

UNIT 1

INTRODUCTION TO SKETCHUP PRO

Get familiar with SketchUp Pro interface, basic navigation tools, templates, preferences, shortcuts and file management.



SketchUp
Pro

TRAINING



UNIT OVERVIEW

In this unit, you will learn the basics of SketchUp Pro. You will understand the user interface, navigation tools, templates, preferences, keyboard shortcuts and file management to build a strong foundation for 3D modeling.



YOU WILL LEARN

- Introduction to SketchUp
- Interface Overview
- Navigation Tools
- Templates
- Preferences
- Keyboard Shortcuts
- File Management



WHY IT'S IMPORTANT?

Understanding the basics of SketchUp Pro helps you work efficiently, save time and create accurate 3D models with the right settings and workflow.



TIPS

- Explore the interface and tools.
- Practice navigation regularly.
- Use templates for accurate modeling.
- Customize preferences for better workflow.
- Learn and use keyboard shortcuts.

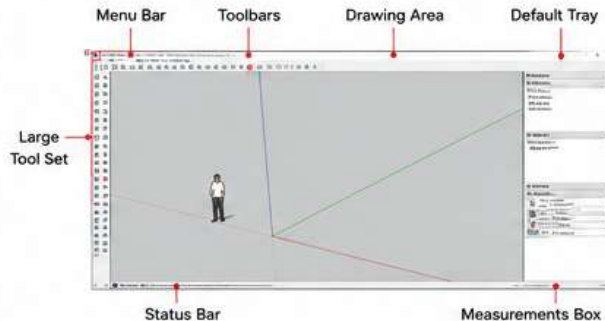
TOPICS COVERED

1. INTRODUCTION TO SKETCHUP



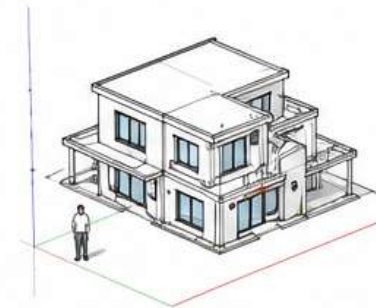
- What is SketchUp?
- Applications & Industries
- SketchUp Versions
- Advantages of SketchUp
- Basic Workflow

2. INTERFACE OVERVIEW

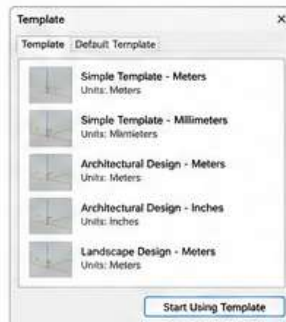


3. NAVIGATION TOOLS

- Orbit
- Pan
- Zoom
- Zoom Window
- Zoom Extents
- Look Around
- Walk
- Position Camera

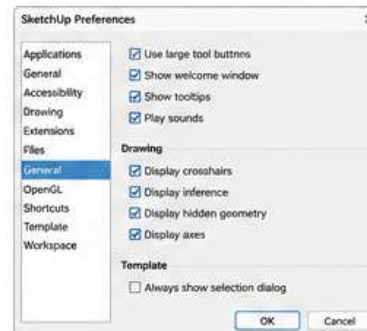


4. TEMPLATES



- Choose Template
- Template Types
- Units Setup
- Template Settings
- Save as Template

5. PREFERENCES



- Application Settings
- Drawing Settings
- Template Settings
- Workspace Settings
- Performance Settings

6. KEYBOARD SHORTCUTS

Tool / Command	Shortcut
Select	Space
Line	L
Rectangle	R
Circle	C
Push / Pull	P
Move	M
Rotate	Q
Scale	S
Erase	E
Orbit	O
Pan	H
Zoom	Z



Use shortcuts to speed up your workflow

7. FILE MANAGEMENT



New

Create a new SketchUp file.



Open

Open existing SketchUp files.



Save

Save your current model.



Save As

Save the model with a new name.



Import

Import CAD, images or other files.



Export

Export models in different formats.



Organize

Organize and manage your files & folders.



LEARNING OUTCOMES

- Understand SketchUp Pro interface and workspace.
- Navigate 3D space efficiently.
- Set up templates and preferences.
- Manage files and use shortcuts effectively.
- Build a solid foundation for 3D modeling.

NEXT UNIT >>

Unit 2: Project Setup

Learn how to set up your project with units, axes, guides, scenes, tags and styles for better model organization.



UNIT 2

PROJECT SETUP

Learn how to set up your SketchUp project with proper units, axes, guides, scenes, tags, styles and model organization.

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UNIT OVERVIEW

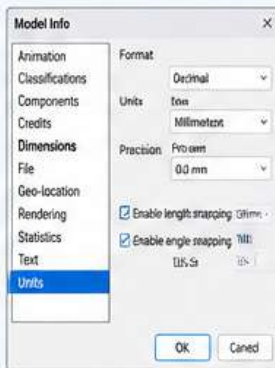
In this unit, you will learn how to organize and set up your project correctly before modeling. Proper setup helps in accurate modeling, better performance and easy management of your 3D model.

YOU WILL LEARN

- Working with Units
- Axes & Origin
- Guides
- Scenes
- Tags (Layers)
- Outliner
- Styles
- Model Organization

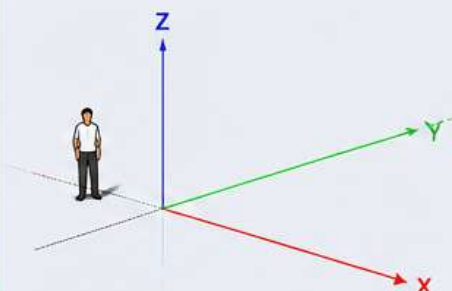


1. UNITS



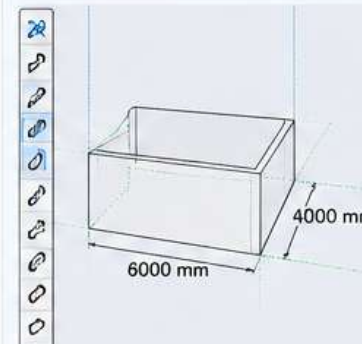
- Choose Units (mm, cm, m, inch)
- Set Precision
- Enable Length Snapping
- Enable Angle Snapping

2. AXES & ORIGIN



- Red Axis = X (Left - Right)
- Green Axis = Y (Front - Back)
- Blue Axis = Z (Up - Down)
- Always model from the Origin (0,0,0)

3. GUIDES



- Create Guides from Edges
- Move / Delete / Lock Guides
- Use Guides for accurate modeling

4. SCENES



- Create New Scenes
- Rename Scenes
- Update Scenes
- Use for Presentations
- Easy Switching between views

5. TAGS (LAYERS)



- Create Tags
- Assign Colors
- Show / Hide
- Lock / Unlock
- Organize Model easily

6. OUTLINER



- View Model Hierarchy
- Expand / Collapse
- Select Items Easily
- Keep Model Structured

7. STYLES



- Apply Different Styles
- Customize Edges, Background
- Improve Presentation Quality

8. MODEL ORGANIZATION



- Use Tags Properly
- Group / Component Smartly
- Keep File Light & Organized
- Clean & Efficient Workflow

WHY PROJECT SETUP IS IMPORTANT?

A well-structured setup at the beginning saves time, avoids errors and keeps your model organized throughout the project.



TIPS

- Always set correct units at the start.
- Use Guides for accurate drawing.
- Organize using Tags & Outliner.
- Create Scenes for different views.



BEST PRACTICES

- Start every project with a proper setup.
- Keep model organized from the beginning.
- Use meaningful names for Tags & Scenes.
- Regularly save and backup your file.



NEXT UNIT >>

Unit 3: Basic Drawing Tools

Learn essential drawing tools like Line, Rectangle, Circle, Arc, Push/Pull and more.



UNIT 3

BASIC DRAWING TOOLS

Learn the essential SketchUp drawing tools to create accurate 2D shapes and build the foundation of your 3D models.



TRAINING

UNIT OVERVIEW

In this unit, you will learn the basic drawing tools in SketchUp Pro. These tools help you create lines, shapes and faces which are the building blocks of 3D modeling. Practice these tools to draw accurately and efficiently.

YOU WILL LEARN

- ✓ Line Tool
- ✓ Rectangle Tool
- ✓ Circle Tool
- ✓ Polygon Tool
- ✓ Arc Tool
- ✓ Freehand Tool
- ✓ Push / Pull Tool
- ✓ Offset Tool



WHY BASIC DRAWING TOOLS ARE IMPORTANT?

These tools help you create precise geometry, control dimensions and form the base for complex 3D models.

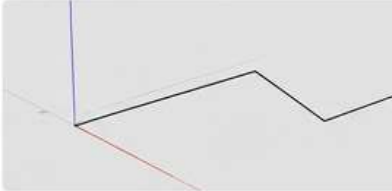


1. LINE TOOL



Draw edges and lines in any direction.

Example:



Tips:

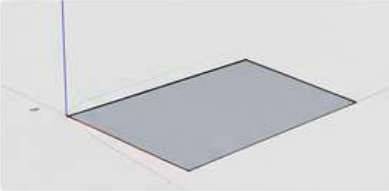
- Click to start and click to end.
- Use arrow keys to lock direction (Up/Down/Left/Right).
- Type length and press Enter for precise line.

2. RECTANGLE TOOL



Draw rectangles and squares on any plane.

Example:



Tips:

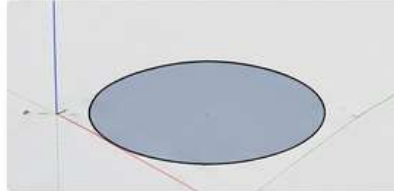
- Click first corner, then opposite corner.
- Type dimensions (e.g., 3000,2000) and press Enter.
- Use arrow keys for square.

3. CIRCLE TOOL



Draw circles and circular faces.

Example:



Tips:

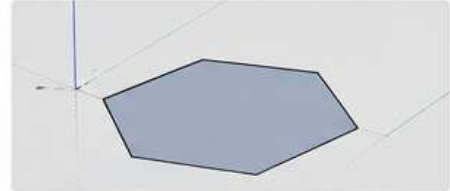
- Click center point, then drag to set radius.
- Type radius or diameter and press Enter.
- Use Segments in Entity Info for smooth circle.

4. POLYGON TOOL



Draw polygons with any number of sides.

Example:



Tips:

- Click to set center, move cursor to set radius.
- Type number of sides (e.g., 6 for hexagon).
- Type radius and press Enter.

5. ARC TOOL



Draw arcs and curved edges.

Example:



Tips:

- Click start point, second point and drag.
- Move cursor to adjust arc.
- Type value for precise arc.

6. FREEHAND TOOL



Draw freehand lines and curves.

Example:



Tips:

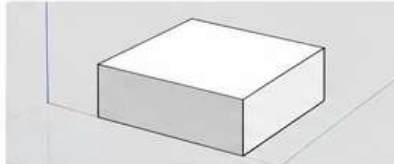
- Click and drag to draw freehand.
- Great for sketches and organic shapes.
- Use fewer segments for clean curves.

7. PUSH / PULL TOOL



Push or pull faces to create 3D shapes.

Example:



Tips:

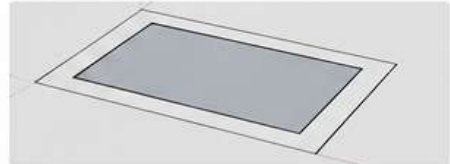
- Click face and push/pull to create volume.
- Ctrl = Toggle create new starting face.
- Type value for exact distance.

8. OFFSET TOOL



Create parallel copies of edges or faces.

Example:



Tips:

- Select face or edge and move cursor inward/outward.
- Click to set offset distance.
- Type value for precise offset.



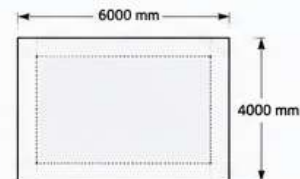
TIPS

- ✓ Use measurements for accuracy.
- ✓ Follow axis directions for straight lines.
- ✓ Practice each tool regularly.
- ✓ Combine tools to create complex shapes.



BEST PRACTICES

- ✓ Plan your drawing before modeling.
- ✓ Use precise dimensions.
- ✓ Keep geometry clean and simple.
- ✓ Use Zoom and Pan to check your work.



NEXT UNIT >>

Unit 4: Modification Tools

Learn how to modify, move, rotate, scale and edit your geometry to build detailed 3D models.



UNIT 4

MODIFICATION TOOLS

Learn how to modify and edit geometry in SketchUp Pro using powerful modification tools to build accurate 3D models.



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UNIT OVERVIEW

In this unit, you will learn essential modification tools in SketchUp Pro. These tools help you transform, edit and refine your geometry efficiently to create detailed and professional 3D models.



YOU WILL LEARN

- ✓ Move Tool
- ✓ Rotate Tool
- ✓ Scale Tool
- ✓ Follow Me Tool
- ✓ Intersect Faces
- ✓ Solid Tools
- ✓ Eraser Tool
- ✓ Soften / Smooth Edges

WHY MODIFICATION TOOLS ARE IMPORTANT?

These tools allow you to manipulate and refine your model with precision, save time and explore design variations easily.



TIPS

- ✓ Use the right tool for the right task.
- ✓ Use inference and snapping for accuracy.
- ✓ Practice regularly to improve speed.
- ✓ Use Undo (Ctrl + Z) to correct mistakes.



BEST PRACTICES

- ✓ Keep your model clean and organized.
- ✓ Use groups/components before modifying.
- ✓ Work with precision and plan each step.
- ✓ Save your work frequently.



NEXT UNIT >>

Unit 5: Groups, Components & Materials

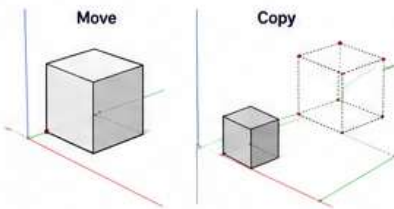
Learn how to organize your model using groups, components and apply materials for realistic visual results.



1. MOVE TOOL



Move, copy or stretch entities in any direction.



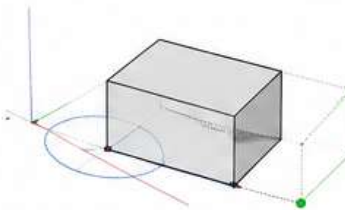
Tips:

- Click on entity and move to new location.
- Hold Ctrl = Make a copy.
- Arrow keys = Lock to axis direction.

2. ROTATE TOOL



Rotate entities around an axis or a point.



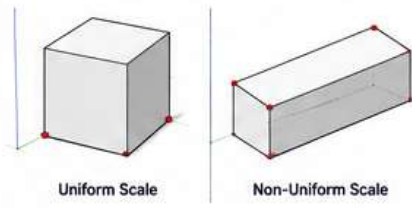
Tips:

- Click to set rotation center.
- Move cursor to rotate.
- Type angle value and press Enter.

3. SCALE TOOL



Resize entities proportionally or non-proportionally.



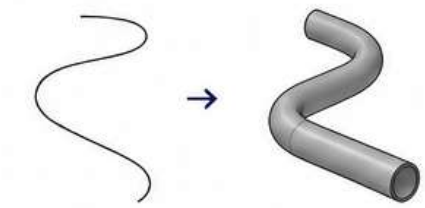
Tips:

- Drag a corner handle to scale uniformly.
- Use side handles to scale non-uniformly.
- Type scale factor and press Enter.

4. FOLLOW ME TOOL



Extrude a face along a path to create 3D shapes.



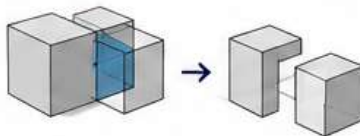
Tips:

- Draw a path first.
- Select profile face, click on path.
- Works great for pipes, rails, and moldings.

5. INTERSECT FACES



Create geometry from the intersection of faces.



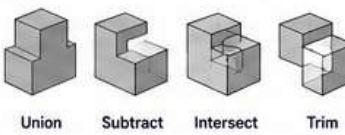
Tips:

- Select faces or groups.
- Right-click > Intersect Faces > With Selection.
- Useful for complex joinery and cutting.

6. SOLID TOOLS



Add or remove material using solid operations.



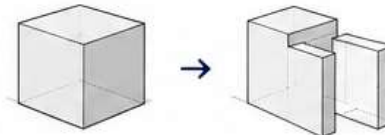
Tips:

- Right-click group/component.
- Use Solid Tools for boolean operations.
- Great for creating openings and details.

7. ERASER TOOL



Erase unwanted entities or edges.



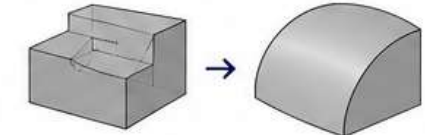
Tips:

- Click on unwanted edges/faces.
- Hold Ctrl = Soften/Smooth.
- Hold Shift = Hide.

8. SOFTEN / SMOOTH EDGES



Control the smoothness of edges and surfaces.



Tips:

- Double-click to soften/smooth edges.
- Use Soften to reduce harshness.
- Use Smooth for curved surfaces.

UNIT 5

GROUPS, COMPONENTS & MATERIALS

Learn how to organize your model efficiently using Groups and Components and apply materials to enhance the look of your 3D models.



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UNIT OVERVIEW

In this unit, you will learn how to organize your model using Groups and Components for better workflow and reusability. You will also explore materials and textures to make your models more realistic and visually appealing.



YOU WILL LEARN

- ✓ Groups
- ✓ Components
- ✓ Dynamic Components
- ✓ Materials
- ✓ Textures
- ✓ Paint Bucket
- ✓ Component Library (3D Warehouse)
- ✓ Component Management



WHY IT'S IMPORTANT?

Using Groups and Components keeps your model organized, reduces file size and makes editing easier. Applying materials and textures adds realism and improves the quality of your presentations and visualizations.



TIPS

- Use Components for repeated objects.
- Use Groups for unique or one-time geometry.
- Keep your model clean and organized.
- Use materials and textures for realistic results.
- Regularly purge unused components and styles.



BEST PRACTICES

- Plan components before creating duplicates.
- Use logical naming and organize in folders.
- Keep materials library organized.
- Use appropriate texture resolution.
- Save custom components for future use.



NEXT UNIT >>

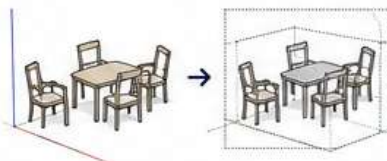
Unit 6: Advanced Modeling Techniques

Learn advanced modeling tools like curved surfaces, terrain, sandbox tools, boolean operations and more to create complex models.



1. GROUPS

Combine geometry into a Group to keep it together and isolate it from other geometry.



Tips:

- Select geometry → Right-click → Make Group
- Groups cannot be edited from outside
- Useful for unique objects
- Helps keep model organized

2. COMPONENTS

Create reusable objects using Components. Changes made to a component update every instance.

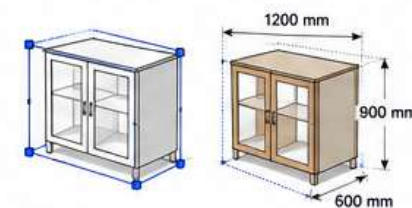


Tips:

- Right-click → Make Component
- Components are reusable
- Saves time and reduces file size
- Use for repeated objects (e.g., doors, windows)

3. DYNAMIC COMPONENTS

Add intelligence to components with dynamic attributes and behaviors.



Tips:

- Add dynamic attributes (size, count, visibility)
- Use formulas for smart behavior
- Great for parametric design
- Improves flexibility and efficiency

4. MATERIALS

Apply colors and materials to faces and surfaces.

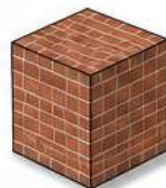
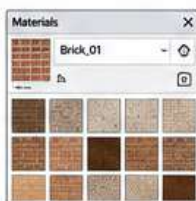


Tips:

- Open Materials panel (Window → Materials)
- Select material and click on face
- Use default or custom materials
- Adjust color, texture and opacity

5. TEXTURES

Add realistic textures to materials for more detailed surfaces.



Tips:

- Choose a material and edit texture
- Adjust scale to match real dimensions
- Use high-quality textures for best results
- Works well for walls, floors, roofs, etc.

6. PAINT BUCKET

Quickly apply materials to faces using the Paint Bucket tool.



Tips:

- Select material first
- Click on face to apply
- Hold Ctrl = Sample material
- Works on groups and components too

7. COMPONENT LIBRARY (3D WAREHOUSE)

Access millions of ready-made components from 3D Warehouse.



Tips:

- Open Window → 3D Warehouse
- Search and download components
- Use high-quality components
- Save frequently used items

8. COMPONENT MANAGEMENT

Organize, edit and manage your components effectively.



- ✓ Rename Components
- ✓ Edit In Context
- ✓ Change Axes
- ✓ Hide / Unhide
- ✓ Delete Unused
- ✓ Reload Components

Tips:

- Keep components organized
- Use meaningful names
- Remove unused components
- Improves model performance

UNIT 6

ADVANCED MODELING TECHNIQUES

Explore advanced tools and workflows in SketchUp Pro to create complex, detailed and professional 3D models.



TRAINING

UNIT OVERVIEW

In this unit, you will learn advanced modeling techniques to create complex geometry, terrains, organic shapes, and use powerful tools and extensions to improve your modeling efficiency and creativity.

YOU WILL LEARN

- ✓ Curved Surfaces
- ✓ Organic Modeling
- ✓ Terrain Modeling
- ✓ Sandbox Tools
- ✓ Boolean Operations
- ✓ 3D Warehouse
- ✓ Import CAD Files
- ✓ Export Models



WHY ADVANCED MODELING TECHNIQUES ARE IMPORTANT?

These techniques help you go beyond basic shapes and build complex, real-world models with accuracy and creativity. They improve productivity and open more possibilities for design and visualization.



TIPS

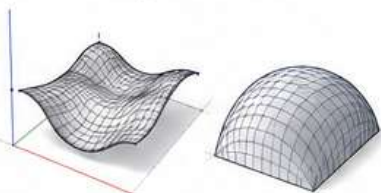
- Regularly save your work.
- Use Tags and Outliner to stay organized.
- Keep your model light and optimized.
- Explore extensions from Extension Warehouse.



1. CURVED SURFACES



Create smooth and complex curved surfaces using native tools.



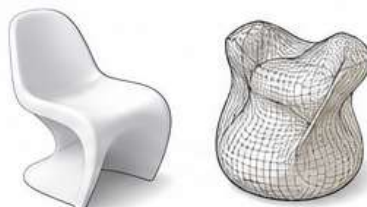
Tips:

- Use Follow Me, Line, Arc and Spline.
- Soften/Smooth edges for better results.
- Great for roofs, facades and furniture.

2. ORGANIC MODELING



Model freeform and organic shapes for creative designs.



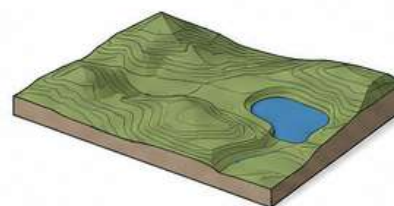
Tips:

- Use Sandbox tools and SubD extensions.
- Push/Pull with reference and guides.
- Ideal for furniture, product and concept design.

3. TERRAIN MODELING



Create and edit terrains for sites and landscapes.



Tips:

- Use From Contours and Sandbox tools.
- Adjust elevations and smooth terrains.
- Add textures for realistic landscape.

4. SANDBOX TOOLS



Use Sandbox tools to shape and manipulate terrains and organic forms.



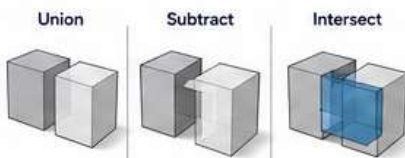
Tips:

- Great for terrains, landscapes and soft forms.
- Adjust settings for precision control.
- Combine with other tools for better results.

5. BOOLEAN OPERATIONS



Combine and subtract solids to create complex geometry.



Tips:

- Use Solid Tools (Union, Subtract, Intersect).
- Make sure geometry is solid.
- Useful for openings, cutouts and connections.

6. 3D WAREHOUSE



Access millions of ready-made models to save time.



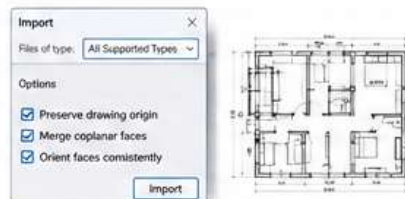
Tips:

- Open Window → 3D Warehouse.
- Search and insert high-quality components.
- Don't forget to credit the model author.

7. IMPORT CAD FILES



Import DWG/DXF files for reference and modeling.



Tips:

- Use File → Import → DWG/DXF.
- Clean up layers and lines after import.
- Scale and units should be checked.

8. EXPORT MODELS



Export your models in different formats for various uses.



Tips:

- Use File → Export → 3D Model / 2D Graphic.
- Choose the right format as per requirement.
- Adjust export options for best quality.



BEST PRACTICES

- Plan before modeling.
- Use components for repetitive elements.
- Keep geometry clean and efficient.
- Test different tools and workflows.
- Backup your work frequently.



NEXT UNIT >>

Unit 7: Views, Sections & Documentation

Learn how to create views, sections, dimensions and prepare documentation for your projects professionally.



UNIT 7

VIEWS, SECTIONS & DOCUMENTATION

Learn how to control your model views, create sections, add dimensions and prepare professional documentation in SketchUp Pro.



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UNIT OVERVIEW

In this unit, you will learn how to create and manage views, make sections, add dimensions, text and labels, and prepare your model for documentation and printing.

YOU WILL LEARN

- ✓ Camera Tools
- ✓ Sections
- ✓ Scenes
- ✓ Dimensions
- ✓ Text
- ✓ Labels
- ✓ Layout Preparation
- ✓ Printing



WHY DOCUMENTATION IS IMPORTANT?

Good documentation communicates your design clearly, reduces errors during construction and ensures your project is executed accurately.



1. CAMERA TOOLS



Control how you view and navigate your model.



Tips:

- Use Orbit to look around the model.
- Use Pan to move the view.
- Use Zoom to get closer or farther.
- Use Zoom Extents to fit the model.

2. SECTIONS



Cut through your model to see inside and create sections.



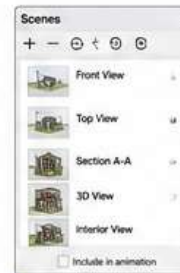
Tips:

- Use Section Plane to cut the model.
- Double-click on the plane to edit.
- Hide the plane and cap as needed.
- Great for documentation and presentations.

3. SCENES



Save and manage multiple views of your model.



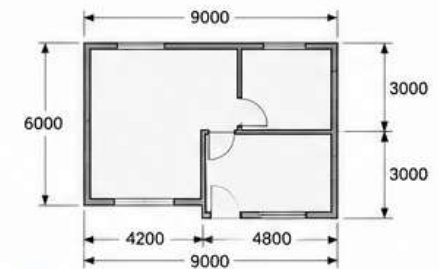
Tips:

- Create scenes for different views.
- Update scenes after changes.
- Use scenes in animations and layouts.
- Organize scenes with clear names.

4. DIMENSIONS



Add accurate dimensions to communicate size and details.



Tips:

- Use the Dimension tool for accuracy.
- Choose appropriate units and precision.
- Keep dimensions clear and readable.
- Place dimensions outside the geometry.

5. TEXT



Add text notes, titles and annotations to your model.



Tips:

- Use 3D Text for model annotations.
- Use Leader with Text for notes.
- Choose appropriate font and size.
- Keep text clean and easy to read.

6. LABELS



Add labels to tag and identify elements in your model.



Tips:

- Use the Label tool for clear information.
- Customize label style and leader length.
- Great for schedules and documentation.
- Helps in better communication.

7. LAYOUT PREPARATION



Set up your model views in LayOut for documentation.



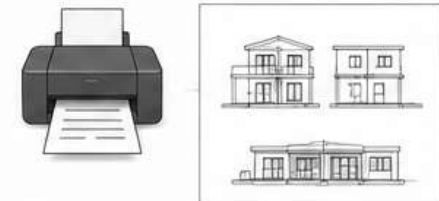
Tips:

- Send scenes to LayOut.
- Arrange views on sheets.
- Add dimensions, text and details.
- Use templates for consistency.

8. PRINTING



Print or export your drawings in the required format.



Tips:

- Print to PDF for sharing.
- Choose correct paper size and scale.
- Check line weights and visibility.
- Always do a print preview before final.



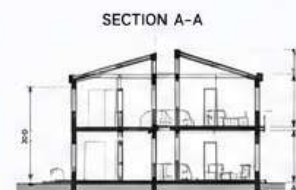
TIPS

- ✓ Organize your scenes and views clearly.
- ✓ Use Tags to control visibility.
- ✓ Keep your dimensions and text consistent.
- ✓ Regularly update scenes after modeling.
- ✓ Use templates for professional output.



BEST PRACTICES

- ✓ Plan your documentation before starting.
- ✓ Use meaningful names for scenes.
- ✓ Keep your model clean and organized.
- ✓ Follow standard drawing conventions.
- ✓ Review and check all dimensions and notes.



NEXT UNIT >>

Unit 8: Residential House Project

Apply all the tools and techniques you have learned to create a complete 3D residential house model from plan to presentation.



UNIT 8

RESIDENTIAL HOUSE PROJECT

Apply all the tools and techniques learned to create a complete 3D Residential House Model from plan to presentation.



TRAINING

UNIT OVERVIEW

In this unit, you will work on a complete Residential House project. You will start from a 2D floor plan and build a detailed 3D model including architecture, roof, openings, interiors, furniture and landscape.

★ YOU WILL CREATE

- ✓ Floor Plan
- ✓ Walls
- ✓ Doors & Windows
- ✓ Roof
- ✓ Stairs
- ✓ Furniture
- ✓ Landscape
- ✓ Complete House Model

PROJECT HIGHLIGHTS

- Real-world residential house project
- Step-by-step modeling workflow
- Accurate dimensions and details
- Organized model with components
- Presentation-ready 3D model



1. FLOOR PLAN

Import or draw the floor plan, set units and organize the model.



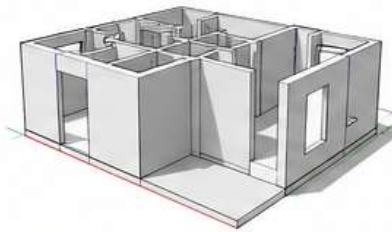
Tips:

- Use accurate dimensions.
- Set model units and scale.
- Organize using Tags and Groups.



2. WALLS

Create and modify walls to build the structure.



Tips:

- Use Rectangle and Push/Pull.
- Set wall thickness.
- Use Groups for better editing.



3. DOORS & WINDOWS

Add doors and windows with proper sizes and positions.



Tips:

- Use Components for doors & windows.
- Align and position accurately.
- Use Tags for easy management.



4. ROOF

Create roof using appropriate tools and techniques.



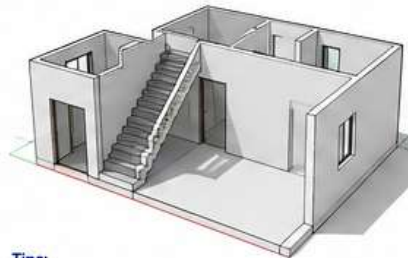
Tips:

- Use Push/Pull, Move and Follow Me.
- Add roof overhangs and slopes.
- Keep roof clean and well-grouped.



5. STAIRS

Add stairs to connect different levels.



Tips:

- Use Stair tool or modeling techniques.
- Set correct riser and tread.
- Check height and headroom.



6. FURNITURE

Add furniture and interior elements.



Tips:

- Use 3D Warehouse components.
- Scale and place furniture properly.
- Use Tags for interior items.



7. LANDSCAPE

Add external elements like plants, driveway and lawn.



Tips:

- Use 3D Warehouse for plants and people.
- Add pathways, driveway, boundary.
- Improve overall presentation.



8. COMPLETE HOUSE MODEL

Finalize the model and create stunning views.



Tips:

- Check the model for errors.
- Apply materials and styles.
- Create scenes for presentation.



TOOLS & FEATURES USED



Line



Push/Pull



Offset



Move



Rotate



Scale



Follow Me



Groups



Components



Tags



Sections



Scenes



BEST PRACTICES

- ✓ Work in real-world scale and units.
- ✓ Use Groups and Components.
- ✓ Keep model organized with Tags.
- ✓ Save frequently and back up your file.
- ✓ Check model for clean geometry.



DELIVERABLES

- 3D House Model (.skp)
- Floor Plan (Top View)
- Elevations
- Sections
- Presentation Scenes
- High Quality Renders (Optional)



UNIT 9

INTERIOR DESIGN PROJECT

Create a complete interior design 3D model including layout, furniture, materials, lighting and presentation.



SketchUp
Pro

TRAINING

UNIT OVERVIEW

In this unit, you will design and model complete interior spaces. You will learn to plan layouts, add furniture, apply materials, create ceiling designs and prepare presentation views for an impressive output.

★ YOU WILL CREATE

- ✓ Living Room
- ✓ Bedroom
- ✓ Kitchen
- ✓ Bathroom
- ✓ Ceiling Design
- ✓ Furniture Layout
- ✓ Material Application
- ✓ Interior Presentation



PROJECT HIGHLIGHTS

- Complete interior spaces from planning to presentation
- Realistic materials and textures
- Furniture and decor placement
- Ceiling and lighting design
- Presentation-ready renders



1. LIVING ROOM

Design a modern living room with proper layout and decor.



Tips:

- Plan furniture layout for comfort.
- Use Components for sofa, table, TV unit.
- Apply textures and materials.
- Add curtains, rugs and accessories.



2. BEDROOM

Create a comfortable bedroom with furniture and storage.



Tips:

- Use Components for bed, wardrobe, etc.
- Maintain clear circulation space.
- Apply materials for walls, floor and furniture.
- Add lighting for a cozy look.



3. KITCHEN

Design a modular kitchen with appliances and storage.



Tips:

- Plan working triangle (sink-stove-fridge).
- Use Components for cabinets and appliances.
- Apply materials for a realistic look.
- Add proper lighting.



4. BATHROOM

Model a functional bathroom with fixtures and fittings.



Tips:

- Use Components for sanitary items.
- Apply water-resistant materials.
- Use proper lighting and ventilation.
- Add mirrors and accessories.



5. CEILING DESIGN

Create false ceiling and lighting design.



Tips:

- Use Rectangle, Push/Pull for ceiling.
- Add recess and cove lighting.
- Use Components for lights and fans.
- Create light groups for control.



6. FURNITURE LAYOUT

Arrange furniture to create functional and aesthetic spaces.



Tips:

- Maintain proper furniture spacing.
- Ensure clear movement paths.
- Use Groups and Components.
- Check views from different angles.



7. MATERIAL APPLICATION

Apply realistic materials, colors and textures to all surfaces.



Tips:

- Use Materials window to apply textures.
- Adjust scale for realistic appearance.
- Create custom materials if required.
- Maintain consistency in material use.



8. INTERIOR PRESENTATION

Create scenes and final presentation views.



Tips:

- Create scenes for each area.
- Adjust camera, style and lighting.
- Use LayOut for presentation sheets.
- Export high-quality images and animations.

TOOLS & FEATURES USED



BEST PRACTICES

- ✓ Plan layout before modeling.
- ✓ Use Groups and Components for organization.
- ✓ Apply realistic materials and lighting.
- ✓ Check model from multiple views.
- ✓ Keep model clean and optimized.
- ✓ Use Tags for better control.



DELIVERABLES

- 3D Interior Model (.skp)
- Floor Plan (Top View)
- Reflected Ceiling Plan
- Interior Elevations
- Sections (If Required)
- Presentation Scenes
- High Quality Renders (Optional Animation / Walkthrough)



UNIT 10

COMMERCIAL BUILDING PROJECT

Apply all the tools and techniques to create a complete 3D Commercial Building Model from concept to presentation.



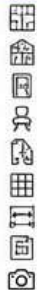
TRAINING

UNIT OVERVIEW

In this unit, you will work on a complete Commercial Building project. You will start from the site and building planning to modeling, documentation and presentation including exterior and interior views.

YOU WILL CREATE

- ✓ Site & Planning
- ✓ Building Structure
- ✓ Facade & Exterior
- ✓ Interior Layout
- ✓ Doors, Windows & Stairs
- ✓ Materials & Finishes
- ✓ Sections & Elevations
- ✓ Documentation & Sheets
- ✓ Presentation & Renders



PROJECT HIGHLIGHTS

- Real-world commercial building workflow from planning to presentation
- Accurate dimensions, levels and details
- Exterior modeling with facade elements
- Interior planning with furniture & finishes
- Sections, elevations and documentation
- Presentation-ready renders and walkthroughs



1. SITE & PLANNING

Set up the site, import survey and create building footprint.



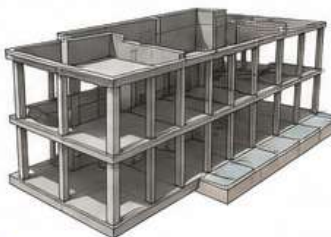
Tips:

- Import CAD/DWG site plan.
- Set model units and true north.
- Use Tape Measure for setbacks.
- Organize with Tags and Groups.



2. BUILDING STRUCTURE

Model walls, slabs, columns and beams for the structure.



Tips:

- Use Push/Pull and Offset for walls.
- Create floors and floor thickness.
- Use Groups for structural elements.
- Maintain proper levels and alignment.



3. FACADE & EXTERIOR

Design building facade with glass, cladding and details.



Tips:

- Use Components for facade elements.
- Apply materials for realistic look.
- Use Scenes to check different views.
- Add surrounding environment.



4. DOORS, WINDOWS & STAIRS

Add and arrange doors, windows and stairs with components.



Tips:

- Use Components for doors/windows.
- Align and set proper sizes.
- Create stairs with Stair tool.
- Use Tags for easy management.



5. INTERIOR LAYOUT

Plan interior spaces with partitions, furniture and circulation.



Tips:

- Use Layout tools for partitions.
- Add furniture from 3D Warehouse.
- Ensure clear circulation paths.
- Use Groups and Components.



6. MATERIALS & FINISHES

Apply realistic materials, colors and finishes to all surfaces.



Tips:

- Use Materials window to apply.
- Adjust texture scale for accuracy.
- Create custom materials if needed.
- Maintain consistency in finishes.



7. SECTIONS & ELEVATIONS

Create sections and elevations for documentation.



Tips:

- Use Section Plane for sections.
- Create Elevations from scenes.
- Add dimensions and levels.
- Check for clarity and accuracy.



8. DOCUMENTATION & SHEETS

Prepare layout sheets with plans, elevations, sections and details.



Tips:

- Send scenes to LayOut.
- Arrange drawings with annotations.
- Add dimensions, text and legends.
- Use templates for professional sheets.



9. PRESENTATION & RENDERS

Create realistic renders and walkthroughs for presentation.



Tips:

- Set up scenes for key views.
- Adjust lighting and environment.
- Use Enscape/V-Ray (if available).
- Export high-quality images.



10. PROJECT FINAL OUTPUT

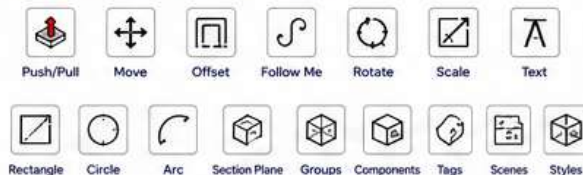
Finalize the model and deliver complete project output.



Tips:

- Check model for errors.
- Organize model and clean up.
- Prepare all drawings and renders.
- Deliver complete project package.

TOOLS & FEATURES USED



BEST PRACTICES

- ✓ Plan before modeling.
- ✓ Use Groups and Components.
- ✓ Keep model organized with Tags.
- ✓ Use proper units and scale.
- ✓ Apply materials and lighting carefully.
- ✓ Check model from multiple views.
- ✓ Save frequently and backup your work.
- ✓ Prepare clean and professional outputs.



DELIVERABLES

- 3D Model (.skp)
- Floor Plans
- Elevations
- Sections
- Details (if required)
- Presentation Sheets
- High Quality Renders
- Walkthrough (Optional)
- Project Documentation



UNIT 11

RENDERING & PRESENTATION

Learn to create photo-realistic renders, apply materials, set up lighting, and prepare stunning presentations to showcase your projects.



TRAINING

UNIT OVERVIEW

In this unit, you will learn how to enhance your models with materials, lighting, environments and create high-quality renders and presentation sheets for professional output.

YOU WILL LEARN

- ✓ Materials & Textures
- ✓ Lighting Setup
- ✓ Environment & Background
- ✓ Camera & View Settings
- ✓ Enscape Rendering
- ✓ Post-Production Basics
- ✓ Presentation Sheets
- ✓ Walkthrough & Animation
- ✓ Export & Deliverables

WHY RENDERING & PRESENTATION ARE IMPORTANT?

- Realistic renders bring your design to life.
- High-quality visuals help clients understand your ideas clearly.
- Professional presentation builds trust and makes a strong impression.



1. MATERIALS & TEXTURES



Apply and edit realistic materials to bring your model to life.



Tips:

- Use Enscape Material Library.
- Adjust color, texture, reflectivity, bump and transparency.
- Create custom materials for unique look.

2. LIGHTING SETUP



Set up natural and artificial lighting for the best results.



Tips:

- Use Sunlight for natural lighting.
- Add artificial lights (IES/Area/Spot).
- Adjust brightness, color and intensity.

3. ENVIRONMENT & BACKGROUND



Add realistic environments and background for context.



Tips:

- Use HDRI environments for realism.
- Adjust sky, clouds and rotation.
- Add context with surroundings.

4. CAMERA & VIEW SETTINGS



Control camera views and create the perfect composition.



Tips:

- Use 2-Point Perspective for interiors.
- Adjust FOV, height and aspect ratio.
- Save scenes for different views.

5. ENSCAPE RENDERING



Render high-quality images using Enscape.



Tips:

- Choose rendering quality (Draft/High/Ultra).
- Enable Denoiser for clean renders.
- Use Render Queue for multiple outputs.

6. POST-PRODUCTION BASICS



Enhance your renders with basic image adjustments.



Tips:

- Adjust exposure, contrast, brightness.
- Fine-tune color balance and saturation.
- Use tools like Photoshop or Lightroom.

7. PRESENTATION SHEETS



Create professional sheets to present your project.



Tips:

- Arrange plans, views and renders neatly.
- Add dimensions, notes and titles.
- Maintain clean layout and hierarchy.

8. WALKTHROUGH & ANIMATION



Create walkthroughs and animations to amaze your clients.



Tips:

- Create key frames along camera path.
- Adjust speed and transitions.
- Export video in MP4 format.

9. EXPORT & OUTPUT OPTIONS



Export your renders and deliver in the right format.



Tips:

- Use high resolution for prints.
- Organize files and name properly.
- Export as per client requirements.

10. FINAL PRESENTATION



Compile all sheets and renders for final project delivery.



Tips:

- Review all sheets and renders.
- Ensure consistency and quality.
- Deliver a professional project package.

RENDERING TOOLS & FEATURES



Enscape Features Used

- ✓ Real-time rendering
- ✓ Depth of Field
- ✓ Atmosphere
- ✓ Global illumination
- ✓ Ambient Occlusion
- ✓ Bloom
- ✓ Reflection & Shadows
- ✓ Denoiser
- ✓ Auto Exposure

BEST PRACTICES

- ✓ Plan your views before rendering.
- ✓ Use appropriate lighting and materials.
- ✓ Keep models clean and organized.
- ✓ Test different settings for best result.
- ✓ Save time with Scenes and View Management.
- ✓ Always back up your work.



DELIVERABLES

- High-quality rendered images (JPG/PNG)
- Presentation sheets (PDF)
- Walkthrough video (MP4)
- 3D Model (.skp)
- Project documentation
- Complete project package



Great design is not just how it looks, but how well it is presented.

Practice, Explore, Render & Present like a Professional!



UNIT 12

PROFESSIONAL WORKFLOW & PROJECT DELIVERY

SketchUp
Pro

TRAINING

Learn the end-to-end professional workflow to manage projects efficiently, collaborate with teams and deliver projects like a pro.

UNIT OVERVIEW

In this unit, you will learn the professional workflow followed in the industry – from project setup, data organization, teamwork and coordination to final delivery. This ensures quality, consistency and timely project completion.

YOU WILL LEARN

- ✓ Project Workflow Overview
- ✓ File Organization
- ✓ Layers, Tags & Standards
- ✓ Components & Libraries
- ✓ Collaboration & Teamwork
- ✓ Model Coordination
- ✓ Quality Control & Review
- ✓ Client Communication
- ✓ Project Delivery & Handover
- ✓ Documentation Standards



WHY WORKFLOW MATTERS?

- ✓ Saves time and reduces rework
- ✓ Improves team collaboration
- ✓ Ensures model accuracy and consistency
- ✓ Helps meet deadlines
- ✓ Builds client trust and professionalism



1. PROJECT WORKFLOW OVERVIEW



Understand the complete project life cycle and workflow stages.



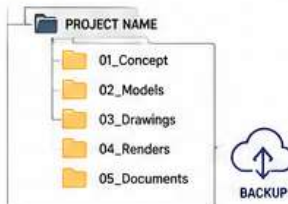
Tips:

- Follow a structured workflow.
- Define roles and responsibilities.
- Use checklists at each stage.

2. FILE ORGANIZATION



Organize files and folders for easy access and backup.



Tips:

- Use clear naming conventions.
- Keep project folders structured.
- Backup files regularly (local + cloud).

3. LAYERS, TAGS & STANDARDS



Use Tags, Styles and Standards for clean and consistent models.



Tips:

- Use Tags for visibility control.
- Follow standard naming.
- Use Styles for consistent presentation.

4. COMPONENTS & LIBRARIES



Create, manage and reuse components efficiently.



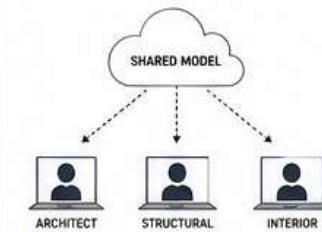
Tips:

- Use Components to save time.
- Build your own library.
- Keep components organized.

5. COLLABORATION & TEAMWORK



Work with teams using shared files and smooth communication.



Tips:

- Use cloud storage or collaboration tools.
- Communicate changes clearly.
- Keep everyone updated.

6. MODEL COORDINATION



Coordinate and integrate different disciplines in one model.



Tips:

- Use consistent origins.
- Check for clashes and overlaps.
- Coordinate versions regularly.

7. QUALITY CONTROL & REVIEW



Check model accuracy and maintain quality standards.



Tips:

- Review model before sharing.
- Use checklists for QC.
- Fix issues and maintain standards.

8. CLIENT COMMUNICATION



Present ideas, take feedback and communicate clearly.



Tips:

- Present with scenes and views.
- Take clear feedback.
- Update and confirm changes.

9. DOCUMENTATION STANDARDS



Prepare drawings and documents as per professional standards.



Tips:

- Use standard templates.
- Maintain line weights & text styles.
- Keep drawings clear and readable.

10. PROJECT DELIVERY & HANDOVER



Deliver complete project package professionally to the client.



Tips:

- Provide all required files.
- Share with proper documentation.
- Ensure client satisfaction.

TOOLS & FEATURES USED



BEST PRACTICES

- ✓ Plan before you model.
- ✓ Keep model clean and organized.
- ✓ Use Tags and Components smartly.
- ✓ Follow naming standards.
- ✓ Collaborate and communicate.
- ✓ Review and deliver on time.
- ✓ Always backup your work.



DELIVERABLES

- ✓ 3D Model (.skp)
- ✓ Working Drawings (PDF/DWG)
- ✓ Presentation Sheets (PDF)
- ✓ High Quality Renders
- ✓ BOQ / Quantities (if required)
- ✓ Project Report
- ✓ Handover & Backup Files



PROFESSIONAL WORKFLOW

01 PROJECT SETUP

Define scope, units, standards & templates

02 MODEL

Build clean, accurate and organized model

03 COORDINATE

Integrate & check for consistency

04 REVIEW & QC

Check quality and make improvements

05 DOCUMENT

Create drawings & presentation sheets

06 PRESENT

Present to client & get feedback

07 DELIVER

Deliver final files & project handover

WORK SMART.
DELIVER BETTER.
BUILD TRUST.