Autodesk Revit Architecture Essentials

Overview

This training course is designed to teach you the Autodesk Revit functionality as you would work with it throughout the design process. You begin by learning about the user interface and basic drawing, editing, and viewing tools. Then you learn design development tools including how to model walls, doors, windows, floors, ceilings, stairs and more. Finally, you learn the processes that take the model to the construction documentation phase.

Prerequisites

Before using this courseware the student should have working knowledge of the following:

- An understanding of architectural terminology is an asset.
- Microsoft Windows XP, Microsoft Windows Vista, Microsoft Windows 7 or Microsoft Windows 8.

Available Exams and Certifications

- Autodesk Certified User (Click for More)
- Autodesk Certified Professional (Click for More)

Course Accreditations

6 Credits (By the South African Institute of Architects - SAIA)

Course Outline

Revit in a Nutshell

- Interactive exercise on creating and documenting a basic building

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

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

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

Visibility Control and Categorisation

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

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

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

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

Window, Door and Component Use

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

Basic Schedules and Legends

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

Stairs Ramps and Railings

- Stair by component and by sketch
- Characteristics of simple ramps
- Hosted and stand-alone handrailing
- Exercise on stairs and railings

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

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

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