

COURSE OUTCOME MATRIX COURSE SYLLABUS PART 2 of 3

Course Number and Title	WL 104 SHIELDED METAL ARC WELDING (SMAW)
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Credit Hours	3
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Course Description	Through classroom and/or lab/shop learning and assessment activities, students in this course will describe the shielded metal arc welding (SMAW) process, demonstrate the safe and correct set-up of the SMAW workstation, associate SMAW electrode classifications with base metals and joint criteria, demonstrate proper electrode selection and use based on metal types and thicknesses, build pads of weld beads with selected electrodes in the flat position, build pads of weld beads with selected electrodes in the horizontal position, perform basic SMAW welds on selected weld joints, and perform visual inspection of welds.
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Prerequisite(s) and/or Corequisite(s)	
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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	0	0	0
2	Demonstrate the safe and correct set up of the SMAW workstation.	P- Imitate (1)	1, 2, 3, 4	0	1	0	1	1	0
3	Correlate SMAW electrode classifications with base metals and joint criteria and demonstrate proper electrode selection based on metal types and thickness.	C- Applying (3)	1, 2, 3, 4	0	0	0	1	1	0
4	Build pads of weld beads with selected electrodes in the flat and horizontal positions as well as perform basic SMAW welds on selected weld joints.	P- Imitate (1)	1, 2, 3, 4	0	0	0	1	1	0
5	Perform visual inspections of welds.	C- Understanding (2)	1, 2, 3, 4	0	0	0	1	0	0
6	Troubleshoot common issues with SMAW machines and weldments.	C- Analyzing (4)	1, 2, 3, 4	0	1	0	1	1	0
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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