The Hashemite University
Faculty of Engineering
Department of Allied Engineering sciences
Course Syllabus
First Semester 2022-2023

Course Title:	Computer-Aided Engineering Drawing	**Course Number:**	110400202
Designation:	Compulsory, credit 1 hour	**Prerequisite(s):**	110400201
Instructor:		**Instructor's email:**	
Coordinator of the Course:			
Office Hours:			

Course Description (catalog):
Introduction to Computer Aided Drawing (AutoCAD) Software, drawing limits, grid setting and drawing aids, coordinate system, drawing tools (point, line, ray, multi-line, poly-line, polygons, rectangle, arc, circle, ellipse), Modify tools (copy, erase, offset, move, rotate, lengthen, terminate, fillet, chamfer, array), Layers, Zoom, dimensions, text, hatch, orthographic projection and isometric drawing.

Textbook(s) and/or Other Supplementary Materials:
AutoCAD manual and lecture notes.

References:
1. James H. Earle, "Engineering Design Graphics, with AutoCAD 2000", Addison Wesley
2. Introduction to AutoCAD 2017 2D and 3D Design, Bernd S. Palm and Alf Yarwood

Major Topics Covered:

Topic	# Weeks	# Contact hours*
AutoCAD basics and Getting Started with AutoCAD 2020	1	3
Drawing of Lines, Absolute and relative Cartesian Coordinates, Object snap, ortho and polar mode	1	3
Drawing Circles and Polygons, Circle, Construction Line, Polygon, Offset, Trim, Fillet, Drawing Arc, Poly Lines.	2	6
Drawing Multi Lines, Making Blocks, Learn the use of the following commands: Make Block,	2	6
Dimensioning, Learn the use of the following dimensioning commands	1	3
Layers, Creation and control of layers, line properties and hatch	2	6
Multiview drawing (orthographic projection drawing) by using layers commands	3	12
Draw Isometric by using AutoCAD 2D	1	6
Total	**13**	**45**

***Contact hours include lectures, quizzes and exams**

Specific Outcomes of Instruction (Course Learning Outcomes):
After completing the course, the student will:

CLO 1: Be able to utilize the AutoCAD software to create certain geometric forms using precise drawing instructions that allow these drawings to be expressed in a simple and straightforward manner through visual illustrations. (1,6,7)

CLO 2: Be able to set up a drawing with the correct scale, draw with precision and modify objects with edit commands (1,6,7)

CLO 3: Be able to annotate and dimension drawings according to industry standards to place. students on the first visual representation-based step of engineering design. (1,6,7)

CLO 4: Be able to Create Multiview drawing construction (orthographic drawings) in accordance with industry standards to inspire innovative solutions to numerous fundamental engineering difficulties. (1, 6, 7)

CLO 5: Be able to create Isometric drawings with precision (1,6,7)

Student Outcomes (SO) Addressed by the Course:

#	Outcome Description	Contribution
	General Engineering Student Outcomes	
(1)	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	L
(2)	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	
(3)	an ability to communicate effectively with a range of audiences	
(4)	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider. the impact of engineering solutions in global, economic, environmental, and societal contexts	
(5)	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	
(6)	an ability to develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions	H
(7)	an ability to acquire and apply new knowledge as needed, using appropriate. learning strategies.	L
	H=High, **M**= Medium, **L**=Low	

Grading Plan:

Midterm Exam	30 Points
Course work	30 Points
Final exam	40 Points