

# **AUTODESK AUTOCAD ESSENTIALS CERTIFIED TRAINING**



## **Courseware Description**

- AutoCAD Fundamentals training cover the fundamental core topic for working with the AutoCAD software. The teaching strategy is to start with a few basic tools that enable the student to create and edit a simple drawing, and then continue to develop those tools.

## **Courseware Objectives**

- The primary objective of this course is enable the participant to create a basic 2D drawing, design and drafting using AutoCAD. Even at this fundamental level, AutoCAD is still one of the most sophisticated computer applications that you are likely to encounter. Therefore learning to use it can be challenging.

## **After completing this course, participants will be able to:**

- Understand 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

## **Duration**

- 3 Days

## **Who Should Attend**

- This course is designed for new users of AutoCAD.

## **Pre-Requisites**

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

## **Course Achievement**

- Autodesk Certification of Completion shall be issued to participants with full attendance record upon training completion.

## **Course Content**

### **CHAPTER 1: GETTING STARTED WITH AUTOCAD**

- 1.1 Starting the Software
- 1.2 User Interface
- 1.3 Working with Commands
- 1.4 Cartesian Workspace
- 1.5 Opening an Existing Drawing File
- 1.6 Viewing Your Drawing
- 1.7 Saving Your Work



## **CHAPTER 2: BASIC DRAWING & EDITING COMMANDS**

- 2.1 Drawing Lines
- 2.2 Erasing Objects
- 2.3 Drawing Lines with Polar Tracking
- 2.4 Drawing Rectangles
- 2.5 Drawing Circles
- 2.6 Undo and Redo Actions

## **CHAPTER 3: PROJECTS – CREATING A SIMPLE DRAWING**

- 3.1 Creating a Simple Drawing
- 3.2 Create Simple Shapes

## **CHAPTER 4: DRAWING PRECISION IN AUTOCAD**

- 4.1 Using Running Object Snaps
- 4.2 Using Object Snap Overrides
- 4.3 Polar Tracking at Angles
- 4.4 Object Snap Tracking
- 4.5 Drawing with Snap and Grid

## **CHAPTER 5: MAKING CHANGES IN YOUR DRAWING**

- 5.1 Selecting Objects for Editing
- 5.2 Moving Objects
- 5.3 Copying Objects
- 5.4 Rotating Objects
- 5.5 Scaling Objects
- 5.6 Mirroring Objects
- 5.7 Editing with Grips

## **CHAPTER 6: PROJECTS – MAKING YOUR DRAWINGS MORE PRECISE**

- 6.1 Schematic Project: Electronics Diagram
- 6.2 Architectural Project: Landscape
- 6.3 Mechanical Project (with Polar & Tracking)
- 6.4 Mechanical Project: Surge Protector
- 6.5 Mechanical Project: Satellite

## **CHAPTER 7: ORGANIZING YOUR DRAWING WITH LAYERS**

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

## **CHAPTER 8: ADVANCED OBJECT TYPES**

- 8.1 Drawing Arcs
- 8.2 Drawing Polylines
- 8.3 Editing Polylines
- 8.4 Drawing Polygons
- 8.5 Drawing Ellipses



## **CHAPTER 9: GETTING INFORMATION FROM YOUR DRAWING**

- 9.1 Working with Object Properties
- 9.2 Measuring Objects

## **CHAPTER 10: PROJECTS – DRAWING ORGANIZATION & INFORMATION**

- 10.1 Architectural Project
- 10.2 Mechanical Project
- 10.3 Civil Project

## **CHAPTER 11: ADVANCED EDITING COMMANDS**

- 11.1 Trimming and Extending Objects
- 11.2 Stretching Objects
- 11.3 Creating Fillets and Chamfers
- 11.4 Offsetting Objects
- 11.5 Creating Arrays of Objects

## **CHAPTER 12: INSERTING BLOCKS**

- 12.1 What are Blocks?
- 12.2 Inserting Blocks
- 12.3 Working with Dynamics Blocks
- 12.4 Inserting Blocks with Design Center
- 12.5 Inserting Blocks with Content Explorer

## **CHAPTER 13: PROJECTS – CREATING MORE COMPLEX OBJECTS**

- 13.1 Mechanical Project 1: Plate
- 13.2 Mechanical Project 2: Gasket
- 13.3 Mechanical Project 3: Plate
- 13.4 Mechanical Project 4: Rocker Arm
- 13.5 Architectural Project 1: Floor Plan
- 13.6 Architectural Project 2: Floor Plan
- 13.7 Civil Project – Parking Lot

## **CHAPTER 14: SETTING UP A LAYOUT**

- 14.1 Printing Concepts
- 14.2 Working in Layouts
- 14.3 Copying Layouts
- 14.4 Creating Layout Viewports
- 14.5 Guidelines for Layouts

## **CHAPTER 15: PRINTING YOUR DRAWING**

- 15.1 Printing Layouts
- 15.2 Printing from the Model Tab

## **CHAPTER 16: PROJECTS – PREPARING TO PRINT**

- 16.1 Mechanical Project
- 16.2 Architectural Project

**CHAPTER 17: TEXT**

- 17.1 Working with Annotations
- 17.2 Adding Text in a Drawing
- 17.3 Modifying Multiline Text
- 17.4 Formatting Multiline Text
- 17.5 Adding Notes with Leaders to Your Drawing
- 17.6 Creating Tables
- 17.7 Modifying Tables

**CHAPTER 18: HATCHING**

- 18.1 Hatching
- 18.2 Editing Hatches

**CHAPTER 19: ADDING DIMENSIONS**

- 19.1 Dimensioning Concept
- 19.2 Adding Linear Dimensions
- 19.3 Adding Radial and Angular Dimensions
- 19.4 Editing Dimensions

**CHAPTER 20: PROJECTS – ANNOTATING YOUR DRAWING**

- 20.1 Mechanical Project
- 20.2 Architectural Project 1
- 20.3 Architectural Project 2
- 20.4 Civil Project

**Course Tentative**

TIME	DAY 1	DAY 2	DAY 3
10.00am – 11.00pm	Chapter 1 & 2	Chapter 8	Chapter 15
11.01am – 12.00pm	Chapter 3	Chapter 9 & 10	Chapter 16
12.01pm – 1.00pm	Chapter 4	Chapter 11	Chapter 17
<b>1.01pm – 2.00pm</b>	<b>Lunch Break</b>		
2.01pm – 3.00pm	Chapter 5	Chapter 12	Chapter 18
3.01pm – 4.00pm	Chapter 6	Chapter 13	Chapter 19
4.01pm – 5.00pm	Chapter 7	Chapter 14	Chapter 20

**Note:** The Course duration is a guideline. Course topics and duration may be modified by the instructor based on the knowledge and skill level of the course participant.