ILLINOIS VALLEY COMMUNITY COLLEGE

COURSE OUTLINE

DIVISION: Workforce Development

COURSE: WLD 1213 GMAW Pipe, All Positions

Date: Summer 2022

Credit Hours: 2

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

Prerequisite(s): WLD 1232

Enrollment by assessment or other measure? ☐ Yes ☒ No
If yes, please describe:

Corequisite(s): None

Pre- or Corequisite(s): None

Consent of Instructor: ☐ Yes ☒ No

Delivery Method:

☒	**Lecture**	**1 Contact Hours (1 contact = 1 credit hour)**
☐	**Seminar**	**0 Contact Hours (1 contact = 1 credit hour)**
☒	**Lab**	**2 Contact Hours (2-3 contact = 1 credit hour)**
☐	**Clinical**	**0 Contact Hours (3 contact = 1 credit hour)**
☐	**Online**	
☐	**Blended**	
☐	**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 pipe, vee groove, 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
GMAW pipe 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 deposit a root weld with correct melt through.
4. Demonstrate the ability to deposit fill weld positions with restarts, in stringer and weave styles.
5. Demonstrate the ability to deposit cap pass welds with restarts, in stringer and weave styles.
6. Demonstrate the ability to conduct a Visual Examination of these welds to AWS criteria.