

Sardar Patel College of Engineering Andheri (West), Mumbai 400 058
Year: 2025-26



Bharatiya Vidya Bhavan's
SARDAR PATEL COLLEGE OF ENGINEERING
(Government Aided Autonomous Institute under Mumbai University)
Andheri (W), Mumbai - 400058



MTech in Civil Engineering with
Construction Management Course

Academic Evaluation Scheme/Credit System Year 2025-26
Regulation 23 (R23)

Sardar Patel College of Engineering Andheri (West), Mumbai 400 058
Year: 2025-26

Scheme for F.Y.M.Tech In Civil Engineering with Construction Management Course, (Semester - I) R23 Academic Year 2025-26														
SR. NO.	Course Name	Code	Course Plan per Week (Hrs)			SL/ Sem.	Credits	In Semester Evaluation			End Semester Evaluation		End semester weightage (%)	Total Points
			L	P	T			Mid term (Points)	Mid Term Duration (Hrs.)	IE	Points	Time (Hrs.)		
	Theory Courses													
1	Construction Organization and Safety Management	PC-MTCM101	3	--	0	48	3	30	1.5	20	100	3	50%	100
2	Applied Statistics and Quantitative Techniques	PC-MTCM102	3	--	1	64	4	30	1.5	20	100	3	50%	100
3	Research Methodology and IPR	PC-MTCM103	2	--	1	48	3	30	1.5	20	100	3	50%	100
	Program Elective Courses													
4	Program Elective-I	PE-MTCM11X	3	--	0	48	3	30	1.5	20	100	3	50%	100
5	Program Elective-II	PE-MTCM12X	3	--	0	48	3	30	1.5	20	100	3	50%	100
6	Program Elective-III	PE-MTCM13X	3	--	0	48	3	30	1.5	20	100	3	50%	100
	Laboratory Courses													
7	Advanced Material testing Lab	PC-MTCM151	--	4	--	4	2	--	--	25	25	--	100%	50
	Vocational and Skill Enhancement Course													
8	Geo-Informatics Lab	SE-MTCM101	--	4	--	4	2	--	--	25	25	--	100%	50
	Indian Knowledge System Courses													
9	Indian Knowledge System	IK-MTCM10X	2	--	--	32	2	30	1.5	20	50	2	100%	100
TOTAL			19	8	2		25							800

L: Lecture T: Tutorial P: Practical SL: Self Learning IE : Internal Evaluation

1 Credit corresponds to 30 Hours of student engagement in a semester. Apart from actual contact hours (L,T,P), the remaining hours are utilized for self-learning by students

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Program Elective-I Courses

Sr. No.	Code	Elective
1.	PE-MTCM111	Building Services and Maintenance
2.	PE-MTCM112	Construction materials
3.	PE-MTCM 113	Accounting and Finance Management (NPTEL/SWAYAM Courses)

Program Elective-II Courses

Sr. No.	Code	Elective
1	PE-MTCM121	Management of Infrastructure Services
2	PE-MTCM122	Advanced Construction Techniques
3.	PE-MTCM123	Construction Marketing

Program Elective-III Courses

Sr. No.	Code	Elective
1.	PE-MTCM131	Repair, Rehabilitation and Retrofitting Techniques
2	PE-MTCM132	Appraisal & Implementation of Infrastructure Projects
3	PE-MTCM133	Management of Housing Projects

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Scheme for F.Y.M.Tech In Civil Engineering with Construction Management Course, (Semester - II) R23 Academic Year 2025-26														
SR. NO.	Course Name	Code	Course Plan per Week (Hrs)			SL/ Sem.	Credits	In Semester Evaluation			End Semester Evaluation		End semester weightage (%)	Total Points
			L	P	T			Mid term (Points)	Mid Term Duration (Hrs.)	IE	Points	Time (Hrs.)		
Theory Courses														
1	Project Monitoring and Control	PC-MTCM201	3	--	--	48	3	30	1.5	20	100	3	50%	100
2	Project Appraisal, Planning and Scheduling	PC-MTCM202	3	--	1	48	4	30	1.5	20	100	3	50%	100
3	Seminar/ Mini Project	PC-MTCM203	--	4	--	4	2	--	--	50*	50*	--	100%	100*
Program Elective Course														
4	Program Elective-IV	PE-MTCM21X	3	--	--	48	3	30	1.5	20	100	3	50%	100
5	Program Elective-V	PE-MTCM22X	3	--	--	48	3	30	1.5	20	100	3	50%	100
Open Elective Course														
6	Open Elective	OE-MTCMXXX	3	--	--	48	3	30	1.5	20	100	3	50%	100
Laboratory Course														
7	Project Management Lab	PC-MTCM251	--	4	--	4	2	--	--	25	25	--	100%	50
Vocational and Skill Enhancement Course														
8	Building Information Modeling Lab	SE-MTCM201	--	4	--	4	2	--	--	25	25	--	100%	50
9	Ability Enhancement Course	AE-MTCM20X	2	--	--	32	2	30	1.5	20	100	3	50%	100
TOTAL			17	12	1		24							

L: Lecture T: Tutorial P: Practical SL: Self Learning IE : Internal Evaluation

1 Credit corresponds to 30 Hours of student engagement in a semester. Apart from actual contact hours (L,T,P), the remaining hours are utilized for self-learning by students

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Program Elective – IV Courses

Sr. No.	Code	Elective
1.	PE-MTCM211	Risk and Value Management
2	PE-MTCM212	International Construction Business
3	PE-MTCM213	Infrastructure Planning and Managements (NPTEL/SWAYAM Courses)

Program Elective –V Courses

Sr. No.	Code	Elective
1.	PE-MTCM221	Management of Construction Resources
2	PE-MTCM222	Total Quality Management in Construction
3	PE-MTCM223	International Contracting
4	PE-MTCM224	Modern Construction Materials (NPTEL/SWAYAM Courses)

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Scheme for S.Y.M.Tech In Civil Engineering with Construction Management Course, (Semester - III) R23 Academic Year 2025-26														
SR. NO .	Course Name	Code	Course Plan per Week (Hrs)			SL (Min. Hrs.)	Credits	In Semester Evaluation			End Semester Evaluation		End semester weightage (%)	Total Points
			L	P	T			Midterm (Points)	Mid Term Duration (Hrs.)	IE	Points	Time (Hrs.)		
	Value Education Courses													
1	Value Education Course	VE-MTCM30X	2	-	-	32	2	30	1.5	20	100	3	50%	100
Field or Community Engagement Project														
2	Field or Community Engagement Project	FP-MTCM301	-	4	-		2	Continuous evaluation shall be defined by course mentor or activity evaluator						100
Internship/Dissertation														
3	Internship/Dissertation Phase - I	DS-MTCM301	4 [#] +38				14			100*	200 ^{\$}			300
TOTAL			2	4			18							500

- Contact hours with supervisor/mentor/guide = 4

* - Evaluation shall be based on one or more presentations during the semester. 50% weightage shall be for the report and remaining 50% shall be for presentations. The evaluation shall be carried out by the allotted guide and at least one internal examiner

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Scheme for S.Y.M.Tech In Civil Engineering with Construction Management Course, (Semester - IV) R23 Academic Year 2025-26														
SR. NO.	Course Name	Code	Course Plan per Week (Hrs)			SL (Min. Hrs.)	Credits	In Semester Evaluation			End Semester Evaluation		End semester weightage (%)	Total Points
			L	P	T			Mid term (Points)	Mid Term Duration (Hrs.)	IE	Points	Time (Hrs.)		
	Co-curricular Activity													
1	Co-curricular course	CC-MTCM40X	1			16	1	30	1.5	20	100	3	50%	100
Internship/Dissertation														
2	Internship/Dissertation Phase - II	DS-MTCM401	4 [#] +38				14			100*	200 ^{\$\$}			300
TOTAL							15							400

- Contact hours with supervisor/mentor/guide = 4

* - Evaluation shall be based on one or more presentations during the semester. 50% weightage shall be for the report and remaining 50% shall be for presentations. The evaluation shall be carried out by the allotted guide and atleast one internal examiner

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List of Ability Enhancement Courses

Sr. No.	Code	Courses
1	AE-MTCM201	English for Technical writing
2	AE-MTCM202	Project Planning and Management

List of Indian Knowledge System

Sr. No.	Code	Courses	Sr. No.	Code	Audit Courses
1	IK-MTCM101	Constitution of India	2	IKS-MTCM10X	Related NPTEL/SWAYAM Courses

List of Value Education Course

Sr. No.	Code	Courses
1	VE-MTCM301	Disaster Management
2	VE-MTCM302	Introduction to Sustainability and Sustainable Development
3	VE-MTCM303	Safety in Construction
4	VE-MTCM30X	Related NPTEL/SWAYAM Courses

Open Elective

Sr. No.	Code	Elective
1	OE-MTCM201	Operations Research
2	OE-MTCM202	Legal Aspects in Construction
3	OE-MTCM203	Business Analytics
4	OE-MTCM204	Cost Management of Engineering Projects
5	OE-MTCM205	Artificial Intelligence in Engineering
6	OE-MTCM20X	Related to NPTEL/Swayam Courses

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Evaluation for R23

1. For passing, student must secure minimum 50% marks in each course with all heads of passing taken together and minimum 50% marks in the end semester examination.

2. Department will offer online course as Program Elective or Open Elective courses subject to availability of a course on <https://swayam.gov.in/>, and NPTEL and availability of internal resources. The assessment criteria for these courses will be as per swayam / NPTEL. After evaluation grades will be awarded as per institute criteria. 2, 3 Credits will be assigned for online courses of 8 and 12 weeks respectively.

3. Assessment criteria for Laboratory/Tutorial work i.e. weightage for assessment shall be as follows: (i) Participation in Laboratory/Tutorial = 20% (ii) Journal/Drawing sheet/Sketch book = 40% (iii) MCQ/oral/test = 40% (5) L – Lecture P – Lab T - Tutorial

* 50 Marks for seminar / mini project evaluation and 50 for presentation. The seminar / mini project report should be evaluated by supervisor and at least one internal examiner.

* Note 1: 50 Marks for seminar / mini project evaluation and 50 for presentation. Note 2: The seminar report should be evaluated by supervisor and at least one internal examiner.

4. Mid-Semester: The courses under the category “Theory courses (PC, PE, OE)” and “Ability Enhancement Courses (AE)”. The evaluation is based on Mid Term Exam having 30% weightage. Any change in the same will be informed by the course instructor.

The courses under the category “Skill Enhancement”, “Value Education” and Indian Knowledge system”, the evaluation is based on activity , lab work, Presentation, Test, Mini project, Field project, Practical Examination, viva. This evaluation shall be conducted by course instructor.

5. IE: Internal Evaluation will be carried out by course instructor for 20 points. It is the continuous evaluation throughout the semester.

The evaluation will be based on minimum three of the following activities decided by course instructor. The maximum points that can be assigned to one activity will be 07. The course instructor needs to inform the students and head of the department about the activities those will be considered for IE and the points assigned to them in first week of semester. The course instructor will submit the internal evaluation points (out of 20 with activity wise break up) to examination section before the beginning of End Semester examination.

List of Activities: 1. Class Involvement 2. Assignments 3. Problem Solving 4. Mini project 5. Quizzes 6. Presentation 7. Oral

6. End semester evaluation: The courses under the category “Theory courses” and “Ability Enhancement Courses”. The evaluation is based on End semester examination of 100 points. **The end semester examination will cover all the modules of the course content.**

The courses under the category “Skill Enhancement”, “Value Education” and “Indian knowledge system”, the evaluation is based on lab assignment/ activity (Presentation, Test, Mini project, Field project, Practical Examination).

7. \$\$\$\$ The evaluation for Co-curricular course/ activity shall be defined by course instructor or activity evaluator. The evaluation of points shall be carried out throughout the semester and the grade Pass/ No pass will be awarded which will not be considered for CPI calculation.

Note: Refer Academic and Examination rules and regulations for further details.