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	
	Type	Code			L	T	P					
1	BSC	MVJ19MCV31	Fourier Series, 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 Practices	Civil Engineering	0	1	3	3	50	50	100	2
8	PCC	MVJ19CVL38	Solid Mechanics Laboratory	Civil Engineering	0	1	3	3	50	50	100	2
9	HSMC	MVJ19SK/BK39	Samskrutika Kannada / Balake Kannada	Humanities	1	0	0	3	50	50	100	1
		MVJ19CPH39	CPH		1	0	0	3	50	50		
10	BSC	MVJ19MCVDIP301	Additional Mathematics-1	Mathematics	2	1	0	3	50	50	100	-
				Total	19	07	08	30	500	500	1000	24

Note: BSC: Basic Science, PCC: Professional Core Course , HSMC: Humanity and Social Science
MVJ19MXXDIP301- Mandatory non-credit course

IV SEMESTER B.E. (Civil Engineering)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
	Type	Code			Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
					L	T	P					
1	BSC	MVJ19MCV41	Complex Analysis 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	Advanced Geo-Informatics & 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	1	3	3	50	50	100	2
8	PCC	MVJ19CVL48	Concrete Technology Laboratory	Civil Engineering	0	1	3	3	50	50	100	2
9	HSMC	MVJ19SK/BK49	Samskrutika Kannada / Balake Kannada	Humanities	1	0	0	3	50	50	100	1
		MVJ19CPH49	CPH		1	0	0	3	50	50		
10	BSC	MVJ19MCVDIP401	Additional Mathematics-2	Mathematics	2	1	0	3	50	50	100	-
				Total	19	07	08	30	500	500	1000	24

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

V SEMESTER B.E. (Civil Engineering)

S No	Course		Course Title Environmental Engineering Laboratory	Teaching Department	Teaching hours/week			Examination				Credits
	Type	Code			Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
					L	T	P					
1	PCC	MVJ19TME51	Technical Management & Entrepreneurship	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	1	3	3	50	50	100	2
7	PCC	MVJ19CVL57	Highway Engineering Laboratory	Civil Engineering	0	1	3	3	50	50	100	2
8	PCC	MVJ19CVL58	Geotechnical Engineering Laboratory	Civil Engineering	0	1	3	3	50	50	100	2
9	HSMC	MVJ19ENV59	Environmental Studies	Humanities	1	0	0	3	50	50	100	1
				Total	16	07	09	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

VI SEMESTER B.E. (Civil Engineering)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
	Type	Code			Theory Lecture	Tutorial	Practical / Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
					L	T	P					
1	HSMC	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	1	3	3	50	50	100	2
7	PCC	MVJ19CVL67	Software Application Laboratory	Civil Engineering	0	1	3	3	50	50	100	2
8	Proj	MVJ19CVP68	Mini-Project	Civil Engineering	0	0	6	3	50	50	100	3
				Total	15	06	12	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

VII SEMESTER B.E. (Civil Engineering)

S No	Course Type	Course Code	Course Title	Teaching Department	Theory Lecture (L)	Tutorial (T)	Practical/Drawing (P)	Duration in Hours	CIE Marks	SEE Marks	Total marks	Credits
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	1	3	3	50	50	100	2
8	Proj	MVJ19CVP78	Project Phase-1	Civil Engineering	0	0	4	-	50	-	50	2
				Total	16	07	07	21	400	350	750	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	Geotechnical Earthquake Engineering	MVJ19CV754	Research Techniques in Engineering

VIII SEMESTER B.E. (Civil Engineering)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
	Type	Code			Theory Lecture	Tutorial	Practical /Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
					L	T	P					
1	Proj	MVJ19CVP83	Project Phase-2	Civil Engineering	0	0	20	3	50	50	100	10
2	Int	MVJ19CVI84	Internship	Civil Engineering	0	0	6	3	50	50	100	3
3	Sem	MVJ19CVS85	Seminar	Civil Engineering	0	0	2	3	50	50	100	1
4	CRT	MVJ19CVC86	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)