Structural Design and Analysis Engineer

Why Structural Design and Analysis Engineer Certifications ?

In this Learning Path you will learn Autodesk Revit Structural Engineer and Autodesk Robot Structural Analysis Professional.

Explore the powerful workflow between Revit software and Robot Structural Analysis Professional software.

Audience Profile :

- Structural / Civil Engineers or Draftsmen
- Structural / Civil Students and Fresh Graduate

Prerequisites:

- Microsoft Windows operating system and its core functionality.
- Working knowledge of Transact-SQL.
- Working knowledge of relational databases.

Course Overview:

- In this Learning Path you will learn Autodesk Revit Structural Engineer and Autodesk Robot Structural Analysis Professional.
- Autodesk Revit software is a Building Information Modeling (BIM) solution for structural engineering firms, providing tools specific to structural design. BIM improves multidisciplinary coordination of structural design documentation, minimizes errors, and enhances collaboration among building project teams.
- Autodesk Robot Structural Analysis Professional software is a comprehensive global analysis application with an open API, delivering more flexibility to analyze and design a broad range of structures. The course outcome is to facilitate integration of 2D and 3D structural concepts into analysis for evaluation of existing projects and conceptual development for new projects.
- In this Learning Path we'll explore the powerful workflow between Revit software and Robot Structural Analysis Professional software.
- We'll start with a simple structural model of a building in Revit, and we'll develop an understanding of the analytical model that Revit builds concurrently with the creation of structural geometry.
- We'll then explore the Structural Analysis for Revit feature, which lets static and gravity analyses be performed in the cloud directly from Revit.
- Next, we'll push that model into Robot Structural Analysis Professional to perform a basic analysis and code group-based design.

In this Learning path

1. **Revit for Structural Design**
2. **Robot Structural Analysis**

Revit for Structural Design Outline:

- Getting Started
- Course overview
- Get the software
- See where you stand
- Starting a structural project
- Working with structural components part 1
- Working with structural components part 2
- Content creation and management
- Working with views and annotations
- Revision and sheet management
- Working with revisions
- Setting up and managing sheets
- Collaboration and project management
- Working with phases
- Working with design options
- Using work-sharing features
- Assessing and reviewing warnings in Revit
- Configuring export and print settings

Robot Structural Analysis Outline:

- Overview
- Robot modules
- Robot screen layout
- Basic configuration of the program
- Navigation techniques
- Methods of working with Robot interface
- Entering the structural analysis data
- Analysing the structure
- Results preview
- Design of elements of a structure
- 3D Frame Structure
- Configuration of the program
- Model Definition
- Structure Analysis
- Results Preview
- Preparation of printouts
- RC and Steel Mixed Structure
- Configuration of the program
- Structure Analysis
- Integration of Robot Structural Analysis with Revit Structure
- Export Revit model to Robot
- Structure Analysis in Robot
- Modification of the Structure in Robot
- Update Revit Model from Robot

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