

CLASS OBJECTIVE

The Preparing Construction Documents with Revit Architecture course focuses on using Revit's "modeling" tools, annotation content and documentation systems to produce Construction Documentation. After completing the class, even though there is still much to learn about Revit, attendees will be able join a project team and assist with the completion of the project.

CLASS PRE-REQUISITE

Students need access to a PC with Revit installed and an internet connection. Dual monitors are very helpful. The class assumes attendee will have familiarity with architectural construction documents. No Prior Revit or AutoCAD experience is necessary, however, to get the most out of the class we recommend reviewing Autodesk Free "getting started" tutorials prior to the Day.

<https://knowledge.autodesk.com/support/revit-products/getting-started?sort=score>

AGENDA

The course is comprised of nine half Day sessions with live instruction & hands-on exercises. Each Day is a half-day in duration and consists of 2-4 workshops, from 30-120 minutes in length.

DAY 1

- **Class Setup**
 - Using Zoom
 - Copying Files to Desktop
- **Workshop 1 – Navigating Revit**
 - Revit File Versions & Types
 - Opening Projects
 - Stand Alone Vs. Workshared
 - Interface Review - Application Menu, Quick Access Toolbar, Ribbon, Options Bar, Project Browser, Properties, Status bar
 - Switching Views – Project Browser and View Mark Hyperlinks
 - Navigation: Zooming-Panning-Orbiting
 - Keyboard Shortcuts
- **Workshop 2 – Key Concepts**
 - Selecting Objects
 - Object Properties – Instance and Type
 - Revit Organization - Categories\Families\Types, Modeling Vs Drafting
 - Line Weights, Line Patterns, Line Styles
 - Object Styles
 - Materials
 - Adding Text, Dimensions, and Tags

□ **Workshop 3 – Views and View properties**

- Duplicating Views
- View Properties

DAY 2

□ **Workshop 1 - New Projects, Levels, Walls & Modify Tools**

- Starting a New Project & Templates
- Adding Levels
- Adding Walls
- Draw Tools, Location Line, Wall Height
- Dimensioning to Position Walls
- Modify Tools - Align, Move, Copy, Rotate, Trim\Extend, Mirror, Copy\Paste

□ **Workshop 2 – Wall Types**

- Modifying and Creating Custom Wall Types
- Wall Layer Function
- Materials

□ **Workshop 3 – Doors, Windows, & Openings**

- Adding Doors, Windows, and Openings
- Editing Parameters (Instance and Type)
- Loading Families
- Wall Openings – Loadable families and opening tools

DAY 3

- **Workshop 1 – Column Grids & Columns**
 - Adding Column Grids
 - Grid and Level Extents - 2D vs. 3D Grids
 - Structural / Architectural Columns
 - Interaction between columns and walls
 - Footings for Structural Columns
 - Footings for Structural Walls
- **Workshop 2 – Placing Components & Model Groups**
 - Adding Components - plumbing fixtures, equipment, furniture, etc.
 - Placement options & hosting
 - Spacebar to rotate/align
 - Creating Duplicate Types
 - Instance vs. Type Parameter
 - Model Groups, Group Editor
- **Workshop 3 - Creating Component Families**
 - Categories & starting from templates, Hosting vs. Non-hosted
 - Reference Planes
 - Dimensional Parameters
 - Creating Geometry
 - Associating Geometry to Parameters
 - Instance Vs. Type Parameters
 - Material Parameters

DAY 4

- **Workshop 1 – Rooms, Tags, & Schedules**
 - Placing Rooms
 - Room Tags and Tag options
 - Room Separation Lines
 - Schedules - Room Finish & Door Schedule
- **Workshop 2 – Floors, Roofs, & Ceilings**
 - Placing and modifying floors
 - Seeing Inside your Model
 - Placing and modifying roofs
 - Creating Ceilings & Soffits
 - Adding Ceiling components - Lights Fixtures, Diffusers

DAY 5

- **Workshop 1 – Railings**
 - Railing Type Review & Railing Settings
 - Placing Railings on Floors
- **Workshop 2 – Stairs and Ramps**
 - Stair Type Review & Stair construction settings
 - Creating Stair Types
 - Placing & Editing Stairs
 - Visibility and Graphic settings
 - Adding Ramps
 - Adding Railings to Stairs
- **Workshop 3 –Curtain Walls as Storefront**
 - Curtain Wall Type Review
 - Placing Curtain Walls
 - Adding Grids & Mullions
 - Mullion and Panel Options

DAY 6

- **Workshop 1 –Detailing**
 - Model based vs. Drafted
 - Drafting tools
 - Detail Lines - Line Weights, Line Patterns, Line Styles
 - Filled Regions
 - Detail Components
 - Live Callouts vs Reference Views
- **Workshop 2 –Sheets and Printing**
 - Creating Sheets, Title block Parameters
 - Adding Views to sheets
 - Viewport Types and Options
 - Consistent Sheet Setup
 - Guide Grids and Scope Boxes
 - Printing
- **Workshop 3 – Legends**
 - Legend Uses
 - Creating and Adding to Sheets
 - Legend Components
- **Workshop 4 – Worksharing**
 - Worksharing Setup
 - Central and Local Files
 - Worksets
 - Workset Colorization
 - Synchronize to Central

DAY 7

- **Workshop 1 – Advanced Walls**
 - Multi-Component Wall types
 - Splitting wall layers
 - Unlocking wall layers
 - Integrated Sweeps & Reveals
 - Applied Sweeps and Reviews
 - Stacked Walls
 - Edit Wall Profile
 - Split Face & Paint
 - Tapered and Canted Walls (Revit 2021 and 2022)
- **Workshop 2 – Site & Topography**
 - Site Plan View
 - Creating Terrain Site Model (Toposurface)
 - Editing Surface
 - Site Components & Annotation
- **Workshop 3 – Origin Points & Linking Revit Models**
 - Setting Building Location
 - Origin Points
 - True North and Project North
 - Geo Locating Project
 - Linking Revit Models & Positioning
 - Managing Linked Files
 - Controlling graphics in linked files

DAY 8

- **Workshop 1 – Renovation Projects \ Phasing**
 - Overview of the Phasing System
 - Creating Existing, Demolition, and New Work Views
 - Assigning Phases to building elements
- **Workshop 2 –Design Options**
 - Design Option Review
 - Enabling Design Options
 - Creating Option Views
- **Workshop 3 –Advanced Visibility Controls**
 - View Range & Plan Regions
 - View Filters
 - View Templates

DAY 9

- **Workshop 1 – Advanced Family Topics**
 - Visibility Parameters
 - Formulas
 - Nested Families
 - Arrays in Families
 - Tag Families
 - In-Place Families
- **Workshop 2 – Advanced Parameters**
 - Parameter Types & Uses
 - Creating Shared Parameters
 - Scheduling Shared Parameters
- **Workshop 3 – Areas & Area Schedules**
 - Creating Area Plans
 - Areas vs. Rooms
 - Area Schemes
 - Area Schedules
- **Workshop 4 – BIM Management Topics - Model & File Maintenance**
 - Worksharing Setup
 - Model Maintenance
 - Purge, Audit, Compact, Warning Review
 - Setting up worksharing
 - Creating New Central Files
 - Backups, History, Restoring
 - E-transmit
 - Archiving
 - Sharing with Consultants
 - Browser Organization

