

4/14/2025

DATE

REQUIRED COURSE

ELECTIVE COURSE

TEC DIVISION

 NEW COURSE REVISION

# Lake Land College

## Course Information Form

<b>COURSE NUMBER:</b>	WLD-062		<b>TITLE (30 Characters Max):</b>			Gas Metal Arc Welding II							
<b>SEM CR HRS:</b>	2.5	<b>Lecture:</b>		0.5	<b>Lab:</b>	4.0	<b>ICCB Lab:</b>	4.0	<b>ECH:</b>	4.5			
<b>Course Level:</b>	<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		<b>Clinical Practicum:</b>	0.0	<b>Work-based Learning:</b>	0.0	<b>WBL ECH:</b>	0.0			
<b>Course PCS &amp; CIP:</b>	12 - 48.0508		<b>IAI Code</b>		N/A			<b>Contact Hours (Minutes/Week)</b>					
<b>Repeatable (Y/N):</b>	N	<b>Pass/Fail (Y/N):</b>	N	<b>Variable Credit (Y/N):</b>	N	<b>Min:</b>		<b>Max:</b>		16 Wks	225	8 Wks	450
<b>Prerequisites:</b>	WLD-040 or WLDC-040, WLD-041 or WLDC-041 and WLD-061 or WLDC-061												
<b>Corequisites:</b>	None												
<b>Catalog Description: (40 Word Limit)</b>	This course teaches students to perform gas metal arc welds in the horizontal, vertical and overhead positions using single and multiple pass welds.												

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work Based Learning
Horizontal single pass	1	8		
Horizontal multiple pass	1.5	10		
Vertical single pass	1	8.5		
Vertical multiple pass	1.5	10		
Overhead single pass	1	8.5		
Overhead multiple pass	1.5	15		
<b>TOTAL</b>	<b>7.5</b>	<b>60</b>	<b>0</b>	<b>0</b>

### EVALUATION

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

### COURSE MATERIALS

<b>TITLE:</b>	Welding Principles and Practices
<b>AUTHOR:</b>	Edward Bohnart
<b>PUBLISHER:</b>	MCGraw/Hill
<b>VOLUME/EDITION/URL:</b>	6th Edition
<b>COPYRIGHT DATE:</b>	2024

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
Horizontal single pass	9	<p><i>The student will be able to:</i></p> <ol style="list-style-type: none"> <li>1. Identify and demonstrate GMAW beads in the horizontal position with single pass for square butt, lap, and "T" welds.</li> <li>2. Make and examine fillet welds in all positions on carbon steel.</li> <li>3. Make and examine groove welds in all positions on carbon steel.</li> <li>4. Set up for GMAW (spray) operations on carbon steel.</li> <li>5. Fabricate parts from a drawing or sketch.</li> <li>6. Pass GMAW-S and GMAW (spray) welder performance qualification test on carbon steel.</li> </ol>

Horizontal multiple pass	11.5	<ol style="list-style-type: none"> <li>1. Identify and demonstrate GMAW beads in the horizontal position with multiple passes for butt, lap, and "T" welds.</li> <li>2. Make and examine fillet welds in all positions on carbon steel.</li> <li>3. Make and examine groove welds in all positions on carbon steel.</li> <li>4. Set up for GMAW (spray) operations on carbon steel.</li> <li>5. Fabricate parts from a drawing or sketch.</li> <li>6. Pass GMAW-S and GMAW (spray) welder performance qualification test on carbon steel.</li> </ol>
Vertical single pass	9.5	<ol style="list-style-type: none"> <li>1. Identify and demonstrate GMAW beads in the vertical up position with single pass for square butt, lap and "T" welds.</li> <li>2. Make and examine fillet welds in all positions on carbon steel.</li> <li>3. Make and examine groove welds in all positions on carbon steel.</li> <li>4. Set up for GMAW (spray) operations on carbon steel.</li> <li>5. Fabricate parts from a drawing or sketch.</li> <li>6. Pass GMAW-S and GMAW (spray) welder performance qualification test on carbon steel.</li> </ol>
Vertical multiple pass	11.5	<ol style="list-style-type: none"> <li>1. Identify and demonstrate GMAW beads in the vertical up position with multiple passes for butt, lap, and "T" welds.</li> <li>2. Make and examine fillet welds in all positions on carbon steel.</li> <li>3. Make and examine groove welds in all positions on carbon steel.</li> <li>4. Set up for GMAW (spray) operations on carbon steel.</li> <li>5. Fabricate parts from a drawing or sketch.</li> <li>6. Pass GMAW-S and GMAW (spray) welder performance qualification test on carbon steel.</li> </ol>
Overhead single pass	9.5	<ol style="list-style-type: none"> <li>1. Identify and demonstrate GMAW beads in the overhead position with multiple passes for butt, lap, and "T" welds.</li> <li>2. Make and examine fillet welds in all positions on carbon steel.</li> <li>3. Make and examine groove welds in all positions on carbon steel.</li> <li>4. Set up for GMAW (spray) operations on carbon steel.</li> <li>5. Fabricate parts from a drawing or sketch.</li> <li>6. Pass GMAW-S and GMAW (spray) welder performance qualification test on carbon steel.</li> </ol>
Overhead multiple pass	16.5	<ol style="list-style-type: none"> <li>1. Identify and demonstrate GMAW beads in the overhead position with multiple passes for butt, lap, and "T" welds.</li> <li>2. Make and examine fillet welds in all positions on carbon steel.</li> <li>3. Make and examine groove welds in all positions on carbon steel.</li> <li>4. Set up for GMAW (spray) operations on carbon steel.</li> <li>5. Fabricate parts from a drawing or sketch.</li> <li>6. Pass GMAW-S and GMAW (spray) welder performance qualification test on carbon steel.</li> </ol>
<b>67.5</b>		

<b>Outcomes*</b>	<b>At the successful completion of this course, students will be able to:</b>
Course Outcome 1	Demonstrate GMAW beads in the horizontal position with multiple passes for square butt, lap, and "T" welds.
Course Outcome 2	Demonstrate GMAW beads in the vertical up position using a multiple passes for square butt, lap, and "T" welds.
Course Outcome 3	Demonstrate GMAW beads in the overhead position using a multiple passes for square butt, lap, and "T" 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.*