

Autodesk AutoCAD for Design and Drafting Professional

Course Description

The Autodesk AutoCAD for Design and Drafting Professional course provides comprehensive instruction on the fundamental concepts and techniques of using AutoCAD, a leading software for 2D and 3D computer-aided design (CAD). Participants will learn how to navigate the AutoCAD user interface, create, and edit drawings, work with layers, apply precision tools, manage objects, annotate drawings, and prepare their designs for printing. This course also serves as preparation for the AutoCAD for Design and Drafting Professional Certification exam. Participants will acquire the knowledge and skills necessary to excel in the certification exam, making it an ideal choice for those looking to validate their expertise in AutoCAD.

Audience

- Individuals interested in learning AutoCAD for architectural, engineering, or design purposes
- Students pursuing degrees or certifications in fields related to CAD and drafting
- Professionals working in architecture, engineering, or design industries who want to upgrade their AutoCAD skills
- Anyone interested in acquiring knowledge of computer-aided design for personal or professional growth

Pre-requisite Knowledge/Skills

No prior experience with AutoCAD is required. However, basic computer skills and familiarity with the Windows operating system are recommended.

Course Objectives

By the end of the course, participants will be able to:

- Navigate the AutoCAD user interface and understand its features
- Create, modify, and manage 2D drawings using essential drawing and editing commands
- Apply precision techniques for accurate drawing placement and object manipulation
- Organize and annotate drawings using layers, text, dimensions, and hatches
- Create and insert reusable blocks and dynamic blocks
- Set up layouts and viewports for printing and presentation purposes
- Understand and utilize advanced features such as parametric drawing and external references

Course Outline

The course comprises 40-hours of theory. It's divided into 8 different modules.

Module 1: Introduction to AutoCAD

1. Getting Started with AutoCAD

- Starting the Software
- User Interface
- Working with Commands
- Cartesian Workspace

2. Working with Drawings

- Opening an Existing Drawing File
- Viewing Your Drawing
- Saving Your Work

Module 2: Basic Drawing Commands

1. Drawing Objects

- Drawing Lines
- Drawing Circles
- Drawing Arcs
- Drawing Polylines
- Drawing Ellipses
- Drawing Rectangles

2. Modifying Objects

- Selecting Objects for Editing
- Moving Objects
- Copying Objects
- Rotating Objects
- Scaling Objects
- Mirroring Objects
- Erasing Objects
- Undo and Redo Actions

Module 3: Working with Layers and Properties

1. Understanding Layers

- Creating New Drawings With Template

- Layer States
- Changing an Object's Layer

2. Object Properties

- Working with Object Properties
- Measuring Objects

Module 4: Advanced Drawing and Editing Commands

1. Advanced Editing Techniques

- Trimming and Extending Objects
- Stretching Objects
- Creating Fillets and Chamfers
- Offsetting Objects
- Creating Arrays of Objects

2. Working with Blocks

- What are Blocks?
- Inserting Blocks
- Working with Dynamic Blocks
- Editing Blocks
- Creating Blocks

Module 5: Annotating and Dimensioning

1. Adding Text and Annotations

- Adding Text in a Drawing
- Modifying Multiline Text
- Formatting Multiline Text
- Adding Notes with Leaders to Your Drawing

2. Creating Dimensions

- Dimensioning Concepts
- Adding Linear Dimensions
- Adding Radial and Angular Dimensions
- Editing Dimensions

Module 6: Layouts and Printing

1. Working with Layouts

- Creating Layouts
- Creating Layout Viewports
- Named Views

2. Printing and Plotting

- Printing Concepts
- Printing Layouts
- Print and Plot Settings

Module 7: Advanced Tools and Features

1. Advanced Drawing Techniques

- Using Running Object Snaps
- Using Object Snap Overrides
- Object Snap Tracking
- Construction Lines
- Coordinate Entry
- Locating Points with Tracking

2. External References

- Attaching External References
- Modifying External References

3. Working with Templates and Standards

- Creating Templates
- Using Standard Layouts
- Annotation Styles

Module 8: Advanced Projects and Workflows

1. Drawing Organization and Information

- Architectural Project
- Mechanical Project
- Civil Project

2. Advanced Customization and Productivity Tools

- Creating a Custom Workspace
- Using the Keyboard Effectively
- Object Creation, Selection, and Visibility
- Working in Multiple Drawings
- Copying and Pasting Between Drawings
- Additional Layer Tools

3. Collaboration and File Management

- Collaboration Tools
- File Management Techniques