



CAD using CATIA V5 R16 Course Curriculum

Day I

Introduction

- a) Dassault Systemes & products
- b) CATIA, PLM & Industries using CATIA.
- c) Parametric / Feature based Modelling Concept (Parent-child relations and Associativity)
- d) Supported file formats (open / Import & save / export)
- e) Syllabus modules
- f) Starting CATIA its GUI
- g) Customization of workbench & entering a workbench
- h) Mouse Navigation
- i) General commands (new file, open, save, save as, close) & keyboard shortcuts & Mouse Gestures
- j) Design Intent

Sketcher Workbench

- I) Entering the Sketcher workbench Sketch & Positioned Sketch
- II) Toolbars
 - a) Workbench
 - b) Standard
 - c) Sketch tools
 - d) Profile
 - e) Operation
 - f) Constraint
 - g) View
 - h) Properties
 - i) Extra toolbars like Visualization, Select, User selection Filter
- III) Customization & options
 - a) General
 - b) Display
 - c) Parameters & measure
 - d) Mechanical Design → Sketcher
- IV) Tips & Workshop

Day II

Part design Workbench

- a) Common toolbars like standard, view, workbench, select
- b) Sketcher toolbar
- c) Sketch-based features (Pads, Pockets, Shaft, Groove, Hole, Rib, Slot, Solid Combine, Stiffener, Multi-Sections Solid, Remove Multi-Sections Solid)

Day III

Part design Workbench

- d) Dress-up features (Fillet, Chamfer, Drafts, Shell, Thickness, Thread/Tap, Remove Face)
- e) Transformation features (Translation, Rotation, Symmetry, Mirror, Patterns, Scaling)
- f) Apply material toolbar
- g) Tips & Workshop

Wireframe & surface Design Workbench

- a) Common toolbars
- b) Wireframe toolbar (Points, Lines, Planes, Projection, Intersection, Spline, Connect, Helix, Circle)

Day IV

Wireframe & surface Design Workbench

- c) Surfaces toolbar (Extrude, Revolve, Sphere, Cylinder, Offset, Sweep, Fill, Multi-section, Blend)
- d) Operations toolbar (Join, Disassemble, Heal, Split, Trim, Boundary, Extract, Extrapolate, Transformation)
- e) Surface & solids interaction Part Design → Surface-Based Features Toolbar
- f) Tips & Workshop

Day V

Assembly Design Workbench

- a) Top-down & Bottom-up assembly design approach.
- b) Common toolbars
- c) Product structure tools
- d) Move & manipulating parts using compass.
- e) Constraints
- f) Assembly features
- g) Catalogue
- h) Measure.
- i) Tips & Workshop

Day V

Drafting Workbench

- a) Page setup & customization
- b) Layout & templates
- c) Common toolbars
- d) Generative design toolbars → Geometry creation & modification, Tools
- e) Interactive design toolbars → Generating views & Generate BOM, Generate dimension
- f) Dress-up
- g) Dimensioning
- h) Annotations
- i) G D & T, Tips & Workshop

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