

# GUJARAT TECHNOLOGICAL UNIVERSITY

**BRANCH NAME: B. Arch**

**SUBJECT CODE: 2X55006**

**SUBJECT NAME: Elective – I (Advance Computer Application)**

**3rd Year, Semester: V**

## Prerequisite:

It is assumed that students have basic computer operating skills with 2D computer aided design software literacy covered in Computer Application – 1.

## Rationale:

Developing software skills for enhancing Architectural Graphical Representation and Rendering Techniques. This course aims towards developing professional preparedness and skill enhancement.

## Teaching and Assessment Scheme:

Teaching Scheme			Credits C	Examination Marks				Total Marks	University Exam Type
Field work	Lectures	Studio		External exam		Internal exam			
				(ESE)Theory	(ESE) Viva	(PA)Theory	(PA)Viva		
NA	1	1	02	NA	50	NA	50	100	VIVA

## Content:

Sr. No.	Content	Total Hours*	% Weightage
1	Basics and advances of 3-D Modeling	12	70%
2	Rendering through software Walk through	12	
3	Introduction to Analytical software for energy efficiency calculations, quantity takeoff, project management, day lighting visualization, parametric analysis etc	08	30%

\*: indicative

## References:

- Blender 3D Architecture, Buildings, and Scenery: Create photorealistic 3D architectural visualizations of buildings, interiors, and environmental scenery by Allan Brito

- Virtual Architecture: Modeling and Creation of Real-Time 3D Interactive Worlds by Mohd Fairuz Shiratuddin, Kevin Kitchens, Desmond Fletcher
- The SketchUp Workflow for Architecture: Modeling Buildings, Visualizing Design, and Creating Construction Documents with SketchUp Pro and Layout by Michael Brightman

**List of Projects/Assignments\*:**

Tutorial/lab work shall consist of 3D model building of a small building exterior as well as interior, application of materials and assign light sources. After creating a real-time 3D modeling, various rendered images and walkthrough videos can be generated as exercises for students.

\*- this is suggestive for common purpose. Faculty may decide on this, considering student group and institution philosophy.