AutoCAD 3D Essentials – Course Outline and Schedule

Prerequisite: Working knowledge of AutoCAD 2D

Suitable for: Those needing first time knowledge of AutoCAD 3D

Course Description
Examples of why 3D drawings are needed will be in Construction, Mechanical and Electrical where overlapping of piping, ducting and building structure can cause a lot of unforeseeable problems when seen in 2D. In Mechanical or product design drawings the viewer can look at the object at many different perspectives to come up a workable design, rather than make many mistakes and taking a much longer time to develop a working product.

In many organizations, lack of 3D knowledge hampers the organization, as sometimes minor changes or edits to a drawing can take days to complete, as you have to wait for the drafting department or people skilled with AutoCAD to come back with the changes. It will help the participant be more productive at the workplace, and workflows can turn around much faster.

Target Audience: Those who already have a 2D knowledge of AutoCAD – Draughtsman, Assistant Engineers and Engineers in the field of Mechanical, Civil, Road, Transport, Oil and Gas, Manufacturing, Industrial, Chemical and Petroleum. Product Engineers. Architects and Interior Designers who wish to go on to 3D to enhance their skills.

Learning Objectives:
Upon Completion of this course, students will be able draw, edit, modify, add to previously drawn 3D drawings, and create completely new 3D drawings from zero.

Methodology
Life practical hands-on sessions 70% and 305 Theory. Students will have mastered with confidence subject matter, to be able to independently pursue subject matter by the end of class.

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DAY 1

Time	Subjects
9.00 -9.30 am	1. Introduction 2. Taking the AutoCAD 3Dtour
9.30 -1.00 pm	3. 3D Space • XYZ-Plane • Types of 3d Models • Changing the Model Display • Visual Styles • View Cube (Parallel and Perspective modes) Setting • Model Viewport
1.00 -2.00 pm	Lunch
2.00 - 3.30 pm	4. Getting started with Solid Modeling • Creating Solid Primitives • Creating Models from 2D Profiles • Creating Composite Solid
3.30 -5.00 pm	5. Working in 3D Space • Modes: Dynamic UCS, Polar, 3D Snap. • UCS direct manipulation • UCS ribbon tool 6. Changing the model position • 3D Gizmo • 3D Move, • 3D Rotate, • Scale3D

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Day 2

Time	Subject
9.00 — 11.30 am	7. Editing Solid Models • Adding Detail to Solid Models • Editing Solid Model • Duplicating Faces and Edges
11.30 – 1.00 pm	8. Editing Solid Models (II) • Solid History • Live Section
1.00 — 2.00 pm	Lunch
2.00 — 3.30 pm	9. Editing Solid Models (II) • Extracting Geometry from Solid Models • Setting Styles • Base View • Elevations
3.30 — 5.00 pm	10. Editing Solid Models (III) • Base View • Elevations

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