

COURSE OUTCOME MATRIX COURSE SYLLABUS PART 2 of 3

Course Number and Title	WL 266 ADVANCED GAS TUNGSTEN ARC WELDING (GTAW)
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Credit Hours	3
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Course Description	Advanced topics in GTAW welding, including welding in various positions and directions. The student will exhibit expertise in various welding positions on pipe; describe safety rules and equipment used; and describe the effects of welding parameters in GTAW. The student will weld various joint designs and diagnose welding problems and perform visual inspection.
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Prerequisite(s) and/or Corequisite(s)	WL 202 – Gas Tungsten Arc Welding (GTAW)
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Required Textbooks/References/Course Materials:
None.

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	Demonstrate appropriate methods for preparing base metal materials	P- Manipulate (2)	1,2,3,4	0	0	0	1	1	0
3	Select the appropriate tungsten electrode type and diameter for related equipment and projects	P- Perfect (3)	1,2,3,4	0	1	0	1	1	0
4	Select and apply the appropriate heat range, high frequency, polarity, shielding gas flow rate, filler rod type, and diameter for related equipment and projects	P- Perfect (3)	1,2,3,4	0	1	0	1	1	0
5	Demonstrate the manipulative skills necessary to weld selected joint designs with GTAW process which meet industry standards in 2G, 3G, 4G, and 6G positions and various base metals.	P- Articulate (4)	1,2,3,4	0	0	0	1	1	0
6	Distinguish between qualification and certification procedures	C- Understanding (2)	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