CAD & CAM SYLLABUS

Contact: 9640648777

Duration: 1 Month

PTC
PRO-Engineer (CREO)

Sketcher:
Sketcher Mode, Sketcher Environment, Drawing a Sketch Using the Sketcher Tools, Dimensioning the Sketch, Sketched Entities Constraint, Modifying Dimensions, Fillets, Reference coordinate system, Splines, Moving and Resizing, Importing 2D Drawing.

Modeling:
General Interaction, Parametric Models, Basic Modeling, Using a Template, Cut Feature, Intent Manager, Manipulating Sketches, Rounds, Basic Modifications, Datum's, Holes. More Features, Sweeps and Blends, Resolve Features, Layers, Visualizations.

Assemblies:
Bottom-up Assembly, Top-up Assembly Components, Redefining the Components of an Assembly, Reordering the Components, Replacing Components, Modifying the Components, Creating the Exploded state, Bill of Material (BOM), Editing Assemblies.

Advanced Modeling:
Datum Points, Datum Curves, Relations, Sketcher, Variable Section Sweep, Standard Holes, User defined Features, Advanced Patterns, Family Tables, Advanced Rounds, Helical Sweep, Creating a Map key.

Detailing:
Creating Drawing, Sections, Detailing, Tolerances, GD & T, Text, Formats, Assembly Drawings.

Surfaces:
Blended Surfaces, Two parallel Curves, Several parallel curves, Non-parallel Curves, Curves in 2 Directions, Swept Blend, Working with Surfaces, Merge, Trim, Solidify, Offset, Mirror, Thicken, Advanced Surfaces, Rounds, Blend Control Points, Tangency Conditions, Extend Surface, Extension Distance, Wrap Feature.

CAD & CAM SYLLABUS

Contact: 9640648777

PTC
PRO-Engineer (CREO)

Sheet Metal:

The User Interface, Introduction, Terms, Toolbar, Object Selection and Viewing, Methodology, Unattached Walls, Extrude, Revolve and Flat Walls, Blend and Offset Walls, Additional Walls, Extend and Merge Walls Bend and Unbend, Cut, Round, Chamfer and Hole, Punch and Notch, Bend Back, Form Features, Flat Pattern and Flattern, Connect, Deform Area, Bend Allowance, Setup and Parameters, Bend Order Tables, Projects.

Solid Works:

Duration: 1 Month

- Solid works contents
- Introduction
- Sketching
- Parts and Features
- Assemblies
- Drawings and Detailing
- Sheet metal
- Import and Export
- Motion Studies

CATIA:

Duration: 1 Month

User Interface, Managing Files
Visualizing Models, Specification Tree
Managing Geometry

Part Design:

Introduction to part Design
Basic Sketch Based Features
Dress Up Features Patterns
Additional Dress Up Features

CAD & CAM SYLLABUS

Contact: 9640648777

Assembly Design:

Basic Assemblies,
Assembly Overview,
Assembly Workbench, Product Specification Tree,
Component Reposition Methods,
Creating Bottom-Up Assembly,
Assembly Constraints

Wireframe and Surface:

Basic Wireframe Geometry, Basic Surfaces
Geometrical Sets

Drafting:

Drafting Introduction, Geometry Creation
Geometry Modification, Dress Ups
View Creation, Secondary Views
Editing Drawing, Dimensioning
Annotations, Draft Tools
Bordering Creation Ballons with Bill of Materials (BOM)
Filtering Assembly Drawing Views
Customizing Your Drawing Sheet
Drafting Workshop
Generative Sheet Metal Design
Introduction, Parameters
Walls, Bends, Features
Stampings, Operations, Drawing, GD &T
Project

Sheet Metal Modeling

Wall commands, Bends, Views, Stampings/Cuttings, hopper commands, transformation commands

CAD & CAM SYLLABUS

Contact: 9640648777

Duration: 1 Month

AutoCAD:

Using the AutoCAD Modules, 3D User Interface
Viewing 3D Models, Views
Modifying 3D Models, Surface Modeling
Solid Modeling, solid editing
Sectioning solids, meshing
Revolving, extrusion, loft, sweep, shell, slice
Helix, mass properties, press/pull
Separate, planner surface, project work

Hypermesh Syllabus:

Duration: 1 Month

Getting started with Hypermesh

Working with Fe-Models.
Model viewing option using permanent menu.

Working with geometry

Basic operations \ failures
Advanced features for working with before meshing
Note: Tips for considerations Edone before meshing

Introduction to Meshing

Introduction to 2D – (Shell) elements
Basic meshing operations & commands
Meshing of surface using shell elements
Properties of elements
Meshing concepts & techniques
Transitions – methods
Advanced features & concepts in shell
Meshing & features of other 2D – commands

Introduction to 3D – elements

Types of elements
Features of 3D – elements
Types of elements
Features of 3D – meshing commands
Tetra mesh & other 3D commands

CAD & CAM SYLLABUS

Contact: 9640648777

Duration: 1 Month

Introduction to modification

Advanved features using, using Tool – panel
Commands in Tool – Panel

Introduction to 1-D elements

Where they are used, when they are using
Creation of 1D – elements & commands
Related to 1D elements

Introduction to Boundary conditions

Applying Boundary conditions creating systems
Applying loads….Constrains etc
.

Other important concepts Include

Extraction of Mid – surface, Quality checks
Writing output checks for the different solves packages.
Post – processing (Reviving the result)
Element, Specification for the project
Consideration before starting a project.

Ansys Syllabus:

Duration: 1 Month

FEA and ANSYS

What is FEA?
About ANSYS
ANSYS Basics

Starting ANSYS

ANSYS Workbench Environment
The GUI
Graphics and Picking
The Database and Files
Saving Files
Exiting ANSYS
File Types

CAD & CAM SYLLABUS

Contact: 9640648777

Duration: 1 Month

General Analysis Procedure

Overview
Preliminary Decisions
Preprocessing
Solution
Post processing

Introduction to ANSYS Modeling

Direct Generation vs. Solid Modeling
Direct Generation
Creating nodes and elements
Filling between nodes
Setting Element Attributes
Solid Modeling
Bottom up
Using key points
Using lines, splines & arcs
Using areas and volumes (arbitrary)
Top Down

From Primitives

Creating rectangle, circle, polygon, block, cylinder, prism, sphere, cone and torus.
Concepts of hard points, line fillets and area fillets.
Modeling with Boolean operations
Intersect, Add, Subtract, Overlap, Glue, Divide

Introduction to Coordinate Systems

Types of coordinate Systems
Global & Local
Active coordinate system

Introduction to Working Planes

Creating a new working plane
Moving and rotating the working plane

Modify / Transformation commands

Copy, Reflect,
Move/ Modify, Scale

CAD & CAM SYLLABUS

Contact: 9640648777

Duration: 1 Month

Model Creation by Extrusion

Sweeping key points along a trajectory to create lines
Revolving key points about an axis to create arcs or full circles, normal to the axis
Sweeping lines or splines along a trajectory to get areas
Revolving lines, splines or arcs about an axis to create cylindrical areas.
Giving depth to an area to create a volume, normal to the area
Creating a volume with tapered faces
Sweeping an area along a trajectory to create a volume
Revolving an area about an axis to create a cylindrical volume
Extending Lines
Modifying an existing line by extending that line to a desired length
Creating a new line on the basis of an existing line, where the existing line will not be modified.
Meshing

Introduction to elements

One Dimensional Elements
Two Dimensional Elements
Two and Half Dimensional Elements
Three Dimensional Elements
Quadrilateral Elements
Triangular Elements
Brick Elements
Tetrahedral Elements
Shell Elements

Introduction to Meshing

Mapped and free meshing
How to control mesh size?
How to use Mesh Tool?
Concatenation and its significance
Clearing mesh and re-meshing
Some useful meshing techniques

CAD & CAM SYLLABUS

Contact: 9640648777

Duration: 1 Month

Numbering Controls

Merging Coincident Points
Compressing Item Numbers
Setting Start Number & viewing Start Number Status
Adding Number Offset
What is coupling and how to create coupled sets of nodes Static Structural Analysis
Modal Analysis Thermal Analysis…