



CAD.:Labs
software solutions

**AUTODESK®
AUTOCAD®**

**3D Drawing &
Modeling**
Students Guide Metric



Este curso introduce a los usuarios que tienen buen desempeño con los comandos 2D de AutoCAD a los conceptos y métodos del modelado en 3D. El curso proporciona una base sólida en los fundamentos de 3D y explora las principales características del modelado avanzado 3D en AutoCAD.

Duración del curso de 25 hrs en 5 días.

Temario | AUTODESK® AUTOCAD® 3D Drawing & Modeling by ©ASCENT

1 3D Foundations

1.1 Why use 3D?

Types of 3D Models

1.2 Introduction to the 3D Modeling Workspace

3D Ribbon Panels

1.3 Basic 3D Viewing Tools

Present 3D Views

Orbiting in 3D

Using Visual Styles

1.4 3D Vavigation Tools

ViewCube

SteeringWheel

1.5 Introduction to the User Coordinate System (UCS)

Dynamic UCS

2 Simple Solids

2.1 Working with Solid Primitives

Drawing Solid Primitives

Editing Solid Primitives

2.2 Solid Types

Creating Boxes and Wedges

Creating Pyramids

Creating Cylinders and Cones

Creating Spheres and Tori

Creating Wall-like Solid with Polysolid

2.3 Working with Composite Solid

Creating Composite Solids

Modifying Composite Solids

2.4 Working with Mesh Models

Creating Mesh Primitives

Creating Mesh Models from Objects

Editing Mesh Models

Convert from Mesh Models

3 Working with the User Coordinate System

3.1 UCS Basics

UCS Icon

Moving the UCS Origin

Moving the UCS to a Face

Moving the UCS Using 3 Points

3.2 UCS X, Y and Z Commands

3.3 UCS Multi-functional Grips

3.4 Saving a UCS by Name

4

Creating Solids & Surface from 2D Objects

4.1 Complex 3D Geometry

Creating Surface and Solids

4.2 Extruded Solids and Surface

Presspull

Modifying Extrusions

4.3 Swept Solids and Surfaces

Modifying Sweeps

3D Paths

4.4 Revolved Solids and Surfaces

Modifying Revolves

4.5 Lofted Solids and Surfaces

Modifying Lofts

4.6 NURBS Surfaces

Creating NURBS Surfaces

Edit NURBS Surfaces

Modifying in 3D Space

5.1 Gizmo Tools

5.2 Amazing Objects in 3D Space

Align Command

3D Align Command

5.3 Modifying Commands

3D Move and 3D Rotate

3D Scale

Mirroring Objects in 3D

Arraying Objects in 3D

5

6

Advanced Solid Editing

6.1 Editing Components of Solids

Editing Faces

Editing Edges

Editing Vertices

Modification Options

6.2 Fillets and Comfers on Solids

6.3 Editing of Solids

Extruding Faces

Offsetting Faces and Edges

Moving Faces

Rotating Faces

Tapering Faces

Removing Faces

Copying Faces

Additional Editing Tools

7.1 Creating a Shell

7.2 Imprinting Edges of Solids

7.3 Slicing a Solid along a Plane

7.4 Interference Checking

7.5 Converting Objects to Surfaces

Converting Planar Surfaces from 2D Objects

Converting 2D Objects to Surfaces

Converting Solids to Surfaces

7.6 Converting Object to Solids

Converting 2D Objects to Solids

Converting Surfaces to Solids

Converting Solids or Surfaces to Wireframe

8

Refining the View

8.1 Working with Sections

Working with Sections

Setting the Sections Plane

Working with Live Sections

Generating Sections from Section Planes

8.2 Working with Cameras

Adjusting a Camera

Clipping Camera Views

8.3 Modifying Views in 3D

Modifying Views

8.4 Animating with ShowMotion

8.5 Creating ShowMotion Shots

8.6 Creating Animations

Using Walk and Fly

Animating a Walkthrough

Animation Motion Paths

Point Clouds

9.1 Points Clouds

Attach Point Cloud

Point Cloud Contextual Tab

Objects Snap

Dynamic UCS

9

10

Visualization

10.1 Creating Visual Styles

Visual Style Settings

10.2 Working with Materials

Using the Materials by Browser

Libraries

Adding Materials

Attaching Materials by Layer

Material Editor

Texture Editor

10.3 Specifying Light Sources

Default Lighting

Sunlight

User- Defined Lights

Modifying Lights

10.4 Rendering Concepts

Adjusting the Exposure

Render Presets Manager

Working Drawings from 3D Models

11.1 Creating Multiple Viewports

11.2 2D Views from 3D Solids

Creating Hidden Line Views

Creating Profiles from Solids

11.3 Creating Technical Drawings with Flatshot

11.4 3D Model Import

11.5 Automatic Model Documentation

Adding Base Views

Adding Projected Views

Editing Drawing Views

11.5 3D Printing

Print Studio

3D Print Service