



WLD 263  
WELDING CAPSTONE

Welding Capstone WLD 263  
CCOG

Course Description

Provides an opportunity to demonstrate readiness for welding employment through the development and performance of a comprehensive welding project and the successful completion of an industry-based written assessment. Requires: Completion of One-Year Certificate in Welding Technology. Prerequisites: Prerequisites/concurrent: WLD 260 or WLD 261. Audit available.

Addendum to Course Description

The Welding Technology Capstone Class will allow the department to assess the knowledge and skills acquired during the student's welding education ensuring that each student who completes the program is work ready.

Through the fabrication process students will demonstrate their technical proficiency. The projects will take place at the Welding Department under the direction of an instructor. Students will be encouraged to choose projects that fall within their area of interest, allowing them to gain relevant real-world experience.

Intended Outcomes for the course

Upon completion of the course students should be able to:

- Function safely in the PCC Welding Lab.
- Design a project with instructor supervision.
- Demonstrate advanced fabrication techniques.
- Fabricate an instructor-approved project.
- Demonstrate job-seeking skills.

Aspirational Goals

Upon completion of this course the student will obtain the knowledge and skills to be employed in the welding industry.

Course Activities and Design

Welding lec/lab courses are Open Entry and Open Exit (OE/OE) and are offered concurrently. Courses are designed to meet the needs of the students with flexible scheduling options. Students may attend full time or part time. This is an OE/OE course which does not align with the normal academic calendar.

Outcome Assessment Strategies

The student will be assessed on his/her ability to demonstrate the development of course outcomes. The methods of assessment may include one or more of the following: oral or written examinations, quizzes, written assignments, visual inspection and welding tests.

Course Content (Themes, Concepts, Issues and Skills)

Function safely in the PCC Welding Lab

- Understand and practice personal safety by using proper protective gear
- Understand and practice power tool safety
- Understand and practice equipment safety for welding and oxy-fuel cutting systems
- Understand and maintain a safe work area
  - Recognize and report dangerous electrical and air/gas hose connections
  - Understand and practice fire prevention

Design and Fabricate approved Project

- Prepare fabrication drawings
- Prepare written proposals detailing the time, materials, budget and project schedule
- Deliver an oral presentation of project details to the faculty
- Determine most efficient welding process(es)
- Demonstrate welding and fabrication proficiency

Demonstrate job-seeking skills.

- Prepare a portfolio
- Interview with an employer
- Take off-site weld test

## Design and fabricate a project

For the Capstone class, you will develop a project with your instructor that will help you on your chosen path in welding.

**Propose the project** - The project must be submitted in written form to your instructor and also presented orally. This written proposal does not have to be a full report but should explain what you plan to do and why you want to do it. The report must also fulfill the requirements of the CCOG by including projected time, materials, budget, preferred process or processes, and project schedule.

Communicating with your instructor before writing your proposal is a very good idea. Your instructor should be able to help you with deciding the scope of your project given the time available (80 hours)

This is the time to further develop the skills that will be required for you to land the jobs that you are most interested in. Many students choose to use this time to work on certifications to help better their chances of employment.

**Do the work** – Make or do whatever you have proposed. Keep track of what you do each day on the form provided at the end of the packet. Regardless of the project you choose, you must prepare fabrication drawings of the project (even if it is a set of certification plates). Orthographic projections and an isometric view of the project will be required.

**Write a report** – Write a report detailing your project. Reflect on whether or not you have met the expectations of your proposal. Write of your successes and failures. Include photos of work in progress and finished product if you are able. For certs. You could include plates fit-up, root, cover, and certification paperwork, as an example.

## Demonstrate Job-Seeking Skills

**Prepare a portfolio:** All this means is get all the documents in order that will help you to better land the job of your choice.

**Write an awesome resume** – by now you are a welding rock star – express it through your resume. Your instructor should be able to help you with some wording and organizational tips to best describe your many welding, cutting, shop tool, and fabrication skills. A slightly altered resume for every job is not a bad idea. Changing a group of bullet points at the top of the resume to fit each employer's needs may help an employer see right away that you are the one for the job.

**Do you have any certifications?** — Copies of your certifications would be good to have in your portfolio. These can include any kind of relevant certifications to our industry. Welding, fork lift, CDL, CPR, heavy equipment operator etc.

**Get your references together** — Everyone asks for references. Have them prepared and at your fingertips in your handy-dandy employment portfolio.

**Cover letter?** The jury is still out on cover letters. Depends on who you ask. Here is the link to the page I gave up struggling to summarize without plagiarizing

<https://www.thebalancecareers.com/should-you-include-a-cover-letter-if-it-s-not-required-2060291>

some great points made there. So, if you want a cover letter write one that can be modified for each job and include it in your portfolio.

**Interview with an employer** — We have an arrangement with Madden Industrial Craftsmen, where our students set up an interview and the interviewer fills out a mock interview assessment for us. Here is a link to the website.

<https://mici.com/>

If you look at the CCOG for the class you will see that “Interview with an employer” and “take an offsite weld test” are requirements for WLD 263. If you are already looking for work and have had an interview with someone other than Madden you could write about the interview as an addendum to your written project report. I would suggest getting this done early on in the class and not waiting until the last minute.

The offsite weld test is a bit trickier. We no longer have a reliable partner to get this part easily done. If you have had a weld test for a job that you have applied for then the problem is solved. Barring this we will have to be creative. We can set up a weld test in the weld shop on a shift other than your own with a process that is used in the field that you are most interested in.

### **So, in a nutshell:**

Fabrication portion:

- Propose the project
- Complete the project
- Write report about project

Portfolio portion:

- Resume
- Cover letter
- Certifications
- References
- Mock or real interview
- “Offsite” weld test

Track your time and daily accomplishments:

- Fill out the time tracker and include it with your final report

# WLD 263 Time Tracker

## Monday

## Tuesday

## Wednesday

## Thursday

Week

1	Hours/work done:	Hours/work done:	Hours/work done:	Hours/work done:
2	Hours/work done:	Hours/work done:	Hours/work done:	Hours/work done:
3	Hours/work done:	Hours/work done:	Hours/work done:	Hours/work done:
4	Hours/work done:	Hours/work done:	Hours/work done:	Hours/work done:
5	Hours/work done:	Hours/work done:	Hours/work done:	Hours/work done:
6	Hours/work done:	Hours/work done:	Hours/work done:	Hours/work done:
7	Hours/work done:	Hours/work done:	Hours/work done:	Hours/work done:
8	Hours/work done:	Hours/work done:	Hours/work done:	Hours/work done:
9	Hours/work done:	Hours/work done:	Hours/work done:	Hours/work done:
10	Hours/work done:	Hours/work done:	Hours/work done:	Hours/work done:
11	Hours/work done:	Hours/work done:	Hours/work done:	Hours/work done:
12	Hours/work done:	Hours/work done:	Hours/work done:	Hours/work done:

Write the hours for each day and a short description of what you did on that day.