Structural Design with Autodesk Revit

40 Hours

Course Description

This course is designed to provide a comprehensive introduction to Autodesk Revit for structural design professionals. Participants will learn the essential skills and knowledge required to create and manage structural projects efficiently using Revit software. The course covers a wide range of topics, from project setup to content creation, annotation, and collaboration, empowering learners to become proficient in structural design with Revit.

Audience

This course is suitable for architects, engineers, drafters, and anyone involved in structural design projects. It is ideal for both beginners and intermediate-level Revit users looking to enhance their skills in structural design and modeling.

Pre-requisite Knowledge/Skills

Participants should have a basic understanding of structural design principles and computer-aided design (CAD) concepts. Familiarity with Autodesk Revit is helpful but not required.

Course Objectives

By the end of this course, participants will be able to:

- Set up and configure a structural project in Autodesk Revit.
- Create and manage structural components, including columns, walls, floors, and framing.
- Work with reinforcement tools and detailing for structural elements.
- Manage family categories and types and create custom family content.
- Utilize views and annotations effectively for documentation.
- Handle revisions, sheet management, and collaborate on projects.
- Perform model assessments, interference checks, and optimize project performance.
- Configure export and print settings for project deliverables.
- Successfully complete a comprehensive course challenge exercise.
- Prepare for Autodesk Revit certification with a practice test.

Course Outline

The course comprises 32 hours of theory. It's divided into 11 different modules.

1. Getting Started

- Module Overview
- Course Overview
- Get the Software
- Tips for the Exam
- Exam Objectives
- Course Resources

2. See Where You Stand

- Module Overview
- Pre-test

3. Starting a Structural Project

- Module Overview
- Link or Import Files
- Understand the Concept of Copy and Monitor Elements from a Linked File
- Create Additional Grids and Levels
- Create a Site File and Understand Shared Coordinates
- Practice Exercise
- Practice Exercise

4. Working with Structural Components Part 1

- Module Overview
- Working with Structural Columns
- Working with Structural Walls Part 1
- Working with Structural Walls Part 2
- Working with Structural Floors Part 1
- Working with Structural Floors Part 2
- Working with Structural Framing Part 1
- Working with Structural Framing Part 2
- Working with Structural Framing Part 3

- Working with Structural Connections

5. Working with Structural Components Part 2

- Module Overview
- Working with Stairs
- Working with Foundations Part 1
- Working with Foundations Part 2
- Working with Reinforcement Tools - Part 1
- Working with Reinforcement Tools Part 2
- Working with Reinforcement Tools - Part 3
- Working with Reinforcement Tools Part 4
- Working with Reinforcement Tools - Part 5
- Working with Reinforcement Tools - Part 6
- Working with Selection Sets
- Using and Modifying Element Materials
- Practice Exercise
- Practice Exercise

6. Content Creation and Management

- Module Overview
- Manage Family Categories and Types
- Creating Family Content
- Create a Type Catalog
- Practice Exercise
- Practice Exercise

7. Working with Views and Annotations

- Module Overview
- Creating and Managing Callout Views
- Creating and Using Detail Components
- Duplicating Views Part 1
- Duplicating Views Part 2
- Creating a Site Plan
- Developing and Customizing Schedules
- Creating and Modifying Annotation Families for Documentation
- Practice Exercise
- Practice Exercise

8. Revision and Sheet Management

- Module Overview
- Working with Revisions
- Setting up and Managing Sheets
- Practice Exercise
- Practice Exercise

9. Collaboration and Project Management

- Module Overview
- Working with Phases
- Working with Design Options
- Using Worksharing Features
- Assessing and Reviewing Warnings in Revit
- Checking a Model for Interferences
- Understanding and Using the Audit and Compact Tools
- Using the Purge Command
- Editing Object Styles
- Transferring Project Standards
- Configuring Export and Print Settings
- Practice Exercise
- Practice Exercise

10. Course Challenge Exercise

- Module Overview
- Challenge Exercise

11. Practice Test

- Module Overview
- Start Your Practice Test