

Innovation & Technology Center

Summer 2026

Section I: Overview:

COURSE TITLE	AutoCAD 2D Essentials
INSTRUCTOR	Eng. Rawan Mohamed
CREDITS (Hours)	Total 20 hours - 4 hours/Day
PRE-REQUISITES/CO-REQUISITES	Basic computer skills; no prior AutoCAD experience required.
LANGUAGE	English
GRADING	Attended/Not Attended
LEARNING ENVIRONMENT	CAD Lab - Computers with AutoCAD (free license)
NUMBER OF PARTICIPANTS	10 - 25
COURSE FEES	2000 EGP/Student

Section II: Background and Rationale:

This workshop introduces participants to the fundamentals of AutoCAD 2D drafting through guided demonstrations and hands-on exercises. It supports learners in creating, editing, annotating, and plotting technical drawings for academic and industry-related applications.

Section III: Learning Outcomes:

- Navigate the AutoCAD interface and set up drawings using units, limits, grid, and snap.
- Create 2D drawings using basic drawing tools and coordinate systems.
- Edit and control drawings using modification tools, OSNAP, grips, zoom, and pan.
- Organize and annotate drawings using layers, text, dimensions, blocks, and WBlocks.
- Prepare layouts and plots, complete a simple annotated 2D drawing, and recognize introductory AR/VR and 3D design applications.

Section IV: Target Audience:

Undergraduate students and beginner learners in engineering, architecture, design, or related fields who need practical AutoCAD 2D drafting skills.

Section V: Content and Structure:

DAY	TITLE	DETAILS
1	AutoCAD 2D Fundamentals (Sunday)	<ul style="list-style-type: none"> • Introduction to AutoCAD • Interface and navigation • Drawing setup: units, limits, grid, and snap • Basic drawing tools: line, circle, arc, rectangle, and polygon • Coordinate systems: absolute, relative, and polar • Application on an architectural plan
2	Editing and Drawing Control (Monday)	<ul style="list-style-type: none"> • Editing tools: move, copy, rotate, mirror, trim, extend, offset, fillet, and chamfer • Object Snap (OSNAP) • Selection methods and grips • Zoom and pan • Application on machine parts and components
3	Layers, Annotation, and Blocks (Tuesday)	<ul style="list-style-type: none"> • Layers and layer management • Text and annotation • Dimensioning and dimension styles • Blocks and WBlocks • Application on a structural plan
4	Layouts, Plotting, and Mini Project (Wednesday)	<ul style="list-style-type: none"> • Hatching and gradient fills • Layouts and viewports • Plotting and printing: plot styles, scale, and paper size • Mini project: simple 2D drawing with annotations
5	Engineering Applications and Design Technologies (Thursday)	<ul style="list-style-type: none"> • Application of 2D drafting in various engineering fields • Introduction to Augmented Reality (AR) and Virtual Reality (VR) in design