



Autodesk Revit: Fundamentals for Residential Design

Course Length: 4 Days

The Autodesk Revit: Fundamentals for Residential Design course teaches residential home designers how to complete a home design project using Autodesk Revit. Users will create a full 3D residential project model, including walls, doors, windows, components, floors, ceilings, roofs, and stairs. This training course takes users through the design, development, and construction document phases, including how to navigate the user interface, use the basic drawing, editing, and viewing tools, and create the final construction documents.

This course is applicable for residential drafters, designers, and anyone in the residential architecture field. For instructional content focused on a commercial design project, consider the Autodesk Revit: Fundamentals for Architecture training course.

Topics Covered:

- Understanding the purpose of BIM and how it is applied in the Autodesk Revit software.
- Navigating the Autodesk Revit workspace and interface.
- Working with the basic sketching and modifying tools.
- Setting up a residential house design project by linking CAD files.
- Creating levels, interior elevations, sections, and callouts.
- Modeling a 3D house with walls, floors, windows, doors, foundation, and footings.
- Creating ceiling soffits and raised ceilings.
- Adding architectural and structural columns, piers, pilasters, and augers.
- Adding component features, such as furniture, plumbing fixtures, casework, and kitchen and bathroom components.
- Applying finish carpentry, including baseboards.
- Adding soffits, fascia, gutters, frieze boards, and bird boxes.
- Modeling simple and complex roofs, including modifying roof joins and creating dormers in a house design project.
- Modeling residential stairs, balconies, and railings.

Course description shown for Autodesk Revit 2021. Topics, curriculum, and/or prerequisites may change depending on software version.

- Understanding the basics of design options by creating design option sets for a house design project.
- Setting up sheets for plotting with text, dimensions, details, tags, and schedules.
- Creating residential wall details in a house design project.

Prerequisites:

An understanding of architectural terminology is an asset.

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Learning Guide Contents

Chapter 1: Introduction to BIM and Autodesk Revit

- 1.1 BIM and Autodesk Revit
- 1.2 Overview of the Interface
- 1.3 Starting Projects
- 1.4 Viewing Commands

Chapter 2: Basic Sketching and Modify Tools

- 2.1 Using General Sketching Tools
- 2.2 Editing Elements
- 2.3 Working with Basic Modify Tools
- 2.4 Working with Additional Modify Tools

Chapter 3: Starting Architectural Projects

- 3.1 Setting Up Levels
- 3.2 Linking and Importing CAD Files

Chapter 4: Modeling Walls

- 4.1 Modeling Walls
- 4.2 Modifying Walls
- 4.3 Applying Finish Carpentry
- 4.4 Adding Room Elements

Chapter 5: Working with Doors and Windows

- 5.1 Inserting Doors and Windows
- 5.2 Loading Door and Window Types from the Library
- 5.3 Creating Additional Door and Window Sizes

Chapter 6: Working with Views

- 6.1 Modifying the View Display
- 6.2 Duplicating Views
- 6.3 Creating Elevations and Sections
- 6.4 Adding Callout Views

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Chapter 7: Modeling Floors

- 7.1 Modeling Floors
- 7.2 Modeling Thickened Slab Edges
- 7.3 Adding Footings
- 7.4 Creating Columns, Piers, Pilasters, and Augers
- 7.5 Creating Sloped Floors

Chapter 8: Modeling Ceilings

- 8.1 Modeling Ceilings
- 8.2 Adding Ceiling Fixtures
- 8.3 Creating Ceiling Soffits and Raised Ceilings

Chapter 9: Modeling Roofs

- 9.1 Modeling Roofs
- 9.2 Creating Roofs by Footprint
- 9.3 Creating Roofs by Extrusion
- 9.4 Modify Roofs
- 9.5 Creating Dormers
- 9.6 Creating Fascias, Soffits, and Gutters

Chapter 10: Modeling Stairs and Railings

- 10.1 Creating Component Stairs
- 10.2 Modifying Component Stairs
- 10.3 Working with Railings

Chapter 11: Adding Components

- 11.1 Adding Components
- 11.2 Modifying Components

Chapter 12: Design Options

- 12.1 Using Design Options

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Chapter 13: Creating Construction Documents

- 13.1 Setting Up Sheets
- 13.2 Placing and Modifying Views on Sheets
- 13.3 Printing Sheets

Chapter 14: Annotating Construction Documents

- 14.1 Working with Dimensions
- 14.2 Working with Text
- 14.3 Creating Legends

Chapter 15: Adding Tags and Schedules

- 15.1 Adding Tags
- 15.2 Working with Schedules
- Chapter 16: Creating Details
- 16.1 Setting Up Detail Views
- 16.2 Adding Detail Components
- 16.3 Adding Detail Lines and Symbols
- 16.4 Annotating Details

Appendix A: Additional Tools

- A.1 Reusing Selection Sets
- A.2 Enhancing Views
- A.3 Creating Structural Grids
- A.4 Working with Guide Grids on Sheets
- A.5 Importing and Exporting Schedules
- A.6 Creating Building Component Schedules
- A.7 Creating a Repeating Detail
- A.8 Revising Tracking
- A.9 Keynoting and Keynote Legends

Appendix B: Introduction to Worksets

- B.1 Introduction to Worksets

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Appendix C: Working with Curtain Walls

- C.1 Creating Curtain Walls
- C.2 Adding Curtain Grids
- C.3 Working with Curtain Wall Panels
- C.4 Attaching Mullions to Curtain Grids
- C.5 Creating Curtain Wall Types with Automatic Grids

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