Course Outline

TOPCON Solutions Store

AUTODESK Platinum Partner

Revit® Essentials for Structural Design

This course is your essential introduction to Autodesk Revit Structure, focusing on the powerful and flexible tools that make it the industry standard for structural modeling. The goal is simple: to provide you with the essential tools and practical experience required to efficiently create, modify, and document parametrically-driven structural projects—from initial architectural link-in to final construction documentation.

Prerequisite: Learn the fundamental skills for using Autodesk Revit's structural tools. Prior experience and knowledge in structural engineering concepts and terminology are highly recommended.

Course Length: 3 Days *(In-Person)* | 4 Days *(Online)*

Key Skills You Will Learn:

- **Building Information Modeling:** Understanding the purpose of Building Information Modeling (BIM) and how it is applied in the Autodesk Revit software.
- **Revit Fundamentals:** Navigate the interface, manage views, and understand the critical concept of Revit Families and components.
- **Project Setup:** Start a structural project, link architectural models, and establish essential datums (levels and grids).
- **Core Modeling:** Add structural columns, foundations, footings, and slabs (for foundations, floors, and roofs).
- **Advanced Framing:** Create comprehensive structural framing, including beams, and framing systems.
- **Working with Sketch & Modify Tools:** Apply core sketching and modifying tools to build dimensionally accurate structural models.
- **Working with View Tools:** Creating callout, additional plans sections, and elevations.
- **Reinforcement Modeling:** Implementing detailed structural reinforcement, covering both the placement of individual rebar and the integration of fabric reinforcement.
- **Construction Documentation:** Mastering the final documentation phase, which includes setting up drawing sheets, placing and modifying views, and managing title blocks.
- **Annotation and Output:** Producing clear, professional drawings by working with dimensions, text, annotations, schedules, and tags.

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(855) 289-1772

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Introduction to Revit
- BIM and Revit
- Overview of the Interface

Starting a Revit Project:
- Selecting a Project Template
- Setting Up Levels
- Creating Grids

Adding Columns:
- Adding Structural Columns

Working with Views:
- Understanding the Project Browser
- Duplicating Views
- Modifying How the View Displays
- Adding Callout Views
- Creating Elevations and Sections

Revit Families:
- About Revit Families
- Loading Components
- Modifying Components

Basic Sketching and Modify Tools:
- Adding General Building Elements
- Working with Basic Modify Tools
- Working with Additional Modify Tools

Foundations:
- Modeling Walls
- Modifying Walls
- Adding Wall Footings
- Adding Isolated Footings

Structural Framing:
- Modeling Structural Framing
- Modifying Structural Framing

Adding Structural Slabs:
- Modeling Structural Slabs
- Creating Shaft Openings

Structural Reinforcement:
- Structural Reinforcement
- Adding Rebar
- Modifying Rebar

Working with Import/Linked Files:
- Linking and Importing CAD Files
- Modifying Imported/Linked CAD Files
- Linking in Revit Models
- Modifying Linked Revit Models
- Managing Links
- Copying and Monitoring Elements

Creating Construction Documents:
- Setting Up Sheets
- Placing Views on Sheets
- Modifying Views on a Sheet

Working with Annotations:
- Working with Dimensions
- Working with Text

Adding Tags and Schedules:
- Adding Tags
- Working with Schedules
- Graphical Column Schedules

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