Agni College of Technology
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.
Accredited by NBA, New Delhi, An ISO 9001:2015 Certified Institution.
OMR, Thalambur, Chennai - 600130, www.act.edu.in

**VENDORS NAME: HARITA TECHSERVE LTD**

**CLASS: II Mechanical (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 |

Agni College of Technology
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.
Accredited by NBA, New Delhi, An ISO 9001:2015 Certified Institution.
OMR, Thalambur, Chennai - 600130, www.act.edu.in

**VENDORS NAME: HARITA TECH SERVE LTD**

**CLASS: II & III Mechanical (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 | |
| | Planes | |
| Day 9 | Revolve, Sphere, Cylinder | 3 Hrs |
| | Points, Points and plane repetition, Extemum and Extemum polar | |
| | Projection, Combine, Reflect line, Silhouette | |
| Day 10 | Offset, Rough offset, Variable offset | 3 Hrs |
| | Parallel curve, Rolling offset, 3D offset | |
| | Circle, Corner, Connect curve, Conic | |
| | Assessment – IV | |
| Day 11 | Shape fillets | 3 Hrs |

| | | |
|---|---|---|
| | 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 |