

## Revit® Essentials for Residential Design

This hands-on course is specifically designed to equip participants with the essential technical knowledge and standardized Building Information Modeling (BIM) workflows using Autodesk Revit. The curriculum focuses on efficiently developing an accurate and intelligent residential BIM model and generating professional-grade construction documents. Participants will learn to leverage Revit's powerful parametric capabilities to manage design changes and streamline the entire documentation process.

**Prerequisite:** To master the fundamental skills for utilizing Autodesk Revit's Residential tools. Prior knowledge of architectural and interior design terminology is highly recommended to maximize your learning.

**Course Length:** 3 Days (*In-Person*) | 4 Days (*Online*)

### Key Skills You Will Learn:

- **Building Information Modeling:** Understanding the purpose of Building Information Modeling (BIM) and how it is applied in the Autodesk Revit software.
- **Revit Fundamentals:** Navigate the interface, manage views, and understand the critical concept of Revit Families and components.
- **Project Setup:** Start a Residential project, link a CAD or PDF file, and establish essential datums (levels and grids).
- **Working Core Sketch & Modify Tools:** Apply core sketching and modifying tools to build dimensionally accurate residential models.
- **View Creation:** Creating interior elevations, sections, callouts and additional plan views.
- **Placing Columns:** Adding architectural and structural columns.
- **Exterior Core Modeling:** Modeling a 3D house with walls, doors, windows, foundation footings, Roofs, soffits, fascia, and gutters
- **Interior Core Modeling:** Modeling 3D houses with walls, floors, baseboards, doors, ceilings, and ceiling soffits.
- **Interior Components:** Adding component features, such as furniture, plumbing fixtures, casework, and kitchen and bathroom components.
- **Develop Custom Materials:** Create accurately materials and apply them to project elements for realistic representation.
- **Vertical Circulation Modeling:** Utilize Revit's specialized tools to efficiently build and residential stairs and railings.
- **Construction Documentation:** Mastering the final documentation phase, which includes setting up drawing sheets, placing and modifying views, and managing title blocks.
- **Annotation and Output:** Producing clear, professional drawings by working with dimensions, text, annotations, schedules, and tags.

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# Course Outline



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### Introduction to Revit

- BIM and Revit
- Overview of the Interface

### Starting a Model-Based Project

- Selecting a Project Template
- Linking and Importing Files
- Linking in PDF
- Modifying Imported/Linked Files
- Setting Up Levels
- Creating Grids

### Working with Views

- Duplicating Views
- Modify How the View Displays
- Adding Callout Views
- Creating Elevations and Sections
- Working with Isometric and Perspective Views

### Revit Families

- About Revit Families
- Loading/Adding Components
  - Furniture, Plumbing, Electrical, etc.

### Basic Sketching and Modify Tools

- Working with Basic Modify Tools
- Working with Additional Modify Tools

### Modeling Walls

- Modeling Walls
- Modifying Walls
- Adding Finish Carpentry
- Adding Room Elements

### Working with Doors and Windows

- Adding and Modifying Doors
- Adding and Modifying Windows

### Modeling Floors

- Modeling Floors
- Modeling Thickened Slab Edges
- Adding Footings
- Adding Architecture and Structure Columns

### Modeling Ceilings

- Modeling Ceilings
- Adding Ceiling Fixtures
- Creating Ceiling Soffits

### Modeling Roofs

- Modeling Roofs
- Creating Roofs by Footprint
- Creating Roofs by Extrusion
- Creating Dormers
- Modify Roofs
- Creating Fascias, Soffits, and Gutters

### Modeling Stairs and Railings

- Creating Component Stairs
- Modifying Component Stairs
- Working with Railings

### Working with Materials

- Materials and Material Libraries

### Creating Construction Documents

- Setting Up Sheets
- Placing and Modifying Views on Sheets

### Working with Annotations

- Working with Dimensions
- Working with Text

### Adding Tags and Schedules

- Adding Tags
- Working with Schedules

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