Course Information Form (CIF)

Course Code: WLD 216

Course Title: Welding Certification I

Department: Applied Sciences and Technologies
PCS Code: 1.2 - Occupational/Technical Instruction
CIP Code: 48.0508
Repeatability: 0

Effective Date: Summer 2026

Credit Hours

Catalog Notation: 2-4-4
Credit Hour Distribution:

Lecture: 2	Lab: 4	Clinical: 0	**Total: 4**

General Course Information

Catalog Description

Welding codes and regulations covering materials, service limitation, fabrication, inspection, test procedures, and qualifications of welding operators. Special emphasis is placed on preparation for American Welding Society (AWS) certification.

General Course Objectives

Students will demonstrate an understanding of code welding. In addition, students will receive guided practice in preparing for certification testing and two opportunities to test.

Minimum Placement Levels

English	Reading	Math
Placement into ENG 098	Placement into CCS 098	Placement into MAT 059

Prerequisites

Credit in WLD 111 or equivalent

Methods of Evaluation

Students will be graded on 3 practical certification exams at 30% of total grade each, and a minimum of 1 written exam at 10% of total grade.

Instructional Materials and Additional Supplies

Welding gloves
Safety glasses

Course Content

General Learning Outcomes (GLOs)

- Reasoning and Inquiry: Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Course Overview	1. List the objectives of the course. 2. Describe how student is to be evaluated. 3. List the grade scale used for the course.	2	0	0
Welding Safety	1. Demonstrate proper safety procedures at all times. 2. Score at least 80% on all safety tests. 3. Identify the equipment and materials essential for safe welding. 4. Explain the safety precautions for electric arc welding. 5. Describe and demonstrate the proper clothing worn in the welding lab.	4	2	0
Shielded Metal Arc Welding and Gas Metal Arc Welding	1. Demonstrate correct machine setup for a given material. 2. Demonstrate correct technique for a given welding position. 3. Select correct polarity and electrode for a given code weld.	2	4	0
Arc Welding Electrodes	1. Select correct electrode and amperage setting for a given code weld.	2	0	0
Code Welding Basics	1. Demonstrate the correct procedure in preparing for a code weld test.	2	0	0
Code Welding Testing	1. Perform and pass a given code weld test.	2	10	0
Joint Fit Up and Positioning	1. Fit up and position a weld joint for a code weld test.	2	4	0
In-Position Welding Practice	1. Practice in-position welds until proficient and ready to test.	2	8	0
Out-of-Position Practice	1. Practice out-of-position welds until proficient and ready to test.	1	18	0
Visual Inspection Criteria	1. Identify flaws in a given code weld. 2. Evaluate if the weld meets the criteria of a given code.	2	2	0
Test Sample Preparation	1. Lay out and prepare destructive test samples to the criteria of a given code.	4	10	0
Types of Non-Destructive Testing	1. Identify non-destructive testing procedures per a given code. 2. Identify the different types of non-destructive tests.	3	0	0
Types of Destructive Testing	1. Safely operate destructive testing equipment. 2. Identify destructive testing procedures per a given code. 3. Identify the different types of destructive tests. 4. Identify a passing destructive test using precision measurement instruments. 5. Identify a failing destructive test using precision measurement instruments.	2	2	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	60	0