



PRINT READING II — WELD 1200

A. Course Description

- **Credits:** 3.00
- **Lecture Hours/Week:** 3.00
- **Lab Hours/Week:** 0.00
- **OJT Hours/Week:** 0
- **Prerequisites:** None
- **Corequisites:** None
- **MnTC Goals:** None

Students in this course will demonstrate the use of the American Welding Society (AWS) welding symbol to industry standards. Students will interpret joint design from welding symbols and learn forming and cutting processes shown on engineering drawings. Classification of base materials and wire will be emphasized.

Prerequisites: Print Reading I

B. Course Effective Dates: 8/27/12 – Present

C. Outline of Major Content Areas

As noted on course syllabus

D. Learning Outcomes

1. Calculate geometric forming and positioning tolerances.
2. Compute project costs for welding, assembly, and fabrication from a bill of materials.
3. Explain components of Non-Destructive Testing (NDT) symbols added as part of a weld symbol.
4. Explain components of multi-weld AWS weld symbols.
5. Explain the SAE/AISI and ASTM steel classification numbering systems.
6. Identify AWS filler wire designations for SMAW, GMAW, FCAW, and GTAW welding processes.
7. Identify sheet, plate, tube, pipe, and structural shape cutting practices.
8. Interpret AWS groove, fillet, plug/slot, and spot weld symbols.
9. Interpret AWS welding symbols.
10. Interpret fillet weld size and bead profile weld symbols.
11. Interpret full, half, partial, and revolved section views on an engineering drawing.
12. Interpret specifications for effective throat, size, profile, side of joint, and melt-through weld symbols.
13. Read assembly, machining, and tooling engineering drawings.
14. Sketch basic and advanced welding assembly drawings.

15. Sketch j-groove, edge flange, corner flange, and flare-v weld symbols.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

F. Learner Outcomes Assessment

As noted on course syllabus

G. Special Information

None noted