

# International Summer School -Manipal University Jaipur [ISSMUJ]-2024



[Hybrid Mode]

## Course Overview

**Name of Course-** Advanced Autodesk® Revit®

Name of Instructor: Ar. Saurabh Sharma

Session: June-July 2024

Language of instruction: English

Number of contact hours: 36

Credit awarded: 03

Pre-requisite: *Installed Autodesk® Revit® software with complete library and basic modelling knowledge. The student needs to be ready with a base project to work further on it, in this course.*

### Objective of Course/Project

- Understand the applications and need of Autodesk® Revit®
- Apply the tools and commands of Autodesk® Revit® in architectural design.
- Analyse the usage of Autodesk® Revit® and its usage in architectural design.
- Create a basic structure using Autodesk® Revit®

### Syllabus:

- Introduction to the UI
- Software and its options, units, levels, materials, modify tools, etc.
- Tools like site and site components and building pad.
- Tools like floors, walls, doors, windows, roof, staircase, columns, furniture
- Enhancing elevation with added elements
- Paint and split tools on elevations
- Materials in elevations
- Massing, building form, roofs, walls, floors, and opening.
- Revit Family
- Options like extrude, bend, void form etc. in family creation.
- Materials and their use in project
- Text and room names
- Area plan and analysis
- Views and sections
- Plans, elevations, views, and sections
- Options like sun path, shadows, etc. to create black & white drawings.
- Sheets and export commands
- Inbuilt software rendering
- Cloud rendering

### Organization of Course

Total contact Hours: 36		
1 <sup>st</sup> week:	9 hrs (Classes)	7 hrs (Self-study/project)
2 <sup>nd</sup> week:	9 hrs (Classes)	2 hrs (Mid-term exam/assessment/discussion)
3 <sup>rd</sup> week:	9 hrs (Classes)	6 hrs (Self-study/project)
4 <sup>th</sup> week:	9 hrs (Classes)	3 hrs (End term exam)

**Mode of lectures:** Hybrid mode lecture, videos, discussion and hands-on

### Course/Project Plan

Lecture no.	Topic	Lecture mode	Instructor
L: 1-3	<ul style="list-style-type: none"> <li>Introduction to the UI.</li> <li>Setting up the software and its options, units, levels, materials, modify tools, etc.</li> <li>Brushing up of basic tools like site and site components.</li> </ul>	Hybrid mode lecture, videos, discussion and hands-on	Ar. Saurabh Sharma
L: 4-5	<ul style="list-style-type: none"> <li>Adding building pad.</li> <li>Modify floors.</li> </ul>		
L: 6-7	<ul style="list-style-type: none"> <li>Modify walls.</li> <li>Modify doors.</li> <li>Modify windows.</li> <li>Modify roof.</li> </ul>		
L: 8-9	<ul style="list-style-type: none"> <li>Modify staircase.</li> <li>Modify columns.</li> <li>Modify furniture.</li> </ul>		
L: 10-11	<ul style="list-style-type: none"> <li>Enhancing elevation with added elements.</li> </ul>		
L:12-13	<ul style="list-style-type: none"> <li>Use paint and split tools on elevations.</li> <li>Add materials in elevations.</li> </ul>		
L:14-15	<ul style="list-style-type: none"> <li>Use massing to create a building form.</li> </ul>		
L: 15-19	<ul style="list-style-type: none"> <li>Add roofs, walls, and floors.</li> <li>Create opening.</li> <li>Add staircase.</li> <li>Add columns.</li> <li>Add furniture.</li> </ul>		
L:20-21	<ul style="list-style-type: none"> <li>Learn to create family.</li> <li>Use options like extrude, bend, void form in family creation.</li> </ul>		
L: 22-25	<ul style="list-style-type: none"> <li>Apply materials and use in project.</li> <li>Add text and room names.</li> <li>Create area plan and analysis.</li> <li>Create views and sections.</li> </ul>		
L: 26-30	<ul style="list-style-type: none"> <li>Add effects in plans, elevations, views, and sections.</li> <li>Use options like sun path, shadows, etc. to create presentation drawings.</li> <li>Produce the black &amp; white drawings.</li> <li>Create sheets and export.</li> </ul>		
L: 31-34	<ul style="list-style-type: none"> <li>Render the drawings using the inbuilt software rendering.</li> <li>Render the drawings on cloud.</li> <li>Create sheets and export.</li> </ul>		
L: 35-36	<ul style="list-style-type: none"> <li>Revision and doubt solving.</li> <li>Exit quiz</li> </ul>		

**Brief profile of the instructor with a Photograph**

Ar. Saurabh Sharma is a graduate of the Maulana Azad National Institute of Technology, Bhopal in architecture 2009 batch and a postgraduate from Indian Institute of Technology, Roorkee in 2011 in architecture. Currently, he is pursuing his PhD from Manipal University Jaipur and working here as an Assistant Professor (Selection Grade) in the School of Architecture and Design. Along with academics in his profile, he has also worked extensively on live projects using tools such as Revit® and BIM.

