CATIA SYLLABUS

Advance CATIA: No. Of Hours –60-70 hrs + Projects

i.e. Total -6 modules

Introduction and Overview of CATIA
CAD/CAM/CAE Product Cycle
Environment of CATIA
Introduction to Menu Bars, Modules

SKETCHER MODE
Profile, Predefined profile, Circle, Spline, Conic, Line, Axis, Point.
Corner, Chamfer, Relimitations, Transformation, 3-D geometry.
Constraint- Geometrical constraint.
Tools- Sketch solving status.
Sketch tool, Views, Standard options etc.

Exercises
PART DESIGN
3D Reference Elements (Point, Line, Plane)
Pad, Pocket, Shaft, Groove, Hole, Rib, Slot, Stiffener, Loft, Remove Loft
Fillet, Chamfer, Draft, Shell, Thickness, Thread/ Tap, filleted pocket,
Transformation feature-
Patterning, Scaling, Mirror
Insert, Annotation, Measure,inseart body,creation of axis system
Boolean Operations: Assemble, Add, Remove, Intersect,union trim ,remove lump.
Copy paste(sketch ,feature),paste special, power copy,UDF,Design Table,Catlauge
creation,Formula creation.

Exercises
WIRE FRAME & SURFACE DESIGN

Extrude, Revolve, Sphere, Offset, Trim, Split, Boundary, Extract
Join, Translate, Rotate, Extrapolating
Sweep, Loft, Blend, Transformation Feature
Projection, Intersection, 3D Circle, Corner, Helix, Fill, Connect Curve, Spline etc.
    Exercises
GENERATIVE SHAPE DESIGN
Extremum, Polar extremum, Spine,Spline Combine etc.
Reflect line, Conic, Spiral, Parallel Curves, Polyline etc.
Healing, Dissemble, Untrim, Curves Smoothening,
Law Creation, Fillet, Adaptive sweep, Multiple
Extract, Patterning etc.BIW templates

ASSEMBLY DESIGN

Insert Component, Product, Part, Existing component, Replace component, Graph tree, reording,
Generate numbering, Fast muti-instation, Catalog Browser etc.
Manipulation, Snap, Smart move, Explode, Stop manipulate on clash etc.
Coincidence, Contact creation, Offset, Angle, Fix, Fix together, Quick constraint, Change
constraint, Reuse pattern etc.
Checking Interference- Clash, Sectioning etc.
Assembly Features etc.
Creating Scenes, Editing scenes etc.

Exercises

SHEET METAL DESIGN

Sheet metal parameters, wall, wall on edge, extrusion, bend, flange, and hopper, fold/unfold, cut
out, hole,
Pattern corner relief, corner, bend stamps,from flat.

INTRODUCTION TO KINAMATICS

INTRODUCTION TO STRUCTURAL ANALYSIS

DRAFTING

1) Generative Drafting

Front View, Auxiliary View, Projection Views, Unfolded view, Section Views, Detail View, Broken
View, Clipping view, View creation wizard etc.
Dimension generation, Balloon generation etc
Positioning Views, Modifying Views etc
Dimension properties, Addition of tolerance etc
Frame cretion, frame modification, Addition of Bill of material etc

Exercises

2) Interactive Drafting

Placing Drawing View, Addition of sheet, Multi view (2.5 D) etc.
Geometry creation, Geometry modification, Dress Up Features, Dimension creation, Dimension
edition , Dimension analysis, Constraint creation, Addition of sybols like datum, geometrical
tolerance, roughness symbol, welding symbol, weld, datum with target, etc
Addition of text with leader, text edition, Graphic properties, table etc.