

AutoCAD Mechanical Certified Training 2019



Courseware Description

- Welcome to the **AutoCAD® Mechanical 2019 Essentials** training guide teaches students about the indispensable core topics required to use the AutoCAD® Mechanical software. Through a hands-on, practice-intensive curriculum, students acquire the knowledge needed to accelerate the mechanical design process. With specific tools for creating and manipulating geometry, automatically acquiring bills of materials, generating mechanical components, and performing design calculations, the AutoCAD Mechanical software offers significant productivity gains that the student learns to maximize.

Course Objectives

After completing this training guide, you will be able to:

- Identify the main interface elements, their setup, and what Help information is available and to create and use drawing template files.
- Describe the object property management system, where layers are configured, and the tools for manipulating layers.
- Organizing drawing geometry and create Mechanical structure in a drawing.
- Describe the core mechanical design tools of rectangle, hatch, fillet, chamfer, holes, slots, and threads and how to use them to create and modify geometry in your drawings.
- Modify and edit drawing objects by creating multiple offset copies, scale them, or use a power command.
- Insert industry standard parts into your assembly designs.
- Create production-ready drawings in model space, and layouts of structured and non-structured geometry, and insert title blocks and borders.
- Notate a drawing through the creation and editing of dimensions, hole, charts, fits lists, and mechanical symbols.
- Explain how to create and edit a bill of materials, parts list, and balloons.
- Describe the tools used to verify the standard or custom parts within your design.
- Exchange data between CAD systems and create Mechanical drawings using Model Documentation.
- Create a custom drafting standard and drawing template with layers, object properties, symbols, text, BOM, parts list, balloons, and other annotation tools.

Duration

- 3 Days

Who Should Attend

- This course is designed for new AutoCAD Mechanical user.

Pre-Requisites

- Basic understanding of mechanical drafting or design.
- A working knowledge of the AutoCAD software.
- A working knowledge of basic design/drafting procedures and terminology.
- A working knowledge of the Microsoft Windows 7 operating system and above.

Course Achievement

- Autodesk ATC Certification of Completion shall be issued to participants with full attendance record upon training completion.

Course Content

CHAPTER 1: GETTING STARTED

- 1.1 Interacting with the User Interface
- 1.2 Common Drawing Setup

CHAPTER 2: OBJECT PROPERTY AND LAYER MANAGEMENT

- 2.1 Property Management
- 2.2 Layer Control

CHAPTER 3: ORGANIZING DRAWING GEOMETRY

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

CHAPTER 4: TOOLS FOR CREATING KEY GEOMETRY

- 4.1 Core Design Tools
- 4.2 Power Snaps
- 4.3 Centerline
- 4.4 Construction Lines
- 4.5 Designing with Lines
- 4.6 Adding Standard Feature Data for Holes and Slots

CHAPTER 5: TOOLS FOR MANIPULATING GEOMETRY

- 5.1 Editing Tools
- 5.2 Power Commands
- 5.3 Associative Hide

CHAPTER 6: MECHANICAL PART GENERATORS

- 6.1 Standard Parts
- 6.2 Chains and Belts
- 6.3 Shaft Generator
- 6.4 Standard Shaft Parts
- 6.5 Springs

CHAPTER 7: CREATING DRAWING SHEETS

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

CHAPTER 8: DIMENSIONING AND ANNOTATING DRAWINGS

- 8.1 Annotation and Annotation Symbols
- 8.2 Creating Dimensions
- 8.3 Editing Dimensions
- 8.4 Hole Charts and Fits Lists
- 8.5 Revision Lists

CHAPTER 9: BILL OF MATERIALS, PARTS LISTS, AND BALLOONS

- 9.1 Part References
- 9.2 Bill of Materials
- 9.3 Inserting Parts Lists
- 9.4 Ballooning Parts

CHAPTER 10: DESIGN CALCULATIONS

- 10.1 Design Calculations

CHAPTER 11: LEVERAGING YOUR EXISTING DATA

- 11.1 DWG Files
- 11.2 IGES Files
- 11.3 Model Documentation

CHAPTER 12: MECHANICAL OPTIONS FOR THE CAD MANAGER

- 12.1 Standards-Based Design
- 12.2 Configuring Layer, Text, and Object Properties
- 12.3 Configuring the Annotation Tools
- 12.4 Configuring Component Properties, BOMs, Parts Lists and Balloons

Course Tentative

TIME	DAY 1	DAY 2	DAY 3
10.00am – 11.30am	Chapter 1	Chapter 5	Chapter 9
11.30am – 1.00pm	Chapter 2	Chapter 6	Chapter 10
1.00pm – 2.00pm	LUNCH BREAK		
2.00pm – 3.30pm	Chapter 3	Chapter 7	Chapter 11
3.30pm – 5.00pm	Chapter 4	Chapter 8	Chapter 12

Note: The Course duration is a guideline. Course topics and duration may be modified by the instructor based on the knowledge and skill level of the course participant.