

Diploma in CAD 2 Hours / Day [AutoCAD]

AutoCAD		Total Duration : 120 Hours
Session 1	• Introduction to Engineering Drawings ◦ Projections (First & Third angle) ◦ Views (Orthographic, Isometric & Perspective) • Introduction to AutoCAD ◦ History ◦ Exploring GUI ◦ Workspaces • Co-ordinate systems	
Session 2 & 3	• Orthographic Views ◦ Drawing settings – Units, Limits ◦ Drawing simple sketches using Line, Circle, Arc, Ellipse, Polygon, Rectangle, Dynamic Input ◦ Editing commands – Erase, Oops, Undo, Redo, Move, Copy, Rotate, Array, Mirror, Align • File Management - New, Qnew, Open, Save, Save as, Close, Exit, Quit • Mini Project 1 – Orthographic Views	
Session 4	• Editing commands – Fillet, Chamfer, Scale, Stretch, Offset, Break, Drawing settings. Trim, Extend • Isometric View ◦ Isoplane • Mini Project 2 – Isometric Views	
Session 5	• Join, Solid, Donut, Fill, Fillmode • Creating Detail Drawing - Revcloud • Perspective Views ◦ One, Two and Three points Perspective views • Mini Project 3 – 2 Point Perspective View	
Session 6	• Object Selection Methods ◦ Select, Qselect • Annotations - Text, Style, Ddedit, Mtext, Scaletext, Spell, Table, Tabledit • Object Properties - Color, Linetype, Ltsscale, Lineweight, Properties, Matchprop • Display Control - Zoom, Pan, Steering wheels(2D), View, Regen, Dsvviewer, Viewres	

Session 7	• Layer Management ◦ Adding / Removing Layers ◦ Layer Status ◦ New Property Filter ◦ New Group Filter ◦ Layer Status Manager ◦ Plot Control
Session 8	• Hatching utilities - Bhatch, hatch, hatchedit • Grip Editing • Inquiry commands - Id, Dist, List, Radius, Angle, Area, Volume • Lengthen • Advanced drawing objects & their editing - Pline, Pedit, Spline, Splinedit
Session 9	• Dimension - Linear, Aligned, Radius, Diameter, Center Mark, Angle, Arc length, Continuous, Baseline, Tolerance, Dimension Space, Dimension Break, Inspection, Jogged radius, Ordinate dimensions. • Leader, Qleader
Session 10	• Mleader, Multi leader style, Add leader, Align Leaderlines, Collect Leader • Dim edit, dimtedit, Dimension Associative, Reassociate • Dimension Style • Construction lines - Xline, Ray • Project 1
Session 11	• (4 hrs theory only) • A generic visualization of Project Management • How does knowledge of Project Management affects you?
Session 12	• (4 hrs theory only) • Some Key aspects that need clarity • Common Sense Project Management
Session 13	• Filter, group, Cal, Block, Wblock, Insert, Dynamic block
Session 14	• Parametric Drawings ◦ Geometric Constraints ◦ Dimensional Constraints • Dynamic Block with Parametric constraints
Session 15	• Defining &Editing attributes –Attdef, Attedit,Eattedit, Attdisp,Attdia, Atttext, Eatttext • Action recorder • Mini Project 4 – Creating BOM / Joiner Details

Session 16	• Divide, Measure, Mslide, Vslide, Script, Slide Library • OLE concepts – Olelinks, Olescale, Insertobj • Hyperlink • Copy, Copybase, Copylink, Pasteclip, Pastespecial, Pasteblock, Pasteoriginal
Session 17	• External references – Xref, Xbind, Circular Xref, Refedit • Mini Project 5 – Develop a project with Xref
Session 18	• Underlay • Design Center, Tool Palettes, Etransmit, Xplode • Introduction to plotting, Page setup, Plot Styles, Plot • Mini Project 6 – Trace a Manual Drafting (Underlay)
Session 19	• Publish • 2D and 3D DWF • Markup Manager • Publish to Web • Mini Project 7 – Create a customized Title Block using Attributes and store it as a Template
Session 20	• Layout Management, Floating Viewports • Project 2 – Complete a Project with Orthographic Views, BOM and arrange them in a Layout as per scale – Take the Printout
Session 21	• Need of 3rd dimension • The conventions of AutoCAD • Co-ordinate systems in 3D • Types of 3D Models • Surface Modeling ◦ Rulesurf, Tabsurf, Revsurf, Edgesurf • Hide, Shade, Shademode
Session 22	• Surface Modeling ◦ 3Dface, Edge, Pface, 3dPoly, 3dMesh, Planesurf, Vpoint, Ddvpoint, Plan, View Cubic, Vports • Mini Project 9 – Surface Model
Session 23	• Solid Primitives ◦ Box, Wedge, Cylinder, Cone, Sphere, Torus, Pyramid • Region • Extrude • Revolve • Union • Subtract

Session 24	• Intersect • Interfere • Polysolid • Sweep • Helix • Loft • Press/Pull • UCS, UCS icon • Dyncamic UCS • UCSman • Mini Project 10 – Solid Model
Session 25	• Mesh Primitives • Working with Gizmos ◦ Move, Rotate, Scale • Sub-object Filters • Smooth Object • Refine Mesh, Facetres • Add / Remove Crease • Split Mesh Face • Extrude Face • Convert to Solid • Convert to Surface • Mini Project 11 – Mesh Model
Session 26	• Fillet • Chamfer • 3DArray • Mirror3D • Rotate3D • 3Drotate • 3Dalign • Slice • Section • SectionPlane • Livesection • Sectionplanejog
Session 27	• Solidedit • Massprop • Solview • Soldraw • Solprof • Flatshot • 3Dorbit • 3Dcorbit

	• 3Dforbit • Dview • Camera • 3Dwalk • 3Dfly • 3ddistance • Mini Project 12 – Create a 3d assembly and generate various views • 3dswivel
Session 28	• Using 3D Image Types • Render Settings palette • Understanding lighting principles • Using lights in Rendering • Pointlight • Spotlight • Distantlight • Lightlist • Render
Session 29	• Rpref • Geographiclocation • Sunproperties • Materials
Session 30	• Renerenvironment • Background Dialog box • Image • Image attach • Imageadjust • Imageclip • Imageframe • Imagequality • Transparency • Draworder • Export / Import • Project 3 – ○ Complete an Assembly drawing ○ Assign Materials, Lights ○ Generate Rendered images for Presentation ○ Create various views using <i>Flatshot</i> for Production drawing ○ Align the views in Layout

Note 00

- Each above session is for 2 hours of theory.

- Equivalent no of hours have to be given for practice session.