS: 3  Lecture: 3  Lab: 0

<table>
<thead>
<tr>
<th>Course Title:</th>
<th>Pneumatic Theory</th>
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<tr>
<th>Catalog Description:</th>
<th>Introduces the students to gas laws and principles, and pneumatic component identification, functions and applications.</th>
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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:

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<tr>
<th>Prerequisites or Necessary Entry Skills/Knowledge:</th>
<th>None</th>
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</table>
### Topics to be Covered

1. Pneumatic system components
2. Pneumatic system applications.
4. Pneumatic symbols.
5. Pneumatic circuit design.

### Student Learning Outcomes

1. Address safety issues related to pneumatic systems.
2. Identify different components of a pneumatic system.
3. Describe how pneumatic principles work.
4. Explore pneumatic gas laws.
5. Apply calculations and equations to basic pneumatic circuits.
6. Interpret pneumatic symbols
7. Read schematic drawings
8. Describe function of pneumatic system components.

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