5/2/2025 DATE
☑ REQUIRED COURSE
☐ ELECTIVE COURSE

TEC DIVISION
☐ NEW COURSE
☑ REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	WLD-051		TITLE *(30 Characters Max)*:	Shielded Metal Arc Welding I							
SEM CR HRS:	2.5	Lecture:	1.0	Lab:	3.0	ICCB Lab:	3.0	ECH:	4.0		
Course Level:	☐ Gen Ed / IAI ☐ Baccalaureate /Non-IAI ☑ Career/Technical ☐ Dev Ed/ Not in Degree Audit			Clinical Practicum:	0.0	Work-based Learning:	0.0	WBL ECH:	0.0		
COURSE PCS #	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	200	8 Wks	400
Prerequisites:	WLD-040 or WLDC-040 and WLD-041 or WLDC-041										
Corequisites:	None										
Catalog Description: (40 Word Limit)	This course provides an introduction to shielded metal arc welding. Students learn to set up equipment, identify electrodes, and strike and run beads in the flat position.										

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
SMAW equipment identification	2.5	1		
SMAW safety practices	2.5			
SMAW electrode identification	3	1		
SMAW set up	2.5	4		
Equipment problems	1.5	15		
Single pass beads	1.5	18		
Multiple pass beads	3	12		
TOTAL	16.5	51	0	0

EVALUATION							
QUIZZES	☑	EXAMS	☑	ORAL PRES	☐	PAPERS	☐
LAB WORK	☑	PROJECTS	☑	COMP FINAL	☐	OTHER	☐

COURSE MATERIALS		
TITLE:	Welding: Principles and Practices	
AUTHOR:	Edward Bohnart	
PUBLISHER:	McGraw/Hill	
VOLUME/EDITION/URL:	6th	
COPYRIGHT DATE:	2024 MAW Equipment Identification	

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		The student will be able to:
SMAW equipment identification	3.5	1. Performs safety inspections of SMAW equipment and accessories.
SMAW safety practices	2.5	1. Demonstrate proper use and inspection of personal protection equipment (PPE). 2. Demonstrate proper Hot Zone operation. 3. 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.)
SMAW electrode identification	4	1. Identify types of SMAW electrodes.
SMAW set up	6.5	1. Make minor external repairs to SMAW equipment and accessories.
Equipment problems	16.5	1. Identify and demonstrate SMAW equipment problems.
Single pass beads	19.5	1. Interpret basic elements of a drawing or sketch. 2. Interpret welding symbol information. 3. Fabricate parts from a drawing or sketch. 4. Operate SMAW equipment on carbon steel.
Multiple pass beads	15	1. Interpret basic elements of a drawing or sketch. 2. Interpret welding symbol information. 3. Fabricate parts from a drawing or sketch. 4. Operate SMAW equipment on carbon steel.
	67.5	

Outcomes*	At the successful completion of this course, students will be able to:
Course Outcome 1	Identify SMAW equipment.
Course Outcome 2	Demonstrate safety practices for equipment and equipment identification.
Course Outcome 3	Demonstrate SMAW single-pass fillet welds in the flat position.
Course Outcome 4	Demonstrate SMAW multi-pass fillet welds in the flat position.
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.*