



Module (Course Syllabus) Catalogue 2025-2026

College/ Institute	Technical College of Computer and Informatics Engineering	
Department	Artificial Intelligence and Robotics Engineering	
Module Name	Engineering drawing with Auto CAD	
Module Code	ED105	
Degree	Technical Diploma <input type="checkbox"/> Bachelor <input checked="" type="checkbox"/> High Diploma <input type="checkbox"/> Master <input type="checkbox"/> PhD <input type="checkbox"/>	
Semester	1	
Qualification	MSc In Computer Engineering	
Scientific Title	Assist. Lecturer	
ECTS (Credits)	6	
Module type	Prerequisite	Core Assist. <input checked="" type="checkbox"/>
Weekly hours		
Weekly hours (Theory)	()hr Class	()Total hrs Workload
Weekly hours (Practical)	(3)hr Class	(120)Total hrs Workload
Number of Weeks	14	
Lecturer (Practical)	Shadan Mohammed Jihad	
E-Mail & Mobile NO.	Shadan.abdalwahid@epu.edu.iq	
Lecturer (Practical)		
E-Mail & Mobile NO.		
Websites		

Course Book

Course Description	This subject is listed in the first course class syllabus as a fundamental course that gives the students important skills in drawing using the AutoCAD package.				
Course objectives	<ol style="list-style-type: none"> 1. This semester is concerned with an introduction to the general use of computers and file management. It covers 2D drawing and basic 3D drawing using CAD techniques and the CAD software program version CAD2012 to enable students to execute various 2D architectural drawings. 2. The course will give a detailed description of the different CAD commands with practical exercises, concerning the application of these commands in creating 2D forms, so the students will gain the ability to use CAD software in drawing two-dimensional drawings. By the end of the course, the students will learn to use the CAD software in drawings and designing shapes. 				
Student's obligation	<ul style="list-style-type: none"> • The students must attend the practical lectures at the computer lab. • For this course, the students will be asked to work on exercises as class work and homework submissions. • The students must complete all tests and exams. 				
Required Learning Materials	<p>For the CAD course, the study method will consist of practical hours; all these are in the laboratory. The students will be asked to work on exercises as class work and homework submissions. The practical part will be of main importance to teach the students how to use the CAD drawing commands, and enhance their ability of create and thinking abstractly to start the process of imagination and design. The students will be asked to work in the lab to draw and design different 2D (two-dimensional compositions). Present the practical lecture by PowerPoint slides using a data show. Use a whiteboard for extra examples.</p>				
Evaluation	Task	Weight (Marks)	Due Week	Relevant Learning Outcome	
	Paper Review				
	Assignments	Homework	5	5	
		Class Activity	2	7	
		Report	5	8	
		Seminar			
		Essay			
		Project	5	11	
	Quiz	8	4		
Lab.	10	6			

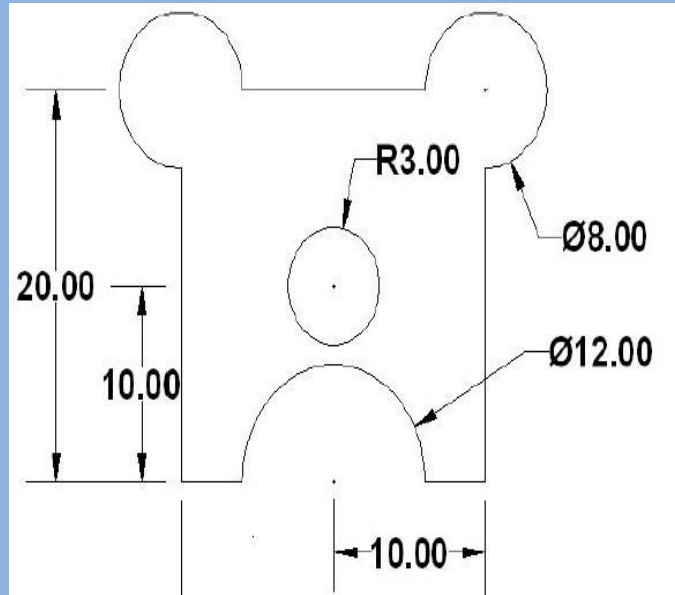
	Midterm Exam	25	7	
	Final Exam	40	12	
	Total	100		
Specific learning outcome:	<ul style="list-style-type: none"> • Teach the students how to work on the AutoCAD software package. • Enable them to draw any 2D shape using the AutoCAD program. • Enable them to draw any 3D shape using the AutoCAD program. 			
Course References:	1- https://images-na.ssl-images-amazon.com/images/I/C1BxaOC0-IS.pdf 2- https://thesourcecad.com/autocad-tutorials/			
Course topics (Practical)		Week		
Introduction to Using AutoCAD		1		
Elements of the program window, basic files, operating the system, and saving the drawings. Screen Elements boundaries, Limits, Units.		2&3		
Snap, Grid, Ortho, Zoom. Introduction to draw menu, entering data for drawing (relative, poler, absolute) co-ordinates		4&5		
Draw menu (Multilane, Construction line, Circle), examples.		6		
Draw menu (Rectangle, Ellipse, Ray) examples. Draw menu (Arc, polygon, Daunt) examples. Draw menu (Hatch, Spline, point) examples		7&8		
Resolution tools for drawing (Osnap). Introduction to modify menu, (Erase, copy) examples		9		
Modify menu (mirror, move, scale) examples. Modify menu (rotate, offset, Multiline) examples. Modify menu (trim, extend, explode, break) examples.		10&11&12		
menu (chamfer, fillet) examples. Modify the Regular distribution of drawing (Array).		13&14		
Writing in the Auto CAD program. Dimensions. Insert Blocks. Selection of line type, line weight, colour Layers and their properties. 3D commands (Solids)		15&16		

Questions Example Design

With the aid of Auto CAD program, draw figure (A), make it as one block then use it to draw figure (B).

NOTES:

- 1- Use the commands (copy, rotate, move, mirror, offset, Osnap and trim), in addition to any other command you need.
- 2- Name the block as "simple".
- 3- The offset distance is (1) unit of length.
- 4- After you finish your drawing, save it on the desktop using your name.
- 5- There is no need to write down the command line history.



Extra notes:

External Evaluator