



Learning AutoCAD Mechanical 2010

In this guide, users learn the features, tools, and proper techniques for creating 2D mechanical drawings using AutoCAD® Mechanical 2010. The hands-on exercises, representing real-world design scenarios, teach users how to efficiently create mechanical designs and engineering production drawings.

Objectives

The primary objective of this class is to teach users the basic skills necessary to become proficient with professional 2D mechanical drawing, design, and drafting using AutoCAD Mechanical 2010. After completing this class, users will be able to:

- Identify and use the key components of the AutoCAD Mechanical 2010 user interface.
- Use the fundamental features of AutoCAD Mechanical 2010.
- Use the precision drafting tools in AutoCAD Mechanical 2010 to develop accurate technical engineering drawings.
- Demonstrate a high level of comfort and confidence with AutoCAD Mechanical 2010 through hands-on practice.

Duration

4 days

Who should attend?

New users of AutoCAD Mechanical.

Pages

Volume 1 – 344 pages; Volume 2 – 198 pages

Typical Schedule

Unless otherwise noted on your class registration e-mail, this class starts each day at 9:00 am and ends at 4:00 pm.

Prerequisites

Before using this guide, users should have a working knowledge of the following:

- Microsoft® Windows® Vista or Microsoft® Windows® XP.
- A recent version of AutoCAD (recommended but not necessary).
- Drafting, design, or engineering principles.

Outline

Getting Started

- Interacting with the User Interface
- Common Drawing Setup

Object Property and Layer Management

- Property Management
- Layer Control

Organizing Drawing Geometry

- Drawing Creation Workflows and Organization
- Structuring Data in Drawings
- Reusing and Editing Structured Data

Tools for Creating Key Geometry

- Core Design Tools
- Power Snaps
- Centerlines
- Construction Lines
- Designing with Lines
- Adding Standard Feature Data for Holes and Slots

Tools for Manipulating Geometry

- Editing Tools
- Power Commands
- Associative Hide

Mechanical Part Generators

- Standard Parts
- Chains and Belts
- Shaft Generator
- Standard Shaft Parts
- Springs

Creating Drawing Sheets

- Model Space Views in Layouts
- Creating Drawing Sheets in Model Space
- Annotation Views When Using Structure
- Title Blocks and Drawing Borders

Dimensioning and Annotating Your Drawings

- Annotation and Annotation Symbols
- Creating Dimensions

- Editing Dimensions
- Hole Charts and Fits Lists
- Revision Lists

Bill of Materials, Parts Lists, and Balloons

- Part References
- Bill of Materials
- Inserting Parts Lists
- Ballooning Parts

Design Calculations

- Design Calculations

Leveraging Existing Data

- DWG Files
- IGES Files
- Inventor Link

Mechanical Options for the CAD Manager

- Standards-Based Design
- Configure Layer, Text, and Object Properties
- Configure the Annotation Tools
- Configure Component Properties, BOMs, Parts Lists, and Balloons

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