AutoCAD 3D Drawing and Modelling

Overview

AutoCAD® 2017 3D Drawing and Modeling introduces students who are proficient with the 2D commands in the AutoCAD® software to the concepts and methods of 3D modeling. The training course provides a thorough grounding in the fundamentals of 3D and explores the main features of the advanced 3D Modeling workspace in the AutoCAD software.

Prerequisites

It is recommended that delegates have a basic working knowledge of one or more of the following:

- AutoCAD Advanced.
- Microsoft® Windows® Vista, Microsoft® Windows® XP, Microsoft® Windows® 7, Microsoft® Windows® 8 or Microsoft® Windows® 10

Available Exams and Certifications

- Autodesk Certified User
- Autodesk Certified Professional

Course Accreditations

6 Credits (By the South African Institute of Architects - SAIA)

Course Outline

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 Primitives Types
- Working with Composite Solids
- Working with Mesh Models

Working with the User Coordinate System

- UCS Basics
- UCS X, Y and Z Commands
- UCS Multifunctional Grips
- Saving a UCS by Name

Creating Solids and 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 of Solids

Additional Editing Tools

- Creating a Shell
- Imprinting Edges of Solids
- Slicing a Soling 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 ShowMotion
- Creating ShowMotion 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