# **Revit Structure** ESSENTIALS

### **Course Length:**

16 Hours

#### **Overview:**

This course is recommended for Contractors and Structural Engineering students and professionals.

### **Learning Objectives:**

- Describe the value of BIM for Structural Design and Engineering.
- Create projects and organizational systems for Structural Design.
- Create framing systems for a steel or concrete framed building.
- Create reinforcement bar designs and structural connections.

#### **Prerequisites:**

It is recommended that the student has a working knowledge in Structural Engineering and are familiar with the latest versions of Microsoft Windows operating systems.

### **Acquisition:**

Students will get a Training Module and an industry recognized Certificate of Completion.

#### Notes:

The course length is a guideline. Course topics and duration may be modified by the instructor based upon the knowledge and skill level of the students.

### **Course Description:**

This introductory level course will give the students a highlevel understanding of the main productivity tools and workflows of Autodesk Revit Structure for designing a building structure. During this session, the student will have a hands-on opportunity to know the capabilities and benefits of the structural workflow.

### **Topics Covered:**

#### Introduction to BIM and Autodesk Revit

- BIM and Autodesk Revit
- Overview of the Interface
- Starting Projects
- Viewing Commands

### Setting Up the Project

- Linking architecture
- Creating levels
- Copy monitor
- Adding and setting up structural views

#### Structural Grids and Columns

- Adding Structural Grids
- Placing Structural Columns

### Foundations

- Modeling Walls
- Adding Wall Footings

### Structural Framing

- Adding perimeter beams
- Adding beam systems
- Altering beam elevations
- Adding joist systems
- Tagging framing

### Floors and Slabs

- Creating a slab on grade
- Adding a concrete floor with steel decking
- Cantilevering slab edges
- Creating thickened slabs
- Creating slab depressions

For inquiries, please call or email:

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# Structural Reinforcement

- Structural Reinforcement
- Adding Rebar
- Modifying Rebar
- Reinforcing Walls, Floors, and Slabs
- Adding a brace frame

## Working with Views

- Setting the View Display
- Duplicating Views
- Adding Callout Views
- Creating Elevations and Sections

## Scheduling

- Structural Schedules
- Graphical Column Schedules
- Working with Schedules

# **Creating Construction Documents**

- Setting up Sheets
- Placing and Modifying Views on Sheets
- Printing Sheets

### Trusses

- Adding Howe trusses
- Attaching trusses to roofs
- Changing truss materials
- Editing the truss bottom chord
- Detailing trusses

# The Steel Tab

- Configuring the connection settings
- Adding a base plate, clip angle and column support
- Customize a connection

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