

**J. Sargeant Reynolds Community College**  
**Course Content Summary**

**Course Prefix and Number:** WEL 160

**Credits:** 3

**Course Title:** Gas Metal Arc Welding (MIG and FCAW)

**Course Description:**

Introduces practical operations in the use of gas metal arc welding and equipment. Studies equipment operation setup, safety, and practice of semi-automatic welding processes. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**General Course Purpose:**

To assist students in developing job skills needed to enter the work force in the welding occupation and as a means to help students acquire the skills necessary to be a GMAW welder.

**Course Objectives:**

Upon completing the course, the student will be able to:

1. Recognize and use the proper safety procedures while welding.
2. Demonstrate the ability to perform correct equipment setup.
3. Demonstrate the ability to use semi-automatic welding equipment.
4. Demonstrate the ability to successfully complete MIG and Flux core welds.

**Major Topics to be Included:**

1. Safety
2. Equipment setup
3. Selection of filler materials and gasses
4. Selection of GMAW consumables
5. MIG welds in the various positions

**Effective Date of Course Content Summary:** November 20, 2012