



AUTONOMOUS SCHEME - MTech Structural Engineering First Year CSE

SCHEME: 2025

Date: 11/6/25

SL No	Course Type	Course type series	Course Code	Course Title	Teaching Dept.	QP setting dept	Credits	Teaching Hrs/Week				Examinations				
								L	T	P	O	CIE Marks	SEE			Tot Marks
													Dur.	Th. Mrks	Lab. Mrks.	
								Lecture	Tutorial	Practical	PBL/ABL/ SL/Others.					
SEM: I																
1	BSC	1	25CSET11	Numerical methods and Optimization Techniques	CV	CV	3	3	0	0	2	50	3	50	-	100
2	IPCC	1	25CSEI12	Advanced Design of RC Structures	CV	CV	4	3	0	2		50	3	50	-	100
3	PCC	1	25CSET13	Matrix methods of Structural Analysis	CV	CV	3	3	0	0	2	50	3	50	-	100
4	PCC	2	25CSET14	Mechanics of Deformable Bodies & Fracture Mechanics	CV	CV	3	3	0	0	2	50	3	50	-	100
5	PCC	3	25CSET15	Artificial Intelligence and Applications in Civil Engineering	CV	CV	3	3	0	0	2	50	3	50	-	100
6	PEC	1	25CSEP11x	Professional Elective 1	CV	CV	3	3	0	0		50	3	50	-	100
7	PCCL	1	25CSEL17	Computational Lab	CV	CV	2	1	0	2		50	3	-	50	100
SEM-I Total							21	19	0	4	8	350		300	50	700
SEM: II																
1	PCC	4	25CSET21	Design of Plates and Shells	CV	CV	3	3	0	0	2	50	3	50	-	100
2	IPCC	2	25CSEI22	Finite Element Method of Analysis	CV	CV	4	3	0	2		50	3	50	-	100
3	PCC	5	25CSET23	Structural Dynamics & Earthquake Resistant Structures	CV	CV	3	3	0	0	2	50	3	50	-	100
4	PEC	2	25CSEP22x	Professional Elective 2	CV	CV	3	3	0	0	2	50	3	50	-	100
5	PEC	3	25CSEP23X	Professional Elective 3	CV	CV	3	0	0	0	2	50	3	50	-	100
6	PCCL	2	25CSEL26	Advanced Computation Laboratory	CV	CV	2	1	0	2		50	3	-	50	100
7	AEC	1	25CSEA21X	Skill and Ability enhancement courses(NPTEL)	CV	CV	1	1	0	0				-		
SEM-II Total							19	14	0	4	8	300		250	50	600
FIRST YEAR TOTAL							40									

BSC: Basic science course, PCC: Professional core. IPCC-Integrated Professional Core Courses, PCCL-Professional Core Course lab, PEC: Professional elective course, PRJ:Project, INT: Internship(G), SLC: Self learning course, L- Lecture, P-Practical, T/SDA-Tutorial / Skill Development Activities (Hours are for Interaction between faculty and students)

PEC 1		PEC 2		PEC 3	
Course Code	Course Title	Course Code	Course Title	Course Code	Course Title
25CSEP111	Ground Improvement Techniques	25CSEP221	Advanced Pre-stressed Concrete	25CSEP231	Advanced Structural Analysis
25CSEP112	Design of Precast & Composite Structures	25CSEP222	Design of High-Rise Structures	25CSEP232	Design of Sub-structures
25CSEP113	DPR Preparation	25CSEP223	Design of Masonry Structures	25CSEP233	Repair and Rehabilitation of Structures
25CSEP114	Building Information Modelling	25CSEP224	Reliability Analysis of Structures	25CSEP234	Mechanics of Composites

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								Lecture	Tutorial	Practical	PBL/ABL/SL/others.		Dur.	Th. Mrks	Lab. Mrks.	
SEM: III																
1	PCC	6	25CSET31	Design of Bridges	CV	CV	4	3	2	0	2	50	3	50	-	100
2	PEC	3	25CSEP34X	Professional Elective 4	CV	CV	3	3	0	0	2	50	3	50	-	100
3	PEC	4	25CSEP35X	Professional Elective 5	CV	CV	3	3	0	0	2	50	3	50	-	100
4	PRJ	1	25CSEPR34	Project Work phase 1	CV	CV	3	0	0	0	@PBL	100	-	-	-	100
5	PRJ	2	25CSEPR35	Societal Project	CV	CV	3	0	0	0	@PBL	100	-	-	-	100
6	INT	1	25CSEG36	Internship			6	(06 weeks between II and III semesters.)				50	3	-	50	100
SEM-III Total							22	9	2	0	6	400		150	50	600

PEC-4		PEC-5	
Course Code	Course Title	Course Code	Course Title
25CSEP341	Advanced Design of Steel Structures	25CSEP351	Special Concrete
25CSEP342	Design of Offshore Structures	25CSEP352	Geotechnical Earthquake Engineering
25CSEP343	Design of Industrial Structures	25CSEP353	Construction Planning and Contract
25CSEP344	Structural Health Monitoring	25CSEP354	Stability of Structures

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								L	T	P	O		SEE			Tot. Marks	
								Lecture	Tutorial	Practical	PBL/AB L/ SL/others.		Dur.	Th. Mrks	Lab. Mrk		
SEM: IV																	
1	PRJ	3	25CSEPR41	Project work phase 2			18	-	-	-	@PBL	100	03	-	100	200	
2	SLC	1	25CSES1y	Self learning course - 1	NPTEL	NPTEL	PP/NP	0	0	0							
3	SLC	2	25CSES2y	Self learning course - 2	NPTEL	NPTEL	PP/NP	0	0	0							
SEM-IV Total							18	-	-	-		100			100	200	
SECOND YEAR TOTAL							40										

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