

Autodesk AutoCAD 2D Essentials

Target Audience

This course is designed for students, architects, engineers, and professionals in various industries who are new to Autodesk AutoCAD and want to learn the essential tools for creating 2D drawings and technical documentation.

Course Objective

The objective of this course is to provide participants with a solid foundation in AutoCAD 2D drafting, enabling them to create, edit, and annotate technical drawings efficiently while adhering to industry standards.

Course Outcome

- Learn to navigate the AutoCAD interface and use basic drawing tools to create precise 2D geometry.
- Understand layer management, object properties, and best practices for organizing drawings.
- Develop skills in annotating drawings with dimensions, text, and hatching to enhance communication.
- Gain proficiency in printing and plotting drawings to scale while maintaining quality and accuracy.

Course Outline: The course comprises **16-hours** of theory and labs and is divided into **6** different chapters. Each chapter will be followed by hands-on lab exercises to reinforce learning and gauge understanding of the topics covered.

Chapter 1. Introduction to AutoCAD

Getting Started with AutoCAD

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

Working with Drawings

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

Chapter 2. Basic Drawing Commands

Drawing Objects

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

Modifying Objects

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

Chapter 3. Working with Layers and Properties

Understanding Layers

- Creating New Drawings with Template
- Layer States
- Changing an Object's Layer

Object Properties

- Working with Object Properties
- Measuring Objects

Chapter 4. Advanced Drawing and Editing Commands

Advanced Editing Techniques

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

Working with Blocks

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

Chapter 5. Annotating and Dimensioning

Adding Text and Annotations

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

Creating Dimensions

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

Chapter 6. Advanced Tools and Features

Advanced Drawing Techniques

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

Working with Templates and Standards

- Creating Templates
- Using Standard Layouts
- Annotation Styles