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 2020-2021

III Semester BE

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	MVJ20MEE31	Transforms and Numerical methods	Mathematics	2	2	0	3	50	50	100	3
2	PCC	MVJ20EE32	Electric Circuit Analysis	EEE	3	1	1	3	50	50	100	4
3	PCC	MVJ20EE33	Analog & Digital Electronics	EEE	2	1	1	3	50	50	100	3
4	PCC	MVJ20EE34	Power System Engineering	EEE	2	1	1	3	50	50	100	3
5	PCC	MVJ20EE35	Electrical and Electronics Measurements	EEE	2	1	1	3	50	50	100	3
6	PCC	MVJ20EE36	Object Oriented Programming& C++	EEE	2	1	1	3	50	50	100	3
7	PCC	MVJ20EEL37	Circuits and Measurements Lab	EEE	0	2	2	3	50	50	100	2
8	PCC	MVJ20EEL38	Analog & Digital Electronics Lab	EEE	0	2	2	3	50	50	100	2
9	HSMC	MVJ20KS/BK39	Kannada	Humanities	1	0	0	2	50	50	100	1
		MVJ20CPH39	CPH		1	0	0	2	50	50		
10	HSMC	MVJ20UHV310	UHV	Humanities	1	0	0	2	50	50	100	1
11	BSC	MVJ20MATDIP301	Additional Mathematics-1	Mathematics	2	1	0	3	50	50	100	-
				Total	17	12	9	31	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 BE

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
	Type	Code			Theory Lecture (L)	Tutorial (T)	Practical/ Drawing (P)	Duration in Hours	CIE Marks	SEE Marks	Total marks	
1	BSC	MVJ20MEE41	Probability distribution, optimization and complex variables	Mathematics	2	2	0	3	50	50	100	3
2	PCC	MVJ20EE42	Electrical Machines -1	EEE	3	1	1	3	50	50	100	4
3	PCC	MVJ20EE43	Control Systems	EEE	2	1	1	3	50	50	100	3
4	PCC	MVJ20EE44	Microcontrollers	EEE	2	1	1	3	50	50	100	3
5	PCC	MVJ20EE45	Electromagnetic Field Theory	EEE	2	1	1	3	50	50	100	3
6	PCC	MVJ20EE46	Linear Integrated Circuits	EEE	2	1	1	3	50	50	100	3
7	PCC	MVJ20EEL47	Electrical Machines-1 Lab	EEE	0	2	2	3	50	50	100	2
8	PCC	MVJ20EEL48	Microcontroller Lab	EEE	0	2	2	3	50	50	100	2
9	HSMC	MVJ20SK/BK49	Kannada	Humanities	1	0	0	2	50	50	100	1
		MVJ20CPH49	CPH		1	0	0	2	50	50		
10	BSC	MVJ20MATDIP401	Additional Mathematics-2	Mathematics	2	1	0	3	50	50	100	-
				Total	15	15	10	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 BE

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	MVJ20TEM51	Technical Management & Entrepreneurship	EEE	2	0	2	3	50	50	100	3
2	PCC	MVJ20EE52	Power Electronics	EEE	3	1	1	3	50	50	100	4
3	PCC	MVJ20EE53	Electrical Machines II	EEE	3	1	1	3	50	50	100	4
4	PCC	MVJ20EE54	Signals and Systems	EEE	2	1	1	3	50	50	100	3
5	PE	MVJ20EE55X	PE Group I	EEE	2	1	1	3	50	50	100	3
6	PCC	MVJ20EEL56	Electrical Machines II Lab	EEE	0	2	2	3	50	50	100	2
7	PCC	MVJ20EEL57	Power Electronics Lab	EEE	0	2	2	3	50	50	100	2
8	PCC	MVJ20EEL58	Control Systems Lab	EEE	0	2	2	3	50	50	100	2
9	HSMC	MVJ20ENV59	Environmental Studies	Humanities	1	0	0	2	50	50	100	1
10	HSMC	MVJ20UHV510	UHV	Humanities	1	2	0	2	50	50	100	2
				Total	13	14	12	27	500	500	1000	26
Note: PCC: Professional Core Course, PE: Professional Elective, HSMC: Humanity and Social Science												

List of Professional elective offered

Professional Elective Group I (MVJ20EE55X)	
Course Code	Course title
MVJ20EE551	Solar and Wind Energy Conversion System
MVJ20EE552	Sensor and Transducer
MVJ20EE553	Embedded Systems

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VI Semester BE

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	MVJ20EE61	Power System Analysis I	EEE	3	1	1	3	50	50	100	4
2	PCC	MVJ20EE62	Industrial Drives and Applications	EEE	3	1	1	3	50	50	100	4
3	PE	MVJ20EE63X	PE Group II	EEE	2	1	1	3	50	50	100	3
4	PE	MVJ20EE64X	PE Group III	EEE	2	1	1	3	50	50	100	3
5	OE	MVJ20EE65X	OE Group I	EEE	2	1	1	3	50	50	100	3
6	PCC	MVJ20EEL66	Machine Design and Electrical Drawing	EEE	0	2	2	3	50	50	100	2
7	PCC	MVJ20EEL67	Power System Lab	EEE	0	2	2	3	50	50	100	2
8	Proj	MVJ20EEMP68	Mini-Project	EEE	0	0	6	3	50	50	100	3
				Total	12	9	15	24	400	400	800	24
Note: PCC: Professional Core Course, PE: Professional Elective, OE: Open Elective, Proj: Project Work												

List of Professional electives, Open electives offered

Professional Elective Group II (MVJ20EE63X)		Professional Elective Group III (MVJ20EE64X)		Open Elective Group (MVJ20EE65X)	
Course Code	Course title	Course Code	Course title	Course Code	Course title
MVJ20EE631	HVDC and FACTS	MVJ20EE641	High Voltage Engineering	MVJ20EE651	Renewable Energy Sources
MVJ20EE632	Industrial Automation	MVJ20EE642	Energy Storage and Management system for Electric Vehicles	MVJ20EE652	Industrial Instrumentation
MVJ20EE633	VLSI Design	MVJ20EE643	Advanced Control Systems	MVJ20EE653	Utilization of Electrical Power

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VII Semester BE

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	MVJ20EE71	Power System Protection	EEE	3	1	1	3	50	50	100	4
2	PCC	MVJ20EE72	Power quality	EEE	3	1	1	3	50	50	100	4
3	PE	MVJ20EE73X	PE Group IV	EEE	2	1	1	3	50	50	100	3
4	PE	MVJ20EE74X	PE Group V	EEE	2	1	1	3	50	50	100	3
5	OE	MVJ20EE75X	OE Group II	EEE	2	1	1	3	50	50	100	3
6	PCC	MVJ20EEL76	Simulation of Power Electronic Converters	EEE	0	2	2	3	50	50	100	2
7	PCC	MVJ20EEL77	Power System Protection Lab	EEE	0	2	2	3	50	50	100	2
8	Proj	MVJ20EEP78	Project Phase-1	EEE	0	0	4	-	100	-	100	2
				Total	12	9	13	21	450	350	800	23

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

List of Professional electives, open electives offered

PE Group IV(MVJ20EE73X)		PE Group V (MVJ20EE74X)		OE Group II(MVJ20EE75X)	
Course Code	Course title	Course Code	Course title	Course Code	Course title
MVJ20EE731	Smart Grid	MVJ20EE741	Power System Optimization and Control	MVJ20EE751	Special Electrical Machines
MVJ20EE732	AI Techniques to Power systems	MVJ20EE742	Electric Vehicle Technologies	MVJ20EE752	Energy Storage Systems
MVJ20EE733	System On Chip	MVJ20EE743	Advanced Power Electronics	MVJ20EE753	Reliability Of Engineering Systems

VIII Semester BE

S No	Course Type	Course Code	Course Title	Teaching Department	Teaching hours/week Theory Lecture L	Tutorial T	Practical/ Drawing P	Duration in Hours	CIE Marks	SEE Marks	Total marks	Credits
1	Proj	MVJ20EEP81	Project Phase-2	EEE	0	0	14	3	50	50	100	7
2	Int	MVJ20EEI82	Internship	EEE	-	-	-	-	-	-	100	3
3	Sem	MVJ20EES83	Seminar	EEE	0	0	2	-	-	-	100	1
4	CRT	MVJ20EEC84	Certification	Industry/Institute	-	-	-	-	-	-	-	2
				Total	0	0	16	3	50	50	300	13

Note: 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)