Course Title:
Gas Metal Arc Welding I

Catalog Description:
Provides the student with a thorough technical understanding of Gas Metal Arc welding, welding safety, equipment and set-up, wire and shielding gas classifications and selection. It also provides training to develop the skills necessary to make quality gas metal arc welds on mild steel.

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:
### Topics to be Covered

<table>
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<th>Safety in the welding shop</th>
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<td>Welding joints and positions</td>
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<td>Material preparation</td>
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<td>Wire selection</td>
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<td>Shielding gases</td>
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<td>Gas Metal Arc Welding (GMAW) principles</td>
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<tr>
<td>Gas Metal Arc Welding equipment, set-up, and supplies</td>
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<tr>
<td>Perform quality welds using Gas Metal Arc Welding processes</td>
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### Student Learning Outcomes

- Recognize a safe work environment and the need for personal safety.
- Demonstrate weld shop safety.
- Demonstrate safe and proper use of Gas Metal Arc Welding equipment and components.
- Demonstrate technical understanding of Gas Metal Arc Welding processes.
- Perform quality welds in the flat position using Gas Metal Arc Welding processes.
- Demonstrate proper adjustment, set-up and operation of Gas Metal Arc Welding equipment.

### Is this course part of a transfer pathway: Yes [ ] No [ ]

*If yes, please list the competencies below

Revised 11/19