Autodesk AutoCAD LT For Designer

Target Audience

This course is designed for architects, engineers, interior designers, and other design professionals who seek to enhance their 2D drafting skills using Autodesk AutoCAD LT. It is ideal for individuals who are new to CAD or those looking to streamline their workflow with precise and efficient 2D drafting tools.

Course Objective

To provide participants with a comprehensive understanding of Autodesk AutoCAD LT's features and functionalities, enabling them to create, modify, and annotate 2D drawings for professional design projects.

Course Outcome

- Gain proficiency in creating and editing 2D drawings with AutoCAD LT.
- Learn to use annotation tools to add dimensions, text, and tables to designs.
- Understand layer management and best practices for organizing drawing elements.
- Develop the ability to generate accurate layouts and plots for professional presentations.

Course Outline: The course comprises **40-hours** of theory and labs and is divided into **17** 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 LT

AutoCAD LT Screen Components

- Start Tab
- Drawing Area
- Command Window
- Navigation Bar
- Status Bar

Invoking Tools in AutoCAD LT

- Keyboard
- Ribbon
- Application Menu
- Tool Palettes
- Menu Bar
- Toolbar
- Shortcut Menu
- File Tabs

AutoCAD LT Dialog Boxes

Starting a New Drawing

- Open a Drawing
- Start from Scratch
- Use a Template
- Use a Wizard

Saving Your Work

- Save Drawing As Dialog Box

Automatic Timed Save

Creating Backup Files

- Changing Automatic Timed Saved and Backup Files into AutoCAD LT
- Format
- Using the Drawing Recovery Manager to Recover Files

Closing a Drawing

Opening an Existing Drawing

- Opening an Existing Drawing Using the Select File Dialog Box
- Opening an Existing Drawing Using the Startup Dialog Box

- Opening an Existing Drawing Using the Drag and Drop Method

Quitting AutoCAD LT
Creating and Managing Workspaces

- Creating a New Workspace
- Modifying the Workspace Settings

AutoCAD LT Help
Save to Web & Mobile

Chapter 2. Getting Started with AutoCAD LT

Dynamic Input Mode

- Enable Pointer Input
- Enable Dimension Input where possible
- Show command prompting and command input near the crosshairs
- Show additional tips with command prompting
- Drafting Tooltip Appearance

Drawing Lines in AutoCAD LT

- The Close Option
- The Undo Option

Invoking Tools Using Dynamic Input/Command Prompt
Coordinate Systems

- Relative Coordinate System
- Relative Polar Coordinates
- Relative Rectangular Coordinates
- Absolute Coordinate System
- Direct Distance Entry

Erasing Objects
Cancelling and Undoing Operations
Object Selection Methods

- Window Selection Method
- Crossing Selection Method
- Lasso Selection Method

Drawing a Circle
Basic Display Commands

- Zooming Drawings

Setting Units Type and Precision

- Specifying the Format
- Specifying the Angle Format
- Setting the Direction for Angle Measurement
- Specifying Units for the Drawing or Block to be Inserted
- Sample Output

Setting the Limits of a Drawing

- Setting Limits
- Limits for Architectural Drawings
- Limits for Metric Drawings

Introduction to Plotting Drawings
Modifying AutoCAD LT Settings by Using the Options Dialog Box

Chapter 3. Getting Started with Advanced Sketching

Drawing Arcs
Drawing Rectangles
Drawing Ellipses
Drawing Regular Polygons
Drawing Polylines
Drawing Donuts
Placing Points

- Changing the Point Style and Size
- Placing Multiple Points
- Placing Points at Equal Distance
- Placing Points at Specified Intervals

Drawing Infinite Lines

- Drawing Construction Lines
- Drawing Rays

Writing a Single Line Text

Chapter 4. Working with Drawing Aids

Introduction
Understanding the Concept and Use of Layers
Working with Layers

- Creating New Layers
- Making a Layer Current

- Controlling the Display of Layers
- Arranging Layers in Increasing Order
- Arranging Layers in Increasing Order with Respect to First Digit
- Merging Layers
- Deleting Layers
- Managing the Display of Columns
- Selective Display of Layers
- Layer States
- Reconciling New Layers
- Isolating and Unisolating Layers
- Controlling the Layer Settings

Object Properties

- Changing the Color
- Changing the Linetype
- Changing the Lineweight
- Changing the Plot Style
- Changing Object Properties using the Properties Palette
- Changing Object Properties using the Quick Properties Palette

Global and Current Linetype Scaling
LTSCALE Factor for Plotting
Working with the Design Center
Drafting Settings Dialog Box

- Setting Grid
- Setting Snap
- Snap Type

Drawing Straight Lines Using the Ortho Mode
Working with Object Snaps
Running Object Snap Mode

- Overriding the Running Snap
- Cycling through Snaps
- Setting the Priority for Coordinate Entry

Using AutoTracking

- Object Snap Tracking
- Polar Tracking

- AutoTrack Settings

Function and Control Keys

Chapter 5. Editing Sketched Objects-I

Creating a Selection Set
Editing Sketches
Moving Sketched Objects
Copying Sketched Objects

- Creating Multiple Copies
- Creating an Array of Selected Objects
- Creating a Single Copy

Pasting Contents from the Clipboard
Pasting Contents Using the Original Coordinates
Offsetting Sketched Objects

- Through Option
- Erase Option
- Layer Option

Rotating Sketched Objects
Scaling the Sketched Objects
Filleting the Sketches
Chamfering the Sketches
Blending the Curves
Trimming the Sketched Objects
Extending the Sketched Objects
Stretching the Sketched Objects
Lengthening the Sketched Objects
Arraying the Sketched Objects

- Rectangular Array
- Polar Array
- Path Array

Mirroring the Sketched Objects

- Text Mirroring

Breaking the Sketched Objects
Placing Points at Specified Intervals
Dividing the Sketched Objects
Joining the Sketched Objects

Chapter 6. Editing Sketched Objects-II

Introduction to Grips

Types of Grips

Adjusting Grip Settings

Editing Objects by Using Grips

- Stretching the Objects by Using Grips (Stretch Mode)
- Moving the Objects by Using Grips (Move Mode)
- Rotating the Objects by Using Grips (Rotate Mode)
- Scaling the Objects by Using Grips (Scale Mode)
- Mirroring the Objects by Using Grips (Mirror Mode)
- Editing a Polyline by Using Grips

Loading Hyperlinks

Editing Gripped Objects

Changing the Properties Using the Properties Palette

Matching the Properties of Sketched Objects

Quick Selection of Sketched Objects

Cycling Through Selection

Managing Contents Using the Design Center

- Folders Tab
- Open Drawings Tab
- History Tab

Making Inquiries About Objects and Drawings

- Measuring Area of Objects
- Measuring the Distance between Two Points
- Identifying the Location of a Point
- Listing Information about Objects
- Checking Time-Related Information
- Displaying Drawing Properties

Basic Display Options

- Redrawing the Screen

- Regenerating Drawings
- Zooming Drawings
- Panning Drawings
- Creating Views

Understanding the Concept of Sheet Sets

- Creating a Sheet Set
- Adding a Subset to a Sheet Set
- Adding Sheets to a Sheet Set or a Subset
- Archiving a Sheet Set
- Resaving All Sheets in a Sheet Set

Placing Views on a Sheet of a Sheet Set

Chapter 7. Creating Texts and Tables

Annotative Objects
Annotation Scale

- Assigning Annotative Property and Annotation Scales
- Customizing Annotation Scale

Multiple Annotation Scales

- Assigning Multiple Annotation Scales Manually
- Assigning Multiple Annotation Scales Automatically

Controlling the Display of Annotative Objects
Creating Text

- Writing Single Line Text

Entering Special Characters
Creating Multiline Text
Editing Text

- Editing Text Using the TEXTEDIT (DDEDIT) Command
- Editing Text Using the PROPERTIES Palette
- Modifying the Scale of the Text
- Modifying the Justification of the Text

Inserting Table in the Drawing
Creating a New Table Style
Setting a Table Style As Current
Modifying a Table Style

Modifying Tables
Creating Text Styles
Creating Annotative Text
Checking Spelling
Text Quality and Text Fill
Finding and Replacing Text
Creating Title Sheet Table in a Sheet Set

Chapter 8. Basics Dimensioning, Geometric Dimensioning, and Tolerancing

Need for Dimensioning
Dimensioning in AutoCAD LT
Fundamental Dimensioning Terms

- Dimension Line
- Dimension Text
- Arrowheads
- Extension Lines
- Leader
- Center Mark and Centerlines
- Alternate Units
- Tolerances
- Limits

Associative Dimensions
Definition Points
Annotative Dimensions
Selecting Dimensioning Tools
Dimensioning a Number of Objects Together
Creating Linear Dimensions
Creating Aligned Dimensions
Creating Arc Length Dimensions
Creating Rotated Dimensions
Creating Baseline Dimensions
Creating Continued Dimensions
Creating Angular Dimensions
Creating Diameter Dimensions
Creating Jogged Dimensions
Creating Radius Dimensions
Creating Jogged Linear Dimensions
Generating Center Marks and Centerlines
Creating Associative Centermark

Chapter 9. Editing Dimensions

- Over-Defined

Controlling the Display of the Dimensional Constraint
Working with Equations

Chapter 10. Dimension Styles, Multileader Styles, and System Variables

Using Styles and Variables to Control Dimensions
Creating and Restoring Dimension Styles
New Dimension Style Dialog box
Controlling the Dimension Text Format
Fitting Dimension Text and Arrowheads
Formatting Primary Dimension Units
Formatting Alternate Dimension Units
Formatting the Tolerances
Dimension Style Families
Using Dimension Style Overrides
Comparing and Listing Dimension Styles
Using Externally Referenced Dimension Styles
Creating and Restoring Multileader Styles
Modify Multileader Style Dialog Box

Chapter 11. Hatching Drawings

Hatching
- Hatch Patterns
- Hatch Boundary

Hatching Drawings Using the Hatch Tool
Panels in the Hatch Creation Tab
Creating Annotative Hatch
Hatching the Drawing Using the Tool Palettes
- Drag and Drop Method
- Select and Place Method
- Modifying the Properties of the Predefined Patterns available in the Tool Palettes

Hatching Around Text, Dimensions, and Attributes
Editing Hatch Patterns
- Using the Hatch Editor Tab
- Using the Edit Hatch Tool
- Using the Properties Tool

Editing the Hatch Boundary
- Using Grips

- Trimming the Hatch Patterns
- Using AutoCAD LT Editing Tools

Hatching Blocks and Xref Drawings
Creating a Boundary Using Closed Loops
Other Features of Hatching

Chapter 12. Model Space Viewports, Paper Space Viewports, and Layouts

Model Space and Paper Space/Layouts
Model Space Viewports (Tiled Viewports)

- Creating Tiled Viewports

Making a Viewport Current
Joining Two Adjacent Viewports
Splitting and Resizing Viewports in Model Space
Paper Space Viewports (Floating Viewports)

- Creating Floating Viewports
- Creating Rectangular Viewports
- Creating Polygonal Viewports
- Converting an Existing Closed Object into a Viewport

Temporary Model Space
Editing Viewports

- Controlling the Display of Objects in Viewports
- Locking the Display of Objects in Viewports
- Controlling the Display of Hidden Lines in Viewports
- Clipping Existing Viewports
- Maximizing Viewports

Controlling the Properties of Viewport Layers
Controlling the Layers in Viewports Using the Layer Properties Manager Dialog Box
Paper Space Linetype Scaling (PSLTSCALE System Variable)
Inserting Layouts
Importing Layouts to Sheet Sets
Inserting a Layout Using the Wizard
Defining Page Settings
Converting the Distance Between Model Space and Paper Space
Controlling the Display of Annotative Objects in Viewports

Chapter 13. Plotting Drawings

Plotting Drawings in AutoCAD LT
Plotting Drawings Using the Plot Dialog Box

Adding Plotters
Editing the Plotter Configuration
Importing PCP/PC2 Configuration Files
Setting Plot Parameters
- Working with Page Setups

Using Plot Styles
- Adding a Plot Style
- Plot Style Table Editor
- Applying Plot Styles
- Setting the Current Plot Style

Plotting Sheets in a Sheet Set

Chapter 14. Template Drawings

Creating Template Drawings
Standard Template Drawings
Loading a Template Drawing
Customizing Drawings with Layers and Dimensioning Specifications
Customizing a Drawing with Layout
Customizing Drawings with Viewports
Customizing Drawings According to Plot Size and Drawing Scale

Chapter 15. Working with Blocks

The Concept of Blocks
Converting Entities into a Block
Inserting Blocks
Creating and Inserting Annotative Blocks
- Block Editor

Dynamic Blocks
Adding Parameter and Action Simultaneously Using Parameter Sets
Inserting Blocks Using the Design Center
Using Tool Palettes to Insert Blocks
- Inserting Blocks in the Drawing
- Modifying Properties of the Blocks in the Tool Palettes

Adding Blocks in Tool Palettes
- Drag and Drop Method
- Shortcut Menu

Modifying Existing Blocks in the Tool Palettes
Layers, Colors, Linetypes, and Lineweights for Blocks
Nesting of Blocks

Creating Drawing Files Using the Write Block Dialog box
Defining the Insertion Base Point
Editing Blocks
- Editing Blocks in Place
- Exploding Blocks Using the XPLODE Command

Renaming Blocks
Deleting Unused Blocks

Chapter 16. Defining Block Attributes

Understanding Attributes
Defining Attributes
Editing Attribute Definition
- Using the Properties Palette

Inserting Blocks with Attributes
Managing Attributes
The ATTEXT Command for Attribute Extraction
Controlling Attribute Visibility
Editing Block Attributes
- Editing Attributes Using the Enhanced Attribute Editor
- Editing Attributes Using the Edit Attributes Dialog Box
- Global Editing of Attributes
- In-place Editing of Blocks with Attributes

Inserting Text Files in the Drawing

Chapter 17. Understanding External References

External References
Dependent Symbols
Managing External References in a Drawing
The Overlay Option
Attaching Files to a Drawing
Working with Underlays
- Editing an Underlay

Opening an Xreffed Object in a Separate Window
Using the Design Center to Attach a Drawing as an Xref
Adding Xref Dependent Named Objects
Clipping External References
Displaying Clipping Frame
Demand Loading
Editing References In-Place