



# GUJARAT TECHNOLOGICAL UNIVERSITY

## BACHELOR OF INTERIOR DESIGN

Subject Code: 2X45102

Subject Name: STRUCTURE - IV

### Prerequisite:

It is mandatory to complete Structure – III in order to opt for this course.

### Rationale:

To understand basic principles of Independent Structures.

### Teaching and Assessment Scheme:

Teaching Scheme			Credits C	Examination Marks				Total Marks
Lectures	Tutorials	Practical		External exam		Internal exam		
				(ESE) Theory	(ESE) Viva	(PA) Theory	(PA) Viva	
2	0	0	2	50	NA	50	NA	100

### Content:

Sr. No.	Content	Total Hours*	% Weightage*
1	<b>Unit 1 :</b> <ul style="list-style-type: none"> <li>Different ways of covering large span areas, basic economics of large span structures, knowledge of material requirements, Light supported space structures, integrated display system, structural elements. Structural systems of fair grounds and exhibition spaces.</li> <li>Structural systems for false ceilings and furniture forms.</li> <li>Effect of simple geometric forms on the overall structural behavior.</li> </ul>	10	30
2	<b>Unit 2 :</b> <ul style="list-style-type: none"> <li>Connections of steel structures bolted / riveted/ welded.</li> <li>Basics of welded connections, types of welds, strength of welds, size of welds.</li> </ul>	8	25
3	<b>Unit 3 :</b> <ul style="list-style-type: none"> <li>Roof Trusses – Preliminary design of roof truss tension, compression members.</li> </ul>	8	25
4	<b>Unit 4 :</b> <ul style="list-style-type: none"> <li>Anti-termite treatment: Types of anti-termite treatment, pre-constructional and post-constructional treatments.</li> </ul>	6	20

\*: indicative

**Reference Books:**

1. S. Ramamrutham, Strength of Materials.
2. Vazirani – Rathwani, Design of steel structures.

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

Presentations, models, case studies, and analysis of structural systems in the above- mentioned framework.

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