

## COURSE OUTLINE

Revision: David Weber, August, 2011

DEPARTMENT:	Manufacturing Technology
CURRICULUM:	Welding Fabrication Technology
COURSE TITLE:	Shielded Metal Arc Welding/Pipe
COURSE NUMBER:	WFT 220
TYPE OF COURSE:	Vocational Preparatory
COURSE LENGTH:	1 Quarter
CREDIT HOURS:	6
LECTURE HOURS:	22
LAB HOURS:	88
CLASS SIZE:	25
PREREQUISITES:	WFT: 100, 120, 121,124,125,127, 128

## COURSE DESCRIPTION:

Students will learn more advance configurations and position for welding with the E 7018, and E 6010 Shielded Metal Arc Welding process on pipe including vertical and overhead. This course will prepare students for the WABO pipe certification testing procedure as well as cutting and beveling pipe with oxy fuel and hand tools.

## STUDENT LEARNING OUTCOMES ADDRESSED:

1. Communication - Communicate and work in groups to complete minimum skills activities.
2. Personal Responsibility - Tack, production weld, and finish as required for assigned activities. Demonstrate consistent safe work habits including citizenship. Demonstrate consistent quality workmanship per industry standards.

WFT 220 Shielded Metal Arc Welding/Pipe  
August, 2011

STUDENT LEARNING OUTCOMES ADDRESSED: (cont.)

3. Critical Thinking and Problem Solving - Formulate and communicate a plan of action for assigned fabrication and maintenance projects.

GENERAL COURSE OBJECTIVES:

At the end of the course the student will be able to:

1. Identify components of a Shielded Metal Arc Welding equipment
2. Explain SMAW principles of operation
3. Safely transport, assemble, adjust, and maintain a SMAW equipment
4. Perform assigned laboratory exercises using SMAW

TOPICAL OUTLINE	APPROX. HOURS
I. Components of a SMAW system	2
II. Operating principles of SMAW E 7018, and E 6010 on pipe	2
III. Setup & use of pipe cutting and beveling systems	2
IV. Techniques for using SMAW on open root fit-up configurations.	<u>104</u>
Total	110

Detailed Topical Outline is available separately

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