

Course: Autodesk Revit Architecture

Course Description

Autodesk Revit Architecture is a powerful BIM tool used by architects throughout the globe to accomplish their projects. This course is designed to make the aspirants familiar with the functionality of Autodesk Revit. The aspirants will begin by learning about the user interface and then about Autodesk Revit commands used for design development followed by those for construction documentation.

The objective of this course is to enable the aspirants to create 3D architectural project models and extract their working drawings.

This course is designed for the new aspirants as well as for existing users to sharpen their skills/knowledge of Revit Architecture.

Class and Lab hours:

40 Hours (35 Theory, 5 Lab)

Prerequisite:

Need to be an architect/engineer with basic knowledge of space planning.

Course Objectives

Upon completion of the course, trainees/students will be able to:

- *Create 2D and 3D models*
- *Understand advanced modeling tools*
- *Create Project Details and Schedules*

Major Instructional Areas:

- *Basics of Autodesk Revit Architecture*
- *Different steps involved in Conceptual Designing*
- *Settings for Renderings*
- *Working with Views and Schedules*
- *Working with design oriented tools*

Detailed Course Outline

Unit Heading	Unit Outcomes	Unit Topics
<i>1. Starting with Revit Architecture</i>	<ul style="list-style-type: none"> <i>The basics of Revit Architecture</i> <i>Revit Architecture interface</i> 	<ul style="list-style-type: none"> <i>Introducing to Revit Architecture</i> <i>Understanding the basic Concepts and Principles</i> <i>Understanding the Interface</i> <i>Understanding the Shortcut Keys</i> <i>Understanding the interoperability of Revit Architecture</i> <i>Setting up configuration and preferences</i>
<i>2. Setting of Template</i>	<ul style="list-style-type: none"> <i>Introduction to Revit Architecture</i> <i>Other Display Settings</i> 	<ul style="list-style-type: none"> <i>Starting a Project</i> <i>Setting Units</i> <i>Setting Other Global Settings</i> <i>Model Display Tools</i> <i>Saving a Project</i> <i>Closing a Project</i>
<i>3. Creating Building Envelope</i>	<ul style="list-style-type: none"> <i>To work with walls and doors</i> <i>Understand Wall & Door Properties</i> 	<ul style="list-style-type: none"> <i>Understanding Walls and its Types</i> <i>Adding Wall Sweep and Wall Reveal</i> <i>Adding Door & Window</i> <i>Understanding Door & Window Properties</i> <i>Openings in Wall</i>
<i>4. Editing Tools</i>	<p><i>To cut, paste, move, and edit the elements</i></p> <p><i>To work with other related editing tools</i></p>	<ul style="list-style-type: none"> <i>Creating a Selection Set</i> <i>Moving and Copying Elements</i> <i>Trimming and Extending Elements</i> <i>Cutting and Pasting Elements</i> <i>Rotating, Mirroring, Matching, Aligning, Deleting, and Splitting Elements</i> <i>Pinning and Unpinning Elements</i> <i>Creating Group of Elements</i>
<i>5. Working with Datum and standard views</i>	<ul style="list-style-type: none"> <i>To work with levels, grids and work planes</i> <i>To work with Project Views</i> 	<ul style="list-style-type: none"> <i>Working with Levels</i> <i>Understanding Level Properties</i> <i>Working with Grids</i> <i>Understanding Grid Properties</i> <i>Working with Reference planes</i> <i>Setting a Work plane</i> <i>Working with Project Views</i>

<p><i>6. Developing the Building Model</i></p>	<ul style="list-style-type: none"> • <i>To work with Architectural Floors</i> • <i>To work with Other Components</i> • <i>Understand Railing and Ramps</i> 	<ul style="list-style-type: none"> • <i>Introducing to Architectural Floors</i> • <i>Creating Roof using roof tool</i> • <i>Sketching a Ceiling</i> • <i>Adding Rooms</i> • <i>Calculating Room Values</i> • <i>Adding Components</i> • <i>Creating Stairs and Ramps</i> • <i>Using Curtain System in a Project</i>
<p><i>7. Massing & Site Features</i></p>	<ul style="list-style-type: none"> • <i>Introduction to site components</i> • <i>Introduction to Massing Features</i> 	<ul style="list-style-type: none"> • <i>Working with Site Features</i> • <i>Setting Site Properties</i> • <i>Adding Property Lines</i> • <i>Understanding Massing Concepts</i> • <i>Creating Building Elements from massing geometry</i> • <i>Creating Families</i>
<p><i>8. Using the Dimension and Constraint</i></p>	<ul style="list-style-type: none"> • <i>To work with tags and keynotes</i> 	<ul style="list-style-type: none"> • <i>Working with tags and keynotes</i> • <i>Adding Symbols</i> • <i>Adding Dimensions and its types</i>
<p><i>9. Detailing and Drafting</i></p>	<ul style="list-style-type: none"> • <i>To work with details using building model</i> • <i>To work with sheets</i> • <i>To work with dependent views</i> 	<ul style="list-style-type: none"> • <i>Creating Details Using Building Model</i> • <i>Creating Drafted Details</i> • <i>Adding Text Notes</i> • <i>Using Schedules in a Project</i> • <i>Creating Drawing Sheets</i> • <i>Creating 3D Views</i> • <i>Rendering Views and Creating Walkthroughs</i>
<p><i>10. Advanced Features</i></p>	<ul style="list-style-type: none"> • <i>Structural Components</i> • <i>Multiple Design Options</i> 	<ul style="list-style-type: none"> • <i>Creating Structural Components</i> • <i>Generating Multiple Design Options</i> • <i>Using Area Analysis tools</i> • <i>Understanding Color Schemes</i> • <i>Masking Region</i> • <i>Linking Building Models</i> • <i>Work sharing Concepts</i> • <i>Purging Unused Elements</i> • <i>Understanding Point Cloud</i>

Evaluation:

There will be one exam that every trainee/student must pass with at least 75% or more to get a certificate of completion from BIMNCAD.

Suggested Learning Approach

In this course, you will study individually or within a group of your peers. As you work on the course deliverables, you are encouraged to share ideas with your peers and instructor, work collaboratively on projects and team assignments, raise critical questions, and provide constructive feedback.

BIMNCAD Syllabus