

# **Autodesk AutoCAD Fundamentals Course Outline**

Duration: 1½ months

#### Overview

The topics covered in this course are geared towards the application of CAD drafting skills to develop solutions to design problems. Student will produce 2D and 3D sketches while learning the 2D and 3D capabilities of the CAD software. The main goal of the course is to communicate the philosophical and engineering intent of an idea by means of a technical drawing.

### **Prerequisites**

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

#### **Course Outline**

#### From Level 1 Essentials Class:

### **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 and Editing Commands**

- 2.1 Drawing Lines
- 2.2 Erasing Objects
- 2.3 Drawing Vertical and Horizontal Lines
- 2.4 Drawing Rectangles
- 2.5 Drawing Circles
- 2.6 Undo and Redo Actions

### **Chapter 3: Projects: Creating a Simple Drawing**

- 3.1 Create 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 (Optional) 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
- 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 Architectural Project: Landscape

## **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: Analyzing Model and Object Properties**

- 9.1 Working with Object Properties
- 9.2 Measuring Objects

### **Chapter 10: Projects: Drawing Organization and Information**

- 10.1 Architectural 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 Working with Dynamic Blocks
- 12.3 Inserting Blocks
- 12.4 Inserting Blocks using the Tool Palettes

# **Chapter 14: Setting Up a Layout**

- 14.1 Working in Layouts
- 14.2 Creating Layouts

- 14.3 Creating Layout Viewports
- 14.4 Guidelines for Layouts

# **Chapter 15: Printing Your Drawing**

- 15.1 Printing Concepts
- 15.2 Printing Layouts
- 15.3 Print and Plot Settings

# **Chapter 16: Projects: Preparing to Print**

16.2 Architectural Project

# Chapter 17:

- 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 Concepts
- 19.2 Adding Linear Dimensions
- 19.3 Adding Radial and Angular Dimensions
- 19.4 Editing Dimensions

# **Chapter 20: Projects: Annotating Your Drawing**

- 20.2 Final Architectural Project 1
- 20.3 Final Architectural Project 2

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