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: 1115**

**NUMBER OF CREDITS: 2**  **Lecture: 1  Lab: 1**

<table>
<thead>
<tr>
<th>Course Title:</th>
<th>Computer Aided Design</th>
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<tr>
<th>Catalog Description:</th>
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<tbody>
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<td>Introduces the skills needed to design, draw, edit, and publish various industrial schematics using CAD software. Students will demonstrate the ability to edit and design mechanical, electrical, and structural schematics. Course time will include instruction on drawing setup and commands along with hands-on lab time working with and creating drawings.</td>
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</table>

**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:

| Prerequisites or Necessary Entry Skills/Knowledge: |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| None           |                |                |                |                |                |                |                |                |
### Topics to be Covered

1. Understanding the workspace.
2. Basic drawing setup.
3. Create and edit drawings.
4. Basic drawing commands.
5. Drawing units and scales.
7. Line types and layers.
8. Dimensioning.
9. Coordinate systems.
10. Grid and snap controls.
11. Templates.
12. Print and plot drawings.

### Student Learning Outcomes

1. Describe the workspace.
2. Perform drawing setup.
3. Utilize various drawing tools to create industrial schematics and prints.
4. Modify drawing features, objects, and drawings.
5. Publish industrial schematics and prints.

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

Revised Date: 05/2020