

AutoCAD 2011 Fundamentals

Course Description: The objective of this course is to enable students to create a basic 2D drawing in AutoCAD. This course covers the essential core topics for working with AutoCAD. 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. More advanced tools are also introduced throughout the course. Not every command or option is covered, because the intent is to show the most *essential* tools and concepts.

Topics include:

- 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

Prerequisites: A working knowledge of basic design/drafting procedures and terminology and a working knowledge of Windows 9x, ME, NT 4.0, 2000, XP, or 7.

Course Content

Chapter 1 Working Effectively with AutoCAD

- 1.1 Creating a Custom Workspace
- 1.2 Using the Keyboard Effectively
- 1.3 Object Creation, Selection, and Visibility
- 1.4 Working in Multiple Drawings
- 1.5 Copying and Pasting between Drawings
- 1.6 Using Grips Effectively
- 1.7 Additional Layer Tools

Chapter 2 Accurate Positioning

- 2.1 Coordinate Entry
- 2.2 Locating Points with Tracking
- 2.3 Construction Lines
- 2.4 Placing Reference Points

Chapter 3 Projects - Productivity Tools

- 3.1 Schematic Project - Purifier Unit
- 3.2 Mechanical Project - 2 Views
- 3.3 Architectural/Civil Project - Formal Garden
- 3.4 Mechanical Project - Cover Plate
- 3.5 Architectural Project – Addition
- 3.6 Mechanical Project - Block
- 3.7 Mechanical Project – Plate

Chapter 4 Parametric Drawing

- 4.1 Working with Constraints
- 4.2 Geometric Constraints
- 4.3 Dimensional Constraints

Chapter 5 Working with Blocks

- 5.1 Creating Blocks
- 5.2 Editing Blocks
- 5.3 Removing Unused Elements
- 5.4 Adding Blocks to Tool Palettes
- 5.5 Modifying Tool Properties in Tool Palettes

Chapter 6 Projects - Creating and Organizing Blocks

- 6.1 Mechanical Project - Control Panel
- 6.2 Architectural Project - Furniture Layout
- 6.3 Civil Project - Utility Layout

Chapter 7 Creating Templates

- 7.1 Why Use Templates?
- 7.2 Controlling Units Display
- 7.3 Creating New Layers
- 7.4 Adding Standard Layouts to Templates
- 7.5 Saving Templates

Chapter 8 Annotation Styles

- 8.1 Creating Text Styles
- 8.2 Creating Dimension Styles
- 8.3 Creating Multileader Styles

Chapter 9 Projects - Drawing Setup and Utilities

- 9.1 Interiors Project
- 9.2 Mechanical/Schematic Project
- 9.3 Civil/Map Project
- 9.4 Mechanical Project - Dimension Styles

Chapter 10 Advanced Layouts

- 10.1 Quick View Layouts
- 10.2 Creating and Using Named Views
- 10.3 Creating Additional Viewports
- 10.4 Layer Overrides in Viewports
- 10.5 Additional Annotative Scale Features

Chapter 11 External References

- 11.1 Attaching External References
- 11.2 Modifying External References
- 11.3 Xref Specific Information

Chapter 12 Projects – Drawing

- 12.1 D-sized Title Block (36x24)
- 12.2 Mechanical Project - Drill Press Base
- 12.3 Architectural Project - Office Tower
- 12.4 P&ID Project - Oil Lubrication System
- 12.5 Civil Project - Warehouse Site