



AUTODESK REVIT STRUCTURE ESSENTIAL

Objectives

The main objective of this course is to teach trainee the basic commands and tools necessary for producing a structural model by using Revit as part of the Building Information Modelling process. After completing this course, trainee will be able to:

- ✓ Describe building information modeling methodology and its benefits.
- ✓ Use different parts of the Revit Structure user interface and work with different types of structural elements and families.
- ✓ Use the different views listed in the Project Browser, control the visibility and graphical.
- ✓ Representation of objects in a structural model, and work with elevation, section, and 3D views.
- ✓ Set up a project and transfer standards between projects, add and modify levels in a structural model and create and modify grids.
- ✓ Work with structural columns and structural walls.
- ✓ Add floor framing using beams, work with beams and beam systems, add and edit structural steel moment and braced frame and work with concrete beams.
- ✓ Add floors in structural models, create a roof, and add structural framing to the roof for support.
- ✓ Add foundations to a structural model.
- ✓ Create stairs and various types of ramps.
- ✓ Add dimensions and spot dimension symbols, work with text and tags, create a legend with notes, annotation symbols, and legend components, and work with different types of schedules
- ✓ Work with detail views, add 3D and 2D reinforcement elements and detail components to concrete detail views and work with drafting views.
- ✓ Work with sheets and titleblocks, print sheets, and export Revit Structure content to CAD formats

Training Programme Day 1

Chapter	Topic	Duration	Time
Chapter 1	Building Information Modelling <ul style="list-style-type: none"> • What is Building Information Modelling (BIM). • Introduction of Revit • Understanding Revit element hierarchy. 	1 -Hour	9.00 AM - 10.00 AM
Chapter 2	Revit Basics <ul style="list-style-type: none"> • The Revit User Interface. • The Ribbon framework. • Guidelines for using the user interface. • Using common modify tools. 	1-Hour	10.00 AM- 11.00 AM
Chapter 3	Viewing the Model <ul style="list-style-type: none"> • About Views • View Properties • Guidelines for Working with Views • View Templates • View Ranges • Using Filters • Guidelines for Controlling Object Visibility • About Elevation and Section Views • Guidelines for Working with Elevation and Section Views 	2-Hour	11.00 AM – 1.00 PM
Chapter 4	Rendering Techniques <ul style="list-style-type: none"> • About Materials and Render Appearances • Process of Using Material Styles • Editing Render Appearances • Guidelines for Using Material Styles • About Materials • Editing Materials • About Render Quality Settings • Process of Specifying Settings for Rendering Interior Views • Guidelines for Rendering Interior Views • About Cloud Base Rendering • Process of Rendering through Autodesk 360 	1-Hour	2.00 PM – 3.00 PM

Chapter 5	Starting a New Project <ul style="list-style-type: none"> • About Levels • Adding and Modifying Levels • Guidelines for Adding and Modifying Levels • About Grids • Methods of Creating and Modifying Grid Lines • Guidelines for Creating and Modifying Grids • Import CAD file • Import Revit link • Copy/Monitor 	2-Hour	3.00 PM – 5.00 PM
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Training Programme Day 2

Chapter	Topic	Duration	Time
Chapter 6	Creating Structural Columns and Walls <ul style="list-style-type: none"> • About Structural Columns • Loading Structural Columns • Creating Structural Column Types • Structural Column Tools and Options • Creating Openings in Structural Columns • Guidelines for Working with Structural Columns • About Structural Walls • Structural Wall Type Parameters • Structural Wall Instance Parameters • About Wall Pilasters • Creating Wall Openings • Guidelines for Working with Structural Walls 	2-Hour	9.00 AM - 11.00 AM
Chapter 7	Creating Frames <ul style="list-style-type: none"> • About Floor Framing • About Beams • Beam Properties • Adding Openings in Beams • Guidelines for Adding and Modifying Beams • About Beams and Beam Systems • Beam System Properties • Methods of Creating Sloped Beams • Process of Creating a 3D Beam System 	2-Hour	11.00 AM- 1.00 PM

	<ul style="list-style-type: none"> Guidelines for Working with Beams and Beam Systems About Structural Steel Frames Setting Steel Frame Symbols in a Plan View Process of Adding Bracing Members Editing Braces Guidelines for Working with Structural Steel Frames 		
Chapter 8	(CONT) Creating Frames <ul style="list-style-type: none"> About Concrete Beams Options to Edit Concrete Beam Joins Vertical Justification of Beams Guidelines for Working with Concrete Beams Guidelines for Adding Steel Stiffeners 	1-Hour	2.00 PM - 3.00 PM
Chapter 9	Stairs <ul style="list-style-type: none"> About stairs Process for creating a staircase by component Process for creating a staircase by sketch 	2-Hour	3.00 PM – 5.00 PM

Training Programme Day 3

Chapter	Topic	Duration	Time
Chapter 10	Detailing and Drafting <ul style="list-style-type: none"> About Callouts Creating Reference Callouts Guidelines for Creating Callouts About Text About Tags Guidelines for Working with Text and Tags About Detail Views Creating Detail Views Process of Saving and Reusing a Detail View Guidelines for Saving and Reusing a Detail View About Drafting Views Process of Creating and Reusing Drafting Views Guidelines for Reusing Drafting View 	3-Hour	9.00 AM - 12.00 PM

Chapter 11	Construction Documentation <ul style="list-style-type: none"> • About Schedules • About Schedule Properties • Exporting Schedules • Modifying Schedule Fields • Guidelines for Creating and Modifying Schedules • Beam Properties 	1-Hour	12.00 PM-1.00 PM
Chapter 12	Presenting the Building Model <ul style="list-style-type: none"> • About Drawing Sheets • Process of Previewing and Printing Sheets and Views • Guidelines for Working with Drawing Sheets • About Titleblocks • Creating and Updating Titleblocks • Guidelines for Creating and Updating Titleblocks • About Revision Tracking • Creating Revision Clouds • Process of Creating and Linking DWF Files • Guidelines for Managing Revisions • Guidelines for Using Walkthroughs • Sun and Shadow Settings • Guidelines for Using Sun and Shadow Settings 	3-Hour	2.00 PM - 5.00 PM