

**Clackamas Community College**

## Online Course/Outline Submission System

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**Section #1 General Course Information****Department:** Welding**Submitter**

First Name: Sue

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**Course Prefix and Number:** WLD - 113**# Credits:** 8**Contact hours**

Lecture (# of hours):

Lec/lab (# of hours): 176

Lab (# of hours):

Total course hours: 176

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

**Course Title:** Gas Metal Arc Welding/Flux Core Arc Welding (Wirefeed)**Course Description:**

Provides students with the opportunity to acquire knowledge and skills to set up and operate equipment to perform fillet and groove welds in all positions with the Gas Metal Arc and Flux Core Arc Welding processes. Oxy-fuel cutting, and air carbon arc cutting and gouging will be covered. Welding codes, standards and specifications will be reviewed.

**Type of Course:** Career Technical Preparatory

Is this class challengeable?

**Yes**

Can this course be repeated for credit in a degree?

**No**

Is general education certification being sought at this time?

**No**

Does this course map to any general education outcome(s)?

**No**

Is this course part of an AAS or related certificate of completion?

**Yes**

**Name of degree(s) and/or certificate(s):** Welding AAS

Are there prerequisites to this course?

**No**

Are there corequisites to this course?

**No**

Are there any requirements or recommendations for students taken this course?

**No**

Are there similar courses existing in other programs or disciplines at CCC?

**No**

Will this class use library resources?

**Yes**

**Have you talked with a librarian regarding that impact?**

**No**

Is there any other potential impact on another department?

**No**

Does this course belong on the Related Instruction list?

**No**

**GRADING METHOD:**

A-F or Pass/No Pass

**Audit: Yes**

When do you plan to offer this course?

**✓ Not every term**

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

**No**

Will this course appear in the college catalog?

**Yes**

Will this course appear in the schedule?

**Yes**

**Student Learning Outcomes:**

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

1. complete a safety test that includes applicable sections of the text book, Clackamas Community College safety rules and policies,
2. set up and operate GMAW (Gas Metal Arc Welding) equipment,
3. operate both manual and semiautomatic oxy fuel cutting equipment,
4. complete a progress chart of welds with GMAW (Gas Metal Arc Welding) and FCAW (Flux Core Arc Welding) electrodes in the flat, horizontal, vertical and overhead positions using proper welding techniques;
5. set up and operate FCAW (Flux Core Arc Welding) equipment,
6. perform destructive and nondestructive testing,
7. interpret welding procedures specifications and certification requirements,
8. research welding codes and standards,
9. set up and operate carbon arc cutting equipment,
10. set up and operate plasma arc cutting equipment.

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***This course does not include assessable General Education outcomes.***

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**Major Topic Outline:**

1. Class orientation, safety, and shop practices.
2. Safety, set up and operation of GMAW (Gas Metal Arc Welding) equipment.
3. Safety, set up and operation of oxy fuel cutting, using both manual and semi-automatic equipment.
4. Safety, set up and operation of FCAW (Flux Core Arc Welding) equipment.
5. Destructive and Nondestructive testing.
6. Fillet welds all positions on steel.
7. Groove welds all positions on steel.
8. Welding Procedures specifications and certification requirements.
9. Welding codes and standards.
10. Carbon arc cutting.
11. Safety, set up and operation of plasma cutting equipment.

**Does the content of this class relate to job skills in any of the following areas:**

- |                                      |           |
|--------------------------------------|-----------|
| 1. Increased energy efficiency       | <b>No</b> |
| 2. Produce renewable energy          | <b>No</b> |
| 3. Prevent environmental degradation | <b>No</b> |
| 4. Clean up natural environment      | <b>No</b> |

5. Supports green services **No**

Percent of course: 0%

First term to be offered:

**Next available term after approval**

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