

**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 2019-2020

**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	MVJ19MEE31	Transforms and Numerical methods	Mathematics	2	2	0	3	50	50	100	3
2	PCC	MVJ19EE32	Electric Circuit Analysis	EEE	3	1	1	3	50	50	100	4
3	PCC	MVJ19EE33	Analog & Digital Electronics	EEE	2	1	1	3	50	50	100	3
4	PCC	MVJ19EE34	Power System Engineering	EEE	2	1	1	3	50	50	100	3
5	PCC	MVJ19EE35	Electrical and Electronics Measurements	EEE	2	1	1	3	50	50	100	3
6	PCC	MVJ19EE36	Object Oriented Programming& C++	EEE	2	1	1	3	50	50	100	3
7	PCC	MVJ19EEL37	Circuits and Measurements Lab	EEE	0	2	2	3	50	50	100	2
8	PCC	MVJ19EEL38	Analog & Digital Electronics Lab	EEE	0	2	2	3	50	50	100	2
9	HSMC	MVJ19KS/BK39	Kannada	Humanities	1	0	0	2	50	50	100	1
		MVJ19CPH39	CPH		1	0	0	2	50	50		
10	BSC	MVJ19MATDIP301	Additional Mathematics-1	Mathematics	2	1	0	3	50	50	100	-
<b>Total</b>					16	12	9	29	500	500	1000	24

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

**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 2019-2020

**IV 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	MVJ19MEE41	Probability distribution, optimization and complex variables	Mathematics	2	2	0	3	50	50	100	3
2	PCC	MVJ19EE42	Electrical Machines -1	EEE	3	1	1	3	50	50	100	4
3	PCC	MVJ19EE43	Control Systems	EEE	2	1	1	3	50	50	100	3
4	PCC	MVJ19EE44	Microcontrollers	EEE	2	1	1	3	50	50	100	3
5	PCC	MVJ19EE45	Electromagnetic Field Theory	EEE	2	1	1	3	50	50	100	3
6	PCC	MVJ19EE46	Linear Integrated Circuits	EEE	2	1	1	3	50	50	100	3
7	PCC	MVJ19EEL47	Electrical Machines-1 Lab	EEE	0	2	2	3	50	50	100	2
8	PCC	MVJ19EEL48	Microcontroller Lab	EEE	0	2	2	3	50	50	100	2
9	HSMC	MVJ19SK/BK49	Kannada	Humanities	1	0	0	2	50	50	100	1
		MVJ19CPH49	CPH		1	0	0					
10	BSC	MVJ19MATDIP401	Additional Mathematics-2	Mathematics	2	1	0	3	50	50	100	-
<b>Total</b>					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												

**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 2019-2020

**V Semester BE**

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	HSMC	MVJ19TEM51	Technical Management & Entrepreneurship	EEE	2	0	2	3	50	50	100	3
2	PCC	MVJ19EE52	Power Electronics	EEE	3	1	1	3	50	50	100	4
3	PCC	MVJ19EE53	Electrical Machines II	EEE	3	1	1	3	50	50	100	4
4	PCC	MVJ19EE54	Signals and Systems	EEE	2	1	1	3	50	50	100	3
5	PE	MVJ19EE55X	PE Group I	EEE	2	1	1	3	50	50	100	3
6	PCC	MVJ19EEL56	Electrical Machines II Lab	EEE	0	2	2	3	50	50	100	2
7	PCC	MVJ19EEL57	Power Electronics Lab	EEE	0	2	2	3	50	50	100	2
8	PCC	MVJ19EEL58	Control Systems Lab	EEE	0	2	2	3	50	50	100	2
9	HSMC	MVJ19ENV59	Environmental Studies	Humanities	1	0	0	2	50	50	100	1
<b>Total</b>					12	12	12	25	450	450	900	24

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

List of Professional elective offered

Professional Elective Group I (MVJ19EE55X)	
Course Code	Course title
MVJ19EE551	Solar and Wind Energy Conversion System
MVJ19EE552	Sensor and Transducer
MVJ19EE553	Embedded Systems

**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 2019-2020

**VI Semester BE**

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	MVJ19EE61	Power System Analysis I	EEE	3	1	1	3	50	50	100	4
2	PCC	MVJ19EE62	Industrial Drives and Applications	EEE	3	1	1	3	50	50	100	4
3	PE	MVJ19EE63X	PE Group II	EEE	2	1	1	3	50	50	100	3
4	PE	MVJ19EE64X	PE Group III	EEE	2	1	1	3	50	50	100	3
5	OE	MVJ19EE65X	OE Group I	EEE	2	1	1	3	50	50	100	3
6	PCC	MVJ19EEL66	Machine Design and Electrical Drawing	EEE	0	2	2	3	50	50	100	2
7	PCC	MVJ19EEL67	Power System Lab	EEE	0	2	2	3	50	50	100	2
8	Proj	MVJ19EEMP68	Mini-Project	EEE	0	0	6	3	50	50	100	3
<b>Total</b>					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 (MVJ19EE63X)		Professional Elective Group III (MVJ19EE64X)		Open Elective Group (MVJ19EE65X)	
Course Code	Course title	Course Code	Course title	Course Code	Course title
MVJ19EE631	HVDC and FACTS	MVJ19EE641	High Voltage Engineering	MVJ19EE651	Renewable Energy Sources
MVJ19EE632	Industrial Automation	MVJ19EE642	Energy Storage and Management system for Electric Vehicles	MVJ19EE652	Industrial Instrumentation
MVJ19EE633	VLSI Design	MVJ19EE643	Advanced Control Systems	MVJ19EE653	Utilization of Electrical Power

**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 2019-2020

**VII 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	PCC	MVJ19EE71	Power System Protection	EEE	3	1	1	3	50	50	100	4
2	PCC	MVJ19EE72	Power quality	EEE	3	1	1	3	50	50	100	4
3	PE	MVJ19EE73X	PE Group IV	EEE	2	1	1	3	50	50	100	3
4	PE	MVJ19EE74X	PE Group V	EEE	2	1	1	3	50	50	100	3
5	OE	MVJ19EE75X	OE Group II	EEE	2	1	1	3	50	50	100	3
6	PCC	MVJ19EEL76	Simulation of Power Electronic Converters	EEE	0	2	2	3	50	50	100	2
7	PCC	MVJ19EEL77	Power System Protection Lab	EEE	0	2	2	3	50	50	100	2
8	Proj	MVJ19EEP78	Project Phase-1	EEE	0	0	4	-	100	-	100	2
<b>Total</b>					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(MVJ19EE73X)		PE Group V (MVJ19EE74X)		OE Group II(MVJ19EE75X)	
Course Code	Course title	Course Code	Course title	Course Code	Course title
MVJ19EE731	Smart Grid	MVJ19EE741	Power System Optimization and Control	MVJ19EE751	Special Electrical Machines
MVJ19EE732	AI Techniques to Power systems	MVJ19EE742	Electric Vehicle Technologies	MVJ19EE752	Energy Storage Systems
MVJ19EE733	System On Chip	MVJ19EE743	Advanced Power Electronics	MVJ19EE753	Reliability Of Engineering Systems

**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 2019-2020

**VIII Semester BE**

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	MVJ19EEP81	Project Phase-2	EEE	0	0	14	3	50	50	100	10
2	Int	MVJ19EEI82	Internship	EEE	-	-	-	-	-	-	100	3
3	Sem	MVJ19EES83	Seminar	EEE	0	0	2	-	-	-	100	1
4	CRT	MVJ19EEC84	Certification	Industry/Institute	-	-	-	-	-	-	-	2
<b>Total</b>					0	0	16	3	50	50	300	16
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)												