

Design Centre

The Complete CAD-CAE Academy



Course Name : Catia Mechanical Designer (ADV)
Duration : 104 hrs.

Syllabus

Introduction

CAD/CAM/CAE Product cycle, Parametric Technology, Introduction to CATIA Environment & Menu bar and Use of Mouse.

Sketcher

Creating 2D Geometry, Working on Profile Toolbar Dimensioning the Sketches, Modifying and Constructing using Operation & Transformation Toolbar. You will also learn about Applying Constraints & Constraint Definition, Animating constraint & Checking Various Mechanisms.

Part Design

Understanding Part Design Environment, Creating Solid Models using Sketch-Based Features, Working with Dress-Up Features, View Toolbar, Creating & Working efficiently on Reference Elements Planes and lines & points.
Advanced solids, Multi body solids, Boolean Operations
Part Validation, Measure, Draft analysis, Wireframe geometry
Creating Planes, Creating Points, Creating Lines

Editing

Updating Features, Transformation Features e.g. Patterning, Rotating, Advanced Modeling Techniques e.g. Boolean Operations, Annotations, Assigning Materials & Measuring Properties

Surface Design (Part 1)

Creating Wireframe elements e.g. helix, splines, Curves, etc. Creating Surfaces like blended, lofted surfaces, etc. Operations on Shape Geometry e.g. Joining, splitting & trimming.

Surface Design (Part 2)

Advanced Task in which Surface Operations like Healing, Extracting, etc. Handling with Curves, Extrapolating surfaces, Splitting body with surface, Solidifying the surface models and Sewing Surface with Solid body.

Assembly Design

Creating Bottom-up Assemblies, Inserting Components, Using Smart Move tool, Applying Constraints, Creating Top-down Assemblies, Working with Subassemblies, Editing Assemblies, Simplifying Assembly, Interference Detection, Sectioning & exploding assembly.

Drafting Workbench

Generating Drawing View with 1st angle or 3rd angle, Using Wizard, Generating Projected, Auxiliary, Section, Detailed views, etc Using Control knob, Editing Views, Generating Dimensions, Inserting Sheets, Adding Datum, Geometric Tolerances & symbols and Generating BOM table.

Catia Part Design Added Exercises

Connector Housing , Bike Rear Lever , Fitting
Bottom Case , Angle Bracket , Meat Mincer Screw
Hinge , Car Jack Support
Piston, Side Toolhead
Tee Fitting

Catia Product Design Added Exercises

Connector Assembly Exercise
Vice Assembly Exercise
Flexible Assemblies Exercise
PC Speaker Assembly Exercise

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