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Semester effective: Fall 2018

Welding (WELD) 1560 Blueprint Reading (3 Units) CSU

Prerequisite: None

Hours and Units Calculation:

48 hours lecture + 96 Outside of class hours (144 Total Student Learning Hours)

Catalog Description: This course will cover certain key principles and practices of reading and interpreting basic industrial blueprints as applied to the welding trade. Additional welding supplies may be required. This course has a material fee.

Type of Class/Course: Degree Credit

Text: Bennett, A. E., and Louis J. Siy. *Blueprint Reading for Welders*. 9th ed., Cengage Learning, 2014.

Additional Instructional Materials:

Students are expected to have the following items:

1. #5 Shaded Safety Glasses & Clear Safety Glasses
2. Welding leather gloves
3. Work boots (above the ankle)
4. Long sleeve shirt & jeans (no holes or rips)
5. Welding hood/helmet
6. Welding cap
7. Pair of pliers (multi-use, wire cutters)
8. Wire brush
9. Chipping hammer

Optional material/equipment:

1. Grinder

Course Objectives:

By the end of the course, a successful student will be able to:

1. explain the welding concepts, principles, and application, and
2. demonstrate understanding of welding blueprint reading in related situations and projects.

Course Scope and Content:

- Unit I Blueprint Reading for Welders' Introduction
 - A. Overview and Purpose

- Unit II Lines, Views, and Sketching
 - A. Basic Lines
 - B. Basic Views
 - C. Purpose of Sketching
 - D. Basic Sketching Techniques

- Unit III Dimensions
 - A. Purpose
 - B. Types of Dimensions

- Unit IV Bill of Materials, Structural Shapes, Views, and Sections
 - A. Preparation of a Bill of Materials
 - B. Common Structural Shapes
 - C. Types of Views
 - D. Types of Sections

- Unit V Detail and Assembly
 - A. Detail Drawing
 - B. Assembly Print

- Unit VI Welding Symbols
 - A. Welding Symbols
 - B. Location of Symbols
 - C. Elements
 - D. Dimension of Symbols
 - E. Various Application

- Unit VII Basic Joints and Weld Types
 - A. Basic Joints
 - B. Other Kinds of Joints
 - C. Weld Types and Purposes

- Unit VIII Metrics
 - A. Applied Metrics

- Unit IX Other Welding Symbols



- A. Pipe Welding Symbols
- B. International Standard Symbols for Welding

Unit X Inspection and Testing

- A. Overview
- B. Destructive Testing
- C. Non Destructive Examination

Learning Activities Required Outside of Class:

The students in this class will spend a minimum of 6 hours per week outside regular class time doing the following:

1. Completing assigned readings from the text
2. Analyzing various blueprint explanation, sketches, drawings, etc. to determine applicability, length, size, extent, contour, finishing
3. Preparing for code testing

Methods of Instruction:

1. Lecture
2. Individual and group work
3. Class discussion and participation
4. Power Point presentations
5. Demonstration

Methods of Evaluation:

1. Class participation
2. Grading scale specified in syllabus
3. Exams and quizzes
4. Observation
5. Written assignments

Supplemental Data:

TOP Code:	095650: Welding Technology
SAM Priority Code:	C: Clearly Occupational
Distance Education:	Not Applicable
Funding Agency:	Y: Not Applicable(funds not used)



Program Status:	1: Program Applicable
Noncredit Category:	Y: Not Applicable, Credit Course
Special Class Status:	N: Course is not a special class
Basic Skills Status:	N: Course is not a basic skills course
Prior to College Level:	Y: Not applicable
Cooperative Work Experience:	N: Is not part of a cooperative work experience education program
Eligible for Credit by Exam:	YES
Eligible for Pass/No Pass:	NO
Taft College General Education:	NONE