AUTODESK® REVIT®

Course Title: Autodesk Revit Advanced Skills	**Course Duration: 1-2 Days**

This course introduces experienced Autodesk Revit users to advanced techniques and concepts for creating parametric models. You will learn to share project files, view a project at different time periods, use 3D massing tools, and create photorealistic images.

Who Should Attend

All design professionals looking to accelerate their knowledge and skills with Autodesk Revit.

Course Objectives

After completing this course, you will be able to:

- Divide a project so different users can access the same design.
- Apply the notion of time to your design.
- Create a model using geometric masses.
- Present building concepts in the form of photorealistic rendered images.

Course Outline

DAY 1

Design Options and Phasing

Design Options

During this session you will learn how to use the design options functionality within Revit to visualise and communicate different options for you design and how to manage these phases throughout the project. We will focus on:

- Setting up option sets and options
- Adding elements to options
- Add elements to your design options
- Manage design options and add a chosen option to the main model
- Set up views to display different design options

Phasing

This session will cover the tools available within Revit to define and display the phases of a project. Differentiate between existing, new and temporary elements of the building and create new phases to subdivide the new works. Following this session you will be able to:

- Create phases within a project
- Assign creation and demolition phases to elements
- Configure phase filters to control the display of elements based on their phase
- Apply phases and phase filters to views
- Create a phasing drawing showing the development of a project over time

Collaboration and Coordination

BIM is all about collaboration – either internally, within your own design team or externally with project stakeholders. Learn how to use Revit's tools to manage multiple users on your project and how to work with information provided by those outside of your organisation. During this session we will also look at how to set up and manage the project's position in the world ensuring accurate reporting of coordinates.

Internal Collaboration

- An overview of the worksharing concept within Revit, worksets and element ownership
- Setting up worksets to subdivide a project for different users
- Creating and working in local files and synchronising changes with a central file
- Managing element ownership and borrowing requests

External Collaboration

- Managing other consultants' models
- Linking other consultants' models into your model
- Controlling the visibility of linked models
- Setting up relationships between two models using the Copy / Monitor function
- Perform a coordination review to asses changes made to monitored items

Coordination

- An overview of Revit's coordinate systems – project & survey coordinates
- Setting up the survey coordinate system to match existing conditions
- Sharing the coordinate system between Revit models

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Course Outline *(continued)*

DAY 2

Visualisation and Area Analysis

Use your model to create presentation views and realistic renderings to help communicate your design intent.

Area Analysis

- Areas – total constructed area and floor area
- Show spatial relationships based on area schemes and floor-plan levels in your model
- Tools for defining usable space
- Colour schemes to help building analysis

Rendering and Visualisation

- Using perspectives, walk-throughs and solar studies
- Creating your own materials, controlling transparency, glow, texture, pattern
- Adding plants, lights and people
- Quickly reproduce the same render settings for different 3D views
- Automatically calculate object colour and intensity as light changes
- Creating photorealistic renderings of 3D views

Conceptual Modelling and Adaptive Components

Is Revit the right tool for conceptual design? Early on in a project, you have many design ideas and the speed at which you communicate those ideas is of the essence. You will see how Revit can be used in the early conceptual design stage of a project. You will also see how can quickly turn your 3D Revit sketches into design components, using intuitive 3D design tools, without duplicating your work.

Conceptual Modelling

- Overview of the specific tools inside Revit for conceptual massing and how they work
- Personal case study on how these tools can be used effectively
- Building a shape or form from scratch
- Using schedules to produce floor area information which is live and constantly updated
- Using the schedules to feedback information into the model to explore different design options
- Creating physical building elements (walls, floors, roofs, curtain walling) from the concept model without redrawing – why have two models when you can have just one?
- Integration – for more advanced, early-stage analysis such as solar, wind & thermal: using Vasari together with Revit

Introduction to Adaptive Components

- What are adaptive components and pattern base components
- Overview of an adaptive and pattern based families
- Preparation of the conceptual mass to work with adaptive components, applying patterns and meshes to surfaces
- Applying pattern-based curtain panels to your mass
- Applying adaptive components to your mass and using the repeater function

Prerequisites

Comprehensive Revit foundation skills, preferably gained through professional training or mentoring.

To enrol call 0845 872 5603 or book online www.cadassist.co.uk/bookit

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