5/6/2025	DATE	TEC	DIVISION
☑	REQUIRED COURSE	☐	NEW COURSE
☑	ELECTIVE COURSE	☑	REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	MTT-050		**TITLE:** *(30 Characters Max)*		Intro to Machining Procedures						
SEM CR HRS:	3.0	**Lecture:**	2.0	**Lab:**	2.0	**ICCB Lab:**	2.0	**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 - 48.0503		**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:	None										
Corequisites:	None										
Catalog Description: (40 Word Limit)	A study designed to highlight the theory and application of cutoff machines, drill press, engine lathe, milling machines and basic benchwork involving layout and hand tools.										

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Non-Clinical Internship/ SOE
Machining, safety and careers	4	1		
Drawings, measurements and layout process	2	3		
Hand tools, fasteners and fixtures	4	1		
Cutting fluids, saws, drills and grinders	4	2		
Lathe machine	8	12		
Milling machine	8	12		
TOTAL	30	31	0	0

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

COURSE MATERIALS		
TITLE:	Machining Fundamentals	
AUTHOR:	Bob Dixon and John R. Walker	
PUBLISHER:	G-W	
VOLUME/EDITION/URL:	11th edition	
COPYRIGHT DATE:	2023	
ISBN:	978-1-64925-079-0	

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		The student will be able to:
Machining, safety and careers	5	1. Describe the evolution of machining and the possible future of machining technology and careers. 2. Demonstrate the basic machine tooling operations and safety.
Drawings, measurements and layout process	5	1. Read and interpret drawings. 2. Take measurements. 3. Lay out new parts to be manufactured.
Hand tools, fasteners and fixtures	5	1. Demonstrate the proper use of various tools. 2. Use fasteners and fixtures to hold parts during the machining process.
Cutting fluids, saws, drills and grinders	6	1. Demonstrate machining processes using cutting fluids. 2. Use saws and drills to complete a lab project properly.
Lathe machine	20	1. Demonstrate safe and proper use of a lathe machine while properly completing a lab project.

Milling machine	20	1. Demonstrate safe and proper use of a vertical milling machine while properly completing a lab project.
	61	

Outcomes*	At the successful completion of this course, students will be able to:
Course Outcome 1	Demonstrate proficiency in the use of measuring tools.
Course Outcome 2	Use a machine lathe to create a precision aluminum handle and brass hammerhead.
Course Outcome 3	Use a vertical milling machine to modify a precision aluminum handle and brass hammerhead.
Primary Laker Learning Competency	Professional Skills & Ethics: Students demonstrate professional skills and ethical accountability.
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*