



## COURSE STRUCTURE

### AutoCAD - 2D

- Basic of Computer & Windows XP
- CAD Concepts, Introduction of AutoCAD and other CAD/CAM/CAE Software
- 2D Drawing Tools
- 2D Editing Tools
- 2D Display Tools
- Drawing Scales, Drawing Limits and Measurements.
- Symbol Library Creation (Blocks), Insert, Minsert, Attribute, WBlock, Hatching Techniques, Boundary Hatching and Editing of Hatches.
- Concept of Layers and Layerisation, Linetypes, Lineweight, Colours, Text, Dtext, Text Styles, Mtext, Spell Dedit, Pint Styles, Multiline Styles Creation.
- Dimensioning a drawing with various options and presentation Dimension control variables, update, override adding geometric Tolerances and Symbols.
- Area Calculation Enquiry Preferences, Osnap Setting, Polar Tracking Booleans, Properties, Painter, Match Properties, Spline Splinedit, Mledit
- Cross Section Representation, XRef, XBind, XClipframe, Rasterimage, Object Linking, Copyclip, Pastclip, Insert Object.
- Quality Presentation with Design Centre, Template Drawing Creation and tips for productivity.
- Isometric Drawing preparation, Snap Isoplane, Blips, Qtext, Grids, Slide Shows.
- Printing/Plotting of 2D Drawing, Previews Page Setup, Layout, Plot Style Manager, Batch Plotting, Exports-Imports, Export Through Internet.
- Exercises, Tests, Quizes and Plenty of Real Live Project Works.

## COURSE STRUCTURE

### AutoCAD - 3D

- Introduction of 3D modeling & Spherical and cylindrical co-ordinate system.
- Solid Modeling with -
  - Wire, Mesh, Surface, Shade, Extrude, Slice, Tabsurf, Revsurf, Edgesurf, Rulesurf, Box, Cylinder, Sphere, Torus, Wedgs, Region, Thickness, Boundary.
- 3D Drawing Tools
- 3D Editing Tools
- 3D Display Tools
  - Multiple Views, Sectional Views, Camera Views, Perspective Views, Aerial Views, Clip Views.
- Setting a View Direction, Setting Views with Compass and Axis Tripod, Auto generation of Front View, Side View, Top View Etc.
- 3D Orbit, Walk through for your plans and Interiors, Perspective Views, Parallel Projection, Continuous Rotated View, Grid Setting, Swirelling, Camera, Camera Placing and Dynamic View.
- Shading -3D models with Flat Shades, Gouraud Shade, Edges Highlight and with other shading effects.
- 3D Dimensioning, 3D Mirror, 3D Array, 3D Solids, 3D Align, 3D Mesh and Mesh Editing, 3D Mass Property.
- User Co-ordinative System (UCS), UCSICON, UCSMAN,
- Paper space Vs Model Space, Floating & Tile Models Space.
- Multiple-Viewport Plotting Hidden Line Supression.
- Rendering
  - Lights, Reflection, Scenes, Finishes, Mapping, Background, FOG, Image Processing.
- Memory Management, Customisation of Tool Bars, Bonus Keys, Utility Commands.
- Productivity with Filter Group, Geometric-Calculator, Labeling Blocks with attributes, Editing Attributes, Olelinks, Olescale, Script Files, Slide Library Creation, Date Base Connectivity, Hyperlink.
- Concept of Partial Load, Postscript Files, Concept of Digitizing.
- Option for Internet Services for Job Opportunity and Surfing.
- Exercises, Tests, Quizes and Plenty of Live Project Works.

## COURSE STRUCTURE

### Pro - E

- Graphic User Interface of Pro / E
- Sweep and Blends, Parametric Design
- File Management, Sketching entities
- Intent manager, Basic Features
- Creating tweak features
- Creating rounds and chamfers
- Pattering features, Simplifies representation
- Family table, User defined features
- Creating surfaces, Assembly Features
- Assembly constraints, Exploded views
- Creating drawing views, Creating dimensions
- Bill of Materials, Ballons, Format
- Designing sheet metals, Photo rendering
- Exporting / Importing files

### Catia

- CATIA User interface, Parametric modeling
- Manipulating objects, Creating sketches
- Sketched features, Placed features
- Transformation features, Dress up features
- Modifying parts,
- Design table and external file management
- Assembling components
- Positioning components using constraints
- Editing parts in assembly,
- Exploding the assembly
- Creating wireframe geometry
- Creating basic and advanced surfaces
- Drawing view generation
- Editing view layout and properties
- Bill of Materials, Ballons
- Automatic dimensioning of a part
- Finalizing the drawing and printing
- Dress up on 2D views, Real time rendering
- CATIA V4 integration, Data exchange

### 3D Max

- Introduction 3D Max, Creating Basic Primitives,
- Selection Types, Customization,
- Modifiers, Shapes, Compound Objects,
- Architectural Objects, Lights' Cameras, Array Tools,
- Materials Basics, Compound Materials,
- Particle Systems, Forces, Editing Mesh Objects,
- Importing Objects, Animation Basics, Projects.