

JAMESTOWN COMMUNITY COLLEGE
State University of New York

INSTITUTIONAL COURSE SYLLABUS

Course Title: Applied Welding

Course Abbreviation and Number: WLD 1240

Credit Hours: 3

Course Type: Lecture/Lab

Course Description: Students will understand the three most common welding processes that are available to perform welds and the numerous ways to cut various materials. The welding processes included are oxy-fuel, plasma, and use of various mechanical cutting machines. Upon completion, students will be able to perform code quality welds on plates of various thicknesses in all three processes, as well as perform cutting operations on plates using all cutting equipment.

No requisites.

Student Learning Outcomes:

Students who demonstrate understanding can:

1. List the important safety measures for the equipment used during this course
 2. Identify the proper welding process for a given application
 3. Perform welds in multiple positions using all three processes
 4. Identify acceptable welds versus unacceptable welds
-

Topics Covered:

- Safety in Welding
 - Burns; face, eye, and ear protection; ventilation; MSDS; clothing specifications; cylinders; fire protection; equipment maintenance; electrical safety; material handling
 - Cutting processes
 - Iron worker; shear; oxy fuel; plasma; semi-automatic oxy fuel; carbon arc gouging; Haas CNC introduction; manual mills & lathes
 - SMAW, GMAW, and GTAW, setup and operation
 - Welding current; arc blow; operating voltage; types of power sources; generators and alternators; duty cycle; welding cables, electrode holders, and work clamps; setup
 - SMAW, GMAW, and GTAW of plate
 - Effect of current too 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