MVJ COLLEGE OF ENGINEERING, Whitefield, Bangalore

An Autonomous Institution, Affiliated to VTU, Belagavi
Scheme of Teaching and Examination 2020-21
Outcome Based Education (OBE) and Choice Based Credit System (CBCS) Effective from the academic year 2020-21

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	MVJ20MCV31	Fourier Series, Transforms, Numerical and Optimization Techniques	Mathematics	2	2	0	3	50	50	100	3
2	PCC	MVJ20CV32	Solid Mechanics	Civil Engineering	3	2	0	3	50	50	100	4
3	PCC	MVJ20CV33	Fluid Mechanics	Civil Engineering	2	2	0	3	50	50	100	3
4	PCC	MVJ20CV34	Geodetic Information	Civil Engineering	3	0	0	3	50	50	100	3
5	PCC	MVJ20CV35	Geo-informatics & Laboratory	Civil Engineering	2	0	2	3	50	50	100	3
6	PCC	MVJ20CV36	Building Materials and Construction	Civil Engineering	3	0	0	3	50	50	100	3
7	PCC	MVJ20CVL37	Geodetic Information Practice	Civil Engineering	0	2	2	3	50	50	100	2
8	PCC	MVJ20CVL38	Solid Mechanics Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
9	HSMC	MVJ20SK/BK39	Samskrutika Kannada / Balake Kannada	Humanities	1	0	0	3	50	50	100	1
10	HSMC	MVJ20UHV310	Universal Human Values I	Humanities	1	0	0	2	50	50	100	1
11	BSC	MVJ20MATDIP31	Additional Mathematics-1	Mathematics	2	1	0	3	50	50	100	-
				Total	19	11	06	32	550	550	1100	25

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	
	Type	Code			L	T	P					
1	BSC	MVJ20MCV41	Complex Analysis, Probability and Sampling Theory	Mathematics	2	2	0	3	50	50	100	3
2	PCC	MVJ20CV42	Analysis of Determinate Structures	Civil Engineering	3	2	0	3	50	50	100	4
3	PCC	MVJ20CV43	Applied Hydraulics	Civil Engineering	3	0	0	3	50	50	100	3
4	PCC	MVJ20CV44	Basic Geotechnical Engineering	Civil Engineering	3	0	0	3	50	50	100	3
5	PCC	MVJ20CV45	Engineering Geology & Laboratory	Civil Engineering	2	0	2	3	50	50	100	3
6	PCC	MVJ20CV46	Concrete Technology	Civil Engineering	3	0	0	3	50	50	100	3
7	PCC	MVJ20CVL47	Applied Hydraulics Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
8	PCC	MVJ20CVL48	Concrete Technology Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
9	HSMC	MVJ20CPH49	Constitution of India, Professional Ethics And Cyber Law	Humanities	1	0	0	3	50	50	100	1
10	BSC	MVJ20MATDIP41	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

MVJ COLLEGE OF ENGINEERING, Whitefield, Bangalore

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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	
	Type	Code			L	T	P					
1	PCC	MVJ20EEM51	Entrepreneurship and Engineering Management	Civil Engineering	3	0	0	3	50	50	100	3
2	PCC	MVJ20CV52	Analysis of Indeterminate Structures	Civil Engineering	3	2	0	3	50	50	100	4
3	PCC	MVJ20CV53	Applied Geotechnical Engineering	Civil Engineering	3	2	0	3	50	50	100	4
4	PCC	MVJ20CV54	Water Supply and Treatment Engineering	Civil Engineering	3	0	0	3	50	50	100	3
5	PE	MVJ20CV55X	Professional Elective-1	Civil Engineering	3	0	0	3	50	50	100	3
6	PCC	MVJ20CVL56	Computer Aided Building Planning & Drawing	Civil Engineering	0	2	2	3	50	50	100	2
7	PCC	MVJ20CVL57	Highway Engineering Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
8	PCC	MVJ20CVL58	Geotechnical Engineering Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
9	HSMC	MVJ20ENV59	Environmental Studies	Humanities	1	0	0	3	50	50	100	1
10	HSMC	MVJ20UHV510	Universal Human Values II -Understanding Harmony And Ethical Human Conduct	Humanities	1	2	0	2	50	50	100	2
				Total	17	12	06	29	500	500	1000	26
Note: PCC: Professional Core Course , PE: Professional Elective, HSMC: Humanity and Social Science												

Professional Elective-1	
MVJ20CV551	Numerical Methods and applications
MVJ20CV552	Ground Improvement Techniques
MVJ20CV553	Alternative Building Materials and Technology
MVJ20CV554	Highway Engineering

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Scheme of Teaching and Examination 2020-21
Outcome Based Education (OBE) and Choice Based Credit System (CBCS) Effective from the academic year 2020-21

VI SEMESTER B.E. (Civil Engineering)

S No	Course Type	Course Code	Course Title	Teaching Department	Theory Lecture L	Tutorial T	Practical / Drawi P	Duration in Hours	CIE Marks	SEE Marks	Total marks	Credits
1	PCC	MVJ20CV61	Hydrology and Irrigation Engineering	Civil Engineering	3	2	0	3	50	50	100	4
2	PCC		Design of RC Structures	Civil Engineering	3	2	0	3	50	50	100	4
3	PE	MVJ20CV63X	Professional Elective-2	Civil Engineering	3	0	0	3	50	50	100	3
4	PE	MVJ20CV64X	Professional Elective-3	Civil Engineering	3	0	0	3	50	50	100	3
5	OE	MVJ20CV65X	Open Elective-1	Civil Engineering	3	0	0	3	50	50	100	3
6	PCC	MVJ20CVL66	Environmental Engineering Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
7	PCC	MVJ20CVL67	Software Application Laboratory	Civil Engineering	0	2	2	3	50	50	100	2
8	Proj	MVJ20CVP68	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	
MVJ20CV631	Air Quality Management	MVJ20CV641	Highway Geometric Design	MVJ20CV651	Sustainability Concepts in Engineering
MVJ20CV632	Municipal Wastewater Management	MVJ20CV642	Pavement Materials	MVJ20CV652	Resource Allocation and Management
MVJ20CV633	Solid Waste Management	MVJ20CV643	Railways, Harbours, Tunneling and Airports	MVJ20CV653	Occupational health and safety management
MVJ20CV634	Air and Water Quality Modeling	MVJ20CV644	Road Safety and Management	MVJ20CV654	Industrial Safety

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Scheme of Teaching and Examination 2020-21
Outcome Based Education (OBE) and Choice Based Credit System (CBCS) Effective from the academic year 2020-21

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	
	Type	Code			L	T	P					
1	PCC	MVJ20CV71	Design of Steel Structures	Civil Engineering	3	2	0	3	50	50	100	4
2	PCC	MVJ20CV72	Design of Pre-stressed Concrete Elements	Civil Engineering	3	2	0	3	50	50	100	4
3	PE	MVJ20CV73X	Professional Elective – 4	Civil Engineering	3	0	0	3	50	50	100	3
4	PE	MVJ20CV74X	Professional Elective – 5	Civil Engineering	3	0	0	3	50	50	100	3
5	OE	MVJ20CV75X	Open Elective-2	Civil Engineering	3	0	0	3	50	50	100	3
6	PCC	MVJ20CV76	Quantity Surveying and Contracts Management	Civil Engineering	1	2	0	3	50	50	100	2
7	PCC	MVJ20CVL77	Computer Aided Detailing of Structures	Civil Engineering	0	2	2	3	50	50	100	2
8	Proj	MVJ20CVP78	Project Phase-1	Civil Engineering	0	0	4	-	50	-	50	2
				Total	16	08	06	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	
MVJ20CV731	Design and Drawing of Hydraulic Structures	MVJ20CV741	Earth and Earth Retaining Structures	MVJ20CV751	Environmental Protection and Management
MVJ20CV732	Water Resource Management	MVJ20CV742	Matrix methods of Structural Analysis	MVJ20CV752	Construction Methods, Planning and Management
MVJ20CV733	Groundwater Hydraulics	MVJ20CV743	Advanced Foundation Engineering	MVJ20CV753	Remote Sensing and GIS
MVJ20CV734	Computational Fluid Dynamics	MVJ20CV744	Finite Element Method	MVJ20CV754	Introduction to Research and Technical Writing

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Scheme of Teaching and Examination 2020-21
Outcome Based Education (OBE) and Choice Based Credit System (CBCS) Effective from the academic year 2020-21

VIII 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	Proj	MVJ20CVP81	Project Phase-2	Civil Engineering	0	0	14	3	50	50	100	7
2	Int	MVJ20CVI82	Internship	Industry/Institute	0	0	6	3	50	50	100	3
3	Sem	MVJ20CVS83	Seminar	Civil Engineering	0	0	2	3	50	50	100	1
4	CRT	MVJ20CVC84	Certification	Industry/Institute	0	0	0	-	-	-	-	2
				Total	00	00	22	09	150	150	300	13
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