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AUTODESK REVIT STRUCTURAL COURSE OUTLINE

Duration: 3 weeks at 2 hrs per Day or one and Half week at 4 hrs per day or one week at Full day

To take full advantage of Building Information Modeling, the Autodesk® Revit® Structure Full training course has been designed to teach the concepts and principles from building design through construction documentation using the Autodesk® Revit® (R1) Structure software. This training course is intended to introduce students to the user interface and the entire building components of the software that makes it a powerful and flexible structural modeling tool. The goal is to familiarize you with the tools required to create, modify, analyze, and document the parametric model.

Topics Covered

- Introduction to the Autodesk Revit software
- Basic drawing and editing tools
- Setting up levels and grids
- Working with views
- Starting a structural project based on a linked architectural model
- Adding structural columns and walls
- Adding foundations and structural slabs
- Structural reinforcement
- Beams, trusses, and framing systems
- Analytical models and placing loads
- Project practices to reinforce learning
- Construction documents
- Annotating construction documents
- Detailing
- Scheduling

Prerequisites

This training course introduces the fundamental skills in learning how to use the Autodesk Revit Structure software. It is highly recommended that students have experience and knowledge in structural design and its terminology.

Chapter 1: Introduction to BIM and Autodesk Revit

- 1.1 BIM and Autodesk Revit
- 1.2 Overview of the Interface
- 1.3 Starting Projects
- 1.4 Viewing Commands

Chapter 2: Sketching and Modify Tools

- 2.1 Using General Sketching Tools
- 2.2 Editing Elements
- 2.3 Working with Basic Modify Tools
- 2.4 Working with Additional Modify Tools

Chapter 3: Starting Structural Projects

- 3.1 Linking and Importing CAD Files
- 3.2 Linking in Revit Models
- 3.3 Setting Up Levels
- 3.4 Copying and Monitoring Elements
- 3.5 Coordinating Linked Models

Chapter 4: Structural Grids and Columns

- 4.1 Adding Structural Grids
- 4.2 Placing Structural Columns

Chapter 5: Foundations

- 5.1 Modeling Walls
- 5.2 Adding Wall Footings
- 5.3 Creating Piers and Pilasters
- 5.4 Adding Isolated Footings

Chapter 6: Structural Framing

- 6.1 Modeling Structural Framing
- 6.2 Modifying Structural Framing
- 6.3 Adding Trusses

Chapter 7: Working with Views

- 7.1 Setting the View Display
- 7.2 Duplicating Views
- 7.3 Adding Callout Views
- 7.4 Elevations and Sections

Chapter 8: Adding Structural Slabs

- 8.1 Modeling Structural Slabs
- 8.2 Creating Shaft Openings

Chapter 9: Structural Reinforcement

- 9.1 Structural Reinforcement
- 9.2 Adding Rebar
- 9.3 Modifying Rebar
- 9.4 Reinforcing Walls, Floors, and Slabs

Chapter 10: Structural Analysis

- 10.1 Preparing Projects for Structural Analysis
- 10.2 Viewing Analytical Models
- 10.3 Adjusting Analytical Models
- 10.4 Placing Loads

Chapter 11: Project - Concrete Structure

- 11.1 Start a Structural Project
- 11.2 Create Foundation Elements
- 11.3 Frame a Concrete Structure

Chapter 12: Creating Construction Documents

- 12.1 Setting Up Sheets
- 12.2 Placing and Modifying Views on Sheets
- 12.3 Printing Sheets

Chapter 13: Annotating Construction Documents

- 13.1 Working with Dimensions
- 13.2 Working with Text
- 13.3 Adding Tags
- 13.4 Adding Detail Lines and Symbols
- 13.5 Creating Legends

Chapter 14: Creating Details

- 14.1 Setting Up Detail Views
- 14.2 Adding Detail Components
- 14.3 Annotating Details

Chapter 15: Scheduling

- 15.1 Structural Schedules
- 15.2 Graphical Column Schedules
- 15.3 Working with Schedules

Structural project