Course Agenda

Module 00 **Revit in a Nutshell**

Interactive exercise on creating and documenting a basic building

Module 01 **Introducing Revit as a BIM tool**

What is BIM and what does it mean?
The benefits of BIM
What will BIM deliver?
Industry drivers
Introducing Levels of BIM
Implications on team and workflow; fee and deliverables; contract and insurance issues

Module 02 **UI Tour, Project Navigation and View Creation**

Interactive session introducing the menu and screen layout
Interrogating the model to extract views
- Plans, sections and elevations
- Displaced views, callouts and drafting views
- 3D isometrics, perspectives and walkthrough movies

Placement and properties of grids, levels and dimensions
Introduction to basic Revit elements
Exercise on creating levels, grids and using dimensions and scope boxes

Module 03 **Element Selection and Manipulation**

Interactive session introducing object selection methods
Element properties and manipulation
Instance and Type parameters
Modify tools, Nodes and Snaps
Exercise on basic editing tools, trim, offset, align, etc

Module 04 **Visibility Control and Categorisation**

Project-Wide Settings
View Specific Overrides
Element Specific Overrides
Individual Line Overrides
Exercise on modifying element visibility

Module 05 **Model Development Methodology**

Is BIM just about 3D?
Information timeline and overload
How a project develops from a base template
The complexity of components
Controlling graphical display

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Module 06 **Wall Creation and Manipulation**

- Wall types
- Working with levels
- Attaching walls
- Editing wall shapes
- Set-out information
- *Exercise on insertion and positioning of walls and openings using basic editing tools*

Module 07 **Floors, Roofs and Ceilings**

- Sketching rules
- Relating slabs to walls and supporting framework
- Controlling slopes
- Basic roof design and examples
- *Exercise on the creation of floors, roofs and ceilings introducing sketching principles*

Module 08 **Window, Door and Component Use**

- Family terminology
- Component placement
- Element hosting
- *Exercise on Doors, Windows and Level-Hosted (Free-standing) Elements*

Module 09 **System Family Editing**

- Principles of composite system family definition
- Understanding properties such as function, and wrapping of layers
- Creating and utilising a system family library
- *Exercise on system family editing*

Module 10 **Basic Schedules and Legends**

- Generation of tabular interrogations of the model
    - Scheduling Components
    - Style schedules
    - Legends
- *Exercise on creating a schedule and legend*

Module 11 **Geometry Formation and In-Place Families**

- Interactive session on the creation and manipulation of basic solid and void forms
    - Extrusion
    - Blend
    - Revolve
    - Sweep
    - Swept Blend
- *Exercise explores creating the above forms*

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Module 12 **Massing Tools and the Building Maker**

- Massing families
- In-place massing and form manipulation
- Analysing the building concept
- Using the building maker tools
- Contextual modelling
- Terrain modelling
- Surrounding buildings and features
- *Exercise on developing a building design from fundamental forms*

Module 13 **Stairs, Ramps and Railings**

- Basic stair creation
- Non-standard and multi-storey stairs
- Characteristics of simple ramps
- Hosted and stand-alone handrailing
- *Exercise on basic and multi-storey stairs, handrailing and ramps*

Module 14 **Basic Curtain Walls**

- Fundamental principles and sub-element identification
- Logic-driven curtain walling
- Advanced panel and mullion design
- Curtain system tools for more complex shapes
- *Exercise on curtain walling*

Module 15 **Room Data and Colour-Fill**

- Room definition and boundary elements
- Terminology - rooms, areas, spaces and zones
- Tagging and scheduling of rooms
- Room area and volume
- Export of data for environmental analysis
- Area plans
- Colour schemes and legends
- *Exercise on room data and colour schemes*

Module 16 **2D Draughting and Annotation**

- Introducing annotation tools and component categories
- Detail component libraries
- Repeating details
- Lines and arcs
- Text, Tags and keynotes
- *Exercise on generating and annotating a construction detail*

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Module 17 **Sheet Compilation and Publication**

- Project browser organisation – WIP and Publish
- Creating and populating sheets
- Working with schedules
- Publishing and document management

Module 18 **Basic Subdivision and Collaboration**

- Introducing a BIM Strategy Document
- Model management
- Project team collaboration techniques
- Transmittal and model issue protocols
- Basics of large-model sub-division
- *Exercise on worksets and task allocation*

Module 19 **Introduction to the Principles of Family Editing**

- The basic process
- 10 stages for trouble-free family creation
- *Exercise on defining a fully parametric furniture component*