Objectives

The main objective of this course is to teach users the commands and tools necessary for professional 2D & 3D design using AutoCAD Mechanical. After completing this course users will be able to:

- ✓ Describe the workflows for organizing drawing geometry and create a Mechanical structure in a drawing.
- ✓ Describe the core mechanical design tools, modify and edit drawing objects.
- ✓ Insert industry standard parts into your assembly designs, create and edit a bill of materials, parts list, and balloons.
- ✓ Describe the tools that you can use to verify whether or not the standard parts or custom parts within your design meet or exceed the requirements for operational use.
- ✓ Create a custom drafting standard and drawing template.

Pre-requisites

This guide is designed for an AutoCAD Mechanical User. It is recommended that you have a working knowledge of:

- Microsoft® Windows® 7, Microsoft® Windows® 8 or Microsoft® Windows® 10
- A basic understanding of mechanical drafting or design.
- A working knowledge of the AutoCAD® software.

Chapter 1: Getting Started
- Interacting with the User Interface
- Common Drawing Setup

Chapter 2: Object Property and Layer Management.
- Property Management
- Layer Control

Chapter 3: Organizing Drawing Geometry
- Drawing Creation Workflows and Organization
- Structuring Data in Drawings
- Reusing and Editing Structured Data

Chapter 4: Tools for Creating Key Geometry
- Core Design Tools & Power Snaps
- Centerlines
- Construction Lines
- Designing with Lines
- Adding Standard Feature Data for Holes and Slots

Chapter 5: Tools for Manipulating Geometry

- Editing Tools
- Power Commands
- Associative Hide

Chapter 7: Mechanical Part Generators

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

Chapter 6: Creating Drawing Sheets

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

Chapter 8: Dimensioning and Annotating Drawings

- Annotation and Annotation Symbols
- Creating Dimensions
- Editing Dimensions
- Hole Charts and Fits Lists
- Revision Lists

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

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

Chapter 10: Design Calculations
- Design Calculations

Chapter 12: 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 Balloon