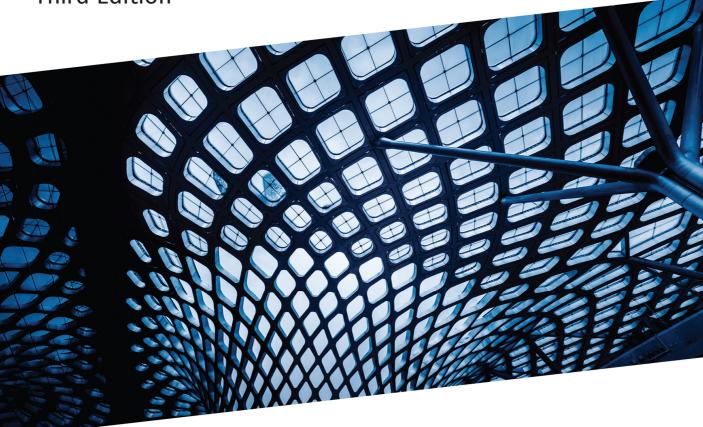
Revit 2024 for Architecture

NO EXPERIENCE REQUIRED

Third Edition





REVIT[®] 2024 FOR ARCHITECTURE

NO EXPERIENCE REQUIRED

THIRD EDITION

REVIT® 2024 FOR ARCHITECTURE

NO EXPERIENCE REQUIRED

THIRD EDITION

Eric Wing



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To my family, Jen, Cassidy, and Jacob. Thanks for waiting patiently on the weekends, and weeknights, and on vacations as I work away.

ACKNOWLEDGMENTS

With this volume of the book, I was given tons of time to make sure everything was in place. Although this book does not cover everything, it will be a great resource for the Autodesk exam and as a desktop reference as you work on projects. With new little tidbits peppered throughout, this book is basically brand-new, with every word and figure carefully reviewed and poured over. I feel confident we made a great book.

When I say "we" I mean that, although I am the guy who belches out words and images, and that's pretty much it, my family sacrifices most. That is because this is one of many jobs I have, so I am constantly working. It has been this way for my children's entire lives. So first and foremost, I thank my family.

Second, I'd like to thank Kimberly (Kimmy) Esquilin for perfect technical edits that actually made the words and figures make sense. Kimmy jumped into this role late and did a tremendous amount of work in a short amount of time. Her expertise was very evident, especially when it came to the more difficult portions of the book.

Last but not least is the team I worked with at Wiley. Thanks to Janet Wehner for keeping everything on schedule and helping with the images. Thank you to Pete Gaughan and Jim Minatel for allowing me to keep rolling with this book after 15 years.

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Kimberly Esquilin is a recent graduate from Syracuse University's School of Architecture. She took an introductory Revit course with author Eric Wing at SU and eventually became his undergraduate assistant. In this role, she helped students learn the fundamentals of Revit. Kimberly is currently working full-time as an architectural designer at C&S Companies in Albany, New York, and is working toward her license in architecture.

CONTENTS AT A GLANCE

	Introduction	xxii
CHAPTER 1	The Autodesk Revit World	1
CHAPTER 2	Creating a Model	45
CHAPTER 3	Creating Views	111
CHAPTER 4	Working with the Autodesk Revit Tools	177
CHAPTER 5	Dimensioning and Annotating	229
CHAPTER 6	Floors	273
CHAPTER 7	Roofs	323
CHAPTER 8	Structural Items	375
CHAPTER 9	Ceilings and Interiors	427
CHAPTER 10	Stairs, Ramps, and Railings	493
CHAPTER 11	Detailing	565
CHAPTER 12	Creating Specific Views and Match Lines	625
CHAPTER 13	Creating Sheets and Printing	643
CHAPTER 14	Creating Rooms and Area Plans	681
CHAPTER 15	Advanced Wall Topics	707
CHAPTER 16	Schedules and Tags	755
CHAPTER 17	Rendering and Presentation	799
CHAPTER 18	Creating Families	821
CHAPTER 19	Project Management	873
	Index	89)

CONTENTS

	Introduction	xxiii
CHAPTER 1	The Autodesk Revit World	1
	The Revit Interface	1
	The Revit Workflow	4
	Using the Ribbon	6
	The View Window	12
	Object Selection	16
	Modifying and Mirroring	17
	Building on Existing Geometry	20
	View Control and Object Display	
	The Project Browser	
	Views	
	File Types and Families	
	System and Hosted Families (.rfa)	
	Using Revit Template Files (.rte)	
	Using Revit Family Files (.rft)	
	Are You Experienced?	
	Now you can.	
CHAPTER 2	Creating a Model	45
	Placing Walls	
	Adding Exterior Walls	
	Using Reference Planes.	
	Adding More Walls	
	Adding Interior Walls	
	Using Temporary Dimensions to Gain Control of Your Model	
	Editing Wall Joins	
	Displaying Wall Joins	
	Disallowing Wall Joins	
	Adding Doors and Windows	
	Adding Doors	
	Placing Openings in Your Walls	

	Adding Windows	103
	Are You Experienced?	110
	Now you can	110
CHAPTER 3	Creating Views	111
	Creating Levels	111
	Adding Levels	
	Understanding the Composition of a Level	
	Making Other Level Adjustments	
	Creating and Modifying Building Sections	
	Adding a Building Section	
	Making Building Modifications in a Section	
	Adding Wall Sections	
	Creating Detail Sections	
	Using Crop Regions	
	Splitting a Section Segment	
	Creating Callouts	
	Creating and Modifying a Camera View	
	Adding a Camera View	160
	Modifying the Camera	
	Creating an Elevation	164
	Interior Elevations	168
	Elevation Properties	172
	Annotation Properties	174
	Are You Experienced?	175
	Now you can	175
CHAPTER 4	Working with the Autodesk Revit Tools	177
-	The Basic Edit Commands	
	The Move Command	
	The Copy Command	
	The Rotate Command	
	The Array Command	
	Radial Array	
	Linear Array	
	The Mirror Command	
	The Align Tool	
		-

	The Split Element Command	205
	The Trim/Extend Command	
	The Offset Command	
	Copy/Paste	
	Creating the Plans	
	Are You Experienced?	
	Now you can	
CHAPTER 5	Dimensioning and Annotating	229
	Dimensioning	229
	Aligned Dimensions	
	Linear Dimensions	
	Angular Dimensions.	
	Radial Dimensions	
	Arc Length Dimensions	
	Using Dimensions as a Layout Tool	
	Constraining the Model	
	Using Dimensions to Move Objects	257
	Using Dimension Text Overrides	260
	Placing Text and Annotations	264
	Adding Leader Text	267
	Changing the Leader Type	
	Modifying the Text Placement	269
	Are You Experienced?	271
	Now you can	271
CHAPTER 6	Floors	273
	Placing a Floor Slab	273
	Creating the Slab	
	Sketching the Slab	
	Building a Floor by Layers	
	Adding Materials	
	Adding a Layer	
	Pitching a Floor to a Floor Drain	299
	Using the Shape Editing tools	
	Creating Shaft Openings	
	Are You Experienced?	320
	Now you can	320

CHAPTER 7	Roofs	323
	Placing Roofs by Footprint	
	Flat Roofs by Footprint	
	Pitched Roofs by Footprint	
	Creating a Sloping Roof	
	Creating Roofs by Extrusion	
	Adding a Roof Dormer	
	Are You Experienced?	
	Now you can.	
CHAPTER 8	Structural Items	375
	Adding Structural Grids	
	Placing a Grid	
	Adding Structural Columns	
	Using Structural Framing	
	Adding a Beam System	
	Adding Bracing	
	Understanding Foundation Systems	
	Adding Structural Footings	
	Structural Slabs	
	Piers and Spread Footings	
	Are You Experienced?	
	Now you can.	
CHAPTER 9	Ceilings and Interiors	427
	Creating Ceilings.	
	Modifying Ceiling Grids	
	Setting Ceiling Element Properties	
	Creating a Plan Region	
	Creating a Custom Ceiling	
	Creating Ceiling Openings and Soffits	
	Creating a Ceiling Opening	
	Creating a Soffit	
	Adding Light Fixtures to Ceilings	
	Adding Interior Design	
	Adding Plumbing Fixtures and Furniture	
	Adding Parabolic Troffers	
	Adding Casework and Furniture	

Contents xix

	Adding Additional Floor Materials Cutting and Adding the Floor Creating a Tile Material Are You Experienced? Now you can.	
CHAPTER 10	Stairs, Ramps, and Railings	493
	Creating Stairs by Using the Rise/Run Function	
	Modifying Boundaries	
	Configuring Railings	
	Creating a Winding Staircase	517
	Stair and Railing Families	532
	Creating a Custom Railing System	537
	Creating Custom Stairs	542
	Adding a Custom Landing	547
	Adding a Gooseneck	548
	Adding Ramps	556
	Are You Experienced?	563
	Now you can	563
CHAPTER 11	Detailing	565
	Working with Line Weights	565
	Drafting on Top of the Detail	
	Using Predefined Detail Components	
	Materials	571
	Repeating Details	573
	Modifying a Detail Component	577
	Modifying Filled Regions	579
	Specifying Drafting Line Weights	598
	Adding Notes	600
	Adding Textual Notations	600
	Creating Blank Drafting Views	602
	Creating a Detail Group	611
	Adding a Section to Another View	617
	Importing AutoCAD Files into a Drafting View	619
	Adding 2D and 3D Lines to the Model	620
	Are You Experienced?	622
	Now you can	622

CHAPTER 12	Creating Specific Views and Match Lines	625
	Duplicating Views	625
	Creating Dependent Views	628
	Adjusting the Crop Regions	630
	Adjusting the Annotation Crop Region	633
	Adding Match Lines	635
	Match-Line Appearance	635
	Adding View References to a Match Line	636
	Using View Templates	640
	Are You Experienced?	640
	Now you can	640
CHAPTER 13	Creating Sheets and Printing	643
	Creating and Populating Sheets	643
	Sheet Organization	
	Modifying a Viewport	654
	Viewport Properties	660
	Adding Revisions to a Sheet	
	Addressing Project Information	
	Generating a Cover Sheet	667
	Printing from Revit Architecture	
	Are You Experienced?	
	Now you can	
CHAPTER 14	Creating Rooms and Area Plans	681
	Creating Rooms	681
	Configuring Properties	686
	Placing and Manipulating Room Tags	690
	Adding a Room Schedule	692
	Adding a Color-Fill Plan	697
	Adding Room Separators	
	Creating an Area Plan	
	Are You Experienced?	
	Now you can	

CHAPTER 15	Advanced Wall Topics	707
	Creating Compound Walls	707
	Adding Layers to the Compound Wall	
	Adding Wall Sweeps	
	Modifying a Wall's Profile in Place	
	Manually Adding Host Sweeps	
	Creating Stacked Walls	
	Creating Curtain Walls	
	Adding a Predefined Curtain Wall	
	Adding a Blank Curtain Wall	
	Creating Curtain Grids	
	Are You Experienced?	
	Now you can	752
CHAPTER 16	Schedules and Tags	755
	Creating Schedules	755
	Adding Fields to a Schedule	
	Sorting and Grouping	
	Controlling Headers	
	Modifying Elements in a Schedule	
	Modifying the Schedule's Appearance	
	Creating Material Takeoffs	770
	Creating a Calculated Value Field	774
	Creating Key Legends	
	Adding Legend Components	
	Adding Tags	783
	Adding Tags Individually	
	Using the Tag All Command	
	Tagging by Material	
	Using Multi-Category Tags	
	Keynoting	
	Keynoting by Element	
	Are You Experienced?	
	Now you can	

CHAPTER 17	Rendering and Presentation	799
	Creating an Interior Rendering	799
	Creating Lighting Groups	806
	Creating Walkthroughs	810
	Exporting an Animation	817
	Creating a Solar Study	818
	Are You Experienced?	820
	Now you can	820
CHAPTER 18	Creating Families	821
	Creating a Basic Family	821
	Adding Reference Planes to a Family	822
	Adding Dimensions and Parameters to a Family	825
	The Type Properties Dialog	830
	Using Mathematical Expressions to Create an Arched Door	838
	Creating 3D Sweeps in a Family	846
	Creating a Casing Sweep	855
	Creating an In-Place Family	869
	Are You Experienced?	872
	Now you can	872
CHAPTER 19	Project Management	873
	Managing Project Phasing	873
	Examining Graphic Overrides	878
	Activating and Explaining Worksharing	879
	Creating a Central Model	882
	Creating a Local File	887
	Loading or Not Loading a Workset during Open	889
	Are You Experienced?	890
	Now you can	890
	Index	891

Introduction

Why do you need a big, thick technical book? Well, it's true that the best way to learn is to just do it. But do you ever just do it and not fully get it? Books can serve either as the basis for learning or as supplements for your learning. No one book will teach you everything you need to know about a specific application, but you may never learn everything you need to know about an application without a book. When written appropriately, the book you purchase is there to start you off using good practices. If you have already begun, the book serves as a desktop reference. And last, a book can serve as confirmation that you're approaching an application in the correct manner.

This book about the Autodesk® Revit® tool is no exception. Although this application has proven to be easy to learn and easy to get a feel for, it's still a deep, sometimes complicated application with many procedures that require step-by-step instructions to understand fully. And to be honest, some of these features just don't work in the real world.

This book has been written by an author who is "in the trenches" using Revit every day. So, yes, you could figure out all this information on your own, but sometimes, it's nice to let someone else figure it out for you and pass that knowledge along to you in the form of a book.

Instead of lengthy paragraphs of text that ultimately lead to nontangible information, this book addresses each subject in a step-by-step approach with more than 1,000 pictures and screenshots to make sure you're on track.

Also, this book uses an actual project and relates to real-world scenarios. As you're following the step-by-step procedures in the book, you'll be encouraged to try many techniques on your own and also to embellish the procedure to fit your own needs. If you would rather stick to the instructions, this book allows you to do that as well. The book's project uses a five-story office building with a link (corridor) to a three-story multi-use building. The book's website provides the model (plus additional families) you'll need for each chapter so that you can open the book, jump to your chapter of interest, and learn something! In addition, this book is flexible enough that you can substitute your own project if you don't want to follow the book's examples.

Although it has hundreds of pages, this book doesn't waste time and space with examples of other people's triumphs but is designed for you to open to any random page and learn something.

Who Should Read This Book

Autodesk® Revit® 2024 for Architecture: No Experience Required. Does that mean that if you've used Revit, you won't find this book advanced enough? No. This book is designed for anyone who wishes to learn more about Revit Architecture. The book is also intended for architects, architectural designers, and anyone using a CAD-based platform to produce architectural-based drawings.

What You Need

Building Information Modeling (BIM) can be tough on hardware. This book recommends that you have 16 GB of RAM with a 4 GHz processor. You should also be running at least 1 GB for your graphics. If you're under these specifications (within reason), in some cases you'll be fine. Just realize, however, that when your model is loaded, your system may start slowing down.

All Revit applications are intended to run on a PC-based system. Windows 11 is recommended.

Included with the book are Revit Architecture project files that follow along with the instructions. Each chapter has one or more actual Revit models that have been completed up to the point of the instruction in that specific chapter—or even that specific section of the chapter—to allow you to jump in at any moment. Also included with the book are custom families that accompany the lessons as well as additional families and projects that you can download as a bonus. You can download the accompanying files at www.wiley.com/go/revit2024ner.

FREE AUTODESK SOFTWARE FOR STUDENTS AND EDUCATORS

The Autodesk Education Community is an online resource with more than five million members that enables educators and students to download—for free (see website for terms and conditions)—the same software used by professionals worldwide. You can also access additional tools and materials to help you design, visualize, and simulate ideas. Connect with other learners to stay current with the latest industry trends and get the most out of your designs. Get started today at www.autodesk.com/joinedu.

Introduction

What Is Covered in This Book

Autodesk[®] *Revit*[®] *2024 for Architecture: No Experience Required* covers the essentials of using the software and is organized as follows:

Chapter 1: The Autodesk Revit World

This chapter introduces you to the Revit Architecture 2024 interface and jumps right into modeling your first building.

Chapter 2: Creating a Model

This chapter begins with placing walls, doors, and windows. It's designed to point you in the right direction in terms of using reference planes and allaround best practices.

Chapter 3: Creating Views

This chapter shows you how to navigate the Revit Project Browser and create new views of the model. Also, you'll learn how to create specific views such as elevations, sections, callouts, plans, and, our favorite, 3D perspectives.

Chapter 4: Working with the Autodesk Revit Tools

In this chapter, you'll learn how to use the everyday drafting tools needed in any modeling application. You'll become familiar with such actions as trim, array, move, and copy. Although it seems remedial, this is one of the most important chapters of the book. It gets you on your way to the "Revit feel."

Chapter 5: Dimensioning and Annotating

In this chapter, you'll learn how to annotate your model. This includes adding and setting up dimensions, adding and setting up text, and using dimensions to physically adjust objects in your model.

Chapter 6: Floors

Yes! Just floors. In this chapter, you'll learn how to place a floor. You'll also learn how to add materials to a floor and how to pitch a floor to a drain.

Chapter 7: Roofs

In this chapter, we'll discuss the ins and outs of placing roofs. You'll learn how to model flat roofs, sloping roofs, pitched roofs, and roof dormers. In addition, you'll learn how to pitch roof insulation to roof drains.

Chapter 8: Structural Items

In this chapter, you'll delve into the structural module of Revit Architecture. The topics we'll cover include placing structural framing, placing structural foundations, and creating structural views.

Chapter 9: Ceilings and Interiors

This chapter focuses predominately on interior design. Placing and modifying ceilings will be covered as well as adding specific materials to portions of walls and floors. You'll also learn how to create soffits.

Chapter 10: Stairs, Ramps, and Railings

This chapter focuses on the creation of circulation items. You'll learn how to create a simple U-shaped multistory staircase to start; then you'll move on to creating a custom winding staircase. From there, you'll learn how to create a custom wood railing. You'll add ramps to the model in this chapter as well.

Chapter 11: Detailing

In this chapter, you'll learn how to draft in Revit. The procedures allow you to draft over the top of a Revit-generated section or create your own drafting view independent of the model. You'll also learn how to import CAD to use as a detail.

Chapter 12: Creating Specific Views and Match Lines

In this chapter, you'll learn how to take advantage of the multitude of views you can create and how to control the visibility graphics of those views to create plans such as furniture and dimensional plans.

Chapter 13: Creating Sheets and Printing

This chapter explores how to produce construction documents using Revit. The procedures include creating a new drawing sheet, adding views to a sheet, creating a title block and a cover sheet, and plotting these documents.

Chapter 14: Creating Rooms and Area Plans

The focus of this chapter is creating rooms and areas. The procedures lead you through the placement of rooms, and you'll learn how to set the properties of those rooms. We'll also discuss how to create room separators and how to create gross area plans. This chapter also guides you through the creation of a color-fill floor plan.

Chapter 15: Advanced Wall Topics

This chapter focuses specifically on the creation of compound walls. By using the Edit Assembly dialog, you'll learn how to add materials, split walls, and add sweeps and reveals such as parapet caps, brick ledges, and brick reveals. Creating stacked walls is also addressed.

Chapter 16: Schedules and Tags

In this chapter, you'll start bringing the BIM into your model. This chapter focuses on adding schedules and annotation tags to specific objects and materials in your model. Most importantly, in this chapter, you'll learn how your model is parameter-driven and how these parameters influence the annotations.

Chapter 17: Rendering and Presentation

In this chapter, you'll learn how to use the Revit rendering tools built into the Revit GUI. This chapter also shows you how to create walkthroughs as well as solar studies.

Chapter 18: Creating Families

With this chapter, you will get into the most valuable part of Revit: Families. We will start with what a family actually is and how they behave within your model. Then we will create a profile family and move to a more advanced door family. Look for many of these procedures on the Autodesk Revit Architecture exam.

Chapter 19: Project Management

If it is your desire to become a BIM manager or just get a great feel for how Revit manages your drawings, this is a good chapter to look at. We will start with project phasing (renovation projects), then jump to how to create a workshared model so that several people can access the models at one time.

PRACTICE TEST ONLINE

Although this book is not an exam prep Study Guide, we've added a new online practice test for you if you are interested in preparing for the valuable Autodesk Certified Professional in Revit for Architectural Design certification exam. If you are interested in gaining this certification and furthering your career, this online practice test will help you assess your readiness for the exam, determine what sections of the book you should study more, and then increase your chances of passing it the first time! This practice test will be available by January 3, 2024. After that date go to www.wiley.com/go/sybextestprep to register and gain access to this interactive online learning environment.

Contacting the Author

As you're reading along, please feel free to contact me on LinkedIn www .linkedin.com/in/eric-wing-9662524, and I will be glad to answer any questions you have.

Sybex strives to keep you supplied with the latest tools and information you need for your work. Please check the website at www.wiley.com/go/revit2024ner, where we'll post additional content and updates that supplement this book if the need arises.

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