# M.Tech.- Structural Engineering

### I SEMESTER

			Teaching Hours /Week			Examination			
S1. No.	Course Code	Course Title	Theory	Practical/ Field Work/ Assignment	Durati on of Exam	CIE	SEE	Total Marks	Credit
1	17CSE11	Advanced Design of RC Structures	4	-	3	50	50	100	4
2	17CSE12	Computational Structural Mechanics	4	-	3	50	50	100	4
3	17CSE13	Design of Masonry Structures	4	-	3	50	50	100	4
4	17CSE14	Structural Dynamics	4	-	3	50	50	100	4
5	17CSE15X	Elective-I	4	-	3	50	50	100	4
6	17CSEL16	Structural Analysis and Design Lab-I		3	3	50	50	100	2
7	17CSE17	Mini-Project-I	-	3	-	50	50	100	2
	TOTAL			6		400	300	700	24

Elective -I	
17CSE151	Advanced Design of Pre-Stressed Concrete Structures
17CSE152	Special Concrete
17CSE153	Design of Precast & Composite Structures
17CSE154	Reliability Analysis of Structures
17CSE155	Disaster Mitigation and Management

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### II SEMESTER

			Teaching	Hours /Week	Examination				
S1. No.	Course Code	Course Title	Theory	Practical/ Field Work/ Assignment	Duration of Exam	CIE	SEE	Total Marks	Cred it
1	17CSE21	Advanced Design of Steel Structures	4	-	3	50	50	100	4
2	17CSE22	Theory of Plates and Shells	4	-	3	50	50	100	4
3	17CSE23	Finite Elements Method of Analysis	4	-	3	50	50	100	4
4	17CSE24	Earthquake Resistance Structures	4	-	3	50	50	100	4
5	17CSE25X	Elective-II	4	-	3	50	50	100	4
6	17CSEL26	Structural Analysis and Design Lab-II		3	3	50	50	100	2
7	17CSE27	Mini-Project-II	-	3	-	50	50	100	2
	TOTAL			6	18	400	300	700	2 4

	Elective -II							
17CSE251	17CSE251 Design of Tall structures							
17CSE252 Repair and Rehabilitation of Structures								
17CSE253	17CSE253 Stability of Structures							
17CSE254 Design Concepts of Substructures								
17CSE255 Corrosion of Steel in Concrete								

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#### III SEMESTER

	Course Code	Course Title	Teachir	g Hours /Week					
S1. No.			Theory	Practical/Field Work/ Assignment	Duration of Exam	CIE	SEE	Total Marks	Credit
1	17CSE31	Internship	-	40	03	50	50	100	20
2	17CSE32	Main Project Phase -1	-	2	-	50	-	50	1
TOTAL		-	-	-	100	50	150	21	

Note: Internship comprises following sub components:

- 1. Presentation on Internship (after 8 weeks from the date of commencement) (CIE) for 25 marks.
- 2. Evaluation of Internship Report (CIE) for 25 marks.
- **3.** Viva-voce on Internship (SEE) for 50 marks.

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#### IV SEMESTER

		Teaching & Learning (Hrs/week)		Practical/	Duration	Marks for			
Course Code	Course Title	Lectures	Discourse/ Self study/ Assignment	Project/ Field work (Hrs/week)	of Exam in Hours	CIE	SEE	Total Marks	Credits
17CSE41	Design of Concrete Bridges	3	2		3	50	50	100	4
17CSE42X	Elective-3	3	2		3	50	50	100	4
17CSE43	Main Project Phase –II			24	3	100	200	300	12
Total		6	4			200	300	500	20

- 1. Project phase-I: 6 weeks duration shall be carried out between II and III semester vacation. Candidates in consultation with the guide shall carryout literature survey/ visit industries to finalize the topic of the project.
- 2. Project phase-II: 16 weeks duration during IV<sup>th</sup> semester. CIE 100 marks evaluation done by the committee constituted comprising of chairman of the department, guide and senior faculty of the department.
- 3. Project evaluation: valuation shall be taken up at the end of the IV<sup>th</sup> semester(SEE)
  - a) Internal examiner shall carry out the evaluation for 100 marks
  - b) External examiner shall carry out evaluation for 100 marks
  - c) The average of marks allotted by the internal and external examiner shall be the final marks of the project evaluation.

Viva-voce examination of the project work shall be conducted jointly by internal and external examiner for 100 marks