



ADVANCED AUTOCAD TRAINING PROGRAM

Practical drafting, detailing, documentation and selected 3D modelling workflows for Architecture, Engineering & Construction (AEC).

500+

AutoCAD commands

25+

Working projects

40+

Working drawings

Technical drawing coverage

- **Planning & foundations.** Working plans, excavation, centreline, footing, column drawings and details.
- **Structural drafting.** DPC, footing details, beam framing, reinforcement drawings, beam and staircase details.
- **Architectural documentation.** Door/window schedules, door-beam drawings and reinforcement details, and elevations.
- **MEP layouts.** Wall and ceiling electrical, air-conditioning, camera and plumbing drawings.
- **Site & utility drawings.** Toilet details, boundary walls, LPG layouts and water-tank details.

Included course benefits

- 1 5 completed working project files
- 2 Library of 10,000+ Revit components
- 3 1,000+ residential 2D drawings with 3D images
- 4 Ongoing software and installation support
- 5 Free workshops on software updates
- 6 Lifetime access to course videos
- 7 Revit and AutoCAD digital books
- 8 Industry updates and practical resources
- 9 Course completion certificate



Syllabus | Core drafting

Engineering drawing fundamentals, drafting tools and precise documentation.

01 Introduction to Engineering Drawings

- Various types of engineering drawings used in the AEC industry.
- Introduction to AutoCAD.
- Graphical User Interface (GUI) and workspaces.
- Coordinate systems.
- Display controls: Zoom, Pan, Redraw, Regen, Clean Screen and Steering Wheels.
- File management: New, Qnew, Open, Save, Save As, Close, Exit and Quit.
- Tutorials 1-4: Coordinate systems; absolute, relative and polar coordinate drawing.
- Drawing settings: Units and Limits.
- Drafting settings: Snap and Grid, Polar Tracking, Object Snap, 3D Object Snap, Dynamic Input and F1-F12 keys.
- Drawing tools: Line, Circle, Arc, Ellipse, Donut, Polygon, Rectangle, Point and Multiple Point.
- Modify tools: Erase, Undo, Redo, Explode, Move, Copy, Rotate, Mirror, Array, Align, Scale, Stretch, Lengthen, Trim, Extend, Break and Join.
- Chamfer, Fillet, Blend Curves and object selection.
- Object properties: Properties window, Color, Linetype, Linetype Scale, Lineweight and Match Properties.
- Tutorial 5: Road Junction - Layout.
- Advanced drawing tools: Multiline, Pline, Spline, Xline, Ray, Wipeout and Revision Cloud.
- Modify tools: Multiline Style/Edit, Polyline Edit, Spline Edit, Offset, PD Mode, Grip Editing, PD Size, Edit Array and Change Space.
- Reverse, Copy Nested Objects, Delete Duplicate Objects, Bring/Send Objects and Grip Editing.
- Tutorial 6: Landscape Design.
- Tutorial 7: Building Floor Plan Drafting.

02 Layer Management

- Add/remove layers, layer states, property filters, group filters, Layer State Manager and plot control.
- Object selection methods: Select, Qselect and Filter.
- Tutorial 8: Creating layers with different properties.
- Tutorial 9: Interior Design using the Single-Point Perspective Method.
- Project exercise: Layout Plan.



Syllabus | Precision & parametrics

Hatching, measurement, annotation, constraints and reusable blocks.

03 Hatching, Inquiry & Isometric Drawing

- Hatching utilities: Hatch, Hatchedit, Gradient, Boundary, Hatch Settings, Fill and Fill Mode.
- Inquiry commands: ID, Dist, List, Radius, Angle, Area and Volume.
- Isometric drawings: Isometric Snap and Isometric Drawings.
- Tutorial 10: Understanding hatch and gradient concepts.

04 Dimensioning, Tolerancing & Tables

- Sessions 10 and 11: Dimensioning, tolerancing and table-creation techniques.
- Dimensions: Linear, Aligned, Radius, Diameter, Angle, Arc Length, Continuous, Baseline, Tolerance, Dimension Space and Dimension Break.
- Inspection, Jogged Radius, Ordinate Dimensions, Leader, Qleader, Oblique, Dimension Text Angle, Dimension Text Alignment and Quick Dimension.
- Multileaders: Multileader Style, Add Leader, Align Leader, Collect Leader and Remove Leader.
- Annotation tools: Text, Style, Multiline Text, Scale Text, Spell, Table, Table Style and Table Edit.
- Dimension Style Manager, Dimension Edit, Dimension Text Edit, Dimension Associative, Re-associate, Jog Line, Inspect and Update.

05 Parametric Modeling & Blocks

- Parametric modelling: Geometric Constraints, Dimensional Constraints and Delete Constraints.
- Tutorial 13: Applying geometric and dimensional constraints.
- Create Block, Base, Write Block, Dynamic Block, Insert, Design Center and Tool Palette.
- Divide and Measure using block and point options.

PRACTICE-LED LEARNING

Hands-on tutorials include hatch concepts, dimensioning techniques, constraints and a series of project-drawing exercises.



Syllabus | Documentation & 3D

Industry-standard drawing packages, reference workflows and 3D tools.

06 Standards, Xrefs, Express Tools & Documentation

- Drawing sheet and title-block standards.
- External References (Xref).
- Action Recorder.
- Express Tools: Explode Attribute, Arc Aligned, Text Explode, Text Case, Torient, Text Fit, Text Circle and Modify Text.
- Super Hatch and Make Line Type / Shape Creation.
- Tutorial 16: Creating a Master Plan drawing using XREF.
- Copy, Copybase, Copylink, Pasteclip, Pastespecial, Pasteblock and Pasteoriginal.
- Master Plan of a building and site.
- Etransmit and Publish.
- Layout and Page Setup.
- Viewports, Viewport Lock and Unlock.

07 Introduction to 3D Modeling

- Basic modelling tools: Primitives, Extrude, Sweep, Revolve, Loft and Press Pull.
- Blend, Patch, Surface Offset, Surface Trim and Surface Untrim.
- Basic editing tools: Union, Subtract, Intersect, Slice, Extrude Faces, Shell, Fillet and Chamfer.

KNOW MORE ABOUT THE PROGRAM

Explore course details and enquire about upcoming batches.

Website: saninfrastructure.com

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