



# AutoCAD & AutoCAD LT Essentials Training



The AutoCAD and AutoCAD LT Essentials training course is designed for those using AutoCAD or AutoCAD LT software with a Windows operating system.

This training courseware is not suitable for the AutoCAD for Mac user.



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## Objectives

The objective of AutoCAD/AutoCAD LT Essentials is to enable students to create a basic 2D drawing in the AutoCAD software. Even at this essentials level, the AutoCAD software is one of the most sophisticated computer applications that you are likely to encounter. Therefore learning to use it can be challenging. To make the process easier and provide flexibility for instructors and students, the training course is divided into two parts that can be taken independently.

### Topic's Covered

- Understanding the AutoCAD workspace and user interface
- Using basic drawing, editing, and viewing tools
- Organizing drawing objects on layers
- Inserting reusable symbols (blocks)
- Preparing a layout to be plotted
- Adding text, hatching, and dimensions

## Course Outline

- |  |                             |
|--|-----------------------------|
| 1) Getting Started with AutoCAD          | 18) Hatching                |
| 2) Basic Drawing and Editing Commands    | 19) Adding Dimensions       |
| 3) Creating a Simple Drawing             | 20) Annotating Your Drawing |
| 4) Drawing Precision in AutoCAD          |                             |
| 5) Making Changes in Your Drawing        |                             |
| 6) Making Your Drawing More Precise      |                             |
| 7) Organizing Your Drawing with Layers   |                             |
| 8) Advanced Object Types                 |                             |
| 9) Analysing Model and Object Properties |                             |
| 10) Drawing Organisation & Information   |                             |
| 11) Advanced Editing Commands            |                             |
| 12) Inserting Blocks                     |                             |
| 13) Creating More Complex Objects        |                             |
| 14) Setting Up a Layout                  |                             |
| 15) Printing Your Drawing                |                             |
| 16) Preparing to Print                   |                             |
| 17) Text                                 |                             |

## Prerequisites

- A working knowledge of basic design/drafting procedures and terminology.
- A working knowledge of your operating system

**Course Duration: 2 Days (recommended)**



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## Detailed Course Outline

### Getting Started with AutoCAD

- Starting the Software
- User Interface
- Working with Commands
- Cartesian Workspace
- Opening an Existing Drawing File
- Viewing Your Drawing
- Saving Your Work

### Basic Drawing and Editing Commands

- Drawing Lines
- Erasing Objects
- Drawing Lines with Polar Tracking
- Drawing Rectangles
- Drawing Circles
- Undo & Redo Actions

### Creating a Simple Drawing

- Create a Simple Drawing
- Create Simple Shapes

### Drawing Precision in AutoCAD

- Using Running Object Snaps
- Using Object Snap Overrides
- Polar Tracking at Angles
- Object Snap Tracking
- Drawing with Snap & Grid

### Making Changes in Your Drawing

- Selecting Objects for Editing
- Move, Copy, Rotate, Scale & Mirror Objects
- Editing with Grips

### Making Your Drawing More Precise

- Schematic Project: Electronics Drawing
- Architectural Project: Landscape
- Mechanical Project (with Polar & Tracking)
- Mechanical Project: Surge Protector
- Mechanical Project: Satellite

### Organizing Your Drawing with Layers

- Creating New Drawings with Templates
- What are Layers?
- Layer States
- Changing an Object's Layer

### Advanced Object Types

- Drawing Arcs
- Drawing Polylines
- Editing Polylines
- Drawing Polygons
- Drawing Ellipses

### Analysing Model and Object Properties

- Working with Object Properties
- Measuring Objects

### Drawing Organisation & Information

- Architectural Project
- Mechanical Project
- Civil Project



## Detailed Course Outline

### Advanced Editing Commands

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

### Inserting Blocks

- What are Blocks?
- Working with Dynamic Blocks
- Inserting Blocks
- Inserting Blocks using Tool Palettes
- Inserting Blocks using the Design Centre
- Inserting Blocks using Content Explorer

### Creating More Complex Objects

- Mechanical Project 1 - Plate
- Mechanical Project 2 - Gasket
- Mechanical Project 3 - Plate
- Mechanical Project 4 – Rocker Arm
- Architectural Project 1 – Floor Plan
- Architectural Project 2 – Floor Plan
- Civil Project – Parking Lot

### Setting Up a Layout

- Printing Concepts
- Working in Layouts
- Creating Layouts
- Creating Layout Viewports
- Guidelines for Layouts

### Printing Your Drawing

- Printing Layouts
- Print & Plot Settings

### Preparing to Print

- Mechanical Project
- Architectural Project

### Text

- Working with Annotations
- Adding Text in a Drawing
- Modifying Multiline Text
- Formatting Multiline Text
- Adding Notes with Leaders to Your Drawing
- Creating Tables
- Modifying Tables

### Hatching

- Hatching
- Editing Hatching

### Adding Dimensions

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

### Annotating Your Drawing

- Mechanical Project
- Architectural Project 1
- Architectural Project 2
- Civil Project

