

Autodesk Revit 2018 (R1) Architecture Fundamentals



Autodesk® Revit® 2018 (R1) Architecture Fundamentals

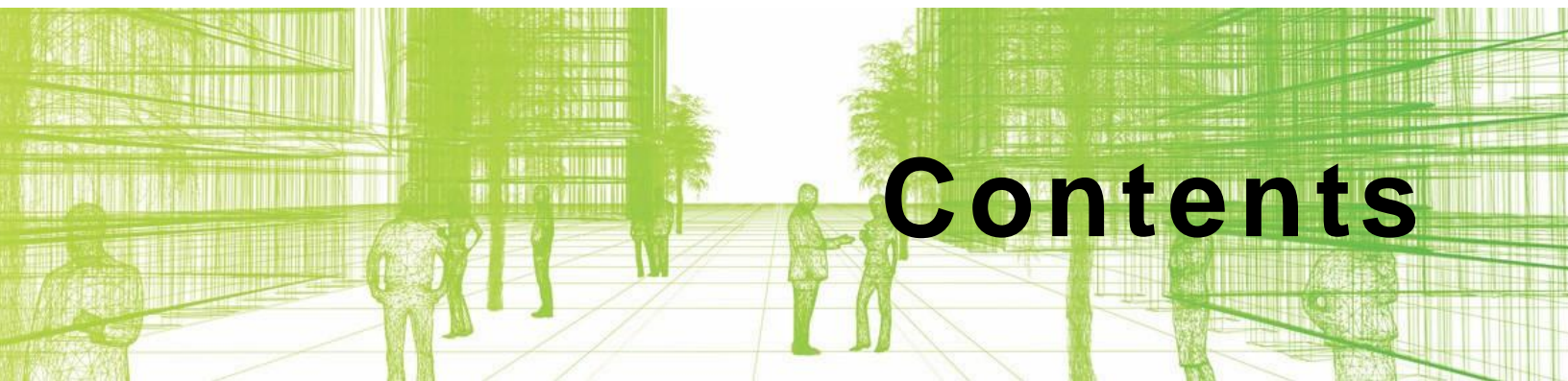
Student Guide
Metric - 2nd Edition

AUTODESK®





Authorized Publisher



Contents

Preface	ix
In this Guide	xi
Practice Files	xv
Introduction to BIM and Autodesk Revit	xvii
Chapter 1: Introduction to BIM and Autodesk Revit	1-1
1.1 BIM and Autodesk Revit	1-2
Workflow and BIM	1-3
Revit Terms	1-4
Revit and Construction Documents	1-5
1.2 Overview of the Interface	1-6
1.3 Starting Projects	1-19
Opening Projects	1-20
Starting New Projects	1-22
Saving Projects	1-23
1.4 Viewing Commands	1-25
Zooming and Panning	1-25
Viewing in 3D	1-27
Visual Styles	1-31
Practice 1a Open and Review a Project	1-33
Chapter Review Questions	1-39
Command Summary	1-41
Chapter 2: Basic Sketching and Modify Tools	2-1
2.1 Using General Sketching Tools	2-2
Draw Tools	2-2
Drawing Aids	2-5
Reference Planes	2-8

2.2 Editing Elements	2-9
Selecting Multiple Elements	2-12
Filtering Selection Sets	2-13
Practice 2a Sketch and Edit Elements	2-16
2.3 Working with Basic Modify Tools	2-21
Moving and Copying Elements	2-21
Rotating Elements	2-23
Mirroring Elements	2-25
Creating Linear and Radial Arrays	2-26
Practice 2b Work with Basic Modify Tools	2-29
2.4 Working with Additional Modify Tools	2-37
Aligning Elements	2-37
Splitting Linear Elements	2-39
Trimming and Extending	2-40
Offsetting Elements	2-41
Practice 2c Work with Additional Modify Tools	2-43
Chapter Review Questions	2-47
Command Summary	2-51
Chapter 3: Setting Up Levels and Grids	3-1
3.1 Setting Up Levels	3-2
Modifying Levels	3-4
Creating Plan Views	3-6
Practice 3a Set Up Levels	3-7
3.2 Creating Structural Grids	3-10
Modifying Grid Lines	3-11
3.3 Adding Columns	3-12
Modifying Columns	3-15
3.4 Linking and Importing CAD Files	3-17
Practice 3b Add Structural Grids and Columns	3-21
Chapter Review Questions	3-26
Command Summary	3-28
Design Development Phase	29
Chapter 4: Modeling Walls	4-1
4.1 Modeling Walls	4-2
4.2 Modifying Walls	4-5
Wall Joins	4-6

Wall Openings..... 4-7

Practice 4a Model the Exterior Shell	4-10
Practice 4b Add Interior Walls	4-16
Chapter Review Questions.....	4-24
Command Summary	4-27
Chapter 5: Working with Doors and Windows.....	5-1
5.1 Inserting Doors and Windows	5-2
Practice 5a Insert Doors and Windows	5-8
5.2 Loading Door and Window Types from the Library.....	5-14
5.3 Creating Additional Door and Window Sizes	5-17
Practice 5b Load and Create Door Types	5-19
Chapter Review Questions.....	5-23
Command Summary	5-25
Chapter 6: Working with Curtain Walls	6-1
6.1 Creating Curtain Walls.....	6-2
Creating Storefronts	6-4
6.2 Adding Curtain Grids.....	6-6
Modifying Curtain Grids.....	6-7
Practice 6a Work with Curtain Walls	6-9
6.3 Working with Curtain Wall Panels	6-13
Creating a Curtain Wall Panel.....	6-15
6.4 Attaching Mullions to Curtain Grids.....	6-17
Modifying Mullions.....	6-18
Practice 6b Add Mullions and Panels to Curtain Walls	6-19
Chapter Review Questions.....	6-25
Command Summary	6-27
Chapter 7: Working with Views	7-1
7.1 Setting the View Display.....	7-2
Hiding and Overriding Graphics	7-3
View Properties	7-8
7.2 Duplicating Views	7-13
Duplication Types.....	7-13
Practice 7a Duplicate Views and Set the View Display.....	7-16
7.3 Adding Callout Views	7-20
Modifying Callouts.....	7-21

Practice 7b Add Callout Views	7-23
7.4 Elevations and Sections	7-29
Elevations.....	7-30
Sections	7-31
Modifying Elevations and Sections	7-33
Practice 7c Create Elevations and Sections	7-37
Chapter Review Questions	7-44
Command Summary	7-47
Chapter 8: Adding Components	8-1
8.1 Adding Components	8-2
Loading Components	8-3
8.2 Modifying Components	8-7
Working with Host Elements	8-7
Purging Unused Elements	8-8
Practice 8a Add Components	8-9
Chapter Review Questions	8-15
Command Summary	8-17
Chapter 9: Modeling Floors	9-1
9.1 Modeling Floors	9-2
Modifying Floors.....	9-5
Joining Geometry	9-7
Practice 9a Model Floors	9-8
9.2 Creating Shaft Openings	9-18
9.3 Creating Sloped Floors	9-19
Creating Multiple Slopes for Drainage	9-20
Practice 9b Add an Elevator Shaft and Slope Floors to Floor Drains	9-22
Chapter Review Questions	9-26
Command Summary	9-27
Chapter 10: Modeling Ceilings	10-1
10.1 Modeling Ceilings	10-2
Sketching Ceilings.....	10-4
Modifying Ceiling Grids	10-5
10.2 Adding Ceiling Fixtures	10-6
Practice 10a Model Ceilings and Add Ceiling Fixtures	10-9
10.3 Creating Ceiling Soffits	10-12

Practice 10b Create Ceiling Soffits	10-14
Chapter Review Questions	10-20
Command Summary	10-22
Chapter 11: Modeling Roofs	11-1
11.1 Modeling Roofs	11-2
11.2 Creating Roofs by Footprint	11-3
Attaching Walls to Roofs	11-5
Practice 11a Create Roofs by Footprint	11-7
11.3 Establishing Work Planes	11-13
11.4 Creating Roofs by Extrusion	11-16
Joining Roofs	11-18
Practice 11b Create Roofs by Extrusion	11-20
Chapter Review Questions	11-23
Command Summary	11-25
Chapter 12: Modeling Stairs, Railings, and Ramps	12-1
12.1 Creating Component Stairs	12-2
Creating Runs	12-3
Creating Other Types of Runs	12-6
Creating Landings	12-9
Adding Supports.....	12-9
12.2 Modifying Component Stairs	12-10
Practice 12a Create Component Stairs	12-13
12.3 Working with Railings	12-20
Modifying Railings	12-22
Practice 12b Modify and Add Railings	12-26
12.4 Sketching Custom Stairs	12-31
Editing Sketched Stairs	12-33
12.5 Creating Ramps	12-34
Practice 12c Sketch Custom Stairs and Ramps	12-36
Chapter Review Questions	12-41
Command Summary	12-43

Construction Documents Phase	45
Chapter 13: Creating Construction Documents	13-1
13.1 Setting Up Sheets	13-2
Sheet (Title Block) Properties	13-4
13.2 Placing and Modifying Views on Sheets.....	13-5
Practice 13a Create Construction Documents	13-11
13.3 Printing Sheets.....	13-17
Printing Options.....	13-17
Chapter Review Questions.....	13-21
Command Summary	13-23
Chapter 14: Annotating Construction Documents	14-1
14.1 Working with Dimensions	14-2
Modifying Dimensions	14-5
Setting Constraints.....	14-8
Practice 14a Add Dimensions	14-13
14.2 Working With Text.....	14-17
Editing Text	14-19
Spell Checking	14-23
Creating Text Types.....	14-24
14.3 Adding Detail Lines and Symbols	14-26
Using Symbols	14-27
Practice 14b Annotate Construction Documents.....	14-28
14.4 Creating Legends	14-36
Practice 14c Create Legends	14-39
Chapter Review Questions.....	14-41
Command Summary	14-43
Chapter 15: Adding Tags and Schedules.....	15-1
15.1 Adding Tags	15-2
Tagging in 3D Views	15-8
Practice 15a Add Tags	15-10
15.2 Adding Rooms and Room Tags.....	15-14
Practice 15b Add Rooms and Room Tags.....	15-18
15.3 Working with Schedules.....	15-24
Modifying Schedules	15-25
Modifying a Schedule on a Sheet	15-26

Practice 15c Work with Schedules	15-28
Chapter Review Questions.....	15-32
Command Summary	15-34
Chapter 16: Creating Details.....	16-1
16.1 Setting Up Detail Views	16-2
Referencing a Drafting View	16-4
Saving Drafting Views	16-5
16.2 Adding Detail Components	16-8
Detail Components.....	16-8
Repeating Details.....	16-10
16.3 Annotating Details	16-12
Creating Filled Regions.....	16-12
Adding Detail Tags.....	16-15
Practice 16a Create a Detail Based on a Section Callout	16-17
Practice 16b Create a Detail in a Detail View	16-23
16.4 Keynoting and Keynote Legends	16-27
Keynote Legends	16-30
Practice 16c Create an Additional Detail.....	16-32
Practice 16d Create a Detail Based on a CAD File	16-33
Chapter Review Questions.....	16-40
Command Summary	16-42
Appendix A: Introduction to Worksets	A-1
A.1 Introduction to Worksets.....	A-2
Saving Workset- Related Files.....	A-4
Command Summary	A-6
Appendix B: Additional Tools	B-1
B.1 Reusing Selection Sets	B-2
B.2 Editing Wall Joins	B-5
B.3 Wall Sweeps and Reveals	B-7
B.4 Creating Curtain Wall Types with Automatic Grids	B-10
B.5 Enhancing Views.....	B-13
Splitting Faces.....	B-14
Applying Materials.....	B-15
Adjusting Linework	B-17
Editing Plan and Section Profiles	B-18

B.6 Creating Dormers	B-19
B.7 Working with Guide Grids on Sheets	B-22
B.8 Revision Tracking	B-24
Issuing Revisions	B-28
B.9 Annotating Dependent Views	B-29
Annotating Views	B-30
B.10 Importing and Exporting Schedules	B-33
B.11 Creating Building Component Schedules	B-35
Schedule Properties	B-42
B.12 Creating a Repeating Detail	B-43
Command Summary	B-45
Appendix C: Autodesk Revit Architecture Certification	
Exam Objectives	C-1
Index	Index-1

SOLINCO / QUERÉTARO

Conde de Miravalle No. 110 Oficina 201

Colonia Carretas

Tel: +52 442-1830664/65

Querétaro, Qro.

SOLINCO / CIUDAD DE MÉXICO

Calle Montecitos #38 P.28 Oficina 6

Col. Nápoles. Delegación Benito Juárez

Tel: +52 55-4333 0225

Ciudad de México.