Course Title:
Intermediate Shielded Metal Arc Welding

Catalog Description:
Perform horizontal, vertical, and overhead welding in accordance with American Welding Society procedures. Common joint types in various thicknesses are welding using various electrodes. Some sheet metal will be welded.

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
Safety and health of welders, use of personal protective equipment, and safety inspection of Shielded Metal Arc Welding equipment and accessories
Set-up of Shielded Metal Arc Welding equipment on carbon steel
Operate Shielded Metal Arc Welding equipment on carbon steel
Demonstrate groove welds in all positions
Inspection of tracks, root passes, intermediate layers, and completed welds
### Student Learning Outcomes

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<th>Outcome</th>
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<tr>
<td>Recognize and demonstrate weld shop safety and the use of personal protective equipment.</td>
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<tr>
<td>Demonstrate safe and proper use of Shielded Metal Arc Welding equipment and components.</td>
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<td>Identify proper electrode selection.</td>
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<td>Evaluate and identify a weld bead’s shape with different heat inputs.</td>
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<td>Describe stringer beads.</td>
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<td>Perform a square butt joint weld in all positions.</td>
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<td>Perform a groove weld in plate in all positions with or without backing.</td>
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**Is this course part of a transfer pathway:** Yes [ ] No [x]  
*If yes, please list the competencies below*

Revised 11/19