COURSE INFORMATION FORM

DISCIPLINE  WELD
COURSE TITLE  Layout and Fabrication Lecture
CR.HR  1  LECT HR.  1  LAB HR.  ______  CLIN/INTERN HR.  ______  CLOCK HR.  ______

CATALOG DESCRIPTION
Student will learn and apply basic rigging operations to material handling. Mathematical formulas, geometrical principles, and charts associated with fabrication will be emphasized. The safe and proper use of fabrication tools and equipment will be stressed.

PREREQUISITES
WELD 130; one WELD 100 level lecture & lab

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

1. Select appropriate lifting equipment for a given application.
2. Use proper signaling for lifting operations.
3. Engage in lifting operations safely.
4. Apply correct mathematical formulas for layout operations.
5. Apply correct geometrical principles for layout operations.
6. Identify and correctly use layout reference material.
7. Select and safely use layout tools.
8. Select and safely use fabrication 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)

Quantitative Literacy and Mathematical Analysis
E. Interpret and apply numeric information embedded in text or real-life situations (3,4,7,8)
F. Interpret and apply numeric information presented in tables, charts, and graphs (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.
2. professional employability skills as applied to a welding environment.
3. critical thinking and problem-solving skills and adapt these skills to welding applications.
4. skills that meet or exceed the American Welding Society’s guidelines for entry-level employees in welding technology.
5. supervisory and managerial skills as applied to the welding industry.

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 written examinations. (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. Lifting equipment operation
   A. Lifting equipment principles of operation
   B. Hand signals for lifting operations
   C. Safety of lifting operations

II. Advanced measurement practices
   A. Mathematical formulas for layout operations
   B. Geometrical principles for layout operations
   C. Layout reference material

III. Layout tools
   A. Selection and proper use
   B. Safety procedures

IV. Fabrication equipment
   A. Selection and proper use
   B. Safety procedures