SARVAJANIK UNIVERSITY
Sarvajanik College of Engineering and Technology
Master of Technology
Structural Engineering

M. Tech.- Ist year Semester – II

Subject Name: Structural Design Project - Mini Project **Subject Code:** MTST13203

Type of course: **Core**
Prerequisite: Analysis and Design of Steel and Concrete structures, Concrete Technology

Rationale: The study aims to develop the work practice in students to apply theoretical and software tools and techniques to solve the field problems of industry. It is also aiming to develop cost aspects and structural detailing of components of structure. It also intends to improve documentation and presentation skill of students.

Teaching and Examination Scheme:

TEACHING SCHEME				Theory Marks			Practical Marks		Total
L	T	P	C	TEE	CA1	CA2	TEP	CA3	100
0	0	4	2	00	00	00	80	20	

CA1: Continuous Assessment (assignments/projects/open book tests/closed book tests **CA2:** Sincerity in attending classes/class tests/ timely submissions of assignments/self-learning attitude/solving advanced problems **TEE:** Term End Examination **TEP:** Term End Practical Exam (Performance and viva on practical skills learned in course) **CA3:** Regular submission of Lab work/Quality of work submitted/Active participation in lab sessions/viva on practical skills learned in course

Content:

Sr. No.	Topics	Teaching Hrs.	Module Weightage
1	The project work has to be a design projects from the following; 1. Tall structures 2. Industrial Structure 3. Water/chemical storage structures 4. Bulk storage structures 5. Concrete Bridges 6. Special Structures The project work is chosen/allotted individually on different topics. It is mandatory to design minimum two full projects (from concept to detailed design & drawing) from above topics along with cost estimation. Use of computational tools is essential. Students are encouraged to take up field problems in consultation with the respective supervisors. At the end of the term student has to present a detailed report. Report should include: • Site visit reports, • Design philosophy,	60	100

	• Design calculation (manual/software/spreadsheet), • Modelling using software, • Structural detailing • Detailed drawings • Cost analysis		

Suggested Specification table with Marks (Theory/Practical):

% Distribution of Marks					
R Level	**U Level**	**A Level**	**N Level**	**E Level**	**C Level**
10%	**10%**	**35%**	**20%**	**20%**	**05%**

Legends: R: Remembrance, **U:** Understanding; **A:** Application, **N:** Analyze, **E:** Evaluate **C:** Create and above Levels **(Revised Bloom's Taxonomy)**

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcome:

Sr. No.	CO Statement After learning this subject, students will be able to	Marks % weightage
CO-1	Develop the skill of documentation and presentation	25
CO-2	Use computational tool for modelling, analyzing & designing structures using relevant codes.	25
CO-3	Prepare structural drawing which is required at the construction site.	25
CO-4	Prepare detailed estimates & cost of project.	10
CO-5	Prepare detailed design	10