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. CMAE COURSE NUMBER: 1518**

**NUMBER OF CREDITS:** 2 Lecture: 2 Lab: 0

<table>
<thead>
<tr>
<th>Course Title:</th>
<th>Manufacturing Process and Production</th>
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<tr>
<th>Catalog Description:</th>
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<tr>
<td>Emphasizes lean manufacturing principles, basic supply chain management, communication skills, and customer service. This course is designed to align with the National Skills assessment and certification system for Maintenance Awareness. The course curriculum is based upon federally-endorsed national standards for production workers.</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:

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<tr>
<th>Prerequisites or Necessary Entry Skills/Knowledge:</th>
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<td>None</td>
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### Topics to be Covered
1. Identify customer needs.
2. Production processes.
3. Equipment set up.
4. Job assignments.
5. Material requirements.
7. Customer requirements.

### Student Learning Outcomes
1. Demonstrate an understanding of manufacturing and production processes.
2. Identify customer needs to ensure that processes are in compliance with customer requirements.
3. Interpret job assignments to meet production goals.
4. Analyze workflow of team members & work groups to meet production goals.
5. Utilize lean and high-performance manufacturing principles to improve the manufacturing process.
6. Communicate material and product requirements.

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

Revised Date: 05/2020