COURSE INFORMATION FORM

DISCIPLINE  WELD

COURSE TITLE  Shielded Metal Arc Welding II (stick) Lecture

CR.HR.  1  LECT HR.  1  LAB HR.  _______  CLIN/INTERN HR.  _______  CLOCK HR.  _______

CATALOG DESCRIPTION

Student will learn the theory and techniques of advanced shielded metal arc welding processes. This will include fillet and groove welds in all positions on mild steel and stainless steel plates with stainless steel electrodes. Pipe techniques will also be addressed for welding fillet and groove welds in all positions on carbon steel pipe.

PREREQUISITES

WELD 141

EXPECTED STUDENT OUTCOMES IN THE COURSE (ESO)

Upon completion of this course, the student will be able to:

1. Describe arc welding safety issues as they apply to advanced SMAW welding.
2. Identify and select correct welding polarities for given tasks.
3. Identify corrective actions to repair weld defects.
4. Describe SMAW principles of operation on carbon steel pipe and stainless steel plate.
5. Determine the correct SMAW filler metals for carbon steel and stainless steel.
6. Describe advanced SMAW welding techniques.
7. Relate Weld Procedure Specifications, AWS D1.1, AWS D1.6 and API 1104 code to advanced SMAW procedures.

GENERAL EDUCATION OUTCOMES (ESO)

Specify which general education outcomes, if any, are substantially addressed by the course. Numbers in parentheses identify the Expected Student Outcomes linked to the specific General Education Outcome.

Life-Long Learning: Attributes of an Awareness of the Convergence of Knowledge

2. Apply learned skills to real world interactions  (1-7)
3. Synthesize information to facilitate application  (1,5,7)
PROGRAM-LEVEL OUTCOMES

CAREER AND TECHNICAL EDUCATION PROGRAM OUTCOMES
Specify which Career and Technical program outcomes, if any, are substantially addressed by the course by completing the “Career and Technical Education template” to show the relationship between course and program outcomes to assessment measures.

The student will demonstrate:

1. academic competency in performing welding operations.

CLASS-LEVEL ASSESSMENT MEASURES
Student accomplishment of expected student outcomes will be assessed using the following measures. (Identify which measures are used to assess which outcomes.)

1. Formative and summative tests (1-7)
Individual instructors may order this outline as fits the needs of their individual courses. In addition, they may place more emphasis on some areas than on others. What is assured is that this particular list is covered in the course. Other topics may be added to a course as the instructor sees fit, and as time and interest allow. An *asterisk can be used to mark an item as optional.

I. Arc welding safety
   A. Electrical
   B. Other potential hazards
II. Repair weld defects
    A. Identify defects
    B. Implement weld procedure
III. Principles of operation
    A. Carbon steel pipe
    B. Stainless steel plate
IV. SMAW filler materials
    A. Identification
    B. Proper use
V. Advanced SMAW techniques
    A. Plate
    B. Pipe
VI. Code Welding
    A. Weld Procedure Specifications
    B. AWS D1.1 structural steel
    C. AWS D1.6 structural stainless steel
    D. API 1104