

JADAVPUR UNIVERSITY
COMPUTER AIDED DESIGN CENTRE
Comp. Sci. & Engg. Dept.
Kolkata - 700 032

Certificate Course on
3D Modeling with Revit

Autodesk Revit was intended to allow architects and other building professionals to design and document a building by creating a parametric three-dimensional model that included both the geometry and non-geometric design and construction information, which is also known as building information modeling or BIM. The software allows users to design a building and structure and its components in 3D, annotate the model with 2D drafting elements, and access building information from the building model's database. In this course, at first we will guide you through the installation process, ensuring you have installed the correct library and region template. If you do not have previous experience with Revit or any CAD-based software, don't worry. We will start off from the beginning building you up to be more than capable of creating your own Revit models. The course will start off by giving a brief introduction to the fundamentals of a building, what BIM is, and then moving onto the basics of Revit; from the terminology that Revit uses to the tools and interface. You will later learn how to model building Walls, Doors and Windows. And as the course progress, will be familiar with handling components, modelling floors, stairs, and roofs, concept of rendering and many more.

Course Duration: 11 weeks (Total 62 hrs.), (3 days/week)

Course fees: Rs. 9,440 /- (18% GST *included*)

Eligibility: Civil/Architectural Engineering Degree / Diploma (at least 1st year passed) /one year Draughtsmanship certificate from ITI or equivalent/Interior Designer.

Class Duration: Theory: 2 hr. / Class
Lab: 2 hr. / Class

Course Content

Sl. No.	Topic	No. of theory classes	No. of Lab classes	Total No. of classes
1	Introduction to Revit Architecture Overview of the Interface Starting Projects & Viewing Commands Using General Sketching Tools Editing Elements Working with basic Modify Tools	1	1	2

2	Modeling Walls, Doors and Windows Modifying Walls Adding Room Elements Inserting Doors and Windows Loading Door and Window types from the Library Creating Additional Door and Window Sizes	1	1	2
3	Working with Curtain Walls Creating Curtain Walls Adding Curtain Grids Working with Curtain Wall Panels Attaching Mullions to Curtain Grids	1	1	2
4	Working with Views Setting the View Display Duplicating Adding Callout Creating Elevations and Sections	1	1	2
5	Concepts about Adding Components Adding Components Modifying Components	1	1	2
6	Annotating Construction Documents Working with Dimensions Working with Text Adding Detail Lines and Symbols Creating Legends	1	1	2
7	Extended Facts about Modeling Floors Modelling Floors Creating Shaft Openings Creating Sloped Floors	1	1	2
8	Application about Modeling Roofs Modelling Roofs Creating Roofs by Footprint Establishing Work Planes Building Roofs by Extrusion	1	1	2
9	Modeling Stairs, Railing and Ramps Creating Component Stairs Modifying Component Stairs Working with Railings Building Ramps	1	1	2
10	Creating Construction Documents, Tags and Schedules Setting up Sheets, placing and modifying Views on Sheets Room separator, Tag room Show mass, Curtain system, Massing floor etc. Space Planning & Area Analysis Creating Color Schemes	1	1	2
11	Procedures about Rendering Producing Basic Renderings Working with Lighting Enhancing Renderings Filter, Sorting/Grouping, Formatting etc.	1	1	2
12	Family creation Start with the basics Start drawing Create other families Add the other family into the parent family Finalize your Revit family.	1	1	2

13	Gutter and downpipes Creating bump maps Tab view and tile view 3d section box and selection box Import image.	1	1	2
14	Temporary dimension properties Room bounding Corner window Change thickness of curtain glass.	1	1	2
15	Foundations and structural slabs Adding Foundations and structural slabs Creating wall footing and isolated footing Structural reinforcement, adding rebar	1	1	2
16	Discussion/Review		1	1
	Total	15	16	31

Examination: *One theory test of 50 marks and one lab test of 50 marks at the end of the course.*