

## COURSE CONTENT

<b>REVIT ARCHITECTURE</b>								
<b>II Semester-SE</b>								
Course Code	Category	Hours/ Week			Credits	Maximum Marks		
	<b>SDC</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>CIA</b>	<b>SEE</b>	<b>Total</b>
<b>Contact Classes: Nil</b>		<b>Tutorial Classes : Nil</b>			<b>Practical Classes: Nil</b>		<b>Total Classes:</b>	
<b>Prerequisites: Engineering Drawing; Computer Aided Civil Engineering Drawing Lab</b>								

### Course Overview:

This course introduces the fundamentals of Building Information Modeling (BIM) through practical, hands-on learning. It covers setting up project environments, including levels, grids, templates, and units, followed by modeling essential building components such as walls, doors, windows, floors, ceilings, and roofs. Learners will explore advanced features like curtain walls, stairs, and ramps, along with annotation and documentation tools. The course also includes material creation, rendering, and visualization techniques. Site modeling, massing, and scheduling are addressed to provide a comprehensive understanding of BIM workflows for efficient design, coordination, and project documentation.

### Course Objectives:

1. To understand the fundamentals of BIM environment setup including levels, grids, templates, and units.
2. To apply modeling techniques for architectural components such as walls, doors, windows, floors, ceilings, and roofs.
3. To analyze the use of advanced modeling tools including stairs, railings, ramps, sweep, and extrusion features.
4. To evaluate visualization and presentation tools such as camera views, rendering, walkthroughs, and site modeling.
5. To create complete building information models with schedules, title blocks, materials, and site components.

### Course Outcomes:

After completion of the course, students will be able to:

1. Set up a BIM project environment by configuring levels, grids, templates, and units in Revit.
2. Create and modify architectural building elements such as walls, doors, windows, floors, ceilings, roofs, stairs, railings, and ramps using Revit tools.
3. Organize and enhance building models using components, curtain walls, openings, materials, sweeps, extrusions, and massing/site tools.
4. Generate annotations, schedules, title blocks, colour schemes, and presentation-ready drawings and documentation from the BIM model.
5. Produce and evaluate visual outputs including camera views, renderings, walkthroughs, and site layouts for effective project presentation.



# **MARRI LAXMAN REDDY**

## **INSTITUTE OF TECHNOLOGY AND MANAGEMENT**

**(AN AUTONOMOUS INSTITUTION)**

(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)

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### **List of Experiments:**

1. Setting up levels and grids
2. Using templates and setting of units
3. Modeling walls
4. Modeling doors
5. Modeling windows, edit type
6. Modify tools, placing of components
7. Curtain walls, wall opening
8. Modeling floors
9. Modeling ceilings & roofs
10. Modeling stairs, railings, and ramps
11. Text, dimension, annotations, model text, model line, room and area
12. Paint, colour scheme, creating new materials, sweep, extrude modeling
13. Executing sweep and extrusion
14. Camera view, hide elements, render view, walkthrough
15. Massing and site, top surface, subregion, building pad, site component, parking site
16. Component schedule, creating title block

### **REFERENCES:**

1. Peter B. and Nigel D., BIM in Principle and in Practice, 1st Edition, ICE Publishing, 2014.
2. Manuals of Building Information Modelling software

### **ELECTRONIC RESOURCES:**

#### **MATERIALSONLINE:**

1. Virtual labs
2. Contents beyond syllabus