



Prerequisites	Length	Description
Familiarity with Windows and building design experience.	3 Days	Students will learn about building information modeling and the tools for parametric design, analysis, and documentation. Fundamental features of Revit Structure 2009 are covered, including the use of 3D parametric design tools to create, analyze, and finish a project. Students will also learn about construction documentation and design visualization. Hands-on exercises representing real-world structural design scenarios are used.

### Chapter 1: Building Information Modeling

- Overview
- About Building Information Modeling
- About Bidirectional Associativity

### Chapter 2: Revit Structure Basics

- Revit Structure User Interface
- Displaying and Hiding the Design Bar Tabs
- Guidelines for Exploring the User Interface
- About Structural Elements
- About Families
- Guidelines for Working with Structural Elements and Families

### Chapter 3: Viewing the Structural Model

- About Views
- View Parameters
- Creating a Dependent View
- Guidelines for Working with Views
- About Controlling Object Visibility
- Modifying Line Styles
- Using Filters
- Guidelines for Controlling Object Visibility
- Working with Elevation and Section Views
- Controlling Visibility of Elevation and Section Tags
- Guidelines for Working with Elevation and Section Views
- About 3D Views
- About Cameras
- Navigating Through a 3D View
- Creating and Modifying 3D Views
- Changing Material Properties
- Guidelines for Working with 3D Views



#### **Chapter 4: Starting a New Project**

- About Projects
- Creating Project Templates
- Guidelines for Creating Project Template Files
- About Levels
- Adding and Modifying Levels
- Guidelines for Adding and Modifying Levels
- About Grids
- Process of Creating and Modifying Grid Lines
- Guidelines for Creating and Modifying Grids

#### **Chapter 5: Creating Structural Columns and Walls**

- About Structural Columns
- Loading Structural Columns
- Creating Structural Column Types
- Creating Openings in Structural Columns
- Guidelines for Working with Structural Columns
- About Structural Walls
- Structural Wall Properties
- About Wall Foundations and Pilasters
- Process of Modeling Structural Walls
- Creating Stepped Walls and Foundations
- Guidelines for Working with Structural Walls

#### **Chapter 6: Creating Frames**

- Adding Floor Framing
- Beam Properties
- Adding Openings in Beams
- Guidelines for Adding and Framing Beams
- About Beams and Beam Systems
- Beam System Properties
- Process of Creating Sloped Beams
- Process of Creating a 3D Beam System
- Guidelines for Working with Beams and Beam Systems
- About Structural Steel Frames
- Setting Braced Frames in Plan View
- Process of Adding Bracing Members
- Editing Braces
- Guidelines for Working with Structural Steel Frames
- About Concrete Beams
- Options to Edit Concrete Beam Joins
- Guidelines for Working with Concrete Beams



## **Chapter 7: Creating Slabs and Roofs**

Adding Slabs

About Slabs

Process of Adding a Floor Type

Creating Sloped Slabs and Shaft Openings in Slabs

Guidelines for Adding Slabs

About Roofs

Process of Sketching Roofs

## **Chapter 8: Creating Foundations**

About Foundations.

Guidelines for Adding Foundations

## **Chapter 9: Creating Stairs and Ramps**

About Stairs and Railings

Creating Stairs

Guidelines for Creating Stairs

About Ramps

Process of Creating Ramps

## **Chapter 10: Creating Plan Annotations and Schedules**

About Tags

Revision Tag Visibility Options

Process of Adding Tags

Guidelines for Adding Tags

About Temporary Dimensions , Permanent Dimensions, and Spot Dimension Symbols

Setting Text Placement Parameters

Guidelines for Adding Dimensions, Symbols, and Text

About Legends

Guidelines for Creating Legends

About Schedules

Working with Schedules

Guidelines for Working with Schedules



## **Chapter 11: Creating Sections and Details**

- Adding Reinforcements and Detail Components
- Guidelines for Adding Reinforcements and Detail Components
- Process of Creating Detail Lines
- Modifying Detail Groups
- Guidelines for Adding Detail Lines and Detail Groups
- Options for Importing and Editing DWG Details
- Guidelines for Importing and Editing DWG Details
- About Concrete Details
- Guidelines for Adding Concrete Detail Components
- About Steel Details
- Creating and Modifying Steel Details

## **Chapter 12: Creating Construction Documentation**

- Working with Sheets and Titleblocks
- About Sheets and Titleblocks
- About Revision Tracking
- Process of Creating Sheets by Using Customized Titleblocks
- Creating Revision Clouds
- Guidelines for Working with Sheets and Titleblocks.
- Print Setup Settings
- Guidelines for Printing Sheets
- Settings for Exporting Content
- Process of Exporting Views to Other CAD Formats
- Guidelines for Exporting Content to CAD Formats