

Course Outline

AutoCAD 2015 Fundamentals

Duration: 3 days (18 hours)

Learning Objectives:

- 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

Target Audience:

New users who want to know how to create and edit Autocad drawings

Prerequisites:

Windows Beginner or equivalent

Topics Covered:

- 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 and Redo Actions
- Projects – Creating a Simple Drawing
 - Create a Simple Drawing
 - Create a Simple Shapes
- Drawing Precision in AutoCAD

- Using Running Object Snaps
- Using Object Snap Overrides
- Polar Tracking at Angles
- Object Snap Tracking
- Drawing with Snap and Grid
- Making Changes in Your Drawing
 - Selecting Objects for Editing
 - Moving Objects
 - Copying Objects
 - Rotating Objects
 - Scaling Objects
 - Mirroring Objects
 - Editing with Grips
- Projects – Making Your Drawing More Precise
 - Schematic Project : Electronics Diagram
 - Architectural Project: Landscape
 - Mechanical Project (with Polar and 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
- Getting Information from Your Drawing
 - Working with Object Properties
 - Measuring Objects
- Projects Drawing Organization and Information
 - Architectural Project
 - Mechanical Project
 - Civil Project
- Advanced Editing Commands
 - Trimming and Extending Objects
 - Stretching Objects
 - Creating Fillets and Chamfers
 - Offsetting Objects
 - Creating Arrays of Objects

- Inserting Blocks
 - What are Blocks?
 - Inserting Blocks
 - Working with Dynamic Blocks
 - Inserting Blocks with DesignCenter
 - Inserting Blocks with Content Explorer

- Projects – 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
 - Copying Layouts
 - Creating Layout Viewports
 - Guidelines for Layouts

- Printing Your Drawing
 - Printing Layouts
 - Printing from the Model Tab

- Projects – 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 Hatches

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

- Projects – Annotating Your Drawing
 - Mechanical Project
 - Architectural Project 1
 - Architectural Project 2
 - Civil Project
- Working Effectively with AutoCAD
 - Creating a Custom Workspace
 - Using the Keyboard Effectively
 - Object Creation, Selection, and Visibility
 - Working in Multiple Drawings
 - Copying and Pasting Between Drawings
 - Using Grips Effectively
 - Additional Layer Tools
- Accurate Positioning
 - Coordinate Entry
 - Locating Points with Tracking
 - Construction Lines
 - Placing Reference Points
- Projects Productivity Tools
 - Schematic Project – Purifier Unit
 - Mechanical Project – 2 Views
 - Architectural/Civil Project – Formal Garden
 - Mechanical Project – Cover Plate
 - Architectural Project – Addition
 - Mechanical Project – Block
 - Mechanical Project – Plate
- Parametric Drawing
 - Working with Constraints
 - Geometric Constraints
 - Dimensional Constraints
- Working with Blocks
 - Creating Blocks
 - Editing Blocks
 - Removing Unused Elements
 - Adding Blocks to Tool Palettes
 - Modifying Tool Properties in Tool Palettes
- Projects – Creating and Organizing Blocks
 - Mechanical Project – Control Panel
 - Architectural Project – Furniture Layout
 - Civil Project – Utility Layout
- Creating Templates
 - Why Use Templates?
 - Controlling Units Display

- Creating New Layers
- Adding Standard Layouts to Templates
- Saving Templates
- Advanced Layout
 - Creating and Using Named Views
 - Advanced Viewport Options
 - Layer Overrides in View Ports
 - Additional Annotative Scale Features
- Annotation Styles
 - Creating Text Styles
 - Creating Dimension Styles
 - Creating Multileader Styles
- Projects – Drawing Setup and Utilities
 - Interior Projects
 - Mechanical/Schematic Project
 - Civil/Map Project
 - Mechanical Project – Dimension Styles
- External References
 - Attaching External References
 - Modifying External References
 - Xref Specific Information
- Projects - Drawing
 - D-sized Title Block (36x24)
 - Mechanical Project – Drill Press Base
 - Architectural Project – Office Tower
 - P&ID Project – Oil Lubrication System
 - Civil Project – Warehouse Site