



# Course Outcome Summary

## Required Program Core Course

### WELD110 Welding Symbols & Blueprint Reading

#### Course Information

Division	Applied Science & Engineering Technology
Contact Hours	30
Total Credits	2

**Prerequisites** RDG 090 and qualifying score on accepted placement test

#### Course Description

WELD 110 is designed to introduce the basic concepts of blueprint reading and welding symbols. The course also covers the basic features of a blueprint such as lines, views, dimensioning and welding & NDT symbols. The blue print reading will be supplemented by the construction exercises using foam and plastic components.

**This course is a required core course for students pursuing an AAS in Welding Technology, Basic Welding Certificate, or Advanced Welding Certificate**

#### Program Outcomes Addressed by this Course:

Upon successful completion of this course, students should be able to meet the program outcomes listed below:

1. Demonstrate safe welding, fabricating, and thermal cutting practices.
2. Perform cutting and gouging procedures using thermal cutting techniques.
3. Follow procedures to deposit sound welds using Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW), and Gas Tungsten Arc Welding (GTAW) processes.
4. Describe American Welding Society (AWS) Standards as well as industrial standards as they relate to welding.
5. Identify and solve common weldability problems.
6. Demonstrate the proper use and care of common welding and fabricating equipment.
7. Identify weld defects, explain methods to prevent defects, and demonstrate proper defect repair.
8. Read prints and interpret welding symbols.
9. Explain knowledge of basic material and welding metallurgy.
10. Specify proper Personal Protective Equipment (PPE) required for applicable work environments.

#### Course Outcomes

In order to evidence success in this course, the students will be able to:

1. Perform basic measurements and mathematical operations.
2. Interpret and convert dimensions from blueprints.
  - a. Applies to program outcome 8.
3. Locate welds in conjunction with the design of the blueprints.
  - a. Applies to program outcome 8.
4. Identify various welding, NDT, and supplementary symbols and their sizes.
  - a. Applies to program outcome 8.
5. Prepare a Bill of Materials for the required weldment.
  - a. Applies to program outcome 8.
6. Identify filler metals, welding processes, and sequences of operations from blueprints.
  - a. Applies to program outcome 8.
7. Identify types of lines found on a print and describe their use.
  - a. Applies to program outcome 8.
8. Identify and explain the significance of the principal views on a multi-view drawing.



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- a. Applies to program outcome 8.
- 9. Locate and explain the purpose of information found in the title block.
  - a. Applies to program outcome 8.
- 10. Determine tolerance variances of a part, feature, and welding from the print dimension and specified tolerance.
  - a. Applies to program outcome 8.

Date Updated: 03/18/2019

By: Stephen Hasselbach

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