

# Dakota County Technical College

## ETSA 1552: Basic Metal Joining and Fabrication

### A. COURSE DESCRIPTION

Credits: 2

Lecture Hours/Week: 1

Lab Hours/Week: 1

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course covers basic welding procedures using arc welding and oxy-fuel equipment. One of the major topics of discussion will be safe use of this equipment. Time will be spent in the lab completing welds in various positions with different processes and electrodes. The processes to be covered in this class will be stick welding (SMAW), wire feed (GMAW), Tig (GTAW) Oxy-Acetylene welding, cutting and brazing along with an introduction to other equipment used in welding shops. Students in this course will be non-welding majors where welding may be a useful tool. Course instruction will stress the many situations where it is advisable to have a skilled welder engaged. Knowing your limitations is of the utmost importance.

**B. COURSE EFFECTIVE DATES:** 08/22/2011 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

### D. LEARNING OUTCOMES (General)

1. apply shop safety practice and proper use of shop equipment
2. calculate proper voltage, feed speeds, and amperages based on machine operation, conditions, materials, and equipment
3. identify preferred welding process to be utilized to complete assigned tasks
4. select appropriate electrodes for specified applications
5. complete welding projects assigned by the instructor in various positions using various welding processes
6. evaluate varied welding processes and applications to your trade

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted