

Government College of Engineering, Karad

M Tech Structural Engineering Programme Outcomes (PO):

Engineering postgraduates will demonstrate:

- PO1:** An ability to independently carry out research /investigation and development work to solve practical problems.
- PO2:** An ability to write and present a substantial technical report/document.
- PO3:** Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.
- PO4:** The curriculum is designed in a way that fosters leadership qualities and teamwork skills, among the graduates to pursue their projects independently.
- PO5:** Demonstrate in-depth knowledge to discuss, analyze, synthesize, justify, critique, and evaluate systems in advanced area of structural engineering.
- PO6:** Invent and arrive at feasible, optimal solution to solve real life engineering problems using professional code of conduct for sustainable development considering socio-economic aspects



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SCHEME OF INSTRUCTION & SYLLABI Scheme of Instruction for First Year of M. Tech. (PG) Degree in Civil -Structural Engineering Semester – I (W.E.F. AY. 2025-26)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs./Wk	Credits	EXAM SCHEME		
									MSE	ISE	ESE
1	PCC	SE2101	Theory of Elasticity & Plasticity	3	-	-	3	3	20	20	60
2	PCC	SE2102	Mechanics of Structure	3	-	-	3	3	20	20	60
3	PEC	SE21*3	Program Elective I	3	-	-	3	3	20	20	60
4	PEC	SE21*4	Program Elective II	3	-	-	3	3	20	20	60
5	MDC	RM2105	Research Methodology	2	-	-	2	2	20	20	60
6	PCC	SE2106	Structural Design Lab I	-	-	4	4	2	-	25	25
7	PEC	SE2107	Laboratory 2 (Based on Elective I & II)	-	-	4	4	2	-	50	-
8	OEC	OE21*8	Open Elective	3	-	-	3	3	20	20	60
9	MNC	AU21*9	Audit Course I	2	-	-	2	Audit	-	-	-
			Total	19	-	8	27	21	120	195	385
											700

L- Lecture T-Tutorial P-Practical

MSE- Mid Semester Examination ISE- In Semester Evaluation

ESE- End Semester Examination (For Laboratory End Semester performance)

* Program Elective- I and II, Audit Course I, Open Elective list is provided at the end of structure.



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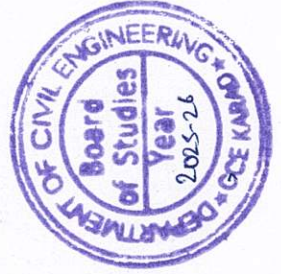
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Scheme of Instruction for First Year of M. Tech. (PG) Degree in Civil -Structural Engineering Semester – II (W.E.F. AY. 2025-26)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits	EXAM SCHEME			
									MSE	ISE	ESE	TOTAL
1	PCC	SE2201	Theory of Plates and Shells	3	-	-	3	3	20	20	60	100
2	PCC	SE2202	Advanced Design of Steel Structures	3	-	-	3	3	20	20	60	100
3	PEC	SE22*3	Program Elective III	3	-	-	3	3	20	20	60	100
4	PEC	SE22*4	Program Elective IV	3	-	-	3	3	20	20	60	100
5	PEC	SE22*5	Program Elective V	3	-	-	3	3	20	20	60	100
6	PCC	SE2206	Structural Design Lab II	-	-	4	4	2	-	25	25	50
7	PCC	SE2207	Mini Project/Industrial Training	-	-	4	4	2	-	50	-	50
8	P/S/IT	SE2208	Seminar	-	-	4	4	2	-	100	-	100
9	MNC	AU22*9	Audit Course II	2	-	-	2	Audit	-	-	-	-
			Total	17	-	12	29	21	100	275	325	700

L- Lecture T-Tutorial P-Practical
 MSE- Mid Semester Examination ISE- In Semester Evaluation
 ESE- End Semester Examination (For Laboratory End Semester performance)

*- Program Elective- III, IV and V, Audit Course II list is provided at the end of structure.



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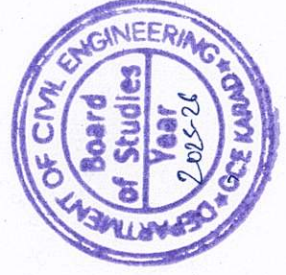
SCHEME OF INSTRUCTION & SYLLABI Scheme of Instruction for Second Year of M. Tech. (PG) Degree in Civil -Structural Engineering Semester – III (W.E.F. AY. 2025-26)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits	EXAM SCHEME			
									MSE	ISE	ESE	TOTAL
1	P/S/IT	SE2301	Dissertation Phase-I	-	-	14	14	07	-	100	100	200
2	MOOC	SE2302	MOOCs / OPEN COURSE (8-12 weeks)	-	-	-	-	03	-	-	100	100
Total				00	00	14	14	10	-	100	200	300

Note:

1. The MOOCs course is mandatory for semester-III in second year M.Tech for all students, and a candidate Dissertation Phase-II of sem-IV of second year M.Tech will be considered incomplete without passing this mandatory MOOC course.
2. In Case, the course offered online are not completely relevant with the topic of dissertation then any course suggested by NASSCOM on recent technologies can be opted by candidate.

L- Lecture T-Tutorial P-Practical
MSE- Mid Semester Examination ISE- In Semester Evaluation
ESE- End Semester Examination (For Laboratory End Semester performance)



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Scheme of Instruction for Second Year of M. Tech. (PG) Degree in Civil -Structural Engineering Semester – IV (W.E.F. AY. 2025-26)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits	EXAM SCHEME		
									MSE	ISE	ESE TOTAL
1	P/S/IT	SE2401	Dissertation phase-II	-	-	32	32	16	-	100	200
			Total	-	-	32	32	16	-	100	200
											300

L- Lecture

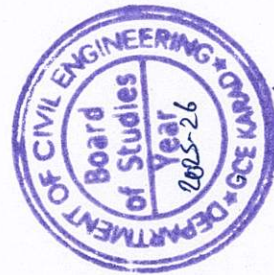
T-Tutorial

P-Practical

MSE- Mid Semester Examination

ISE- In Semester Evaluation

ESE- End Semester Examination (For Laboratory End Semester performance)



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SCHEME OF INSTRUCTION & SYLLABI Scheme of Instruction for Second Year of M. Tech. (PG) Degree in Civil -Structural Engineering List of Electives

Program Elective I Semester - I	Program Elective II Semester - I	Program Elective III Semester - II	Program Elective IV Semester - II	Program Elective V Semester - II
SE 2113 Advanced Design of Concrete Structures	SE 2114 Structural Dynamics	SE 2213 Earthquake Engineering	SE 2214 Design of R. C. Bridges	SE 2215 Finite Element Method
SE 2123 Advanced Design in Composite	SE 2124 Analytical and Numerical Methods for Structural Engineering.	SE 2223 Advanced Design of Foundations	SE 2224 Repairs and Rehabilitation of Structures	SE 2225 Fracture Mechanics
SE 2133 Design of Pre stressed Concrete Structures	SE 2134 Stability of Structures	SE 2233 Soil Structure Interaction	SE 2234 Structural Health Monitoring	SE 2235 Design of High Rise Structures

Open Elective Semester - I	Audit Course I Semester - I	Audit Course II Semester - II
OE2118: Business Analytics	AU2119: Research Paper Writing	AU2219: Constitution of India
OE2128: Industrial Safety	AU2129: Disaster Management	AU2229: Pedagogy Studies
OE2138: Operations Research	AU2139: Sanskrit for Technical Knowledge	AU2239: Stress Management by Yoga
OE2148: Cost Management of Engineering Projects	AU2149: Value Education	AU2249: Personality Development through Life Enlightenment Skills
OE2158: Composite Materials		
OE2168: Waste to Energy		



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