

4/14/2025

DATE



REQUIRED COURSE



ELECTIVE COURSE

TEC

DIVISION



NEW COURSE



REVISION

Lake Land College
Course Information Form

COURSE NUMBER:	WLD-061		TITLE (30 Characters Max):		Gas Metal Arc Welding I					
SEM CR HRS:	2.5	Lecture:		1.5	Lab:	3.0	ICCB Lab:	3.0	ECH:	4.5
Course Level:	<input type="checkbox"/> Gen Ed / IAI <input type="checkbox"/> Baccalaureate /Non-IAI		<input checked="" type="checkbox"/> Career/Technical <input type="checkbox"/> Dev Ed/Not in Degree Audit		Clinical Practicum:	0.0	Work-based Learning:	0.0	WBL ECH:	0.0
Course PCS & CIP:	12 - 48.0508			IAI Code	N/A			Contact Hours (Minutes/Week)		
Repeatable (Y/N):	N	Pass/Fail (Y/N):	N	Variable Credit (Y/N):	N	Min:		Max:		16 Wks 225 8 Wks 450
Prerequisites:	WLD-040 or WLDC-040 and WLD-041 or WLDC-041									
Corequisites:	None									
Catalog Description: (40 Word Limit)	This course introduces gas metal arc welding procedures and equipment. Students learn to perform single and multiple pass welds in the flat position with gas metal arc welding equipment.									

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work Based Learning
GMAW safety practices	3			
GMAW equipment	3			
GMAW set up	3			
GMAW maintenance	6	3		
Single pass beads	3.5	17		
Multiple pass beads	3.5	20		
TOTAL	22	40	0	0

EVALUATION

QUIZZES	<input checked="" type="checkbox"/>	EXAMS	<input checked="" type="checkbox"/>	ORAL PRES	<input type="checkbox"/>	PAPERS	<input type="checkbox"/>
LAB WORK	<input checked="" type="checkbox"/>	PROJECTS	<input checked="" type="checkbox"/>	COMP FINAL	<input type="checkbox"/>	OTHER	<input type="checkbox"/>

COURSE MATERIALS

TITLE:	Welding Principles and Practices
AUTHOR:	Edward Bohnart
PUBLISHER:	McGraw Hill
VOLUME/EDITION/URL:	6th edition
COPYRIGHT DATE:	2024

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
GMAW safety practices	3	1. Demonstrate proper use and inspection of personal protection equipment (PPE). 2. Demonstrate proper safe operation practices in work area. 3. Demonstrate proper use and inspection of ventilation equipment. 4. Demonstrate proper Hot Zone operations. 5. Demonstrate proper work actions for working in confined spaces. 6. Demonstrate proper use of precautionary labeling and MSDS information. 7. Demonstrate proper inspection and operation of equipment used for each welding and thermal cutting process used. (This is best done as a part of the process module/unit for each of the required welding or thermal cutting processes.) 8. Perform safety inspections of GMAW equipment and accessories.
GMAW equipment	3	1. Identify GMAW equipment and accessories. 2. Make minor external repairs to GMAW equipment and accessories.

GMAW set up	3	1. Identify and implement GMAW equipment. 2. Interpret welding symbol information. 3. Fabricate parts from a drawing or sketch. 4. Set up for GMAW-S operations on carbon steel.
GMAW maintenance	9	1. Make minor external repairs to GMAW equipment and accessories. 2. Perform safety inspections of GMAW equipment and accessories. 3. Make minor external repairs to GMAW equipment and accessories.
Single pass beads	20.5	1. Identify and demonstrate acceptable GMAW beads in the flat position with single pass for square butt, lap and fillet welds. 2. Fabricate parts from a drawing or sketch.
Multiple pass beads	23.5	1. Identify and demonstrate acceptable GMAW beads in the flat position with single pass for square butt, lap and fillet welds. 2. Fabricate parts from a drawing or sketch.
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Outcomes*	At the successful completion of this course, students will be able to:
Course Outcome 1	Perform safety inspections of GMAW equipment and accessories.
Course Outcome 2	Demonstrate GMAW beads in the flat position using a single pass for square butt, lap, and fillet welds.
Course Outcome 3	Demonstrate GMAW beads in the flat position using a multiple passes for square butt, lap, and fillet welds.
Primary Laker Learning Competency	Creative Thinking & Problem Solving: Students think creatively to solve problems.
Secondary Laker Learning Competency	Information & Technology Literacy: Students evaluate information effectively using the appropriate technological tools.

*Course and program outcomes will be used in the software for outcomes assessment and should include at least 1 primary and 1 secondary Laker Learning Competency. Limit to 3-5.