

Autodesk Revit

Objective of Training:

This course will cover everything you need to know about Revit with many easy and practical tutorials. Learn to design and build an architectural project from scratch in Autodesk Revit, if you are interested in automated drawing, design, architecture this is the right course for you!

Exploring Autodesk Revit 2018 for Structure is a comprehensive course that has been written to cater to the needs of the students and the professionals who are involved in the AEC profession. This course enables the users to harness the power of BIM with Autodesk Revit 2018 for Structure for their specific use. In course emphasizes on physical modelling, analytical modelling, rebar modelling, and quantity scheduling.

Requirements:

You will only need a pc with Autodesk Revit installed in order to follow the exercises. The individual must possess a degree/diploma in Architecture or Interior designing along with basic computer skills and also should have knowledge of basic architecture concepts. He/She must be able to visualize the 3D concept of building services.

Course Overview:

The course 'Autodesk Revit Bim training' starts with a preliminary tutorial so that you can become familiar with the graphic interface of the program Autodesk Revit Architecture, then we will learn how to set up a project from scratch, establish structural grid lines and reference lines and start setting up structural columns.

The next step will be installing walls, control their wall assembly and learn how to customize elements, you will learn how to use the curtain wall tool and how to create slabs and stairs. A whole tutorial is focused on roofs, how to build them and give the proper slope. Later you will learn how to use of the area command which will allow you to generate quickly and effectively area calculation for your project and how to generate schedules and area take-offs. Modelling a terrain, a classical complex task with other software, such as AutoCAD, 3ds Max or Rhino is made very easy by Revit, you'll see!

At the end of the course we will examine how to develop details to go with our construction document and you will learn how to create a parametric 3d component, the so-called "Revit families"

Why take this course:

If you are interested in automated drawing, design, architecture, this is the right course for you! Drawing time will be radically reduced.

The Learning outcome of the course:

- **A multi-disciplinary solution:**

Revit supports Architectural, Structural and MEPF (Mechanical, Electrical, Plumbing & Fire-fighting) Modelling as well as their co-ordination.

- **Analysis:**

Revit helps you to perform energy analysis, solar study analysis, heating and cooling analysis over the model to get early insights of the model.

- **Bi-direction Associativity:**

In Revit, a change anywhere is change everywhere. Meaning, if a change is done in a plan view, it gets updated in each of the views evading the need to edit it manually in each view.

- **Collaboration:**

Revit supports work-sharing of a single project i.e. multiple project contributors can access centrally shared models which results in better co-ordination, which helps reduce clashes and re-work.

- **Detailing and Drafting:**

Revit allows you to create detailed views providing clarity about the elements and the constituents it is made up of. This helps in documentation.

- **Documentation & BOQs:**

Revit helps you to create a set of construction documentation based on the input/data each of element in the project holds and generate Schedules/BOQ's which are tables used as a report in a construction documentation set.

- **High-end Visualization:**

Revit helps you to apply materials from material library and use a large repository of Revit families to enhance your model to communicate design intent more effectively to project owners and team members by using models to create high-impact 3D visuals. If you require some unique materials or families to be used in the project, they can be downloaded. In case of the families, they can be downloaded from various sources or even be modelled to meet the project needs.

- **Interoperability:**

Revit imports, exports and links your data with commonly used formats, including IFC, DWG and DGN. IFC (Industry Foundation Classes) is an open file format to facilitate interoperability of BIM models.

- **Parametric Components:**

Revit comprises of parametric components which enables you to create a project with parametric building elements like- Door, Window, Wall etc. which can be edited as the project demands.

- **Phases:**

Revit also allows you to model the elements phase wise with the help of Phase attribute to determine the phases of elements/work that you want to track for the project by assigning appropriate Phase (time periods) like Existing, Demolished, and New Construction respectively to the elements.

Intended for:

This course is specially meant for professionals and students in structural engineering, civil engineering, and allied fields in the building industry.

Brief Table of Contents:

Chapter 1: Introduction to Autodesk Revit 2018 for Structure (2 hours)

Chapter 2: Getting Started with a Structural Project (2 hours)

Chapter 3: Setting up a Structural Project (4 hours)

Chapter 4: Structural Columns and Walls (3 hours)

Chapter 5: Foundations, Beams, Floors, and Open Web Joists (3 hours)

Chapter 6: Editing Tools (2 hours)

Chapter 7: Documenting Models and Creating Families (3 hours)

Chapter 8: Standard Views, Details, and Schedules (3 hours)

Chapter 9: 3D Views, Sheets, Analysis, Reinforcements (4 hours)

Chapter 10: Linking Revit Model with Robot Structural Analysis
Student Project (4 hours)