



AutoCAD 2016

For Beginners

AutoCAD 2016 For Beginners

CADFolks

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Introduction

CAD is an abbreviation for Computer-Aided Design. It is the process used to design and draft components on your computer. This process includes creating designs and drawings of the product or system. AutoCAD is a CAD software package developed and marketed by Autodesk Inc. It can be used to create two-dimensional (2D) and three-dimensional (3D) models of products. These models can be transferred to other computer programs for further analysis and testing. In addition, you can convert these computer models into numerical data. This numerical data can be used in manufacturing equipment such as machining centers, lathes, mills, or rapid prototyping machines to manufacture the product.

AutoCAD is one of the first CAD software packages. It was introduced in the year 1982. Since that time, it has become the industry leader among all CAD products. It is the most widely used CAD software. The commands and concepts introduced by AutoCAD are utilized by other systems. As a student, learning AutoCAD provides you with a greater advantage as compared to any other CAD software.

Scope of this Book

The ***AutoCAD 2016 for Beginners*** book provides a learn-by-doing approach for users to learn AutoCAD. It is written for students and engineers who are interested to learn AutoCAD 2016 for creating designs and drawing of components or anyone who communicates through technical drawings as part of their work. The topics covered in this book are as follows:

- Chapter 1, “Introduction to AutoCAD 2016”, gives an introduction to AutoCAD. The user interface and terminology are discussed in this chapter.
- Chapter 2, “Drawing Basics”, explores the basic drawing tools in AutoCAD. You will create simple drawings using the drawing tools.
- Chapter 3, “Drawing Aids”, explores the drawing settings that will assist you in creating drawings.

- Chapter 4, “Editing Tools”, covers the tools required to modify drawing objects or create new objects using the existing ones.
- Chapter 5, “Multi View Drawings”, teaches you to create multi view drawings standard projection techniques.
- Chapter 6, “Dimensions and Annotations”, teaches you to apply dimensions and annotations to a drawing.
- Chapter 7, “Parametric Tools”, teaches you to create parametric drawings. Parametric drawings are created by using the logical operations and parameters that control the shape and size of a drawing.
- Chapter 8, “Section Views”, teaches you to create section views of a component. A section view is the inside view of a component when it is sliced.
- Chapter 9, “Blocks, Attributes and Xrefs”, teaches you to create Blocks, Attributes and Xrefs. Blocks are group of objects in a drawing that can be reused. Attributes are notes, or values related to an object. Xrefs are drawing files attached to another drawing.
- Chapter 10, “Layouts and Annotative Objects”, teaches you create layouts and annotative objects. Layouts are the digital counterparts of physical drawing sheets. Annotative objects are dimensions, notes and so on which their sizes with respect to drawing scale.
- Chapter 11, “Templates and Plotting”, teaches you create drawing templates and plot drawings.
- Chapter 12, “3D Modeling Basics”, explores the basic tools to create 3D models.
- Chapter 13, “Solid Editing Tools”, covers the tools required to edit solid models and create new objects by using the existing ones.
- Chapter 14, “Creating Architectural Drawings”, introduces you to architectural design in AutoCAD. You will design a floor plan and add dimensions to it.

Chapter 1: Introduction to AutoCAD 2016

In this chapter, you will learn about:

- **AutoCAD user interface**
- **Customizing user interface**
- **Important AutoCAD commands**

Introduction

AutoCAD is legendary software in the world of Computer Aided Designing (CAD). It has completed 32 years by the 2014. If you are a new user of this software, then the time you spend on learning this software will be a wise investment. If you have used previous versions of AutoCAD, you will be able to learn the new enhancements. I welcome you to learn AutoCAD using this book through step-by-step examples to learn various commands and techniques.

System requirements

The following are system requirements for running AutoCAD smoothly on your system.

- Microsoft Windows 8/8.1, Windows 7.
- Minimum Intel® Pentium® 4 or AMD Athlon™ 64 processor.
- 2 GB of RAM (3GB Recommended) for 32-bit.
- 4GB of RAM (8GB Recommended) for 64-bit.
- Resolution 1024x768 (1600x1050 or higher recommended) with True Color.
- 6 GB of free space for installation.
- Windows display adapter capable of 1024x768 with True Color capabilities.
DirectX® 9 or DirectX 11 compliant card recommended.
- Windows Internet Explorer 9.0 or later.
- .NET Framework Version 4.5