

**Clackamas Community College**

## Online Course/Outline Submission System

 Show changes since last approval in red

Print

Edit

Delete

Back

Reject

Publish

**Section #1 General Course Information****Department:** Welding**Submitter**First Name: **Dustin**Last Name: **Bates**Phone: **3973**Email: **dustinb****Course Prefix and Number:** WLD - 104**# Credits:** **2****Contact hours**

Lecture (# of hours):

Lec/lab (# of hours): 44

Lab (# of hours):

Total course hours: 44

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:** Introduction to CNC Plasma Cutting**Course Description:**

Introduces the student to the basics of CNC plasma cutting. Participants will learn set-up and operation procedures for plasma machines and how to operate CNC controller software. Two-dimensional wire frame geometry creation and programming will be used to create projects. This course is recommended for anyone interested in CNC plasma cutting for industry applications or artwork.

**Type of Course:** Career Technical Preparatory

Is this class challengeable?

**No**

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?

**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. identify a variety of safety hazards in a CNC plasma cutting environment,
2. write a report on the theory of plasma cutting,
3. demonstrate plasma software capabilities by constructing and modifying two-dimensional wire frame geometry,
4. define terminology relevant to Plasma cutting and software for wireframe creation,
5. perform operation of CNC plasma,
6. demonstrate 2nd geometry creation and manipulation.

---

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

---

Major Topic Outline:

1. Shop Safety.
2. Parameters and Feeds for Plasma cutting.
3. Machine consumables.
4. Operating Machine Controls.
5. Code wizard.
6. Text cutting.
7. Scanning images to be imported.
8. Servo motors.
9. G – Code.
10. Using Mastercam for Geometry construction, nesting and Raster to vector conversion.

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>Yes</b> |
| 4. Clean up natural environment      | <b>No</b>  |
| 5. Supports green services           | <b>No</b>  |

Percent of course: 10%

First term to be offered:

**Next available term after approval**

:

