

AutoCAD – 3D Drawing & Modeling

In this class you will be introduced to the benefits, methodologies of 3D modeling with AutoCAD. Learn how AutoCAD functionality can be applied to create 3D models, Working Drawings from 3D models and visualization of your designs.

Duration

4 Days

Prerequisites

Completion of “AutoCAD® 2012 Essentials” class

A minimum of 120 hours of work experience with the software is recommended.

Knowledge of Drafting, design, or mechanical engineering principles.

Proficient with Microsoft® Windows®

Typical Schedule

This class starts at 9:00 am and ends at 4:00 pm.

Topics Covered

- 3D Foundations
 - Why Use 3D?
 - Introduction to the 3D Modeling Workspace
 - Basic 3D Viewing Tools
 - 3D Navigation Tools
 - Introduction to the User Coordinate System
- Simple Solids
 - Working with Solid Primitives
 - Solid Primitive Types
 - Working with Composite Solids
 - Working with Mesh Models
- Creating Solids & Surfaces from 2D Objects
 - Complex 3D Geometry
 - Extruded Solids and Surfaces
 - Swept Solids and Surfaces
 - Revolved Solids and Surfaces
 - Lofted Solids and Surfaces
 - NURBS Surfaces
- Modifying in 3D Space
 - 3D Gizmo Tools
 - Aligning Objects in 3D Space
 - 3D Modify Commands
- Advanced Solid Editing
 - Editing Components of Solids
 - Editing Faces of Solids
 - Fillets and Chamfers on Solids
- Additional Editing Tools
 - Creating a Shell
 - Imprinting Edges of Solids
 - Slicing a Solid along a Plane
 - Interference Checking
 - Converting Objects to Surfaces
 - Converting Objects to Solids
- Refining the View
 - Working with Sections
 - Working with Cameras
 - Managing Views in 3D
 - Animating with Show Motion
 - Creating Show Motion Shots
 - Creating Animations
- Visualization
 - Creating Visual Styles
 - Working with Materials
 - Specifying Light Sources
 - Rendering Concepts
- Working Drawings from 3D Models
 - Creating Multiple Viewports
 - 2D Views from 3D Solids
 - Creating Technical Drawings with Flatshot
 - 3D Model Import
 - Automatic Model Documentation
- Working with the User Coordinate System
 - UCS Basics
 - UCS X-, Y-, and Z-Commands
 - UCS Multifunctional Grips
 - Saving a UCS by Name