COURSE INFORMATION FORM

DISCIPLINE
WELD

COURSE TITLE
Shielded Metal Arc Welding I (stick) Lecture

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

CATALOG DESCRIPTION
Student will develop an awareness of arc welding safety and the shielded metal arc welding (SMAW) process. This
includes acquiring the knowledge of power sources and polarities, principles of operation, welding techniques,
electrode identification and use, code welding, and maintenance of SMAW equipment.

PREREQUISITES
WELD 121 or take concurrently

EXPECTED STUDENT OUTCOMES IN THE COURSE (ESO)
Upon completion of this course, the student will be able to:

1. Describe arc welding safety issues.
2. Describe constant current power sources.
3. Identify and select correct welding polarities for given tasks.
4. Describe SMAW principles of operation on carbon steel.
5. Determine the correct SMAW filler metals for various carbon steel applications.
6. Describe SMAW welding techniques.
7. Relate Weld Procedure Specifications and AWS D1.1 code to SMAW procedures.
8. Describe maintenance of SMAW equipment.

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 (1-8)
3. Synthesize information to facilitate application (1,5,7)

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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 (1-8)
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. Power sources  
   A. Constant current  
   B. Polarities  
   C. Maintenance  

III. Principles of operation  
   A. Welding techniques  
   B. Troubleshooting problems  

IV. SMAW filler materials  
   A. Identification  
   B. Proper use  

V. Code welding  
   A. AWS D1.1 structural steel  
   B. Weld Procedure Specifications