Course Number and Title	WL 272 ADVANCED FLUX-CORE ARC WELDING (FCAW)

Credit Hours	3

Course Description	Instruction and practice of equipment inspection, maintenance, repair, and set-up for flux-cored arc welding - S (self-shielded). Instruction and practice in the production of fillet and groove welds in all positions on carbon steel using self-shielded flux-cored electrode. Practice and production of assemblies and coupons to be examined and tested according to Section 8 AWS SENSE QC10.

Prerequisite(s) and/or Corequisite(s)	WL 203 – Flux-Core Arc Welding (FCAW)

Required Textbooks/References/Course Materials:

Modern Welding Lab Workbook	12th	Althouse, Andrew D.	Goodheart-Wilcox Co.	1635636876
Modern Welding	12th	Althouse, Andrew D.	Goodheart-Wilcox Co.	1635636868

	General Education Outcomes
1	Utilize written and verbal language to discuss and comprehend information, incorporating a variety of technologies, such as text, data, and images (written language, verbal language, and information technology).
2	Identify and interpret relevant information in order to formulate an opinion or conclusion (critical thinking).
3	Demonstrate and communicate computational methods and mathematical reasoning in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate) (quantitative literacy and fluency).
4	Communicate in appropriate ways with those who are culturally diverse (intercultural competence).

	Program/Department Outcomes
1	Prepare students to become safe and competent welders
2	Provide opportunities to possess communication and critical thinking skills
3	Demonstrate responsible professional conduct and behavior
4	Effectively communicate
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	Course Outcomes (CO)	Bloom's Domain for CO (C, A, P), Category, and Level	Program/ Department Outcome(s)	Written Language	Verbal Language	Information Technology	Critical Thinking	Quantitative Literacy and Fluency	Intercultural Competence
1	Ensure that safety aspects of welding processes and practices are understood and followed	C- Understanding (2)	1,2,3,4	0	1	0	1	0	0
2	Make fillet welds in all positions on carbon steel	P- Perfect (3)	1,2,3,4	0	1	0	0	1	0
3	Understand and demonstrate method: open groove weld on 2G, 3G, 4G positions	P- Perfect (3)	1,2,3,4	0	0	0	1	1	0
4	Discuss and set wire speed, voltage, and proper shielding gas on FCAW machine	C- Applying (3)	1,2,3,4	0	1	0	1	1	0
5	Perform both nondestructive and destructive tests on various joint designs and welds	P- Articulate (4)	1,2,3,4	0	1	0	1	1	0
6	Distinguish between qualification and certification procedures	C- Understanding (2)	1,2,3,4	0	1	0	1	1	0
7									
8									
9									
10									

Bloom's Domain Legend
C = Cognitive
A = Affective
P = Psychomotor

General Education Outcome Legend
2 = Included and Measurable
1 = Introduced and/or Minimally Addressed and Not Measurable
0 = Not included

Approved: May 2021
Reviewed: November 11, 2021