

2/27/2023

DATE

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DIVISION



REQUIRED COURSE

☐ NEW COURSE

ELECTIVE COURSE

☒ REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	WEL-055		TITLE: (30 Characters Max)		Pipefitting & Welding						
SEM CR HRS:	3	Lecture:	1		Lab:	4			ECH:	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	Work-based Learning:	0	WBL ECH:	0	
COURSE PCS #	12.480508		IAI Code				Contact Hours (Minutes/Week)				
Repeatable (Y/N):	Y	Pass/Fail (Y/N):	N	Variable Credit (Y/N):	N	Min:	Max:	16 Wks	250	8 Wks	500
Prerequisites:	WEL-057 and WEL-048										
Corequisites:	None										
Catalog Description: (40 Word Limit)	This is a basic course in pipefitting and welding equipment and safety. Topics include: fabrication and installation of industrial piping systems, pipe layout and welding techniques/applications.										

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
Flanges	1	1		
Gaskets	1	2		
Pipe Welding Nomenclature	3	1		
Pipe Layout & Preparation	2	3		
Pipe Joint Assembly	2	3		
Horizontal Welds on Pipe	2	15		
Vertical Welds on Pipe	2	15		
Welds on 45 Degree Angle Pipe	2	20		
TOTAL	15	60	0	0

EVALUTION			
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 type="checkbox"/>	COMP FINAL <input checked="" type="checkbox"/>	OTHER <input type="checkbox"/>

COURSE MATERIALS	
TITLE: <u>Pipe Welding</u>	
AUTHOR: <u>Larry Jeffus, Bryan Baker</u>	
PUBLISHER: <u>Cengage Learning</u>	
VOLUME/EDITION/URL: <u>1st</u>	
COPYRIGHT DATE: <u>2017</u>	

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
Flanges	2	Identify common types of flange faces. Discuss flange safety practices.
Gaskets	3	Conclude the type of gasket to use and demonstrate proper installation techniques.
Pipe Welding Nomenclature	4	Identify the four positions (1G, 2G, 5G, and 6G) defined by the ASME code.
Pipe Layout & Preparation	5	Demonstrate layout and preparation of pipe nipples with the included angle and root face to meet ASME specifications.
Pipe Joint Assembly	5	Demonstrate assembly of pipe workpiece with proper alignment, root opening, and feathered tack welds.
Horizontal Welds on Pipe	17	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	Demonstrate welding a pipe nipple assembly in the 5G position using E6010 for the root pass and E7018 for the fill and cap passes, to meet ASME specifications.
Welds on 45 Degree Angle Pipe	22	Demonstrate welding a pipe nipple assembly in the 6G position using E6010 for the root pass and E7018 for the fill and cap passes, to meet ASME specifications.
	75	

COURSE OUTCOMES*	At the successful completion of this course, students will be able to:
	Demonstrate welding a pipe nipple assembly in the 2G position using E6010 for the root pass and E7018 for the fill and cover passes.
	Demonstrate welding a pipe nipple assembly in the 5G position using E6010 for the root pass and E7018 for the fill and cover passes.
	Demonstrate welding a pipe nipple assembly in the 6G position using E6010 for the root pass and E7018 for the fill and cover passes.

** Course Outcomes will be used in the Assessment Software for Outcomes Assessment. Limit to 3 - 5.*