

Syllabus

Course Description

[WLD 230 Pipe Welding](#) course will prepare the student(s) for pipe welding techniques in the piping and pressure vessel industry through topics that includes: Pipe specifications, Tube Specifications, Preparation and fit-up, weld passes, walking the cup root pass, open v-groove welding in all common pipe testing positions including: 2G, 5G, and 6G on schedule 80, 2 inch and 6 inch pipe. Welding processes used in this course will include SMAW and GTAW. If time is available, the GMAW and FCAW processes may be included. The student will perform the AWS SENSE certifications for Level 1 and Level 2.

Major Instructional Areas

- Chapter 5 Shielded Metal Arc Welding of Pipe
- Chapter 6 Shielded Metal Arc Welding AWS SENSE Certification
- Chapter 18 Gas Tungsten Arc Welding of Pipe
- Chapter 19 Gas Tungsten Arc Welding pipe AWS SENSE Certification

Major Lab Areas

- Root pass, Fill pass, Cap pass
- SMAW joint preparations
- Discontinuities and defects
- 2G, 5G, 6G positions
- GTAW walking the cup
- AWS SENSE certifications

Required Textbooks

- Welding: Principles and Applications 8th Edition, by Larry Jeffus. Delmar, Cengage Learning, 2015.

Lab Equipment

- *See Student Welding Kit handout.

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Learning Objectives

Chapter 5 Shielded Metal Arc Welding of Pipe

- Pipe Specifications
- Tube Specifications
- Preparations and fit-up
- Weld Passes
- Weld Practice
- Weld Sequencing.
- Restarts

Chapter 6 Shielded Metal Arc Welding AWS SENSE Certification

- SMAW AWS SENSE Certification
- Welding Procedure Specification

Chapter 18 Gas Tungsten Arc Welding of Pipe

- Joint preparations
- Joint Cleaning
- Root Discontinuities and defects
- Purging and backing gas set-up
- Consumable inserts
- Cup walking techniques
- Weld passes
- GTAW and SMAW combination

Chapter 19 Gas Tungsten Arc Welding of Pipe AWS SENSE Certification

- GTAW pipe AWS SENSE Certification
- Welding Procedure Specification
- GTAW and SMAW certification
- Destructive testing
- Weld inspections

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Attendance

Employers expect employees to show up on time for every scheduled work day. Likewise, the Academic Foundations Department expects students to show up on time for every scheduled class day. Attendance is crucial for your success.

- If you miss an entire class, you are marked absent for the number of hours of that class.
- If you miss part of a class, this is how attendance is impacted:
 - Missing up to 5 minutes of a course hour = Tardy
 - Three tardies = 1 absence

***Missing more than 10% of class will result in automatic Failure.**

***15 week course meets 2 times a week for a total of 8 hrs. a week = 120 hrs.**

10% of 120 hrs. = 12 hours or 3 days max

If you are absent:

Each student is expected to be prepared for class upon return. You can check for missed assignments on Blackboard, obtain the phone numbers of two classmates to call for assignment information, or e-mail the instructor. Do not call to inform that you will be absent or for the assignments you missed. As you are expected to attend every class, it is not the instructor's responsibility or obligation to re-teach material to students who are absent.

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Expectation of Students:

As college students, you are expected to show you have the skills, work habits, and professional courtesy necessary to participate in your professional training at CSTCC. Student responsibilities are outlined in the Student Code of Conduct in the Cincinnati State Catalog. To be successful in this course you need to:

- Read the syllabus and consult it regularly. **It is a contract for learning.**
- Be on time for class and remain for the entire class period.
- Come to class with the required materials. **You must have the textbook before the second week of class.**
- **You must have your proper PPE by the 2nd week of class.**
- Listen carefully to other students and give helpful feedback in small groups.
- Be prepared for class by having the assignments completed.
- To stay on task whole class is in session. The first time your behavior disrupts classroom order, you will be given a warning. The second time you will be asked to leave and will need special permission from a Co-chair to re-enter. Any further disruption will result in a referral to the Behavior Intervention Team or your instructor filing a “Violation of the Student Code of Conduct” formal complaint with the Dean of Students.
- **Disruptive conduct includes any of the following:**
 - ✓ **Obnoxious, unruly behavior**
 - ✓ **Disrespect to instructor or other students**
 - ✓ **Refusal to participate in class**
 - ✓ **Talking during class**
 - ✓ **Chronic lack of preparedness**
- Arrange for childcare. Children are not permitted in class. In addition, guests are only permitted with the permission of the instructor.
- **Switch off all personal electronic devices before entering the classroom.** Under no circumstances is a student to send text messages during class. If there is an imperative need to have your phone on during class, please let the instructor know before class begins.
- Do not eat food during class (only drinks are permitted, not at the computer stations.)

Academic Honesty

Cincinnati State’s Student Code of Conduct prohibits academic dishonesty (such as cheating or plagiarism). Students in violation of the code will be subjected to disciplinary action as outlined in the Academic Integrity Policy and Procedures in the Cincinnati State catalog.

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Homework Policy

○ **Homework:**

- The welding program courses will have homework that will be assigned. The expectation is that you will do the assigned homework and ask questions over the material. If you choose not to do the homework, your quizzes will reflect your grade negatively. All homework assigned will have a due date at the discretion of the instructor.
- In the workplace, you are expected to come prepared each day. By signing the syllabus, you have agreed to come to class with the required materials and assignments.
- In case of emergency situations, contact your instructor.

Make-up Exam Policy

There will be no make-up exams offered unless you meet certain criteria approved by the chair person to make up the exam at a later date.

Assessment and Grading Scale

All of the following criteria must be met to pass this course:

- **Students must complete all written exams with minimum score of 75%.**
- **Students must complete the required labs.**
- **Students must complete the AWS SENSE pipe certifications.**

If these criteria are met, your final grade will be determined by averaging the following course components:

Labs and weld certifications = 70%

- **Complete all required labs.**
- **Complete all AWS SENSE welding certifications.**

Chapter written exams = 20%

- Use Study Guides.

Attendance/ housekeeping and overall attitude= 10%

- Weld practice.
- **Show up and be on time.**

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All grades will be reported as letter grades according to the following scale:

93 = 100% = A
84 = 92% = B
76 = 83% = C
under 75% = F

The instructor reserves the right to modify the syllabus to meet the needs of the students.

Disability Statement (Must be read aloud)

If you have a disability that may require accommodations, please contact the Cincinnati State Office of Disability Services to have it documented, assessed, and accommodations authorized. If authorized, ODS will provide a Letter(s) of Accommodation for you to give to your instructors. Every semester thereafter you will contact ODS to request your new letters of accommodation. To register or ask questions contact ODS at 513-569-1775 or email disabilities@cincinnatiastate.edu

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I have read the syllabus and assignment schedule for **WLD 230**. I understand that in order to be successful in this class, I must come to class prepared to work each day. I have read the instructor's requirements for attendance and grading and agree to follow these guidelines.

Student's Name

Student's Signature

Date



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