

JAMESTOWN COMMUNITY COLLEGE
State University of New York

INSTITUTIONAL COURSE SYLLABUS

Course Title: Shielded Metal Arc Welding

Course Abbreviation and Number: WLD 1350

Credit Hours: 3

Course Type: Lecture/Lab

Course Description: This course introduces the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, students should be able to perform SMAW fillet and groove welds on carbon plate with prescribed electrodes.

No requisites.

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.

Topics Covered:

- Shielded metal arc equipment, setup, and operation
 - Welding current
 - Arc blow
 - Operating voltage
 - Types of power sources
 - Generators and alternators
 - Duty cycle
 - Welding cables, electrode holders, and clamps
 - setup
- Shielded metal arc welding of plate
 - Effect of current to high or low
 - Arc length
- Electrode angle
- Electrode manipulation
- Positioning of the welder
- Welding positions required fillet
 - 1F
 - 2F
 - 3F
 - 4F
- Welding positions required open root groove
 - 1G
 - 2G
 - 3G
 - 4G

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 |
|-------|--------|-----|--------|-----|--------|-----|-----|

- 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.

Effective Date: Fall 2021