

4/14/2025

DATE

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REQUIRED COURSE

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ELECTIVE COURSE

TEC

DIVISION

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NEW COURSE

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REVISION

Lake Land College

Course Information Form

COURSE NUMBER:		WLD-052		TITLE (30 Characters Max):		Shielded Metal Arc Welding II																					
SEM CR HRS:		2.5		Lecture:		0.5		Lab:		4.0		ICCB Lab:		4.0		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, WLD-041 or WLDC-041 and WLD-051 or WLDC-051																									
Corequisites:		None																									
Catalog Description: (40 Word Limit)		In this course, students learn to perform single and multiple pass welds with shielded metal arc welding equipment in all positions.																									

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work Based Learning
Horizontal single pass	1	10		
Horizontal multiple pass	1.5	10		
Vertical single pass	1	10		
Vertical multiple pass	1.5	10		
Overhead single pass	1	10		
Overhead multiple pass	1.5	10		
TOTAL	7.5	60	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
COPYRIGHT DATE:	2024

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
Horizontal single pass	11	1. Set up for SMAW operations on carbon steel. 2. Operate SMAW equipment on carbon steel. 3. Make fillet welds in all positions on carbon steel. 4. Make groove welds in all positions on carbon steel. 5. Pass SMAW welder performance qualification test (2G and 3G, uphill, limited thickness test plates) on carbon steel.
Horizontal multiple pass	11.5	1. Set up for SMAW operations on carbon steel. 2. Operate SMAW equipment on carbon steel. 3. Make fillet welds in all positions on carbon steel. 4. Make groove welds in all positions on carbon steel. 5. Pass SMAW welder performance qualification test (2G and 3G, uphill, limited thickness test plates) on carbon steel.

Vertical single pass	11	<ol style="list-style-type: none"> 1. Set up for SMAW operations on carbon steel. 2. Operate SMAW equipment on carbon steel. 3. Make fillet welds in all positions on carbon steel. 4. Make groove welds in all positions on carbon steel. 5. Pass SMAW welder performance qualification test (2G and 3G, uphill, limited thickness test plates) on carbon steel.
Vertical multiple pass	11.5	<ol style="list-style-type: none"> 1. Set up for SMAW operations on carbon steel. 2. Operate SMAW equipment on carbon steel. 3. Make fillet welds in all positions on carbon steel. 4. Make groove welds in all positions on carbon steel. 5. Pass SMAW welder performance qualification test (2G and 3G, uphill, limited thickness test plates) on carbon steel.
Overhead single pass	11	<ol style="list-style-type: none"> 1. Set up for SMAW operations on carbon steel. 2. Operate SMAW equipment on carbon steel. 3. Make fillet welds in all positions on carbon steel. 4. Make groove welds in all positions on carbon steel.
Overhead multiple pass	11.5	<ol style="list-style-type: none"> 1. Set up for SMAW operations on carbon steel. 2. Operate SMAW equipment on carbon steel. 3. Make fillet welds in all positions on carbon steel. 4. Make groove welds in all positions on carbon steel.
67.5		

Outcomes*		At the successful completion of this course, students will be able to:
Course Outcome 1	Demonstrate SMAW beads in the horizontal position on steel plate.	
Course Outcome 2	Demonstrate SMAW beads in the vertical position on steel plate.	
Course Outcome 3	Demonstrate SMAW beads in the overhead position on steel plate.	
Course Outcome 4	Test for AWS standards on a guided bend test.	
Primary Laker Learning Competency	Professional Skills & Ethics: Students demonstrate professional skills and ethical accountability.	
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.