

- Starting Revit
- Starting Revit for the First Time
- Opening a Project File
- Identifying the User Interface Components
- Managing User Interface Components
- · Understanding the Ribbon
- · Customizing the User Interface
- Understanding the Quick Access Toolbar
- Understanding the Options Bar
- Understanding the Application Menu
- Understanding the InfoCenter Toolbar
- Using the Revit App Store
- · Understanding the Project Browser
- Understanding the Properties Palette
- Understanding the Type Selector
- · Understanding the Status Bar
- · Understanding the Drawing Area
- · Understanding the View Controls
- Understanding the Navigation Bar
- Understanding the ViewCube
- · Understanding the Steering Wheels
- · Understanding the Options Dialog

- Managing File and Template Locations
- · Managing the Places List
- Starting a New Project from Recent Files
- Starting a New Project from the Application Menu
- Understanding Units and Snaps
- Using the Mouse
- · Using the Keyboard
- · Customizing Keyboard Shortcuts
- · Managing Windows
- Understanding Macros
- · Saving and Closing Files
- · Closing the Application

Revit Fundamentals

- Understanding BIM
- Understanding the Difference between BIM and CAD
- Understanding Revit Concepts
- Working with the Different Versions of Revit
- Understanding Bidirectional Associativity
- Recognizing Parametric Relationships
- Understanding Families
- Placing Model Elements

- · Sketching Model Elements
- Placing View-Specific Elements
- Working with Datum Elements
- · Placing Elements from the Project Browser
- Loading Families and Using Type Catalogs
- Finding Families Using Autodesk Seek
- · Editing Families within a Project
- Selecting Objects
- Modifying Selection Settings
- · Saving Selection Sets
- · Copying and Moving Objects
- Rotating Objects
- Creating Linear Arrays
- Creating Radial Arrays
- Scaling Objects
- Mirroring Objects
- Using the Clipboard for Copy and Paste
- Splitting Objects
- Creating Elements Consistently with Match Type Properties and Create Similar
- Aligning Objects
- · Trimming and Extending Objects



- Offsetting Objects
- · Pinning Objects in Place
- · Deleting Objects
- · Cutting and Joining Geometry
- · Splitting the Face of an Element
- Applying Materials as Paint
- Measuring versus Dimensioning Objects
- · Understanding Element IDs
- Understanding and Reviewing Warning Messages

Modeling Essentials

- · Creating and Modifying Levels
- · Creating and Modifying Grids
- Creating and Modifying Multi-Segment Grids
- Controlling Datum Visibility
- Limiting Visibility of Datum Using Scope Boxes
- Setting and Showing the Active Work Plane
- Creating Reference Planes
- Modeling Accurately with Length and Angle Snap Increments
- Working with Object Snaps
- Using Visualization Aids When Working in 3D Views

Core and Shell

- Understanding Wall Drawing Aids
- · Creating Exterior Building Walls
- Creating Building Core Walls
- Creating Doors
- · Creating Windows
- · Modifying Door and Window Properties
- Creating Curtain Walls
- · Placing Doors in Curtain Walls
- Creating Curtain Wall Grids and Mullions
- Understanding Compound Structures
- Creating Floors
- Understanding Floor Instance Properties
- Understanding Floor Type Properties
- Creating Sloped Floors by Sketching
- Creating Sloped Floors by Shape Editing
- Creating Floor Openings
- Creating Shaft Openings

- · Creating a Roof by Footprint
- Creating a Roof by Extrusion
- · Joining and Unjoining Roofs
- Understanding Roof Instance Properties
- Understanding Roof Type Properties
- Working with Sloped Glazing Roofs
- Creating Sloped Roofs by Sketching
- · Creating Sloped Roofs by Shape Editing
- Creating Conical Roofs
- Managing Complex Roof Conditions Using Align Eaves
- Creating Roof Soffits
- Creating Fascias
- Creating Dormer Openings
- · Creating Roof Openings
- Modifying Roof and Wall Joins and Controlling Roof Visibility
- · Creating Gutters and Downspouts

Walls - An In-Depth Look

- Understanding Wall System Families and Types
- Creating Walls by Picking Lines
- · Creating a Wall by Face
- Understanding Wall Properties
- Changing the Wall Type as Your Design Evolves
- Understanding Curtain Wall Types
- · Creating a Curved Curtain Wall
- Embedding a Curtain Wall in Another Wall
- · Creating Curtain Walls that Turn Corners
- · Working with Curtain Wall Grids
- · Selecting Curtain Wall Components
- · Modifying Curtain Wall Panels
- Understanding Curtain Wall Corner Conditions
- Modifying and Customizing Curtain Wall Mullions
- Creating a Stacked Wall
- Creating Walls with Modify Tools
- Modifying Wall Profiles
- Creating Wall Openings
- Introducing Wall Layer Functions
- Overriding Host Layer Display

- Understanding Layer Join Cleanups
- · Understanding Wall Layer Wrapping
- Customizing Vertical Wall Structure by Splitting Regions
- Customizing Vertical Wall Structure by Adding Sweeps
- Customizing Vertical Wall Structure by Adding Reveals
- Customizing the Base and Top Extension of Walls
- · Creating Embedded Walls
- · Creating In-Place Wall Sweeps
- · Creating In-Place Reveals
- Creating Joined Walls for Complex Assemblies

Building Structure

- Managing Structural Symbolic Representation Settings
- · Understanding Structural Elements
- Creating Structural Columns
- Creating Slanted Structural Columns
- · Understanding Structural Column Families
- Understanding Structural Column Properties
- Creating Isolated Foundations
- Creating Wall Foundations
- Creating Stepped Foundations
- · Creating Foundation Slabs
- · Creating Slab Edges
- Creating Structural Floors

Creating Beams on Grids

Creating Sloped Beams

Modifying Beams

Creating Trusses

Elements

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Understanding Beam Families

Understanding Beam Properties

Creating Beam and Column Joins

Modifying Elements with Coping

Creating Openings in Structural Framing

Using the Section Shape Parameter

Creating Beam Systems

Creating Structural Walls

Creating Structural Braces

Creating Beams

- Placing Rebar ٠
- Managing the Shape Constraints of Rebar
- · Placing Area and Path Reinforcement
- Placing Fabric Reinforcement
- Customizing Rebar Cover

Stairs and Railings

- · Creating Stairs by Component
- · Creating Landing Components
- · Creating Support Components
- Creating Stair Components by Sketching
- Modifying Stair Components
- Customizing Stair Documentation
- Understanding Stair by Component Properties
- Creating Stairs by Sketching the Run
- Modifying Sketched Stairs •
- · Understanding Stair by Sketch Properties
- · Sketching Stairs with Landings
- · Creating Stairs by Sketching Boundaries and Riser Lines
- Creating Spiral Stairs
- · Creating Multi-Story Stairs and Shafts
- Creating Ramps
- Placing Railings on a Host
- Creating Railings by Sketch •
- Modifying Railings ٠
- Understanding Railing Properties
- · Customizing Railing Properties

Site Tools

- Introducing Site Tools
- Creating a Toposurface Using Points
- Creating a Toposurface from CAD
- · Creating a Toposurface from a Points File
- Managing Site Settings
- Creating Toposurface Subregions and Split Surfaces
- Creating a Building Pad
- Creating a Graded Region •
- Creating Site and Parking Components ٠
- Creating Property Lines and Contour Labels

Schedules and Tags

- Understanding Parameters
- Creating Project Parameters
- **Creating Shared Parameters**
- Understanding Schedules and Tags
- Placing Element Tags
- Working with Material Tags
- Creating a Schedule and Specifying Fields
- Modifying Schedules with Filters
- Modifying Schedules with Sorting and Grouping
- Modifying the Formatting of Schedule Titles and Headers
- Modifying Schedule Formatting
- Modifying the Schedule Appearance
- · Placing Schedules on a Sheet
- · Working with Calculated Values and Conditional Formatting in Schedules
- Creating and Managing a View List
- Working with Material Takeoff Schedules •
- Importing and Exporting Schedule Views

Annotation

- Working with Text Annotations
- Using Keyboard Controls to Add Symbols to Text
- · Checking Spelling in a View
- Finding and Replacing Text •
- Modifying Text Type Properties
- Specifying Keynoting Settings
- Creating Keynotes
- Modifying Keynotes and Keynote Settings •
- Creating a Keynote Legend
- Working with Symbols and Note Blocks
- Working with Legends
- Managing Arrowheads

Dimensions and Constraints

- · Understanding Dimensions and Constraints
- Using Temporary Dimensions •
- Modifying Temporary Dimension Settings
- Working with Permanent Dimensions
- Modifying Dimensions
- Modifying Dimension Graphics

- Modifying Dimension Text Appearance •
- . Creating and Modifying Dimension Styles
- Locking Dimensions
- Controlling Dimensions Using Equality Constraints
- Controlling Dimension Units •
- **Dimensioning Entire Walls**
- Working with Spot Elevations
- Working with Spot Coordinates
- Working with Spot Slopes

Drafting and Detailing

- Understanding Detailing
- Loading and Placing Detail Components
- Placing Repeating Details
- Creating a Repeating Detail •
- . Creating Detail Lines
- Specifying Draw Order
- Showing Hidden Lines in a Detail View
- Modifying the Cut Profile of Model Elements
- . Overriding Linework in a View
- Creating Filled Regions
- Creating Masking Regions
- Creating Batt Insulation •
- Placing Annotations in Detail Views •

Inserting Views and 2D Elements from a File

Creating Model Text and Model Lines

Understanding Scale and Detail Level

Applying and Assigning View Templates

Understanding Visibility and Graphic

Creating Element and Category Overrides

Understanding Plan View Range

Understanding View Discipline

Understanding View Templates

Creating View Templates

Understanding Object Styles

Creating View Types

Overrides

in a View

Leveraging Detail Groups • Saving Views to a File

Working with Visual Styles

View Graphics

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- · Creating Filter Overrides
- Using Temporary Hide or Isolate and Viewing Hidden Elements
- Using Temporary View Properties
- Understanding Crop Regions
- Creating a Non-Rectangular Crop Region
- Understanding Annotation Crop Regions
- Configuring System Family Coarse Scale
 Cut Patterns

Views and Sheets

- Creating Plan Views and Reflected Ceiling Plan Views
- Creating a Plan Region
- Creating Building Elevation Views
- Creating Interior Elevation Views
- Creating Framing Elevation Views
- Changing the Elevation Symbol
- Creating Section Views
- Segmenting Section and Elevation Views
- · Creating Callout Views
- · Sketching a Callout View
- Creating Drafting Views
- · Creating a Reference View
- · Duplicating Views
- · Creating Matchlines and View References
- Creating Additional View References
- Creating and Using Sheets
- Working with Viewports on Sheets
- Aligning Views on Sheets with a Guide Grid
- Using a Sheet List and Placeholder Sheets
- Creating Custom Titleblocks
- Creating a Key Plan
- Managing Sheet Issues and Revisions
- · Creating Revision Clouds and Tags
- Adding a Revision Schedule to a Titleblock
- Creating Supplemental Drawings

Printing and Publishing

- Understanding Printing and Publishing
- · Printing and Managing Print Settings
- Printing to PDF
- · Publishing Files to Buzzsaw

Managing Your Projects

- Managing Project Information
- Understanding How the Location and Site Relate
- · Specifying a Project Location
- · Understanding Coordinate Systems
- Reporting and Displaying Coordinates
- Working with Coordinate Systems
- Relocating a Project
- · Rotating True North and Project North
- · Mirroring a Project
- Managing Project Browser View Organization
- Using Parameters and Filters for Browser Organization
- Managing Project Browser Sheet
 Organization
- Understanding Project Template Files
- · Transferring Project Standards
- · Deleting Unused Items from a Project
- · Setting the Starting View

Managing Settings

- Understanding Model and Drafting Patterns
- Managing Fill Patterns
- Managing Materials and Material Libraries
- Managing Material Properties and Material Assets
- · Managing Line Styles
- Managing Line Weights
- Managing Line Patterns
- · Managing Halftone and Underlay Settings
- · Assigning Assembly Code Files

Structural Design Analysis

- Introducing the Structural Analytical Model
- Controlling the Visibility of the Structural Analytical Model
- Modifying Structural Analytical Model Properties
- Adjusting the Structural Analytical Model
- Confirming Structural Analytical Nodes are Connected
- Understanding Analytical Structural Settings
- Running Structural Analytical Model Checks

 Applying Loads to the Structural Analytical Model

Worksharing

- Introducing Worksharing Concepts
- · Understanding Worksharing Terminology
- Enabling Worksharing in a Project File
- · Creating the Central Model
- Creating a Local Model
- Creating Worksets
- · Understanding Workset Visibility
- Understanding How Central and Local Files Communicate
- · Closing a Workshared Project
- Understanding Editing Requests
- Understanding the Active Workset
- Understanding Worksharing Display Modes
- Specifying Open Worksets
- Managing Worksets in Linked Revit Files
- · Working Offline and Editing at Risk
- Viewing the Workshared Project History
- · Rolling Back Workshared Projects
- · Detaching a File from Central

Collaboration

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- Linking Revit Models
- · Managing Linked Revit Models
- Understanding Sites

Linked Model

a Single Project

Linked Models

Checking For Interferences

- · Linking Revit Models by Shared Coordinates
- Controlling the Coordinates in Linked Revit Models

Controlling the Display of Elements in a

Tagging Elements in a Linked Model

Scheduling Elements from a Linked Model

Monitoring and Coordinating Changes within

Using Copy and Monitor in a Single Project

Performing a Coordination Review with

Using Copy and Monitor with Linked Projects

Groups

- Introducing Groups
- · Creating a Model Group
- Creating and Managing Model Groups and Attached Detail Groups
- Creating Detail Groups
- Editing Groups
- Making Parameters Vary Between Groups
- Excluding Elements from Groups
- · Converting Groups to Links
- · Saving and Loading Groups

Phases

- Introducing Phases
- Understanding Phases
- · Managing Phases
- Understanding Phase Filters and Graphic Overrides
- Assigning Phases and Phase Filters to a View
- Understanding the Impact of Phases on Documentation
- Demolishing Elements
- Establishing Phases in Project Templates

Design Options

- Introducing Design Options
- Working with Design Options and Option Sets

- · Editing Design Options
- Duplicating and Deleting Design Options
- Creating Design Option Views
- Understanding the Impact of Design Options on Documentation
- Promoting and Accepting Design Options

Construction Modeling

- Understanding Construction Modeling
- Creating Parts
- Modifying Parts
- · Controlling the Visibility of Parts
- Dividing Parts
- · Dividing Parts with Gaps and Profiles
- Merging and Excluding Parts
- Scheduling Parts
- · Understanding Wall Joins and Parts
- Creating Parts from Linked Models
- Creating Assemblies
- Placing and Modifying Assembly Instances
- Creating Assembly Views
- Acquiring Assembly Views
- Modifying Assembly Views

Advanced Modeling

- Introducing the In-Place Modeling Tools
- Creating In-Place Family Objects Using Solid Extruded Forms

- Creating In-Place Family Objects Using Solid Blended Forms
- Creating In-Place Family Objects Using Solid Revolved Forms
- Creating In-Place Family Objects Using Solid Swept Forms
- · Enhancing In-Place Families
- Understanding Adaptive Components
- Using Adaptive Components to Create Building Elements

Interoperability

- · Importing and Managing Image Files
- · Linking and Importing CAD Files
- Managing Linked CAD Files
- Controlling the Coordinates of a Linked CAD File
- Managing Imported CAD Files
- Controlling Line Weights in Imported CAD Files
- Using CAD Files to Create Building Model
 Objects
- · Working with Point Clouds
- Working with IFC
- Exporting to 2D CAD Formats
- Exporting to 3D CAD
- Exporting Views to Image Files
- Exporting to IFC