CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
DEPARTMENT OF CIVIL ENGINEERING
M. Tech- Structural Engineering
CBCS & OUTCOME BASED COURSE STRUCTURE

(Effective for the students admitted into I year from the Academic Year 2025-26)

M. Tech I Year I Semester

Course Code	Course Title	Hours per Week			Credits	Maximum Marks	
		L	T	P		CIE	SEE
B520301	Advanced Structural Analysis	3	0	0	3	40	60
B520302	Theory of Elasticity and Plasticity	3	0	0	3	40	60
B5204XX	Professional Elective - I	3	0	0	3	40	60
B5204XX	Professional Elective -II	3	0	0	3	40	60
B520501	Computer Aided Design Laboratory	0	1	2	2	40	60
B520502	Structural Engineering Laboratory	0	1	2	2	40	60
B520303	Research Methodology & IPR	2	0	0	2	40	60
B500705	Audit Course - I	2	0	0	0	--	
Total		**16**	**02**	**04**	**18**		
Number of hours per Week		**22**					

M. Tech I Year II Semester

Course Code	Course Title	Hours per Week			Credits	Maximum Marks	
		L	T	P		CIE	SEE
B520304	Finite Element Analysis	3	0	0	3	40	60
B520305	Structural Dynamics	3	0	0	3	40	60
B5204XX	Professional Elective - III	3	0	0	3	40	60
B5204XX	Professional Elective - IV	3	0	0	3	40	60
B520503	Numerical Analysis Laboratory	0	1	2	2	40	60
B520504	Advanced Structural Analysis and Design Laboratory	0	1	2	2	40	60
B520801	Mini Project with Seminar	0	0	4	2	100	-
B500706	Audit Course- II	2	0	0	0		
Total		**14**	**02**	**08**	**18**		
Total hours per Week		**24**					

M. Tech II Year I Semester							
Course Code	Course Title	Hours per Week			Credits	Maximum Marks	
		L	T	P		CIE	SEE
B5204XX	Professional Elective - V	3	0	0	3	40	60
B5206XX	Open Elective	3	0	0	3	40	60
B520802	Dissertation Work Review - II	0	0	12	6	100	-
Total		**06**	**00**	**12**	**12**		
Total hours per Week		**18**					
M. Tech II Year II Semester							
Course Code	Course Title	Hours per Week			Credits	Maximum Marks	
		L	T	P		CIE	SEE
B520803	Dissertation Work Review - III	0	0	12	6	100	-
B520804	Dissertation Viva-Voce	0	0	28	14	-	100
Total		**0**	**0**	**40**	**20**		
Total hours per Week		**40**					
Total Credits : 68							

List of Professional Electives :

	Code	Subject Name
PE - I	B520401	Theory of Plates and Shells
	B520402	Computer Oriented Numerical Methods
	B520403	Structural Stability
PE - II	B520404	Advanced Reinforced Concrete Design
	B520405	Structural Health Monitoring
	B520406	Structural Optimization
PE - III	B520407	Advanced Structural Steel Design
	B520408	Structural Reliability
	B520409	Design of High-Rise Buildings
PE - IV	B520410	Advanced Pre-stressed Concrete Design
	B520411	Special Concretes
	B520412	Design of Bridges
PE - V	B520413	Earthquake Resistant Design of Structures
	B520414	Pre-Engineered Buildings
	B520415	Rehabilitation and Retrofitting of Structures

List of Open Electives offered by the Department

	Code	Subject Name
OE	B520601	1. Disaster Management