



ILLINOIS VALLEY COMMUNITY COLLEGE

COURSE OUTLINE

DIVISION: Workforce Development

COURSE: WLD 1232 GMAW Open Root, All Positions

Date: Summer 2022

Credit Hours: 2

Complete all that apply or mark "None" where appropriate:

Prerequisite(s): WLD 1209

Enrollment by assessment or other measure? Yes No

If yes, please describe:

Corequisite(s): None

Pre- or Corequisite(s): WLD 2201

Consent of Instructor: Yes No

Delivery Method:

<input checked="" type="checkbox"/> Lecture	1 Contact Hours (1 contact = 1 credit hour)
<input type="checkbox"/> Seminar	0 Contact Hours (1 contact = 1 credit hour)
<input checked="" type="checkbox"/> Lab	2 Contact Hours (2-3 contact = 1 credit hour)
<input type="checkbox"/> Clinical	0 Contact Hours (3 contact = 1 credit hour)
<input type="checkbox"/> Online	
<input type="checkbox"/> Blended	
<input type="checkbox"/> Virtual Class Meeting (VCM)	

Offered: Fall Spring Summer

CATALOG DESCRIPTION and IAI NUMBER (if applicable):

Theory and practice in the preparation and welding of mild steel plate, vee groove, without and open root, in all positions using GMAW process with solid wire electrode.

ACCREDITATION STATEMENTS AND COURSE NOTES:

None

COURSE TOPICS AND CONTENT REQUIREMENTS:

Shop safety
Basic Printreading
Welding joints positions and symbols
Power sources, wire feeders for GMAW
Shielding gasses used in GMAW
GMAW electrode classification
PPE requirements
GMAW welding principles
GMAW metal transfer
GMAW welding techniques

INSTRUCTIONAL METHODS:

Classroom lecture, weld lab hands-on instruction

EVALUATION OF STUDENT ACHIEVEMENT:

1. Read all material before coming to class
2. Participate in classroom and lab discussions and lectures.
3. Attend all class and lab sessions
4. Complete all required assignments, exercises, tasks, quizzes and tests.
5. Self-asses welds, maximize lab time.

The following grading scale will be used:

A= 90-100
B= 80-89
C= 70-79
D= 60-69
F= 0-59

INSTRUCTIONAL MATERIALS:

Textbooks

Modern Welding textbook and workbook, G-W, 12th edition

Resources

Current Learning Management System (LMS) content available
Videos
Handouts
Lincoln Electric Welding technology center
Hobart institute of Welding technology

LEARNING OUTCOMES AND GOALS:

Institutional Learning Outcomes

- 1) Communication – to communicate effectively;
- 2) Inquiry – to apply critical, logical, creative, aesthetic, or quantitative analytical reasoning to formulate a judgement or conclusion;

- 3) Social Consciousness – to understand what it means to be a socially conscious person, locally and globally;
- 4) Responsibility – to recognize how personal choices affect self and society.

Course Outcomes and Competencies

1. Safe use of all equipment as well as all safety guidelines will be discussed and utilized.
2. Demonstrate the ability to prepare the groove face, root face, and assemble with a correct root opening.
3. Demonstrate the ability to prepare the groove face, and assemble with correct root opening without backing.
4. Demonstrate the ability to deposit a root weld, 6” long, with correct melt through.
5. Demonstrate the ability to deposit a root weld, 6” long, with correct groove back penetration.
6. Demonstrate the ability to deposit fill weld positions, 6” long, with restarts, in stringer and weave styles.
7. Demonstrate the ability to deposit cap pass welds, 6” long, with restarts, in stringer and weave styles
8. Demonstrate the ability to conduct a Visual Examination of these welds to AWS criteria.