

COURSE OUTLINES

AutoCAD 2007

Learning outcomes:

The course is designed to aid participants in acquiring skills that would help them in detailed engineering drawings (2D) & basic 3D models.

Pre-requisite:

Knowledge of Photoshop

Course Contents:

- ✚ Introduction to CAD
 - Introduction
 - What is CAD?
 - Fundamentals of Engineering Drawing
 - Taking a Guided Tour
 - Working with AutoCAD
- ✚ Inserting Charts
 - Starting Your First Drawing
 - Setting up a Work Area
 - Specifying Distances with Coordinates
 - Getting to know the Draw Toolbar (Lines, Ray, Construction Lines)
- ✚ Drawing in 2D
 - Detailed Usage of Draw Tools (Polylines, Polygons, Circles, Arcs, Multilines, Splines, Donuts, Ellipse, etc.)
 - Using the AutoCAD Modes as Drafting Tools
- ✚ Learning the Tools of the Trade
 - Planning and Laying Out a Drawing
 - Viewing your Drawing
- ✚ Modifying in 2D
 - Getting to know the Basic Modify Tools (Use of Various Modify Tools like Erase, Copy, Move, Rotate, Scale, Align, Offset, Mirror, Stretch, Lengthen, Break, Trim, Extend, etc. to Construct a Geometry)
- ✚ Power Editing
 - Editing More Efficiently (Usage of Advanced Editing Commands like Fillet, Chamfer, Array, Splinedit, Pedit, etc.)
 - Using Grips to Simplify Editing
- ✚ Enhancing your Drawing Skills
 - Selecting Objects

- Using Advanced Selection Tools
- Using Hatch Patterns in Your Drawings
- Understanding the Boundary Hatch Options
- Hatch Editing
- Using External References
- Editing Xrefs in Place
- Managing Xrefs
- ✚ Getting Data from Drawings
 - Finding Area
 - Getting General Information
- ✚ Exchanging Data from Drawings
 - Using the DXF File Format to Exchange
 - Using AutoCAD Drawings in Desktop Publishing
 - Combining Data from Different Sources
- ✚ Organizing your Work
 - Creating and Inserting Blocks
 - Modifying a Block
 - Creating Attributes
 - Editing Attributes
 - Working on Linetypes, Lineweights and Color Controls
 - Organising Information with Layers
 - Managing Layers
- ✚ Adding Text to Drawings
 - Adding Text to a Drawing
 - Understanding Text Formatting in AutoCAD
 - Organising Text by Styles
 - Adding Simple Text Objects
 - Using Fields to Associate Text with Drawing Properties
 - Adding tables to your Drawing
- ✚ Using Dimensions
 - Understanding the Components of a Dimension
 - Drawing Linear Dimensions
 - Dimensioning Non-orthogonal Objects
 - Adding a Note with an Arrow
 - Creating a Dimension Style
 - Editing Dimensions
 - Skewing Dimension Lines
 - Applying Ordinate Dimensions
 - Adding Tolerance Notation
- ✚ Editing for Productivity
 - Developing your Drawing
 - Marking Divisions on Curves
 - Eliminating Unused Blocks, Layers, Line Types, Shapes and Styles

- ✚ Power Editing
 - Working in Viewports
 - Using the Layout Tabs and Paper Space
 - Working with Paper Space Viewports
 - Understanding Line Weights, Line Types and Dimensions in Paperspace
- ✚ Printing, Plotting and Layouts
 - Adding an Output Device
 - Understanding the Plotter Settings
 - Plotting the Plan
 - Working with Plot Styles
 - Plotting Using Layout Tabs
 - Assigning Plot Styles Directly to Layers and Objects
- ✚ Organizing Project using Sheet Sets
 - Understanding Sheet Sets
 - Creating a Sheet Set from an Existing Project
 - Managing Title Blocks and Cross References
 - Customizing Sheet Sets
- ✚ Managing and Sharing Your Drawings
 - Sharing Drawing over the Internet
 - ePublishing your Drawings
 - Managing your Drawings with Designcenter and the Tool Palettes
 - Establishing Office Standards
- ✚ Introducing 3D
 - Creating a 3D Drawing
 - Viewing a 3D Drawing
 - Drawing Predefined 3D Surfaces
- ✚ 3D Surfaces
 - Creating Complex 3D Surface
 - Using Other Surface Drawing Tools
- ✚ Using Advanced 3D Features
 - Mastering the User Coordinate System
 - Viewing your Model in Perspective (Using 3D Orbit)
- ✚ Mastering 3D Solids
 - Understanding Solid Modelling
 - Creating Solid Forms
 - Creating Complex Solids
 - Editing Solids
 - Advanced Editing Tools for Solids
 - Enhancing the 2D Drawing Process
 - Finding the Properties of a Solid
- ✚ Rendering and Animating 3D Drawings
 - Things to Do Before you Start
 - Creating a Quick Study Rendering