

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

Course Prefix and Number: WEL 120

Credits: 2

Course Title: Introduction to Welding

Course Description: Introduces history of welding processes. Covers types of equipment and assembly of units. Stresses welding procedures such as fusion, non-fusion, and cutting oxyacetylene. Introduces arc welding and plasma arc cutting. Emphasizes procedures in the use of tools and equipment. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

General Course Purpose: To provide students with a basic knowledge of the fundamentals of various welding and cutting processes necessary to begin employment in the welding field.

Course Prerequisites and Co-requisites:

None

Student Learning Outcomes:

Upon completing the course, the student will be able to

- a. Recognize and use proper safety procedures while welding;
- b. Demonstrate the ability to perform correct SMAW equipment set-up;
- c. Demonstrate the ability to perform correct oxyacetylene equipment setup; and
- d. Demonstrate the ability to perform basic brazing, cutting, and welding procedures on carbon steel.

Major Topics to Be Included:

- a. Safety
- b. SMAW equipment
- c. Oxyacetylene equipment
- d. Plasma arc cutting
- e. Oxyacetylene cutting
- f. Oxyacetylene welding
- g. Torch brazing
- h. Shielded metal arc welding

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