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|  | **Course:** | **WEL 104** |
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|  | **Title:** | **Basic Shielded Metal Arc II** |
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|  | **Long Title:** | **Basic Shielded Metal Arc II** |
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|  | **Course Description:** | **Covers performing safety inspections, making minor repairs, adjusting operating parameters, and operating SMAW equipment utilizing E-7018 electrodes. Layout procedures will be practiced during this course.** |
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|  | **Min Credit:** | **4** |

 STANDARD COMPETENCIES:

1. Follow shop safety practices.
2. Maintain a clean, safe work area.
3. Prepare assigned records.
4. Follow assigned instructions to complete work assignments.
5. Participate in assigned fabrication projects.
6. Perform safety inspections on SMAW equipment
7. Make minor external repairs as necessary to SMAW equipment.
8. Set up for shielded metal arc welding operations on plain carbon steel.
9. Operate shielded metal arc welding equipment.
10. Make fillet welds in all positions on plain carbon steel utilizing E-7018 electrodes.
11. Examine tack and completed welds.
12. Execute corrective actions to repair surface flaws on welds and base metals.
13. Recognize fundamental principles of the SMAW process.
14. Explain fundamental principles of the SMAW process.
15. Layout parts using advanced measurement practices.

 TOPICAL OUTLINE:

1. Safety and Record Keeping
   1. Follow shop safety practices.
   2. Maintain a clean, safe work area.
   3. Prepare assigned records.
   4. Follow assigned instructions to complete work assignments.
   5. Participate in assigned fabrication projects.
   6. Perform safety inspections on SMAW equipment
   7. Make minor external repairs as necessary to SMAW equipment.
2. Equipment Setup and Operation
   1. Set up for shielded metal arc welding operations on plain carbon steel.
   2. Operate shielded metal arc welding equipment.
   3. Make fillet welds in all positions on plain carbon steel utilizing E-7018 electrodes.
   4. Examine tack and completed welds.
   5. Execute corrective actions to repair surface flaws on welds and base metals.
   6. Recognize fundamental principles of the SMAW process.
   7. Explain fundamental principles of the SMAW process.
3. Layout Techniques
   1. Layout parts using advanced measurement practices.