



Certificate in BIM Design with Autodesk Revit (10 Sessions in 30 Hours)

The course aims at providing professional training for participants to acquire the knowledge and skills to use the Building Information Modeling (BIM) technology provided by Revit. Upon course completion, you will be able to:

- Design constructional project effectively with Revit
- Produce high-quality, consistent design documents
- Understand BIM teamwork for effective project management and coordination

Course Outline

Lesson 1-3: Essential Understanding

What is BIM, Why BIM

BIM and Revit

- Building Information Modeling
- Background of BIM
- What is Revit
- BIM as a database
- BIM Roadmap

Revit as a BIM tool

- Revit interface
- Zooming and Navigate
- Visual Style

Starting as a Project and project Structure

- Starting a Projects
- Open and Save a Projects
- Building Elements & Family

Build and modify your first Revit model

Start to Draw and Build

- Draw Tools
- Contextual Ribbons
- Drawing Aids
- Reference Planes

Editing Elements

- Object Selections
- Cycle Selections
- Filtering Selection

Modifying Tools

- Move and Copy
- Rotate
- Mirror
- Array
- Align
- Splitting
- Trim & Extend
- Offset

Starting a Project with Datums & Structural Elements

Create Level

- Modify Level
- Create Plan Views

Linking and Importing CAD Files

- Things to do before link CAD to Revit

Create Grids

- Modify Grid Lines

Create Column

- Understanding Component Family
- Special column input method

Lesson 4-6: BIM Modeling Data Entry

Walls

Modeling Walls

- Options Bar
- Create method

Modify Walls

- Editing Wall Profiles
- Wall Opening
- Wall Sweeps and Reveals

Create Different Wall Type

- Understanding Family and Family types

Doors, Windows and Component

Place Doors and Windows in projects

- Create Similar
- Loading Doors and Windows from Family Library
- Create Additional Door and Window Types
- Understanding Family Naming in Standard

Understanding Components

- Get Source from Internet
- Loading Components
- Purge Unused Elements

Curtain Walls and Store Front

Create & Modify Curtain Walls

- Create/ Modify Curtain Wall Grids
- Add Curtain Wall Mullions
- Replace Curtain Panel in different types
- Create Storefront
- Change and modify grids by effective selection method (unlock, window selection, filter)

Present your model by View & 3D Visualization

About View Properties

- Underlay
- View Range
- Duplicate Views

Create Callout Views

- Modify callouts
- View templates

Create Elevations and Sections

- Elevations
- Sections

3D Visualization

- Section box and selection box
- Displace View
- Walkthrough



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Create & Modify Floors

Modeling Floors

- Modify Floors
- Joining Geometry

Create Openings

- Edit floor boundary
- Shaft Opening
- Floor Opening

Create & Modify Ceilings, Prepare interior Rendering

Modeling Ceilings

- Automatic & Sketch Ceilings
- Modify Ceiling Grids
- Create Ceiling material and pattern

Interior Rendering

- Add lighting fixture
- Rendering settings
- Cloud Rendering

Create and Modify Roofs

Create Roof by footprint

- Attach/Detach Wall

Create roof by Extrusion

- Understanding Work planes

Vertical Circulation

Creating Component Stairs

- Create stairs comply with local standard
- Component types
- Landing & Support

Create Railings

- Modify Rails
- Host of Railings

Create Ramps

- Ramp parameters

Lesson 7-8: BIM Data Extraction, Annotation, Detail Drawings & Analysis

Create Room for space data storage

- Create Room
- Room tags

Tags

- Adding Tags
- Modify Tags and insert a New tag type

Schedule

- Create a Schedule
- Modify Schedule Properties

Sheets, Documentation & Analysis

Create and modify sheets

- About Title block and Sheet properties
- Project information
- Placing views to sheet
- Adjust view scale
- Activate and Deactivate views

Prepare suitable documentation format

- Export Sheets to DWF
- Export Model to NWD

Analysis in Revit

- Shadow Studies

Annotation, Details & Drafting Views

Create and management Dimension

- Prepare Dimension
- Constraint in Dimensions
- Dimension Style

Text & Symbols

- Create & Edit text
- Text Types
- Using Symbol

Legends

- Create & Edit Legends

Detail Views

- Drafting Views
- Save and reuse drafting Views
- Detail Components
- Filled Regions
- Adding Detail Tags

Lesson 9-10: Collaboration in Revit

Linking & Grouping

Create & Edit Group

- Nested Groups
- Save and reuse Groups

Worksharing in Workset

- Workset workflow
- Create a Central File
- Share and communicate between local file
- Synchronize with Central