

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

Course Prefix and Number: WEL 120

Credits: 2

Course Title: Fundamentals of Welding

Course Description (including lecture hours, lab hours, total contacts)

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

General Course Purpose

Required for the Welding Career Studies Certificate, this course provides the student with introductory information and hands-on experience for arc and oxyacetylene welding processes.

Course Prerequisites/Corequisites (*Entry-level competencies **required** for enrollment*)

None

Course Objectives (Each item should complete the following sentence.)

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

- Demonstrate proper safety while welding
- Exhibit basic knowledge of arc welding and oxyacetylene equipment
- Set-up and arc weld in the flat, horizontal and vertical positions
- Set-up and gas weld and braze in the flat horizontal and vertical positions
- Cut steel using oxyacetylene and plasma torches

Major Topics to be Included

- Safety
- Basic electric arc welding equipment
- Basic oxyacetylene equipment
- Puddling procedures for electric arc welding
- Puddling procedures for oxyacetylene welding
- Torch cutting procedures
- Types of welding joints

Effective Date of Course Content Summary (Month, Date Year): 1-9-2009