

# WLD 141 Symbols and Specifications

## COURSE DESCRIPTION:

Prerequisite: DMA 010, 020, 030, DRE 096, or satisfactory score on placement test

Corequisite: None

This course introduces the basic symbols and specifications used in welding. Emphasis is placed on interpretation of lines, notes, welding symbols, and specifications. Upon completion, students should be able to read and interpret symbols and specifications commonly used in welding.

Course Hours per Week: Class, 2; Lab, 2; Semester Hours Credit, 2.

## LEARNING OUTCOMES:

Upon completion of this course, students will be able to:

1. Read basic welding blueprints.
2. Identify lines.
3. Identify abbreviations, symbols and terminology on welding drawings.
4. Interpret basic orthographic projection.
5. Interpret basic dimensioning standards.
6. Interpret auxiliary views encountered by individuals in the welding trades.
7. Interpret welding assembly drawings

## OUTLINE OF INSTRUCTION:

- I. Types of drawings
  - A. Working drawings
  - B. One and Two view drawings
  - C. Multi detail drawings
  - D. Partial views
  - E. Assembly drawings
- II. Welding joint design
  - A. Joint dimensions
  - B. Metal type
  - C. Welding positions
  - D. Code or standard requirements
  - E. Welding symbols
  - F. Indicating types of welds
  - G. Weld location
  - H. Location significance of arrow
  - I. Fillet welds
  - J. Spot welds
  - K. Plug welds
  - L. Seam welds

- M. Groove welds
- N. Backing
- O. Flanged welds
- P. Nondestructive testing symbols

### III. Welding Codes and Standards

- A. Codes standards, procedures, and specifications
- B. Welding procedure qualification
- C. Welding procedure specification (WPS)
- D. Qualifying the WPS
- E. General Information
- F. Procedure Qualification Record (PQR)

### **REQUIRED TEXTBOOK AND MATERIAL:**

To be determined by the faculty.