

**Western Iowa Tech Community College**  
**Course Outline of Record**

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Date: 03/06/2014

Prefix & No.: WEL 110 Course Title: Welding Blueprint Reading

Semester **Credit** Hours: 2.00

Lecture **Contact** Hours per Semester: 32.00

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 presents the use of blueprints for transfer of ideas and information. Students learn how to read blueprints with special emphasis on welding blueprints, including lines, views, material descriptions, welding layouts, welding symbols and terms. The application of concepts will be emphasized.

Prerequisite: MAT 772 Applied Math

Corequisite: None

**Course Needs Statement**

This course was identified by the DACUM process to best meet the local industry needs and national certification requirements for WITCC students.

**Required Textbooks and/or materials**

Yes  No  Other

**Course Objectives:**

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

1. Identify basic lines and views
2. Sketch using orthographic, isometric, and oblique representation
3. Read notes and specifications
4. Interpret dimensions on drawings
5. Accurately dimension sketches
6. Identify common structural shapes
7. Prepare a bill of materials

**Content Outline**

- I. Basic Lines
  - A. Types of lines
  - B. Applications
- II. Basic Views
  - A. Orthographic
  - B. Isometric
  - C. Oblique
- III. Dimensions
  - A. Linear
  - B. Angular
  - C. Bevels and chamfers
  - D. Radius and ARC
- IV. Structural Materials
  - A. Beams
  - B. Angles
  - C. Plates and sheets
- V. Support Views
  - A. Enlarged details

- B. Developed views
- C. Sections
- D. Auxiliary views
- VI. Welding Symbols

### **Assessment**

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#### **Course Competencies**

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

1. Recognize basic lines and views
2. Demonstrate basic sketching techniques
3. Assess notes and specifications
4. Interpret dimensions as related to the welding industry
5. Prepare a bill of materials
6. Identify structural shapes
7. Evaluate weld symbols and abbreviations

### **Addendum**

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**Prefix & No.: WEL 110 Course Title: Welding Blueprint Reading**

**Key words:**

#### **Required Textbooks and/or Materials**

Title: **Blue Print Reading for Welders**

Author: **A. E. Bennett and Louis Siy**

Edition: **Current**

Publisher: **Delmar**

ISBN-13:

ISBN-10:

Other Materials: **30, 60, 90 degree triangle, 45 and 90 degree triangle, French curve, protractor, compass, and architect scale**

**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:**