

**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 semi-automatic welding processes with emphasis on practical application. Includes the study of filler wires, fluxes, and gases. 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.

Student Learning Outcomes:

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

- a. Recognize and use the proper safety procedures while welding;
- b. Demonstrate the ability to perform correct equipment setup;
- c. Demonstrate the ability to use semi-automatic welding equipment; and
- d. Demonstrate the ability to successfully complete MIG and Flux core welds.

Major Topics to be Included:

- a. Safety
- b. Equipment setup
- c. Selection of filler materials and gasses
- d. Selection of GMAW consumables
- e. MIG welds in the various positions

Effective Date of Course Content Summary: June 12, 2018