BUTTE COLLEGE
COURSE OUTLINE

I. **CATALOG DESCRIPTION**

WLD 154 - Shop Practices for Welders I **1 - 2 Unit(s)**

Prerequisite(s): WLD 21 and NCCER Level I Welding Qualification
Co-requisite(s): WLD 22, WLD 24, WLD 25, WLD 26, WLD 40
Recommended Prep: Reading Level III; English Level II; Math Level II
Transfer Status: NT
51 - 102 hours Lab

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. Students may enroll in this course up to 2 unit(s) to complete the entire curriculum of the course. Pass/No Pass Only. Open Entry/Open Exit.

II. **OBJECTIVES**

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

A. Follow proper safety protocols when operating welding and cutting equipment.
B. Operate OAW equipment to weld in the flat, horizontal, vertical and overhead positions.
C. Operate SMAW equipment to weld in the flat, horizontal, vertical and overhead positions.
D. Operate GMAW equipment to weld in the flat, horizontal, vertical and overhead positions.
E. Operate FCAW equipment to weld in the flat, horizontal, vertical and overhead positions.
F. Demonstrate the use OFC equipment in a safe manner.
G. Demonstrate the use of PAC equipment in a safe manner.
H. Demonstrate the use of CAC-A equipment in a safe manner.
I. Demonstrate welding skills at a level appropriate for a first semester welding program student.

III. **COURSE CONTENT**

A. **Unit Titles/Suggested Time Schedule**

	Topics	Lab Hours
1.	Intoduction and safety	1.50
2.	OAW	8.25 - 16.75
3.	OFC	8.50 - 17.50
4.	PAC	4.00 - 8.00
5.	CAC-A	4.00 - 8.00
6.	SMAW	8.25 - 16.75
7.	GMAW	8.25 - 16.75
8.	FCAW	8.25 - 16.75
Total Hours		51 - 102

IV. **METHODS OF INSTRUCTION**

A. Demonstrations
B. Laboratory Experiments

V. **METHODS OF EVALUATION**

A. Class participation
B. Practical Evaluations

VI. **EXAMPLES OF ASSIGNMENTS**

A. 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.
B. Writing Assignments
    1. Prepare a written description of base metal preparation for FCAW welding.
    2. Maintain a written log of your daily welding activities.
C. Out-of-Class Assignments
    1. Not applicable

VII. **RECOMMENDED MATERIALS OF INSTRUCTION**

Materials Other Than Textbooks:

A. All tools listed in the Butte College Welding Technology Program Guide.
B. A full list of tools can be found at www.butte.edu./departments/careertech/welding/tools.html

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