Welding Symbols and Blueprint Reading
Outline of Instruction

Course Information
Organization               Monroe County Community College, Applied Science and Engineering Technology
Developers                 R.S.Chandel
Development Date           8/23/2007
Revised Date               8/27/2009
Course Number              WELD-110
Instructional Level        Associate Degree
Instructional Area         Welding Technology
Division                   Industrial Technology
Potential Hours of Instruction 30
Total Credits              2

Description
This course 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.

Major Units
Measurements
Fractions and decimals
Lines & views
Dimensioning blue prints
Basics of weld symbols
Symbols for location, size, length and sequencing of welds
Symbols for fillet, plug and slot, spot, seam and projection, groove and surfacing welds
NDT symbols
Bill of Materials

Methods of Instruction
A programmed, audio-visual training technique will be used along with classroom lectures, workbook assignments, hands-on projects and written evaluations.
Construction Work  
There will be 10 construction exercises. Students will use their own construction kit and work individually and the projects are to be submitted by a due date. The grade for projects will be based on neatness, accuracy and completeness.

### Types of Instruction

<table>
<thead>
<tr>
<th>Instruction Type</th>
<th>Contact Hours</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Presentation</td>
<td>30</td>
<td>2</td>
</tr>
</tbody>
</table>

### Textbooks

Hobart Institute of Welding Technology. *Symbols for Welding-Programmed Learning*.  
*Instructors Handouts*.  
Mike Mohn. *Hands-On Print Reading for Welders*.

### Learner Supplies

None.

### Prerequisites

None

### Exit Learning Outcomes

#### General Education Outcomes

A. Demonstrate an understanding of the process of scientific inquiry  
B. Apply mathematical approaches to the interpretation of numerical information  
C. Communicate information in writing using the rules of standard American English

### Course Outcomes

1. Perform simple measurements and mathematical operations  
2. Extract dimensions from blue prints
3. Locate welds in conjunction with the design of the blueprint
4. Identify various welding, NDT and supplementary symbols and their sizes
5. Prepare a Bill of Materials for the required fabrication
6. Identify filler metals, welding processes and sequences of operations from blueprints.
7. Prepare a Bill of Materials for the required fabrication