

CATIA

I. INTRODUCTION

- Dassault Systems and Products.
- CATIA, PLM and Industries using CATIA V5-6 R2012.
- Parametric/ Feature based modeling concept
- Supported File Formats
- Syllabus modules
- Starting CATIA V5 R2012
- Customization of Workbench and entering a workbench.
- Mouse navigation
- Toolbars
- Hot Keys
- Color Schemes
- General Commands
- Design Intent

II. WORKBENCHES

- Sketcher
- Part Design
- Surface Design
- Assembly design
- Drafting
- Sheet Metal Design

III. SKETCHER

- Entering the sketcher workbench
- Toolbars
 - Workbench
 - Standard
 - Sketch Tools
 - Profile
 - Operation
 - Constraint
 - View

- Properties
- Visualization
- User Selection Filter
- Customisation and Options
 - General
 - Display
 - Parameters and Measure
- Tips and Workshop

▶ IV. PART DESIGN

- Common Toolbars
 - Standard
 - View
 - Workbench
 - Select
- Sketcher Toolbar
- Sketch Based Features
 - Pad
 - Pockets
 - Shaft
 - Groove
 - Hole
 - Rib
 - Slot
 - Solid Combine
 - Stiffener
 - Multi-sections
 - Remove Multi-Sections
 - Solid
- Dress Up Features
 - Fillets
 - Chamfers
 - Drafts
 - Shell
 - Thickness
 - Thread /Tap
 - Remove Face

- Transformation Features

- Translation
- Rotation
- Symmetry
- Mirror
- Patterns
- Scaling

- Apply Material Toolbar

- Tips and Workshop

➡ V. SURFACE DESIGN

- Wireframe Toolbar

- Points
- Lines
- Planes
- Projection
- Intersection
- Spline
- Connect
- Helix
- Circle

- Surface Toolbar

- Extrude
- Revolve
- Sphere
- Cylinder
- Offset
- Sweep
- Fill
- Multi
- section
- Blend

- Operation Toolbar

- Join
- Disassemble
- Heal
- Split
- Trim
- Boundary
- Extract
- Extrapolate
- Transformation

- Surface and Solids Interaction

- Tips and Workshop

➡ VI. ASSEMBLY DESIGN

- Top Down and Bottom Up Assembly
- Common Toolbars
- Product Structure Tools
- Move and Manipulating parts using compass
- Constraints
- Assembly Features
- Catalogue
- Measure

- Tips and Workshop

➡ VII. DRAFTING

- Page set up and Customization
- Layouts and Templates
- Common Toolbars
- Generative
 - Design
 - Toolbars
 - Geometry
 - Creations ▪
 - Modification
 - Tools
- Interactive
 - Design
 - Toolbars
 - Generating
 - Views ▪ Billi
ng of
 - Materials ▪
 - Generate
 - Dimensions
- Dress Up
- Dimensioning
- Annotation
- GD & T
- Tips and Workshop

➡ VIII. SHEET METAL DESIGN

- Generative sheet metal design
 - Creating Base Wall
 - Creating Wall On Edge
 - Creating Extrusions
 - Creating Swept Walls
 - Creating Bend
 - Bend from Flat
 - Rolled Walls
 - Folding and Unfolding Sheet Metal Parts
 - Flat Patterns of Sheet Metal Components
 - Viewing a Sheet Metal Components in Multiple Windows
- Common Toolbars
- Cutting
- Stamping
 - Creating a Surface Stamp
 - Creating a Bead Stamp

- Creating a Curve Stamp

- Creating a Flange Cut Out Stamp
- Creating a Louver Stamp
- Creating a Bridge Stamp
- Creating a Flanged Hole Stamp
- Creating a Circular Stamp
- Creating a Stiffening Rib Stamp
- Creating a Dowel Stamp