

Autodesk Revit Structure

Course details



Course Description:

The Revit Structure building information model combines a physical representation of the building fully associated with an analytical representation.

This common, computable building model is used for structural design, drawing production, and coordination and drives third-party structural analysis applications.

Revit can be used as a very powerful collaboration tool between different disciplines in the building design sphere.

Objectives:

This course covers the basics of Autodesk Revit Structure Users are introduced to the concepts of Building Information Modelling and the tools for parametric design, analysis, and documentation They learn the fundamental features of Autodesk Revit Structure, learn to use the 3D parametric design tools for creating and analyzing a project, and finish with construction documentation and design visualization.

Course textbooks and other reading materials:

Web Resources:

- <https://www.autodesk.com/products/revit/overview>
- <http://seek.autodesk.com>
- <http://help.autodesk.com/view/RVT/2023/ENU/>

Prerequisites:

- Basic knowledge and skills about using computers
- Engineering background is recommended

Grading:

Attendance 40%

Assignments 60% (Workshops & Projects)

To pass the course and receive both Autodesk & CAD MASTERS certificate you should:

- Attend at least 80% of course hours
- Score more than 70% as a total score + Technical evaluation by the instructor



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Course Outline:

This course including the following:

Class 1:

- Introduction
- What is BIM technology?
- What Is Revit?
- Understanding the interface

Class 2:

- What is template
- Starting a project
- Datum (grids & levels)
- Family Hierarchy
- Creating columns

Class 3:

- Floors
- Shaft openings
- Drop Panels
- Copying Floors
- Floors Slope Direction

Class 4:

- How to copy columns
- Rename Levels & Corresponding Views
- Selection & Modifying tools (Selection Filters)
- Creating Basic Walls
- Openings in Walls
- Wall Edit Profile

Class 5:

- Wall Attach to slabs
- Controlling the 3D Views: (3D Plans (Orient to Views))
- Foundations
- Beams, Beam System

Class 6:

- Link CAD Files
- Manage Links
- Using CAD Files to Model Elements

Class 7:

- Multi-story Building
- Stairs



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Class 8:

- Annotations (Dimensions)
- Visibility and Graphics (V.V) + Hide & Isolate Tools
- Sections & Elevations
- Call outs

Class 9:

- Manual Rebar
- Reinforcements using extensions

Class 10:

- Scheduling and quantities:
 - Columns
 - Beams
 - Foundation
- Calculated Values
- Add parameter

Class 11:

- Annotating
 - Dimensions
 - Text Notes
 - Tags
- Modify Tagging Families
- Creating Sheets
- Printing

Class 12:

- Views
 - Section
 - Callout
 - Plan Views
 - Elevations

Class 13:

- Integration with Other Software
- Introduction to modeling in place
- Using loads and boundary conditions

Class 14:

- Final workshop
- Revision



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