Lake Superior College

WLDG 1540: Shielded Metal Arc Welding I

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 2

Lab Hours/Week: 2

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course introduces students to the shielded metal arc welding process, including equipment, terms, and safety procedures. Students will learn how to strike and control the welding arc to produce quality welds. Students will learn how to produce a pad of beads and fillet welds in the flat and horizontal position with commonly used electrodes. (Prerequisites: None) (2 hrs lec/2 hrs lab/0 hrs OJT)

B. COURSE EFFECTIVE DATES: 04/21/2008 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

D. LEARNING OUTCOMES (General)

1. Describe the shielded metal arc welding process.
2. Describe welding terms, test positions, and nomenclature.
3. Describe how the five essentials of shielded metal arc welding affect the quality of welds.
4. Identify and follow all safety rules.
5. Identify and follow all safety rules.
6. Operate and maintain SMAW equipment.
7. Control the arc to produce quality welds.
8. Produce welds with E7018 and E6010 electrodes.
9. Produce a pad of beads in flat position.
10. Produce single and multi-pass fillet welds in the flat and horizontal position.
11. Produce single and multi-pass groove welds in the flat and horizontal positions.
12. Setup and maintain Oxyfuel gas cutting equipment.
13. Perform simple cutting operations on carbon steel in the flat position.
14. Evaluate work according to course quality measures.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted