COURSE INFORMATION FORM

DISCIPLINE                  WELD
COURSE TITLE                Gas Metal Arc Welding I (MIG) Lecture
CR.HR                       1
LECT HR                     1
LAB HR                      
CLIN/INTERN HR.             
CLOCK HR.                   

CATALOG DESCRIPTION
Student will develop an awareness of arc welding safety and the gas metal arc welding (GMAW) processes. This includes acquiring the knowledge of power sources and polarities, principles of operation, welding techniques, modes of filler metal transfer, filler metal identification and use, code welding, and maintenance of GMAW 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 voltage power sources.
3. Identify and select correct welding polarities for given tasks.
4. Describe GMAW principles of operation on carbon steel.
5. Describe the various modes of filler metal transfer.
6. Determine the correct GMAW filler materials for various carbon steel applications.
7. Describe GMAW welding techniques.
8. Relate Weld Procedure Specifications and AWS D1.1 code to GMAW procedures.
9. Describe maintenance of GMAW equipment and accessories.

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 (1-9)

3. Synthesize information to facilitate application (1,6,8)
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 (1-9)
COURSE OUTLINE FORM

CATALOG NO.  WELD 150

DISCIPLINE  WELD

COURSE TITLE: Gas Metal Arc Welding I (MIG) Lecture

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 voltage
   B. Polarities
   C. Maintenance of equipment

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

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

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