

# MVJ College of Engineering

Whitefield, Bangalore

*An Autonomous Institution, Affiliated to VTU, Belagavi*

Scheme of Teaching and Examination 2024

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

Effective from the academic year 2025-26

## Department of Civil Engineering – M. Tech Transportation Engineering

I SEMESTER (Core Courses related to main Engineering Stream)												
S. No	Course Type	Course Code	Course Title	Teaching Department	Teaching Hour per Week			Examination				Credits
					Theory	Practical/ Seminar	Tutorial/ SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	P	T/SDA					
1	IPCC	MVJCTE101	Numerical methods and Optimization Techniques	Mathematics	03	00	00	03	50	50	100	4
2	PCC	MVJCTE102	Pavement Materials and Construction	Civil Engineering	03	00	00	03	50	50	100	3
3	PCC	MVJCTE103	Urban Transport Planning	Civil Engineering	03	00	00	03	50	50	100	3
4	PCC	MVJCTE104	Applied Soil Mechanics and Ground Improvement Techniques	Civil Engineering	03	00	00	03	50	50	100	3
5	PCC	MVJCTE105	Advanced Traffic Engineering	Civil Engineering	03	00	00	03	50	50	100	3
6	PCCL	MVJCTEL106	Advanced Highway Material Testing Lab	Civil Engineering	01	02	00	03	50	50	100	2
7	AUD / AEC	MVJCTE107	Research Methodology and IPR ( <b>Online</b> )		Online courses (online.vtu.ac.in)							PP
									300	300	600	18

### Semester – I

Note: PCC: Professional core courses, PEC Professional Elective Courses, IPCC-Integrated Professional Core Courses. MPS-Mini Project With Seminar. AUD/AEC: Audit Courses / Ability Enhancement Courses (Mandatory), PCCL-Professional Core Course lab. L-Lecture, P-Practical, T/SDA-Tutorial / Skill Development Activities (Hours are for Interaction between faculty and students) PP/NP-Passed / Not Passed (Only for non-Credit Course)

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## Department of Civil Engineering – M. Tech Transportation Engineering

### Semester – II

II SEMESTER (Core Courses related to main Engineering Stream)												
S. No	Course	Course Code	Course Title	Teaching Department	Teaching Hours per Week			Examination				Credits
					Theory	Practical/Seminar	Tutorial/SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	IPCC	MVJCTE201	Pavement Geo-techniques	Civil Engineering	03	02	00	03	50	50	100	4
2	PCC	MVJCTE202	Pavement Analysis and Design	Civil Engineering	03	00	00	03	50	50	100	3
3	PCC	MVJCTE203	Transportation Economics and Evaluation	Civil Engineering	03	00	00	03	50	50	100	3
4	PCC	MVJCTE204	Railways and Airways	Civil Engineering	03	00	00	03	50	50	100	3
5	PEC	MVJCTE205x	Professional Elective 1	Civil Engineering	03	00	00	03	50	50	100	3
6	PEC	MVJCTE206x	Professional Elective 2	Civil Engineering	03	00	00	03	50	50	100	3
7	PCCL	MVJCTEL207	Traffic Engineering Lab	Civil Engineering	00	03	00	03	50	50	100	2
8	SEC	MVJCTE208	Online MOOC Course		Online courses							1
									350	350	700	22

Note: PCC: Professional core courses, PEC Professional Elective Courses, IPCC-Integrated Professional Core Courses. MPS-Mini Project With Seminar. AUD/AEC: Audit Courses / Ability Enhancement Courses (Mandatory), PCCL-Professional Core Course lab. L-Lecture, P-Practical, T/SDA-Tutorial / Skill Development Activities (Hours are for Interaction between faculty and students) PP/NP-Passed / Not Passed (Only for non-Credit Course).

Professional Elective-1		Professional Elective-2	
Course Code	Course Title	Course Code	Course Title
MVJCTE2051	Road safety and Management	MVJCTE2061	Rural Roads
MVJCTE 2052	Intelligent Transportation Systems	MVJCTE2062	Construction Project Management
MVJCTE2053	Pavement Evaluation and Management	MVJCTE2063	Pavement Management Systems
MVJCTE2054	Theory of Traffic flow	MVJCTE2064	Infrastructure Management and EIA on transportation

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**Semester – III**

IIISEMESTER (A)											
Sl.No	Course	Course Code	Course Title	Teaching Hours/Week			Examination				Credits
				Theory	Practical/ Mini Project/ Internship	Tutorial/Skill Development Activities	Durationinhours	CIEMarks	SEEMarks	TotalMarks	
1	PEC	MVJCSE 3011x	(Online Courses )12 weeks duration	L	P	SDA				100	3
2		MVJCSE 3012x	(Online Courses )12 weeks duration							100	3
3		MVJCSE 3013x	(Online Courses )12 weeks duration							100	3
4	INT	MVJINT3084	Two-semester duration, SEE in the IV semester which leads to project work / start-up	Two-semester duration, SEE in the IV semester which leads to project work /start-up			03	100	---	100	3
TOTAL										400	12
Note: PEC: Professional Elective Courses, L-Lecture,P-Practical, T/SDA-Tutorial/Skill Development Activities (Hours are for Interaction between faculty and students). INT: Internship: Research Internship/Industry Internship Leading to the project work/start-up, PROJ: Project Phase-I: Problem statement out of undergone Internship (Industry /Research) report submission.											

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**Department of Civil Engineering – M. Tech Transportation Engineering**

**Semester – III**

IIISEMESTER (B)											
Sl.No	Course	Course Code	CourseTitle	TeachingHours/Week			Examination				Credits
				Theory	Practical/Mini-Project/Internship	Tutorial/Skill Development Activities	Durationinhours	CIEMarks	SEEMarks	TotalMarks	
1	PEC	MVJCSE3011x	ProfessionalElectiveV(OnlineCourses)12weeks duration	03	00	00	03	100	-	100	3
2	PEC	MVJCSE3012x	ProfessionalElectiveVI(OnlineCourses)12weeks duration	03	00	00	03	100	-	100	3
3	PEC	MVJCSE3013x	ProfessionalElectiveVI(OnlineCourses)12weeks duration	03	00	00	03	100	-	100	3
4	INT	MVJINT3084	Industry Internship	One semester Duration			03	100	100	200	11
TOTAL				09	00	00	12	400	100	500	20

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**Semester – III**

For the students who are willing to take a research-leading paper publication in Q1/Q2/Q3 Journals and to a PhD Registration											
III SEMESTER( C)											
Sl.No	Course	CourseCode	CourseTitle	Teaching Hours/Week			Examination				Credits
				Theory	Practical/Mini-Project/Internship	Tutorial/Skill Development Activities	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	PEC	MVJCSE3011x	Professional Elective V(Online Courses) 12 weeks duration	03	00	00	03	100	-	100	3
2	PEC	MVJCSE3012x	Professional Elective V(Online Courses) 12 weeks duration	03	00	00	03	100	-	100	3
3	PEC	MVJCSE3013x	Professional Elective V(Online Courses) 12 weeks duration	03	00	00	03	100	-	100	3
4	PEC	MVJCSE3014x	Professional Elective V(Online Courses) 12 weeks duration	03	00	00	03	100	-	100	3
5	PROJ	MVJPROJ3085	Project Phase-I	One semester Duration			03	100	---	100	6
TOTAL				12	00	00	15	500	---	500	18

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**Semester – IV**

IV SEMESTER (A)										
Sl.No	Course	Course Code	CourseTitle	Teaching Hours/Week		Examination				Credits
				Theory	Practical /Fieldwork	Durationin hours	CIEMarks	SEE Marks Vivavoce	Total Marks	
				L	P					
1	INT	MVJINT4081	Research Internship/ Industry Internship Leading to Project Work /Start-up	Two Semester Duration		03	100	100	200	12
2	PROJ	MVJMPRJ4082	Project			03	100	100	200	16
TOTAL						06	200	200	400	28

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**Semester – IV**

IV SEMESTER (B)										
Sl.No	Course	Course Code	Course Title	Teaching Hours/ Week		Examination				Credits
				Theory	Practical /Fieldwork	Durationin hours	CIEMarks	SEE Marks Vivavoce	Total Marks	
				L	P					
1	PROJ	MVJPROJ4081	Project work	--	08	03	100	100	200	20
TOTAL				--	08	03	100	100	200	20

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**Semester – IV**

IV SEMESTER (B)										
Sl.No	Course	Course Code	Course Title	Teaching Hours/ Week		Examination				Credits
				Theory	Practical /Fieldwork	Durationin hours	CIEMarks	SEE Marks Vivavoce	Total Marks	
				L	P					
1	PROJ	MVJPRJ4081	Project work	--	08	03	100	100	200	22
TOTAL				--	08	03	100	100	200	22