

JAMESTOWN COMMUNITY COLLEGE
State University of New York

INSTITUTIONAL COURSE SYLLABUS

Course Title: Adv Shielded Metal Arc Welding

Course Abbreviation and Number: WLD 2250

Credit Hours: 3

Course Type: Lecture/Lab

Course Description: Advanced shielded metal arc (stick) welding techniques will be performed using mild steel electrodes in the flat, horizontal, vertical, and overhead positions on structural plate. Identifying and analyzing defects in welding joints is emphasized. Carbon steel plate is welded using shielded metal arc welding (SMAW) to American Welding Society (AWS) Code. Students will develop skills necessary to make quality welds on carbon steel pipe with open root and backing rings according to AWS, American Society of Mechanical Engineers (ASME), and American Petroleum Institute (API) code.

Prerequisite: WLD 1350; Eligibility: MAT 1590.

Student Learning Outcomes:

Students who demonstrate understanding can:

1. Demonstrate an ability to make multiple pass welds in all positions.
 2. List specific types of weld joints as well as their structural application.
 3. Explain how to prepare, test, and evaluate guided bend test specimens.
 4. Demonstrate an ability to make code quality welds on plate.
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Topics Covered:

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| 1.) Multiple pass welds. <ul style="list-style-type: none">- Root pass- Hot pass- Filler pass- Multiple pass weld- Cover pass | - Restarting a weld bead
- Preheating and Postheating |
| 2.) SMAW of Plate <ul style="list-style-type: none">- Preparation<ol style="list-style-type: none">a.) Weld grooveb.) Back Gougingc.) Specimens for testing | 3.) Pipe <ul style="list-style-type: none">- Preparation and fitup- Joint Design- Codes and standards- Practice Welds- 2G positions- 5G positions- 6G positions |
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Information for Students

- Expectations of Students
 - [Civility Statement](#)
 - [Student Responsibility Statement](#)
 - [Academic Integrity Statement](#)
- [Accessibility Services](#)

Students who require accommodations to complete the requirements and expectations of this course because of a disability must make their accommodation requests to the Accessibility Services Coordinator.
- [Get Help: JCC & Community Resources](#)
- [Emergency Closing Procedures](#)
- Course grade is determined by the instructor based on a combination of factors, including but not limited to, homework, quizzes, exams, projects, and participation. Final course grade can be translated into a grade point value according to the following:

A=4.0	B+=3.5	B=3	C+=2.5	C=2	D+=1.5	D=1	F=0
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- Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, VA appointments) are welcome and encouraged to communicate these to the instructor.
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Effective Date: Fall 2021