

Western Iowa Tech Community College
Course Outline of Record

Date: 03/06/2014

Prefix & No.: WEL 425 Course Title: Measuring, Layout, and Applied Weld Symbols

Semester **Credit** Hours: 1.00

Lecture **Contact** Hours per Semester: 16.00

Lab **Contact** Hours per Semester: 0.00

Clinical **Contact** Hours per Semester: 0.00

OJT or Internship **Contact** Hours per Semester:

Course/Lab Fee: Yes No

Pre and Post Assessments:

Course Description

This course combines lecture and lab activities to present basic measuring and layout tools used extensively by industry, as well as application of basic symbols. It emphasizes hands-on applications, accurate measurements techniques and proper use of tools and interpretation of basic weld symbols.

Prerequisite: None

Corequisite: None

Course Needs Statement

This course was developed through the DACUM process to meet local industry needs and national accreditation requirements for WITCC welding students.

Required Textbooks and/or materials

Yes No Other

Course Objectives:

The course will provide information which should enable the student to:

1. State basic measurements in both fraction and decimal notation
2. Use basic measuring tools common to the welding and fabrication industry
3. Accurately take and record measurements
4. Interpret basic welding symbols

Content Outline

- I. Safety
 - A. hazard Awareness
 - B. Ladders
 - C. Flame and Arc Awareness
 - D. Moving and Rotating Members
- II. Interpreting Basic Measurements
 - A. Reading Fractions
 - B. Reading Decimals
 - C. Conversions
 - D. Adding and Subtracting of Measurements
- III. Basic Measuring Tools
 - A. Steel Tapes and Rules
 - B. Levels
 - C. Plumb Bobs
 - D. Protractors and Angle Finders
 - E. Squares
 - F. Other Alignment Tools
- IV. Basic Welding Symbols

Assessment

Course Competencies

At the conclusion of the course, the student will be able to:

1. Observe all safety procedures while taking measurements
2. Perform basic measurements in decimals and fractions
3. Calculate and record accurate measurements
4. Accurately transfer measurements to a work piece
5. Demonstrate the proper use of common measuring and layout tools used in a shop environment
6. Interpret basic welding symbols used in a production environment

Addendum

Prefix & No.: WEL 425 Course Title: Measuring, Layout, and Applied Weld Symbols

Key words:

Required Textbooks and/or Materials

Title: **Welding Principles and Applications**

Author: **Jeffus & Johnson**

Edition: **Current**

Publisher: **Delmar**

ISBN-13:

ISBN-10:

Other Materials: **Tape Measure**

Course/Lab Fee: \$0.00

Rationale (usage) for lab fees:

Additional Information:

Common Final: Yes No

See Division Chair for facility and equipment needs.

Reminder: Each Course Outline of Record is expected to be reviewed every five (5) years.

Attached Files: