COMMON COURSE OUTLINE: Course discipline/number/title: CAD 1120: Welding Technology

A. CATALOG DESCRIPTION

1. Credits: 2
2. Hours/Week: 1 hour lecture, 2 hours lab.
3. Prerequisites (Course discipline/number): CAD 1039, CAD 1200, CAD 1220, CAD 1221 or instructor's permission
4. Co-requisites (Course discipline/number): CAD 1123, CAD 1150, CAD 1222, CAD 1323.
5. MnTC Goals (if any): NA

This course is designed to teach welding symbols and their applications. Basic CAD drafting skills are incorporated into making complete weldment drawings. The students will create and identify welding symbols and learn to apply them in a variety of drawing situations which are found in industry. This course will be taught in a state-of-the-art facility featuring the latest release SolidWorks.

B. DATE LAST REVISED (Month, year): April, 2013

C. OUTLINE OF MAJOR CONTENT AREAS:

1. Welding process Overview
2. Bills of materials and weldments
3. Welding joints
4. Welding symbols
5. Types of weld symbols
   a) Fillet weld
   b) Groove weld
   c) Back or backing weld
   d) Plug and slot weld
   e) Surface weld
   f) Edge weld
   g) Spot weld
   h) Resistance welds

D. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Demonstrate correct use of weld symbols using CAD.
2. Create weldment drawings using CAD.
3. Dimension weldment drawings using CAD.
5. Observe industrial weldment drawings.
6. Identify weld symbols.

E. LEARNING OUTCOMES (MNTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:

1. Evaluation of electronic files
2. Skill proficiency exercises
3. Quizzes and Exams

G. RCTC CORE OUTCOME(S) ADDRESSED:

- Communication
- Critical Thinking
- Global Awareness/Diversity
- Personal/Professional Accountability
- Civic Responsibility
- Aesthetic Response

H. SPECIAL INFORMATION (if any): Tuition differential