



VENDORS NAME: HARITA TECHSERVE LTD

CLASS: II MECHATRONICS (Third SEM)

SUBJECT: BASIC CATIA TRAINING

DAY 1	ENGINEERING DRAWING
	Introduction to Engineering Drawing
	Methods of Projection
	Sections
DAY 2	INTRODUCTION TO CATIA V5
	About CATIA V5
	History of CATIA
	CATIA modeling process, Parametric design concept, feature based design etc
	About PLM
	SKETCHER WORKBENCH
	Basic sketch, Sketch in task environment, Selection tools
	Profile, Predefined shapes, Circles, Spline, Conics, Line, Points
	Operations, Corner, Chamfer, Relimitation tools,
	Projections, Transformations
	Constrains, Constrain dialogue box, Constrains, Fix together,
	Animate constrain, Edit multi constrain
	Sketch tools, Grid, Snap on grid, Construction,
	Geometrical constrains, Dimensional constrains., Sketch analysis
Visualization tools, View tool bar, Workbench	
DAY 3	Part Modelling
	Reference Elements: Point, Axis, Plane, Axis System
	Sketch Based Feartures: Pad, Pocket,
	Dressup Features: Edge Fillet, Variable radius Fillet, Chamfer
	Drafting
	Standards, Templates in drafting
	Creating the drawing
Front view,Projections, Auxiliary view, Isometric view	
Day 4	Transformation Features: Mirror, Rectangular Pattern
	Edit Geometry, Parent child relationship, copy & paste features,
	Standards, Templates in drafting
	Creating the drawing
	Views
	Dimensions
	Dimensions, Chained dimensions,Distance, Angular, Radius, Diameter,

DAY 5	Multipad, Drafted Filleted pad, Drafted filleted pocket, Multi pocket, ,
	Chordal Fillet, Stiffener, Draft,
	Translation, Rotation, Symmetry, Axis to Axis Transformation
	Unfolded View, Advanced Front View, Cumulated dimensions, Stacked dimensions, Chamfer Dimensions
DAY 6	Shaft, Groove, Holes, , Translation, Rotation, Axis To Axis, Circular Pattern
	Draft reflect line, Face to Face Fillet, Variable Draft,
	Circular pattern,
	Half Section, Aligned Section, Offset Section,
DAY 7	Thread Dimension, Hole Dimension Table, Coordinate Dimension Table
	Text, Text with leader, Annotations, Gometric Tolerance
DAY 8	Rib, Slot, Solid Combine
	Tri tangent Fillet, Shell, Thicken
	Datum target, Datum Feature, Surface Finish, Weld Symbols
DAY 9	Multi Section Solid, Remove Multi Section Solid
	Remove Face, Replace Face
	User pattern, Scale, Affinity
	Symbols and Table creation
	Dress up
	Centre line, Area fill creations, Arrow
	Geometry creation
	Points, Lines, Circle and Ellipse, Profiles, Curves
	Geometry modifications
	Relimitation tools, Transformation tools, Constrains
Generate dimensions	
DAY 10	ASSEMBLY DESIGN
	Introduction to assembly
	Assembly approaches-Top down assembly, Bottom up assembly
	Component, Product, Part
	Existing component, Existing component with positioning
	Replace component, Graph tree reordering, Generate numbering
	Fast multi instantiation, Define multi installation
	Move options
	Manipulations
Snap, Smart move	
DAY 11	Explode, Stop manipulation on clash and Assembly constrains
	Coincident, Contact constrain, Offset, Angular, parallel, Perpendicular, Fix
	Fix together, Quick constrain, Change constrain, Reuse pattern
	Assembly Features
	Split, Hole, Pocket, Add, Remove
Symmetry in assembly	
DAY 12	Boolean Operations: Assemble, Add, Remove, Union Trim,
	Design table, Power copy, Functions and relations, Catalog



VENDORS NAME: HARITA TECH SERVE LTD

CLASS: II & III MECHATRONICS (4TH & 6TH Semester)

SUBJECT: ADVANCED NX CAD TRAINING

S.No	Table of Contents	Duration in Periods
Sheetmetal		
Day 1	Introduction about sheet metal design	3 Hrs
	Sheet metal parameters	
	Walls-Wall, wall on edge, Extrusion	
	Flange, Hem, Tear drop, User flange	
Day 2	Bending,Punching	3 Hrs
	Bend, Conical bend	
	Assessment - I	
Day 3	Bend from flat, Folding, Unfolding	3 Hrs
	Point or curve mapping	
	Cutting and stamping	
Day 4	Pocket, Hole, Circular cutout, corner relief, Fillet, Chamfer,	3 Hrs
	Transformation features	
	Assessment- II	
Day 5	Rolled wall	3 Hrs
	Hopper, Free form surface, Rolled wall	
Day 6	Manufacturing preparation- Overlapping, Save as DXF	3 Hrs
	View-Fold and unfold	
	Assessment - III	
Surface Modelling		
Day 7	Extrude,Edge Fillet	3 Hrs
	Split, Trim,Join	
Day 8	Wireframe	3 Hrs
	Line, Axis, Polyline	
	Geometrical Set	
	Ordered Geometrical Set	
Day 9	Planes	3 Hrs
	Revolve, Sphere, Cylinder	
	Points, Points and plane repetition, Extremum and Extremum polar	
Day 10	Projection, Combine, Reflect line, Silhouette	3 Hrs
	Offset, Rough offset, Variable offset	
	Parallel curve, Rolling offset, 3D offset	
	Circle, Corner, Connect curve, Conic	
Day 11	Assessment – IV	3 Hrs
Day 11	Shape fillets	

	Chamfer	
	Spline, Helix, Spiral, Curve from plane, Contour, Isoparametric curve	
Day 12	Sweep -Profile, line	3 Hrs
	Fill Surfaces, Untrim	
Day 13	Sweep - Circular, Guide	3 Hrs
	Sew	
Day 14	Multisection Surface, Blend Surface	3 Hrs
	Assessment - V	
Day 15	Transformation features	3 Hrs
	Extrapolate	
Day 16	Boundary	3 Hrs
	Extract	
	Multi Extract	
Day 17	Boolean Operations	3 Hrs
	Pattern	
Day 18	Bead	3 Hrs
	Diabolo	
	Mating flange	
	Hole	
Day 19	Publication	3 Hrs
	Copy and Paste surfaces	
Day 20	Assessment - VI	3 Hrs
	Total	60 Hrs