

Google SketchUp & 3D Modeling

A comprehensive hands-on 3-month (12-week) professional course in SketchUp Pro for architectural 3D modeling, interior space planning, dynamic components, materials and textures, camera views & walkthroughs, V-Ray photorealistic rendering, and 2D construction documentation using SketchUp LayOut.

Duration 12 Weeks (72 Hours)	Training Mode Offline Classroom Training	Certification Industry Certificate	Practical Labs 100% Hands-on
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Detailed Course Curriculum & Modules

MODULE 01 SketchUp Interface & Precision Navigation - SketchUp Pro Interface, Workspace Setup, Default Trays, Toolbars & Template Selection - Units Setup (Architectural, Decimal, Fractional), Precision Tolerances & Snapping Guides - Navigation & Camera Controls: Orbit, Pan, Zoom, Zoom Window, Look Around & Walkthrough Tool - Standard Views, Perspective vs Axonometric vs Two-Point Perspective Projections - Selection Tools: Single Click, Double Click, Triple Click, Window & Crossing Selection - Inferences Engine: Axis Alignment (Red, Green, Blue), Point Inferences, Edge Snapping & Lock Axis Keys	MODULE 02 2D Drafting & Core 3D Modeling Tools 2D Drawing Commands: Line, Freehand, Arc, 2-Point Arc, 3-Point Arc, Pie, Circle & Polygon - Precision Input: Measurements Box, Absolute & Relative Dimensions, Exact Coordinate Drawing - Transforming 2D to 3D: Push/Pull Tool, Face Extrusion, Follow Me for Extrusions along complex paths - Transformation Tools: Move, Copy, Array (Linear & Radial Arrays), Rotate & Scale - Offset Tool for Wall Thicknesses, Outlines, Floor Profiles & Recessed Details - Tape Measure, Protractor, Construction Guide Lines, Guide Points & Axes Relocation
MODULE 03 Groups, Components & 3D Warehouse Assets - Entity Management: Understanding Loose Geometry vs Groups vs Components - Creating & Editing Components, Component Axes, Cutting Planes & Gluing Behaviors - Outliner Window: Layered Tree Hierarchy, Renaming, Locking & Organizing Model Structure - Trimble 3D Warehouse: Searching, Downloading, Scaling & Optimizing High-Poly Architectural Assets - Dynamic Components: Parametric Doors, Operable Windows, Kitchen Units & Interactive Attributes - Purging Unused Elements, Model Size Optimization & Polygon Count Management	MODULE 04 Materials, Textures & UV Coordinate Mapping - Material Browser: Predefined Architectural Libraries (Wood, Stone, Glass, Metal, Tile, Concrete) - Paint Bucket Tool, Color Matching, Opacity Adjustment & Texture Scale Controls - Custom Texture Creation: Importing JPEG/PNG, Seamless PBR Textures & Normal/Bump Maps - Texture Positioning: Fixed Pin, Free Pin, Stretching, Rotating, Shearing & Perspective Correction - Projecting Textures onto Curved, Sloped and Irregular Architectural Surfaces - Transparent Glass, Translucent Acrylics, Mirror Reflections & Emissive Self-Illuminated Materials
MODULE 05 Architectural & Interior Space Planning - Importing External CAD Files (DWG/DXF), Scaling, Positioning & Tracing Vector Floor Plans - Wall Modeling: Exterior Shell, Interior Partitions, Lintel Levels & Door/Window Openings - Flooring, Baseboards, Skirting Boards, Cornices, Molding Profiles & False Ceilings - Ceiling Cove Lighting Details, Air Conditioning Diffusers & Recessed Spotlights - Modular Furniture Modeling: Wardrobes, Modular Kitchens, Countertops, Vanity Cabinets & TV Units - Staircase Modeling: Straight Flight, L-Shaped, Dog-Legged, Spiral & Balustrade Railings	MODULE 06 Camera Views, Section Planes & Sun Studies - Section Planes: Cutting Interactive Longitudinal & Latitudinal Section Cuts - Active Section Cuts, Section Fills, Sectional Perspectives & Cut-Away Isometric Views - Scenes Manager: Storing Camera Angles, Hidden Layers, Section Views & Shadow Presets - Shadows & Sun Settings: Geolocation, Latitude/Longitude Setup, Solar Orientation & Sun Studies - Shadow Studies for Daylight Analysis, Solar Ingress & Energy Efficiency Insights - Animated Walkthroughs: Transition Timing, Scene Delays, Frame Rates & Video Export (MP4)
MODULE 07 Photorealistic Rendering with V-Ray / Enscape - Introduction to Render Engines for SketchUp (Chaos V-Ray & Enscape Real-Time Visualizer) - Lighting Setup: Sunlight, Dome Light, HDRI Environment Maps, Sun Direction & Ambient Exposure - Artificial Interior Lights: Rectangle Lights, Sphere Lights, Spotlights, IES Profiles & Mesh Lights - V-Ray Material Editor: Diffuse, Roughness, Reflection, Refraction, Glossiness & Bump/Displacement - Render Output Settings: Resolution (HD, 4K), Aspect Ratios, Interactive Rendering & Denoiser Engine - Post-Production Enhancement: Render Elements, Tone Mapping, Contrast Adjustment & Image Export	MODULE 08 Construction Documentation with SketchUp LayOut - Integrating SketchUp with LayOut for 2D Construction Documentation & Presentation Sets - Paper Size Setup (A1, A2, A3, A4), Title Blocks, North Arrows, Scale Bars & Drawing Borders - Viewport Management: Orthographic Floor Plans, Elevations, Sections & 3D Perspectives - Viewport Scale Linking (1:100, 1:50, 1:20), Hybrid vs Vector vs Raster Display Modes - Dimensioning, Multi-Leader Text Callouts, Keynotes, Revision Clouds & Material Schedules - Exporting High-Resolution Construction PDF Sets, DWG Drawings & Client Presentation Portfolios

■ **Industry Certification**

Authorized certificate verified globally via online portal.

■ **100% Placement Support**

Resume review, mock interviews, and recruiter connections.

■ **Lab Access & Mentorship**

Dedicated workstation lab hours with expert guidance.