

MVJ COLLEGE OF ENGINEERING, Whitefield, Bangalore

An Autonomous Institution, Affiliated to VTU, Belagavi

Scheme of Teaching and Examination 2019-20

Outcome Based Education (OBE) and Choice Based Credit System (CBCS) Effective from the academic year 2019-20

III SEMESTER B.E. (Civil Engineering)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical /Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1	BSC	MVJ19MCV31	Fourier Series, Transforms, Numerical and Optimization Techniques	Mathematics	2	2	0	3	50	50	100	3
2	PCC	MVJ19CV32	Solid Mechanics	Civil Engineering	3	2	0	3	50	50	100	4
3	PCC	MVJ19CV33	Fluid Mechanics	Civil Engineering	3	0	0	3	50	50	100	3
4	PCC	MVJ19CV34	Geodetic Information	Civil Engineering	3	0	0	3	50	50	100	3
5	PCC	MVJ19CV35	Geo-informatics & Laboratory	Civil Engineering	2	0	2	3	50	50	100	3
6	PCC	MVJ19CV36	Building Materials and Construction	Civil Engineering	3	0	0	3	50	50	100	3
7	PCC	MVJ19CVL37	Geodetic Information Practice	Civil Engineering	0	2	2	3	50	50	100	2
8	PCC	MVJ19CVL38	Solid Mechanics Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
9	HSMC	MVJ19SK/BK39	Samskrutika Kannada / Balake Kannada	Humanities	1	0	0	3	50	50	100	1
10	BSC	MVJ19MATDIP31	Additional Mathematics-1	Mathematics	2	1	0	3	50	50	100	-
Total					19	09	06	30	500	500	1000	24

Note: BSC: Basic Science, PCC: Professional Core Course , HSMC: Humanity and Social Science

MVJ19MXXDIP301- Mandatory non-credit course

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IV SEMESTER B.E. (Civil Engineering)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1	BSC	MVJ19MCV41	Complex Analysis, Probability and Sampling Theory	Mathematics	2	2	0	3	50	50	100	3
2	PCC	MVJ19CV42	Analysis of Structures	Civil Engineering	3	2	0	3	50	50	100	4
3	PCC	MVJ19CV43	Applied Hydraulics	Civil Engineering	3	0	0	3	50	50	100	3
4	PCC	MVJ19CV44	Basic Geotechnical Engineering	Civil Engineering	3	0	0	3	50	50	100	3
5	PCC	MVJ19CV45	Engineering Geology & Laboratory	Civil Engineering	2	0	2	3	50	50	100	3
6	PCC	MVJ19CV46	Concrete Technology	Civil Engineering	3	0	0	3	50	50	100	3
7	PCC	MVJ19CVL47	Applied Hydraulics Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
8	PCC	MVJ19CVL48	Concrete Technology Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
9	HSMC	MVJ19CPH49	Constitution of India, Professional Ethics And Cyber Law	Humanities	1	0	0	3	50	50	100	1
10	BSC	MVJ19MATDIP41	Additional Mathematics-2	Mathematics	2	1	0	3	50	50	100	-
Total					19	09	06	30	500	500	1000	24

Note: BSC: Basic Science, PCC: Professional Core Course , HSMC: Humanity and Social Science
MVJ19MXXDIP401- Mandatory non-credit course

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V SEMESTER B.E. (Civil Engineering)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1	PCC	MVJ19EEM51	Entrepreneurship and Engineering Management	Civil Engineering	3	0	0	3	50	50	100	3
2	PCC	MVJ19CV52	Highway Engineering	Civil Engineering	3	2	0	3	50	50	100	4
3	PCC	MVJ19CV53	Advanced Geotechnical Engineering	Civil Engineering	3	2	0	3	50	50	100	4
4	PCC	MVJ19CV54	Water Supply and Treatment Engineering	Civil Engineering	3	0	0	3	50	50	100	3
5	PE	MVJ19CV55X	Professional Elective-1	Civil Engineering	3	0	0	3	50	50	100	3
6	PCC	MVJ19CVL56	Computer Aided Building Planning & Drawing	Civil Engineering	0	2	2	3	50	50	100	2
7	PCC	MVJ19CVL57	Highway Engineering Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
8	PCC	MVJ19CVL58	Geotechnical Engineering Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
9	HSMC	MVJ19ENV59	Environmental Studies	Humanities	1	0	0	3	50	50	100	1
Total					16	10	06	27	450	450	900	24

Note: PCC: Professional Core Course , PE: Professional Elective, HSMC: Humanity and Social Science

Professional Elective-1	
MVJ19CV551	Numerical Methods and applications
MVJ19CV552	Matrix methods of Structural Analysis
MVJ19CV553	Alternative Building Materials and Technology
MVJ19CV554	Finite Element Method

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VI SEMESTER B.E. (Civil Engineering)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical / Drawn	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1	PCC	MVJ19CV61	Hydrology and Irrigation Engineering	Civil Engineering	3	2	0	3	50	50	100	4
2	PCC	MVJ19CV62	Design of RC Structures	Civil Engineering	3	2	0	3	50	50	100	4
3	PE	MVJ19CV63X	Professional Elective-2	Civil Engineering	3	0	0	3	50	50	100	3
4	PE	MVJ19CV64X	Professional Elective-3	Civil Engineering	3	0	0	3	50	50	100	3
5	OE	MVJ19CV65X	Open Elective-1	Civil Engineering	3	0	0	3	50	50	100	3
6	PCC	MVJ19CVL66	Environmental Engineering Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
7	PCC	MVJ19CVL67	Software Application Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
8	Proj	MVJ19CVP68	Mini-Project	Civil Engineering	0	0	6	3	50	50	100	3
Total					15	08	10	24	400	400	800	24

Note: PCC: Professional Core Course , PE: Professional Elective, OE: Open Elective, Proj: Project Work

Professional Elective-2		Professional Elective-3		Open Elective – 1	
MVJ19CV631	Air Quality Management	MVJ19CV641	Highway Geometric Design	MVJ19CV651	Sustainability Concepts in Engineering
MVJ19CV632	Municipal Wastewater Management	MVJ19CV642	Pavement Materials	MVJ19CV652	Resource Allocation and Management
MVJ19CV633	Solid Waste Management	MVJ19CV643	Railways, Harbours, Tunneling and Airports	MVJ19CV653	Occupational health and safety management
MVJ19CV634	Air and Water Quality Modeling	MVJ19CV644	Road Safety and Management	MVJ19CV654	Industrial Safety

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VII SEMESTER B.E. (Civil Engineering)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1	PCC	MVJ19CV71	Design of Steel Structures	Civil Engineering	3	2	0	3	50	50	100	4
2	PCC	MVJ19CV72	Design of Pre-stressed Concrete Elements	Civil Engineering	3	2	0	3	50	50	100	4
3	PE	MVJ19CV73X	Professional Elective – 4	Civil Engineering	3	0	0	3	50	50	100	3
4	PE	MVJ19CV74X	Professional Elective – 5	Civil Engineering	3	0	0	3	50	50	100	3
5	OE	MVJ19CV75X	Open Elective-2	Civil Engineering	3	0	0	3	50	50	100	3
6	PCC	MVJ19CV76	Quantity Surveying and Contracts Management	Civil Engineering	1	2	0	3	50	50	100	2
7	PCC	MVJ19CVL77	Computer Aided Detailing of Structures	Civil Engineering	0	2	2	3	50	50	100	2
8	Proj	MVJ19CVP78	Project Phase-1	Civil Engineering	0	0	4	-	100	-	100	2
Total					16	08	06	21	450	350	800	23

Note: PCC: Professional Core Course , PE: Professional Elective, OE: Open Elective, Proj: Project Work

Professional Elective-4		Professional Elective-5		Open Elective – 2	
MVJ19CV731	Design and Drawing of Hydraulic Structures	MVJ19CV741	Earth and Earth Retaining Structures	MVJ19CV751	Environmental Protection and Management
MVJ19CV732	Water Resource Management	MVJ19CV742	Ground Improvement Techniques	MVJ19CV752	Construction Methods, Planning and Management
MVJ19CV733	Groundwater Hydraulics	MVJ19CV743	Advanced Foundation Engineering	MVJ19CV753	Remote Sensing and GIS
MVJ19CV734	Computational Fluid Dynamics	MVJ19CV744	Dynamics of Soil and Foundations	MVJ19CV754	Introduction to Research and Technical Writing

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S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical /Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1	Proj	MVJ19CVP81	Project Phase-2	Civil Engineering	0	0	20	3	50	50	100	10
2	Int	MVJ19CVI82	Internship	Industry/Institute	0	0	6	3	50	50	100	3
3	Sem	MVJ19CVS83	Seminar	Civil Engineering	0	0	2	3	50	50	100	1
4	CRT	MVJ19CVC84	Certification	Industry/Institute	0	0	0	-	-	-	-	2
Total					00	00	28	09	150	150	300	16

Note: PCC: Professional Core Course , PE: Professional Elective, OE: Open Elective, Proj: Project Work, Int.: Internship, Sem : Seminar, CRT: Certification Course (Can be carried out during the program period but same will reflect in the final semester grade card)

Certificate Courses
Global Environmental Management
Disaster Preparedness
Water Supply and Sanitation Policy in Developing Countries
AI For Everyone
Occupational and Environmental Health and Safety
Building Information Modelling
Design Thinking for Innovation
Geosynthetic Engineering
Statistics for Business and Economics
Data Analytics and Machine Learning