

WELD 100 - Welding Theory & Practice 1 Course Outline

Approval Date: 08/11/2009

Effective Date: 08/10/2009

SECTION A

Unique ID Number CCC000338255

Discipline(s)

Division

Grading Option Letter Grade or P/NP

**Distance
Education Mode
of Instruction**

SECTION B

General Education Information:

SECTION C

Course Description

Repeatability May be repeated 0 times

Catalog This is a basic welding course which provides an awareness of welding and

Description cutting processes and develops or upgrades limited manipulative skills involving oxy-fuel and plasma cutting and stick and wire feed welding. It is designed to introduce welding to community members and students in other vocational areas, and upgrade welders already in industry. This course satisfies the degree requirement for Machine Tool and DDGT.

**Schedule
Description**

SECTION D

Condition on Enrollment

1a. Prerequisite(s): *None*

1b. Corequisite(s): *None*

- b. General shop rules
- c. Personal conduct - attitudes and responsibilities
- d. Testing and grading
- B. Occupational Appreciation
 - a. History and development of welding
 - b. Economics of welding
 - c. Moral and civic responsibilities
 - d. Welding and the future
- C. Safety
 - a. Personal safety and habits
 - b. Shop safety rules
 - c. Oxyacetylene safety
 - d. Arc welding safety
 - e. Safety devices - fire extinguishers, fire blankets, etc.
 - f. General safety - grinders, hand tools, electrical, etc.
 - g. Safety test
- D. Oxygen Fuel Gas Cutting
 - a. Safety
 - b. Manual oxygen-fuel gas
 - c. Cutting torches (types)
 - d. Oxygen-fuel gas flames, temperatures of each, etc.
 - e. Machine oxygen-fuel gas cutting
 - f. Cutting nozzles, tips, and gas pressures
- E. Electrical Arc Welding with Stick and Hardwire Electrodes
 - a. Safety
 - b. Machines and equipment
 - c. Polarity - straight and reverse
 - d. Nomenclature of electrodes and coatings
 - e. Preparations of metals for welding
 - f. Starting and setting machines - voltage and amperage
 - g. Striking and maintaining the arc
 - h. Running the basic welds
 - i. Flat and horizontal welding with various electrodes
 - j. Terminology, processes, procedures and techniques
 - k.

4. Methods of Instruction:

Lecture:

Other (Specify):

Other: Lectures with white board and computer presentations Visual laboratory demonstrations of welding techniques Hands-on laboratory activities

5. Methods of Evaluation:

Letter Grade or P/NP

6. Assignments: State the general types of assignments for this course under the following categories and provide at least two specific examples for each