



Theory	Practical	Total Course Length
33 Hours	33 Hours	66 Hours

### Synopsis

In this course you will learn how to create a complete 3D Structural Model. Using hands-on exercises in both Imperial and Metric to represent Real-World situations and be able to deal with various Structural Design Projects.

### Prerequisites

Trainee should have knowledge of Structural Plans, Elevations & Section. A basic understanding of computer's operating system, launching an application, creating and saving files is a must.

### What will you Learn ?

Introduction to Autodesk Revit Structure  
 Starting New Project  
 Drawing and Modifying Structural Elements  
 Foundations, Framing, Slabs & Vertical Circulation  
 Structural Reinforcement  
 Preparing Project for Structural Analysis  
 Annotating Construction Documents  
 Tags & Schedules  
 Views Setup & Sheet Composition  
 Managing the project  
 Project Team Collaboration  
 Phasing and Groups  
 Exporting Views and Sheets  
 The Navisworks File System  
 Navigating in a Model  
 Working with Viewpoints  
 The Review Tab  
 Dealing with Objects, Sorting and Grouping  
 Clash Detection  
 The Time Liner  
 Presenting, Animating, and Exporting

### Outline

**Introduction to Autodesk Revit Structure**  
 Building Information Modeling and Overview of the Interface

**Starting New Project**  
 Project Template, Setup New Project, Levels, Linking, Importing CAD Files and Inserting Image

**Drawing and Modifying Structural Elements**  
 Structural Grids & Structural Columns

**Foundations**  
 Structural Walls & Wall Footings, Piers & Pilasters and Isolated Footings

**Framing**  
 Drawing & Modifying Structural Framing and Adding Trusses

**Slabs**  
 Structural Slabs & Shaft Openings

**Vertical Circulation**  
 Floors, Creating Shaft Openings and Creating Sloped Floors

**Views Setup**  
 Sections, Elevations, Detail Views, Filters and Duplicating View

**Reinforcement**  
 Adding and Modifying Rebar, Reinforcing Walls, Floors & Slabs

**Analysis**  
 Viewing & Adjusting Analytical Models and Placing Loads

**Annotation Construction Documents**  
 Dimensions, Text, Detail Lines and Symbols

**Tags and Schedules**  
 Tags, Rooms and Room Tags, Schedules and Legends

**Managing the project**  
 Additional Settings , Transfer Project Standards, Object Styles & Purged Unused

**Project Team Collaboration**  
 Worksets, Design Options and Groups

**Family Creation**  
 Foundation, Columns etc

**Exporting Views and Sheets**  
 Export Settings & Exporting to CAD Format

**The Navisworks File System**  
 Navisworks file types, Opening files directly, Appending and merging models.

**Navigating in a Model**  
 Navigation bar, Walking through model, Rotating model with the Orbit tool, Looking around your model, Using the Gravity tool and View Cube

**Working with Viewpoints**  
 Saving a viewpoint, Choosing render styles, Changing the background, Slicing your model using section and Getting rid of lines and text.

**The Review Tab**  
 Getting measurements, Finding the shortest distance between objects  
 Creating redlines

**Dealing with Objects**  
 Selecting objects, Overriding Color, Transparency, and Transform, Hiding and turning on objects,  
 Moving, Rotating & Scaling, Viewing properties and Adding links & Fields, Switching back to Revit and Holding objects.

**Sorting and Grouping**  
 The Selection Tree, Finding items, Saving Selections Set, Quick Find tool and Selection Inspector.

**Clash Detection**  
 Creating a clash test and setting rules,  
 Selecting objects to clash and adding clearances, Running, Resolving & Reducing clashes, Grouping and Assigning clashes,  
 Creating reports: Viewpoints and HTML.

**The Time Liner**  
 Configuring appearances, Creating tasks, Adding selection sets to a task, Adding multiple tasks and running the movie, Simulating settings, Exporting the Time Liner and Adding a data source.

**Presenting, Animating, and Exporting**  
 Animating saved viewpoints, Animating objects and Creating a script.