WELD 133 Basic FCAW

Credit Hours: 3

Scheduled hours per week
  Lecture: .5
  Lab: 2.5
  Other: 0

Catalog Course Description:
Introduction to the flux core arc welding process. Equipment set-up and safety. Hands-on welding on pad of beads, lap joints, tee joints, and butt joints.

Prerequisites: None

Corequisites: None

Course learning Outcomes:
Students should learn the hands on skills required to set up welding machine student will learn hands on skills and also technical knowledge.

Topics to be studied:
1. Safety
2. Equipment
3. Welding Terms and Definitions
4. Electrodes Angles
5. Weld Nomenclature
6. Welding Positions
7. Joint& Weld Classification
8. Weld quality identification
9. Metal transfer and shielding gas
10. Surfacing weld flat position
11. T-joints in 2G, 3G and 4G positions
12. Bevel Plate Practicing in all positions
13. Bevel Plate AWS certification testing in all positions

Relationship of course to program outcomes:

| Students will be proficient with “hands-on” skills in all welding processes (SMAW, G-TAW, FCAW, GMAW) | x |
| 80% of all students will pass ASME welding test on plate 2G,3G and 4G positions and or 6G pipe test | x |
| Students will be able to perform destructive testing and recognize whether it passes or fails and also the daily functions of a (CWI) | x |
| Student will know the technology terminology used in the welding industry | x |
| Students will be able to demonstrate the ability to work ethically, effectively, and respectively with people of diverse backgrounds and with people who have different roles, social affiliations, and personalities. | x |

Approved by Curriculum Committee
Revised 9/09
This course meets the following General Education Outcome(s):

<table>
<thead>
<tr>
<th>Composition and Rhetoric</th>
<th>Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.</th>
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</thead>
<tbody>
<tr>
<td>Science &amp; Technology</td>
<td>Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions. (x)</td>
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<tr>
<td>Mathematics &amp; Quantitative Skills</td>
<td>Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts. (x)</td>
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<tr>
<td>Society, Diversity, &amp; Connections</td>
<td>Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.</td>
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<tr>
<td>Human Inquiry &amp; the Past</td>
<td>Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.</td>
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<tr>
<td>The Arts &amp; Creativity</td>
<td>Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.</td>
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*Place an X by all the general education competencies met in this course.*

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**Special projects or requirements of the course:**
- Research paper
- Equipment “show and tell”

**Additional information:**
- None

**Assessment of Outcomes:**
Outcomes will be measured by testing (quizzes and final exam)

**Prepared by:** Joseph F. Hunt

**Date:** 10/18/2017

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Revised 9/09