



TECHNOCATION FREELANCING TRAINING INSTITUTE & SOFTWARE HOUSE

Professional AutoCAD 2D & 3D Course Outline

Module 1: Introduction to AutoCAD

- Overview of AutoCAD Interface & Tools
- Understanding Workspaces (2D & 3D)
- File Management & Basic Commands

Module 2: 2D Drafting & Editing

- Drawing Basic Shapes (Lines, Circles, Polylines)
- Modifying Objects (Trim, Extend, Fillet, Offset)
- Layers, Line Types, and Colors
- Text, Annotations, and Dimensioning
- Blocks, Groups, and Attributes

Module 3: Advanced 2D Drafting Techniques

- Dynamic Blocks & Parametric Constraints
- Hatching & Gradient Fills
- Advanced Dimensioning & Tolerances
- External References (Xrefs)

Module 4: Introduction to 3D Modeling

- Understanding 3D Coordinates & Viewports
- Creating 3D Objects (Extrude, Revolve, Loft, Sweep)
- Modifying 3D Models (Union, Subtract, Intersect)
- Applying Materials & Textures

Module 5: Advanced 3D Modeling & Rendering

- Solid, Surface, and Mesh Modeling
- Lighting, Shadows, and Rendering Techniques

- Camera Views and Walkthroughs
- Exporting and Converting 3D Models

Module 6: Plotting, Printing, & Exporting

- Layouts and Paper Space vs. Model Space
- Setting Up Viewports & Plot Styles
- Printing & Exporting to PDF, DXF, and Other Formats

Module 7: AutoCAD Customization & Productivity Tools

- Creating Custom Templates & Scripts
- Using Macros & Shortcuts for Efficiency
- Introduction to AutoLISP & Plug-ins
- Integrating AutoCAD with Other Software

Module 8: Industry-Specific Applications & Projects

- Architectural Drafting & Civil Engineering Drawings
- Mechanical & Electrical CAD Design
- Hands-on Final Project & Portfolio Building