

Autodesk Revit BIM Training Course

Course Length: 16-Hours

- 16-Hours (8 x 2-Hour Sessions) Training
- Delivered remotely over MS Teams
- Sessions are recorded and download links are provided after each session for your future use and reference.
- Pricing is based on 1-3 people.
- Volume Discounts apply for 5+ people.
- Training is usually broken up into 2 or 4-hour sessions in the morning and flexible (i.e. consecutive or Monday, Wednesday, Friday, etc.)
- Training sessions can start within 14 days of booking
- Courses are private and topics can be customised to suit

The Autodesk Revit Families Training Course teaches Revit users how to create, modify, test, and manage intelligent BIM content using the Revit Family Editor. Rather than relying solely on downloaded content, participants learn how to develop families that suit their organisation's design, documentation, scheduling, and BIM standards.

Training covers the complete family creation workflow, from selecting the correct family template and establishing reference planes through to creating geometry, applying constraints, defining parameters, creating family types, and testing families within Revit projects.

Participants also develop skills in more advanced family functionality including formulas, nested families, shared parameters, visibility controls, materials, arrays, lookup-driven content, and family library management.

Autodesk describes reference planes as the framework or "skeleton" of a parametric family, with geometry constrained to this framework so parameters can control its behaviour. The course follows this structured approach to creating reliable and maintainable Revit content.

Topics Covered

- Revit Family Editor
- Family templates
- Family categories
- Loadable families
- Reference planes and reference lines
- Constraints and dimensions
- Type parameters
- Instance parameters
- Shared parameters
- Family parameters
- Family types
- Parametric geometry
- Extrusions, blends, revolves and sweeps

- Solid and void forms
- Materials
- Visibility parameters
- Detail levels
- Subcategories
- Formulas
- Conditional formulas
- Arrays
- Nested families
- Shared nested families
- Parameter association
- Family testing and flexing
- Family library standards
- BIM content management
- Family performance and optimisation

Prerequisites

Participants should have a working knowledge of Autodesk Revit, including basic modelling, views, properties, dimensions, and project navigation.

Previous family creation experience is not required. The course progresses from Family Editor fundamentals through to parametric content, formulas, nested families, and more advanced family development workflows.

Training Course Contents

Chapter 1: Introduction to Revit Families and the Family Editor

- Understanding Revit families
- System, loadable, and in-place families
- Navigating the Family Editor
- Understanding RFA files
- Family creation workflow

Chapter 2: Family Templates, Categories and Hosting

- Selecting the correct family template
- Family categories
- Hosted and non-hosted families
- Face-based and work plane-based content
- Planning family behaviour before modelling

Chapter 3: Reference Planes, Reference Lines and Constraints

- Creating reference planes
- Creating reference lines
- Establishing the family framework
- Applying dimensions and constraints
- Locking geometry correctly

Chapter 4: Creating Family Geometry

- Extrusions
- Blends
- Revolves
- Sweeps
- Swept blends
- Solid and void geometry
- Openings and cut geometry

Chapter 5: Parameters and Family Types

- Family parameters
- Type parameters
- Instance parameters
- Creating labelled dimensions
- Creating multiple family types
- Controlling geometry parametrically

Chapter 6: Formulas and Parametric Behaviour

- Creating formulas
- Calculated dimensions
- Conditional family behaviour
- Parameter relationships
- Testing parametric relationships
- Building intelligent family logic

Chapter 7: Materials, Subcategories and Visibility

- Material parameters
- Family subcategories
- Object styles
- Visibility parameters
- Detail levels
- Controlling graphical representation

Chapter 8: Nested and Shared Families

- Creating nested families
- Host and nested family relationships
- Associating parameters
- Shared versus non-shared families
- Scheduling nested components
- Managing complex family structures
- Parametric arrays
- Array constraints
- Repeated nested components
- Controlling quantities

- Testing variable family configurations

Chapter 10: Annotation and 2D Family Content

- Symbolic lines
- Detail components
- Generic annotations
- Annotation families
- Visibility by view and detail level
- Combining 2D and 3D family information

Chapter 11: Testing, Flexing and Troubleshooting Families

- Flexing parameters
- Testing family types
- Loading families into projects
- Testing family behaviour
- Identifying broken constraints
- Troubleshooting parameter relationships
- Improving family reliability

Chapter 12: Revit Family Standards and Content Management

- Family naming conventions
- Parameter standards
- Shared parameter strategies
- Family library structures
- Quality assurance
- Content deployment
- Maintaining company BIM libraries

Optional Chapter: Advanced Parametric Revit Families

- Advanced formulas
- Conditional parameters
- Complex constraints
- Advanced arrays
- Multi-configuration families
- Parametric design strategies

Optional Chapter: Revit MEP Family Creation

- MEP family categories
- Mechanical and electrical components
- Plumbing components
- Connector requirements
- MEP parameters
- Testing families in building systems

Optional Chapter: Manufacturer and Product BIM Families

- Converting product information into BIM content

- Product types and configurations
- Manufacturer parameters
- Product data and scheduling
- Material options
- Creating reusable manufacturer BIM libraries

Optional Chapter: Revit Family Library and Company Standards

- BIM content standards
- Family naming conventions
- Shared parameters
- Library structures
- Family auditing
- Content approval procedures
- Company-wide deployment