Course Title:
Gas Tungsten Arc Welding I

Catalog Description:
Provides the student with a thorough technical understanding of Gas Tungsten Arc welding, welding safety, equipment and set-up, rod and shielding gas classifications and selection. It also provides training to develop the skills necessary to make quality gas tungsten arc welds on non-ferrous metals.

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

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<th>Topic</th>
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<tr>
<td>Safety in the welding shop</td>
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<td>Welding joints and positions</td>
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<td>Material preparation</td>
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<td>Rod selection and shielding gas</td>
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<td>Gas Tungsten Arc Welding (GTAW) principles</td>
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<tr>
<td>Gas Tungsten Arc Welding equipment, set-up, and supplies</td>
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<td>Perform quality welds using Gas Tungsten Arc Welding processes on non-ferrous metals</td>
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### Student Learning Outcomes

- Recognize and demonstrate weld shop safety and the use of personal protective equipment.
- Demonstrate safe and proper use of Gas Tungsten Arc Welding equipment and components.
- Demonstrate technical understanding of Gas Tungsten Arc Welding processes.
- Perform quality welds using Gas Tungsten Arc Welding processes on non-ferrous metals.
- Demonstrate proper adjustment, set-up and operation of Gas Tungsten Arc Welding equipment.

**Is this course part of a transfer pathway:** Yes [ ] No [x]  
*If yes, please list the competencies below*

Revised 11/19