

Autodesk AutoCAD 3D

Duration : 2 Days

Overview

This course is designed to give a good fundamental understanding of 3D modelling It covers Solid Modelling 3D Faces Model/Paper Space bi-directional Boolean Adaptive.

Target Audience

This course is aimed at those who want a clear and straightforward insight into the world of 3D Solid Modelling within AutoCAD.

Prerequisites

2D CAD ideally AutoCAD experience is helpful to progress quickly through this course. However other drafting design or engineering experience is useful. It is recommended that you have a working knowledge of Microsoft supported systems.

Objectives

The primary objective of this course is to teach delegates the basic commands necessary for 3D modelling and how to create scaled drafting views / paper space using AutoCAD. Upon completion of the course the student will:

- Become familiar with the AutoCAD 3D user interface
- Understand the concepts and features of 3D AutoCAD
- How to edit 3D models in AutoCAD
- Present drawings based on 3D model within AutoCAD
- Develop a level of comfort and confidence with 3D AutoCAD through hands-on experience

Course Content

DAY 1

3D FOUNDATIONS

Why Use 3D?
Introduction to the 3D Modelling 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 the User Mesh Models

WORKING WITH THE USER COORDINATE SYSTEM

UCS Basics
UCS X Y and Z Commands
UCS Multi-functional
Saving a UCS by Name

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

MODIFYING IN 3D SPACE

3D Gizmo Tools
Aligning Objects in 3D Space
3D Modify Commands



DAY 2

ADVANCED SOLID EDITING

Editing Components of Solids
Editing Faces of Solids
Fillet and Chamfers on Solids
NURBS Surfaces

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 VIEWS

Working the Sections
Working with Cameras
Managing Views in 3D
Animating with ShowMotion
Creating ShowMotion Shots
Creating Animations

POINT CLOUDS

Point Clouds

VISUALISATION

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