AutoCAD Level 1: Essentials

Days: 3

Audience: Professionals who want unparalleled creative freedom, productivity, and precision for producing superb 3D modeling.

Prerequisites: Knowledge of basic computer navigation and basic design/drafting procedures and terminology.

Description: Learn to design and shape the world around you using the powerful, flexible features found in AutoCAD® design and documentation software, one of the world's leading 2D and 3D CAD tools. In this course, you will learn to navigate the AutoCAD user interfaces and use the fundamental features of AutoCAD. You will learn to use the precision drafting tools in AutoCAD to develop accurate technical drawings and you'll discover ways to present drawings in a detailed and visually impressive way.

Course Objectives: In this course, you will:

- Navigate the AutoCAD user interfaces
- Use the fundamental features of AutoCAD
- Use the precision drafting tools in AutoCAD to develop accurate technical drawings
- Present drawings in a detailed and visually impressive way

OUTLINE:

LESSON 1: 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

LESSON 2: BASIC DRAWING & EDITING COMMANDS
- Drawing Lines
- Erasing Objects
- Drawing Lines with Polar Tracking
- Drawing Rectangles
- Drawing Circles
- Undo and Redo Actions

LESSON 3: PROJECTS - CREATING A SIMPLE DRAWING
- Create a Simple Drawing
- Create Simple Shapes

LESSON 4: DRAWING PRECISION IN AUTOCAD
- Using Running Object Snaps
- Using Object Snap Overrides
- Polar Tracking at Angles

- Object Snap Tracking
- Drawing with Snap and Grid (Optional)

LESSON 5: MAKING CHANGES IN YOUR DRAWING
- Selecting Objects for Editing
- Moving Objects
- Copying Objects
- Rotating Objects
- Scaling Objects
- Mirroring Objects
- Editing with Grips

LESSON 6: PROJECTS - MAKING YOUR DRAWINGS MORE PRECISE
- Schematic Project: Electronics Diagram
- Architectural Project: Landscape
- Mechanical Project (with Polar & Tracking)
- Mechanical Project: Surge Protector
- Mechanical Project: Satellite

LESSON 7: ORGANIZING YOUR DRAWING WITH LAYERS
- Creating New Drawings With Templates
- What are Layers?
- Layer States
- Changing an Object's Layer

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LESSON 8: ADVANCED OBJECT TYPES
- Drawing Arcs
- Drawing Polylines
- Editing Polylines
- Drawing Polygons
- Drawing Ellipses

LESSON 9: ANALYZING MODEL AND OBJECT PROPERTIES
- Working with Object Properties
- Measuring Objects

LESSON 10: PROJECTS - DRAWING ORGANIZATION & INFORMATION
- Architectural Project
- Mechanical Project
- Civil Project

LESSON 11: ADVANCED EDITING COMMANDS
- Trimming and Extending Objects
- Stretching Objects
- Creating Fillets and Chamfers
- Creating Arrays of Objects

LESSON 12: INSERTING BLOCKS
- What are Blocks?
- Working with Dynamic Blocks
- Inserting Blocks
- Inserting Blocks using the Tool Palettes
- Inserting Blocks using the DesignCenter
- Inserting Blocks using the Content Explorer

LESSON 13: 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

LESSON 14: SETTING UP A LAYOUT
- Printing Concepts
- Working in Layouts
- Creating Layouts
- Creating Layout Viewports
- Guidelines for Layouts

LESSON 15: PRINTING YOUR DRAWING
- Printing Layouts
- Print and Plot Settings

LESSON 16: PROJECTS - PREPARING TO PRINT
- Mechanical Project
- Architectural Project

LESSON 17: 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

LESSON 18: HATCHING
- Hatching
- Editing Hatches

LESSON 19: ADDING DIMENSIONS
- Dimensioning Concepts
- Adding Linear Dimensions
- Adding Radial and Angular Dimensions
- Editing Dimensions

LESSON 20: PROJECTS - ANNOTATING YOUR DRAWING
- Mechanical Project
- Architectural Project 1
- Architectural Project 2
- Civil Project