

AutoCAD® Complete Guide

Design and shape the world around you with the powerful, flexible features found in AutoCAD® software, one of the world's leading 2D and 3D design applications. With robust 3D tools that can create almost any shape imaginable, AutoCAD® helps you intuitively explore design ideas. It offers innovations that can increase design and documentation efficiency, and enables you to more securely, accurately, and seamlessly share those designs with colleagues. Powerful programming tools and thousands of available add-ons provide the ultimate in flexibility, helping you customize AutoCAD® software for your specific needs. With these capabilities and more, AutoCAD® delivers the power and flexibility needed to take documentation and design further.

User's prerequisites

You don't need any previous experience with AutoCAD® to take this course.

Course Outline

Getting Started

- Exploring the AutoCAD for Windows User Interface
- Setting Drawing Units

Basic Drawing Skills

- Navigating 2D Drawings
- Drawing Lines and Rectangles
- Canceling, Erasing, and Undoing
- Using Coordinate Systems
- Drawing Circles, Arcs, and Polygons
- Filletting and Chamfering Lines

Using Drawing Aids

- Grid and Snap
- Ortho and Polar Tracking
- PolarSnap and Running Object Snaps
- From Snap and Object Snap Tracking

Editing Entities

- Creating Selection Sets
- Move and Copy
- Rotate and Scale
- Working with Arrays
- Trim and Extend
- Lengthen and Stretch
- Offset and Mirror
- Grip Editing

Shaping Curves

- Drawing and Editing Curved Polylines
- Drawing Ellipses
- Drawing and Editing Splines
- Blending Between Objects with Splines

Controlling Object Visibility and Appearance

- Changing Object Properties
- Setting the Current Layer
- Altering Objects' Layer Assignments
- Controlling Layer Visibility
- Applying Linetype
- Assigning and Managing Layer Properties

Organizing Objects

- Defining Inserting Blocks
- Editing Blocks
- Redefining Blocks and Working with Groups

Hatching and Gradients

- Specifying Hatch Areas
- Associating Hatches with Boundaries
- Hatching with Patterns, Hatching with Gradients

Working with Blocks and Xrefs

- Working with Global Blocks
- Accessing Content Globally and Storing Content
- Referencing External Drawings and Images

AutoCAD® Complete Guide is designed to give you a solid understanding of AutoCAD® features and capabilities from the basics through to advanced and complex 3D modeling components. Every course is designed to use all learning styles from text, audio, video, interactivity, quizzes and practical "Let Me Try" examples.

To get the most out of this course, we strongly recommend you review every topic within the course and take advantage of the different tools and activities to help to ensure you retain the important information within. We also encourage you to take all the progress tests to ensure you have retained the knowledge, and most importantly practice with the hundreds of real-world, Let Me Try examples.

Creating and Editing Text

- Creating Text Styles
- Transforming and Creating Text
- Writing and Formatting Paragraphs of Text using MTEXT
- Editing Text
- Dimensioning
- Styling Dimensions
- Adding Dimensions
- Editing Dimensions

Keeping In Control with Constraints

- Working with Geometric and Dimensional Constraints
- Constraining Objects Simultaneously with Geometry and Dimensions, Making Parametric Changes

Working with Layouts and Annotative Objects

- Creating Annotative Styles and Objects
- Creating Layouts and Adjusting Floating Viewports
- Overriding Layer Properties in Layout Viewports, Drawing on Layouts

Printing and Plotting

- Configuring Output Devices
- Creating Plot Style Tables
- Using Plot Style Tables
- Plotting Layouts and Exporting to an Electronic Format

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AutoCAD® Complete Guide (cont'd)

Course Outline (cont'd)

Working with Data

- Geolocating Projects
- Defining Attributes and Blocks
- Inserting Attributed Blocks and Working with Tables

Navigating 3D Models

- Using Visual Styles
- Working with Tiled Viewports and 3D Navigation
- Cameras, Steering Wheels and Saving Views

Navigating 3D Models - Bonus Content

- 3D Workspaces
- Using Visual Styles
- Working with Tiled Viewports
- 3D Navigation
- Steering Wheels
- Cameras and Saving Views

Modeling in 3D

- Creating Surface Models
- Editing Surface Models
- Creating Solid Models
- Editing Solid Models, Smoothing Meshes

Solids - Bonus Content

- Working with 3D Objects - AutoCAD Commands
- Drawing 3D Polylines and using 3D OSNAPS
- Working with the UCS
- Creating Primitive Solid Models
- Boolean Operations - Bonus Content
- Working with 3D Objects - Gizmos

- Working with 3D Objects - Editing Primitives
- Working with 3D Objects - Aligning
- 3D Arrays & 3D Mirrors
- Creating Solid Models
- Sweeping
- Lofts
- Press Pull
- Thickening Surfaces
- Shells
- Editing Edges of Solids
- Editing Faces of Solids
- Separating Solids
- 3D Print Services

Surfaces - Bonus Content

- Creating Surface Models - Extrude & Revolve
- Creating Surface Models - Lofts & Blends
- Surface Associativity
- Creating Surface Models - Sweep
- Creating Surface Models - Planar & Network
- Creating Surface Models - Offset
- Editing Surface Models
- Patching Surfaces
- Sculpting Surface Models
- NURBS
- Projection
- Spline Creation
- Surface Analysis

Meshes - Bonus Content

- Intro to Mesh and Mesh Smoothness
- Creating Meshes - Primitives
- Creating Meshes - Converting From other Object Types
- Creating Meshes - Using Other Objects
- Using Grips to Edit Meshes
- Editing Meshes - Vertices & Edges
- Editing Meshes - Faces

Presenting and Documenting 3D Design

- Assigning Materials
- Placing and Adjusting Lights
- Creating Renderings and Documenting Models with Drawings

Presenting and Documenting 3D Design - Bonus Content

- Assigning Materials
- Creating Materials
- Placing and Adjusting Lights
- Cameras
- Creating Renderings
- Animations
- Section Planes and Elevations
- SOLVIEW, SOLDRAW, & SOLPROF
- Flatshot
- Creating 2D Views
- Creating 2D Views - Sections & Details
- Documenting 3D Models from Other Systems

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