



Course Outline

2026-2027 Catalog

WLD 154 - Shop Practices for Welders I

Catalog Description

Transfer Status: NT

Prerequisite: WLD 21 and NCCER Level I Welding Qualification

Corequisite: WLD 22, WLD 24, WLD 25, WLD 26, WLD 40

Unit(s): 1.00-2.00

Lab: 51.00-102.00 Contact hours/0.00-0.00 Out of class hours/51.00-102.00 Total hours/1.00-2.00 Unit(s)

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Course Description: This is a supervised lab experience for first semester welding program students. Students will practice skills in oxyacetylene welding (OAW), oxy-fuel cutting (OFC), shielded metal arc welding (SMAW), gas metal arc welding (GMAW), and flux core arc welding (FCAW) in all positions (flat, vertical, horizontal and overhead). Students will also use a variety of freehand and automatic burning equipment including plasma arc cutting (PAC) units and air carbon arc cutting and gouging (CAC-A) units. This course may be repeated to a maximum of 2.00 units to complete the entire curriculum of the course. Pass/No Pass only. Open Entry/Open Exit.

Objectives

Upon successful completion of this course, the student should be able to:

1. Follow proper safety protocols when operating welding and cutting equipment.
2. Operate OAW equipment to weld in the flat, horizontal, vertical and overhead positions.
3. Operate SMAW equipment to weld in the flat, horizontal, vertical and overhead positions.
4. Operate GMAW equipment to weld in the flat, horizontal, vertical and overhead positions.
5. Operate FCAW equipment to weld in the flat, horizontal, vertical and overhead positions.
6. Demonstrate the use of PAC equipment in a safe manner.
7. Demonstrate the use of CAC-A equipment in a safe manner.
8. Demonstrate welding skills at a level appropriate for a first semester welding program student.
9. Demonstrate the use OFC equipment in a safe manner.

Course Content

Topic Titles / Suggested Time Topic		
	<u>Lab</u>	
<u>Topics</u>		<u>Lab Hrs</u>
Introduction and safety		1.50
OAW		8.25
PAC		4.00
CAC-A		4.00
SMAW		8.25
GMAW		8.25
FCAW		8.25
OFC		8.50
Total Hours:		51.00

Methods of Instruction

- A. Demonstrations
- B. Laboratory Experiments
- C. Welding

Methods of Evaluation

- A. Class participation
- B. Practical Evaluations

Examples of Assignments

Reading Assignments

1. Read the manual for the GMAW equipment and describe the steps for proper setup to the instructor.
2. Read the American Welding Society (AWS) code book for proper FCAW welding procedures and demonstrate these procedures in class.

Writing Assignments

1. Maintain a written log of your daily welding activities.
2. Prepare a written description of base metal preparation for FCAW welding.

Out-of-Class Assignments

1. Not applicable

Recommended Materials of Instruction

Other Learning Materials

All tools listed in the Butte College Welding Technology Program Guide.

A full list of tools can be found at www.butte.edu/departments/careertech/welding/tools.html

Minimum Qualifications

Welding

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