AutoCAD Mechanical Essentials Training Course

Course Overview

Course Length: 16-Hours

- 16-Hours - 8 x 2-hour training sessions
- Remote training over MS Teams
- Sessions are recorded and download links for each session are provided for future use
- Training for up to 1-3 people
- Sessions can start within 7 days upon ordering
- Flexible sessions (i.e. consecutive or Monday, Wednesday, Friday, etc.)
- Courses are private and topics can be customised to suit
- Includes certificate of completion

This AutoCAD Mechanical Essentials course teaches the core tools and workflows needed to create and document mechanical designs efficiently using AutoCAD Mechanical. Through hands-on, practice-based exercises, you will learn to create and modify geometry using mechanical-specific commands, organise drawings with layers and mechanical structure, insert standard parts and generators, produce production-ready layouts, and generate annotations and documentation such as dimensions, symbols, and bills of materials.

Topics Covered

- Identify the main interface elements, configure the workspace, use Help resources, and create and use drawing template files.
- Describe the object property management system, configure layers, and use layer tools effectively.
- Organise drawing geometry and create a mechanical structure using components, component views, and folders.
- Use core mechanical design tools (rectangle, hatch, fillet, chamfer, holes, slots, and threads) to create and modify geometry.
- Modify objects using tools such as offset copies, scaling with separate X/Y values, and power commands.
- Insert industry-standard parts into mechanical assembly designs using part libraries and generators.
- Create production-ready drawings in model space and layouts, including title blocks and borders.
- Annotate drawings by creating and editing dimensions, hole charts, fits lists, and mechanical symbols.
- Create and edit a bill of materials (BOM), parts list, and balloons.
- Verify that standard and custom parts meet operational requirements using analysis and checking tools.
- Exchange data between CAD systems using Mechanical DWG and IGES formats, and use Inventor Link for Mechanical drawings.

- Create custom drafting standards and drawing templates including configuration for layers, symbols, text, BOMs, parts lists, balloons, and other annotation tools.

Prerequisites

No prior AutoCAD Mechanical experience is required; however, the following is recommended to get the most from the course:

- Comfortable with Windows and basic file management
- A standard mouse with a scroll wheel is recommended for efficient navigation
- Basic drafting knowledge (layers, units, and scale) is helpful but not required
- Optional: prior exposure to mechanical drawings or manufacturing documentation can be beneficial

Training Guide Contents

Chapter 8: Dimensioning and Annotating Drawings
- Lesson: Annotation and Annotation Symbols
- Lesson: Creating Dimensions
- Lesson: Editing Dimensions
- Lesson: Hole Charts and Fits Lists
- Lesson: Revision Lists

Chapter 9: Bill of Materials, Parts Lists, and Balloons
- Lesson: Part References
- Lesson: Bill of Materials
- Lesson: Inserting Parts Lists
- Lesson: Ballooning Parts

Chapter 10: Design Calculations
- Lesson: Design Calculations

Chapter 11: Leveraging Your Existing Data
- Lesson: DWG Files
- Lesson: IGES Files
- Lesson: Model Documentation

Chapter 12: Mechanical Options for the CAD Manager
- Lesson: Standards-Based Design
- Lesson: Configure Layer, Text, and Object Properties
- Lesson: Configure the Annotation Tools
- Lesson: Configure Component Properties, BOMs, Parts Lists, and Balloons