4/14/2025	DATE	TEC	DIVISION
☑	REQUIRED COURSE	☐	NEW COURSE
☐	ELECTIVE COURSE	☑	REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	WLD-080		**TITLE** *(30 Characters Max):*	Pipe Welding							
SEM CR HRS:	3.0	**Lecture:**	1.0	**Lab:**	4.0	**ICCB Lab:**	4.0	**ECH:**	5.0		
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 & 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**	250	**8 Wks**	500
Prerequisites:	WLD-053 or WLDC-053 and WLD-070 or WLDC-070										
Corequisites:	None										
Catalog Description: (40 Word Limit)	This is a basic course in pipe welding. Topics include fabrication of industrial piping systems and welding techniques/applications.										

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
Pipe welding nomenclature	3	2		
Pipe preparation	2.5	4		
Pipe joint assembly	2.5	4		
Horizontal welds on pipe	2	15		
Vertical welds on pipe	2.5	15		
6G welds on pipe	2.5	15		
Guided bend test of 6G welds	0	5		
TOTAL	15	60	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

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		The student will be able to:
Pipe welding nomenclature	5	1. Identify the four positions (1G, 2G, 5G, and 6G) defined by the ASME code.
Pipe layout & preparation	13	1. Demonstrate the layout and preparation of pipe with the included angle and root face to meet ASME specifications.
Horizontal welds on pipe	17	1. Demonstrate welding a pipe nipple assembly in the 2G position using E6010 for the root pass and E7018 for the fill and cap passes, to meet ASME specifications
Vertical welds on pipe	17.5	1. Demonstrate welding a pipe in the 5G position using ER70S-6 for the root pass and E7018 for the fill and cap passes, to meet ASME specifications.

6G welds on pipe	17.5	1. Demonstrate welding a pipe in the 6G position using ER70S-6 for the root pass and E7018 for the fill and cap passes, to meet ASME specifications.
Guided bend testing	5	1. Test for ASME Standards on a guided bend test. 2. Examine cut surfaces and edges of prepared base metal parts. 3. Examine tacks, root passes, intermediate layers and completed welds.
	75	

Outcomes*	At the successful completion of this course, students will be able to:
Course Outcome 1	Demonstrate welding pipe nipple in the 2G position using E6010 for the root pass and E7018 for the fill and cover passes.
Course Outcome 2	Demonstrate welding pipe 5G position using ER70S-6 for the root pass and E7018 for the fill and cover passes.
Course Outcome 3	Demonstrate welding pipe in the 6G position using ER70S-6 for the root pass and E7018 for the fill and cover passes.
Primary Laker Learning Competency	Scientific Literacy: Students apply the scientific process to real-life situations.
Secondary Laker Learning Competency	Critical Thinking: Students connect knowledge from various disciplines to formulate logical conclusions.

**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.*