WELD 1455: Trades Enhancement Welding

A. COURSE DESCRIPTION
   Credits: 3
   Lecture Hours/Week: 2
   Lab Hours/Week: 2
   OJT Hours/Week: *.*
   Prerequisites: None
   Corequisites: None
   MnTC Goals: None
   Students will be introduced to different welding and cutting processes. Covered in this course will be proper weld fusion, heat distortion, penetration, and their effects to the parent material. Students will learn the basics of proper welding and cutting machine set up from turning the machine on and off and identification of machine parts to demonstrating and identifying the differences between good quality welds and poor quality welds. Students will be introduced to and demonstrate weld shop safety and practice, and proper compressed cylinder transport and storage. (3 credits: 2 lecture/1 lab)

B. COURSE EFFECTIVE DATES: 02/23/2015 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
   1. Introduce and demonstrate proper welding and cutting techniques
   2. Identify welding shop hazards such as electrical, chemical, heat and fire dangers
   3. Proper compressed cylinder handling and storage
   4. Importance of shop cleanliness

D. LEARNING OUTCOMES (General)
   1. Identify safe practices and dangers when working in a weld shop
   2. Demonstrate proper storage of compressed gases
   3. Examine the effects of heat distortion
   4. Demonstrate safe set up, start up, and shut down of equipment
   5. Demonstrate proper oxy-fuel and plasma cutting processes
   6. Demonstrate proper welding techniques while using GMAW and GTAW welding processes
   7. Introduce and perform welding techniques in the 1G, 2G, 3G, and 4G welding positions
   8. Avoid weld shop hazards
   9. Perform proper weld shop shut down procedures
   10. Demonstrate daily shop cleanliness

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted