5/21/2025	DATE	TEC	DIVISION
☑	REQUIRED COURSE	☐	NEW COURSE
☑	ELECTIVE COURSE	☑	REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	CAD-059		**TITLE:** *(30 Characters Max)*	Special Applications of CAD							
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 - 15.1302		**IAI Code:**					**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:	CAD-056 or concurrent enrollment										
Corequisites:	None										
Catalog Description: (40 Word Limit)	This course is a more in-depth study of computer-aided design. The student will explore specific architectural and civil applications of CAD and industry requirements.										

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
Mechanical design	1.5	6		
Architectural design	1.5	6		
Mapping	1.5	6		
System variables	1	6		
Electrical schematics	1.5	6		
Civil design	1.5	6		
Solid modeling	2	6		
Architectural 3D design	1.5	6		
AutoCAD commands	1.5	6		
Individual project	1.5	6		
TOTAL	15	60	0	0

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

COURSE MATERIALS		
TITLE:	None	
AUTHOR:		
PUBLISHER:		
VOLUME/EDITION/URL:		
COPYRIGHT DATE:		

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		The student will be able to:
Mechanical design	7.5	1. Use CAD for mechanical design.
Architectural design	7.5	1. Use CAD for architectural design.
Mapping	7.5	1. Convert paper maps into CAD format.
System variables	7	1. Control AutoCAD parameters with system variables.
Electrical schematics	7.5	1. Use specialized CAD program to create electrical schematics.
Civil design	7.5	1. Use CAD for civil engineering design.

Solid modeling	8	1. Create a 3D solid model and find mass properties. 2. Use paper space to display and plot 3D models. 3. Create a solid model part and make a physical prototype.
Architectural 3D design	7.5	1. Create and display a building design in 3D.
AutoCAD commands	7.5	1. Demonstrate knowledge of most AutoCAD commands.
Individual project	7.5	1. Complete an industry standard CAD project in the student's field of concentration. 2. Use CAD and PowerPoint to create a visual resume.
	75	

Outcomes*	Outcome Title	At the successful completion of this course, students will be able to:
Course Outcome 1	Inquiry Dbase Info	Produce database information for a CAD drawing using Inquiry commands.
Course Outcome 2	Arch Draw Commercial	Generate an architectural drawing using commercial product drawings.
Course Outcome 3	Electrical Schematic	Produce an electrical schematic.
Course Outcome 4	Civil Engn Design	Produce a civil engineering design.
Course Outcome 5	3D Solid Model Des	Produce a physical prototype from a 3D solid model design.
Primary Laker Learning Competency	Communication: Students communicate through the exchange of information.	
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.*