

COCONINO COMMUNITY COLLEGE

COURSE OUTLINE

Prepared by: Joe Costion

Status: Permanent

Date: 09/20/06

Expires:

A. Identification:

1. Subject Area: Construction Technology Management
2. Course Number: WLD 100
3. Course Title: Basic Welding
4. Credit Hrs: 2

Catalog Description: Shop procedures, safety and personal protection. Grinders, drill presses, and saws. Resistance and oxyacetylene welders. Arc welders; alternating current (AC) and direct current (DC) modes, electrodes, positioning and securing. Prerequisites: Registered apprentice status with Northern Arizona Carpenters Joint Apprenticeship Training Committee or permission of the apprenticeship coordinator. One lecture. Two lab. May be taken for S/U credit.

B. Course Goals:

Shop procedures, safety and personal protection. Grinders, drill presses, and saws. Resistance and oxyacetylene welders. Arc welders; alternating current (AC) and direct current (DC) modes, electrodes, positioning and securing.

C. Course Outcomes:

Students will:

1. Discuss procedures for clean up and securing the shop.
2. Demonstrate proper use of personal protection gear.
3. Demonstrate safe and proper operation of welding machines and equipment including grinders, drill presses, and saws.
4. Operate the resistance welder safely and properly including set up and securing.
5. Operate the oxyacetylene welder safely and properly including set up, cutting, use of filler metals, and securing the welder.
6. Operate an arc welder safely and properly in the AC and DC modes.
7. Identify common electrodes used in industry with the arc welder.
8. Demonstrate common positions used in the welding industry using the arc welder.

D. Course Content:

Will include:

1. Shop Procedures
 - a. Clean up
 - b. Security
2. Personal Protection
 - a. Eye protection
 - b. Clothing
 - c. Shoes
3. Equipment Operation
 - a. Hand and pedestal grinders
 - b. Hand and drill press
 - c. Abrasive cutoff saws
4. Resistance Welder
 - a. Set up
 - b. Safe operation
 - c. Secure welder

5. Oxyacetylene Welder
 - a. Set up
 - b. Safe operation
 - c. Cutting
 - d. Common filler metals
 - e. Secure welder
6. Arc Welder
 - a. Set up AC mode
 - b. Set up DC mode
 - c. Common electrodes
 - d. Common welding positions
 - e. Secure welder