

# Course syllabus & Lesson Plan

## AutoCAD 2D & 3D

### Module 1: 2D Drafting (Basic)

#### Session 1:

- Software Installation
- System Requirements
- How to get free license?

#### Session 2:

- Introduction
- Latest Version
- AutoCAD's user interface
- Drawing Units
- Working with Commands
- Limits
- AutoCAD's Cartesian workspace

#### Session 3:

- Line & Polyline
- Multiline
- Erase
- Selection of objects
- Navigation Bar (Pan, Zoom)
- Undo & redo
- Dynamic input
- Coordinate System

#### Session 4:

- Snap & Grid
- Properties
- Join & Explod
- Boundary
- Ortho mode
- Polar tracking at angles
- Object snap & Object snap tracking
- Selection cycling

#### Session 5:

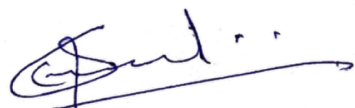
- Circles
- Move, Copy, Rotate, Scale & Mirror

#### Session 6:

- Rectangles
- Groups
- Utilities
- Trim & Extend
- Polygon
- Fillets, Chamfer & Blend Curves

#### Session 7:

- Arc
- Offset
- SP Line Fit, SP Line CV
- X Line, Ray
- Multiple Points



- Divide, Measure
- WipeOut, Donut, Revision Cloud

#### **Session 8:**

- Ellipses
- Hatch & Gradient
- Array
- Stretch

### **Module 2: Advanced Productivity Tools**

#### **Session 9:**

- Dimensions
- Dimension Style

#### **Session 10:**

- Lengthen
- Align
- Break, Break at Point
- Reverse
- Bring to Front/Back

#### **Session 11:**

- Single line text & Multiline text
- Leader
- Table
- View Tab
- Express Tools tab

#### **Session 12:**

- Blocks
- Insert & Editing blocks
- Attribute

#### **Session 13:**

- Layers
- Isometric Drafting
- Working with annotations

#### **Session 14:**

- 2D Home Plan

#### **Session 15:**

- Mini Project

### **Module 3: 3D Modeling**

#### **Session 16:**

- Viewport Controls
- View Controls
- Visual style Controls
- View Cube
- Orbit
- Box, Cylinder, Cone, Sphere, Pyramid, Wedge, Torus

#### **Session 17:**

- 3D Polyline
- 3D Move, 3D Rotate, 3D Scale, 3D Mirror, 3D Align
- 3D object snap
- Region & Boundary
- Polysolid

- Extrude Solid
- Union
- Subtract

#### **Session 18:**

- Press pull
- Sweep Solid
- Helix
- Culling, Filter, Gizmo
- Revolve Solid
- Intersect
- interfere

#### **Session 19:**

- Loft Solid
- Slice
- Separate
- Shell
- Solid editing Faces
- Solid editing Edges
- Fillet Edge
- Chamfer Edge

#### **Session 20:**

- Section plane
- Generate Section Block
- Edit UCS
- Dynamics UCS
- Dimensions in 3D

#### **Session 21:**

- Mini Project

### **Module 4: Advanced 3D Modeling**

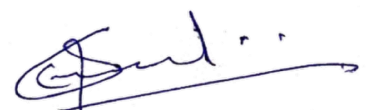
#### **Session 22:**

- Network Surface
- Planar Surface
- Extrude Surface
- Loft Surface
- Revolve Surface
- Sweep Surface
- Blend Surface
- Patch Surface
- Offset Surface
- Surface Associativity

#### **Session 23:**

- Fillet
- Trim
- Untrim
- Extend
- Sculpt
- Extract Intersection
- Offset Edges
- Convert to NURBS, Show CV, Hide CV, NURBS Editing, CV Edit Bar
- Project to UCS, Project to View, Project to 2 Points

#### **Session 24:**



- Mesh: Box, Cylinder, Cone, Sphere, Pyramid, Wedge, Torus
- Mesh Primitives Option

#### **Session 25:**

- Revolved Surface
- Edge Surface
- Ruled Surface
- Tabulated Surface
- SURFTAB1 & SURFTAB2
- Smooth Object
- Smooth More, Smooth Less, Refine Mesh,
- Add Crease, Remove Crease

#### **Session 26:**

- Extrude Face
- Split Face
- Merge Face
- Close Hole
- Collapse Face or Edge
- Spin Triangle Face
- Convert to Solid, Convert to Surface

#### **Session 27:**

- 3D Home
- Elevations
- Staircase

#### **Session 28:**

- Materials Browser
- Create Light
- Shadows
- Sun Status
- Creating Scenes
- Camera
- Rendering concepts

#### **Session 29:**

- Plotting/Printing
- Layout Tabs

#### **Session 30:**

- Revision & Doubts

