

Technical Education Services

AutoCAD Essentials

Course Length: 3 days

This AutoCAD training course is designed specifically for those using AutoCAD or AutoCAD LT with a Windows operating system. If you are using a Mac computer, you must be able to run the Windows operating system or emulate the Windows environment, with the Windows version of AutoCAD. While the AutoCAD for Mac software has similar functionality to the Windows version, there are some key differences and this course does NOT cover the AutoCAD for the Mac specific features or functionality. You may want to review the [AutoCAD for Windows versus AutoCAD for Mac](#) system differences before registering for this Windows-specific class.

The objective of AutoCAD Essentials is to enable you to create, modify, and work with a 2D drawing in the AutoCAD software.

The AutoCAD Essentials training course covers the essential core topics for working with the AutoCAD software. The guide begins with learning the basic tools for creating and editing 2D drawings. It then continues to explore the tools used to annotate drawings by adding text, hatching, dimensions, and tables. More advanced tools, such as working with blocks and setting up layouts, are introduced to improve your efficiency with the software. Not every command or option is covered, because the intent is to show the essential tools and concepts, such as:

Topics Covered

- Understanding the AutoCAD workspace and user interface
- Using basic drawing, editing, and viewing tools
- Organizing drawing objects on layers
- Using reusable symbols (blocks)
- Preparing a layout to be plotted
- Adding text, hatching, and dimensions

The AutoCAD Essentials course is not recommended for users that have completed the AutoCAD Fundamentals course, as content for Essentials is already covered in the Fundamentals course.

Prerequisites

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

Course description shown for AutoCAD 2021. Topics, curriculum, and/or prerequisites may change depending on software version.



Training Guide Contents

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 Objects
- 5.4 Rotating Objects
- 5.5 Scaling Objects
- 5.6 Mirroring Objects
- 5.7 Editing with Grips

Course description shown for AutoCAD 2021. Topics, curriculum, and/or prerequisites may change depending on software version.





Chapter 6: Projects: Making Your Drawings More Precise

- 6.1 Schematic Project: Electronics Diagram
- 6.2 Architectural Project: Landscape
- 6.3 Mechanical Project: Using Polar and 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: 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
- 10.2 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: Blocks

- 12.1 What are Blocks?
- 12.2 Inserting Blocks using the Blocks Palette
- 12.3 Inserting Blocks using the Tool Palettes
- 12.4 Working with Dynamic Blocks
- 12.5 Inserting Blocks using the DesignCenter

Course description shown for AutoCAD 2021. Topics, curriculum, and/or prerequisites may change depending on software version.





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 Working in Layouts
- 14.2 Creating Layouts
- 14.3 Creating Layout Viewports
- 14.4 Named Views
- 14.5 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

- 16.1 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 (Optional) 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

Course description shown for AutoCAD 2021. Topics, curriculum, and/or prerequisites may change depending on software version.





Chapter 20: Projects: Annotating Your Drawing

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

Appendix A: Skills Assessment 1

Appendix D: AutoCAD Certification Exam Objectives

Course description shown for AutoCAD 2021. Topics, curriculum, and/or prerequisites may change depending on software version.





Cancellation Policy

The following cancellation policy shall apply to all training engagements, Live Online, Consulting Services and Dedicated/Custom Training:

- Company reserves the right to reschedule or cancel the date, time and location of its class at any time. In the event that a Training Class is cancelled by Company, Customer is entitled to a full refund. Company shall not be responsible for any other loss incurred by Customer as a result of a cancellation or reschedule.
- For Customer cancellations when written notice is received (i) at least ten (10) business days in advance of the class, the Customer is entitled to a full refund of its payment or reschedule enrollment, (ii) less than ten (10) business days, Customer shall not be entitled to a refund, but shall receive a class credit to be used within three (3) months of the date of the original class.
- Student substitutions are acceptable with at least two (2) days prior notice to the class, provided substitution meets course prerequisites and is approved by Company's Training Coordinator (trainingcoordinator@rand.com)
- For all Training orders, cancellation notices must be submitted to trainingcoordinator@rand.com. Company is not responsible for any error in the delivery of the email notice. In the event of any reschedule of Consulting Services and/or Dedicated/Custom Training by Customer, Company will invoice Customer for all non-cancellable travel expenses.

To request more information or to see training locations, visit www.imaginit.com/contact-us.

Course description shown for AutoCAD 2021. Topics, curriculum, and/or prerequisites may change depending on software version.

