

III SEMESTER

Sl. No.	Course		Course Title	BOS	Teaching Hours/Week				Examination				Credits
					Theory/lecture	Tutorials	Practical/Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
	Type	Code			L	T	P	S					
1	BSC	MVJ21MA31D	Transforms and Numerical Methods	MA	3	2	0		3	50	50	100	4
2	PCC	MVJ21EE32	Electrical Circuit Analysis with PSpice	EEE	3	2	0		3	50	50	100	4
3	PCC	MVJ21EE33	Digital Electronics	EEE	3	0	0		3	50	50	100	3
4	IPCC	MVJ21EE34	Analog Electronics and Op-Amps with PSpice	EEE	3	0	2		3	100	100	200	4
5	IPCC	MVJ21EE35	Electrical Machines-1	EEE	3	0	2	Y	3	100	100	200	4
6	HSMC	MVJ21CPH36	Constitution of India and Professional Ethics and Cyber Law	Humanities	1	0	0		2	50	50	100	1
7	AEC	MVJ21EEA37	Domestic Wiring	EEE	1	0	2		2	50	50	100	2
8	BSC	MVJ21MATDIP-I	Additional Mathematics-I	MA	1	2	0		3	50	50	100	-
Total					17/18	4/6	6/6		19/22	450/500	450/500	900/1000	22

Note: BSC: Basic Science Course, IPCC: Integrated Program Core Course, PCC: Program Core Course, HSMC: Humanity and Social Science & Management Course, AEC: Ability Enhancement Course, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.

Additional Mathematics-I: The course is a non-credit mandatory course (NCMC) prescribed for III semester lateral entry diploma holders admitted to BE programs. The successful completion of the program is mandatory for the award of the degree.

IV SEMESTER

Sl. No.	Course		Course Title	BOS	Teaching Hours/Week				Examination				Credits
					Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
	Type	Code			L	T	P	S					
1	BSC	MVJ21MA41D	Probability distribution, optimization and complex variables	MA	2	2	0		3	50	50	100	3
2	PCC	MVJ21EE42	Power System Engineering-I	EEE	3	0	0		3	50	50	100	3
3	PCC	MVJ21EE43	OOPS with C++ for Electrical Engineering	EEE	3	0	0		3	50	50	100	3
4	IPCC	MVJ21EE44	Electrical Machines-II	EEE	3	0	2		3	100	100	200	4
5	IPCC	MVJ21EE45	Microcontroller and ARM Processor	EEE	3	0	2	Y	3	100	100	200	4
6	HSMC	MVJ21KAN46	Kannada	HUMANITIES	1	0	0		2	50	50	100	1
7	AEC	MVJ21EEA47	Digital Logic Design using Integrated Circuits	EEE	1	0	2		2	50	50	100	2
8	INT	MVJ21INT48	Summer Internship-I	Completed during the intervening period of II and III semesters						50	50	100	2
9	BSC	MVJ21MATDIP-II	Additional Mathematics-II	MA	1	2	0		3	50	50	100	-
Total					16/17	2/4	6/6		19/22	500/550	500/550	1000/1100	22

Note: BSC: Basic Science Course, IPCC: Integrated Program Core Course, PCC: Program Core Course, HSMC: Humanity and Social Science & Management Course, AEC: Ability Enhancement Course, INT: Internship, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.

Additional Mathematics-I: The course is a non-credit mandatory course (NMC) prescribed for III semester lateral entry diploma holders admitted to BE programs. The successful completion of the program is mandatory for the award of the degree.

Summer Internship-I: Viva voice will be conducted for the 03 weeks inter/intra institutional summer internship activities carried out during the intervening period of II and III semesters. The internship will be considered as a head of passing and will be considered for the award of degree. Those, who do not take up / complete the internship will be declared fail and will have to complete during subsequent examination after satisfying the internship requirements.

V SEMESTER

Sl. No.	Course		Course Title	BOS	Teaching Hours/Week				Examination				Credits
	Type	Code			Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	HSMC	MVJ21EE51	Technical Management for Electrical Industries	EEE	3	0	0		3	50	50	100	3
2	PCC	MVJ21EE52	Smart Sensor Systems	EEE	3	0	0		3	50	50	100	3
3	IPCC	MVJ21EE53	Control System Engineering with MATLAB	EEE	3	0	2		3	100	100	200	4
4	IPCC	MVJ21EE54	Power Electronics with MATLAB	EEE	3	0	2	Y	3	100	100	200	4
5	PEC	MVJ21EE55X	Professional Elective – I	EEE	3	0	0		3	50	50	100	3
6	HSMC	MVJ21ENV56	Environmental Studies	CV	1	0	0		2	50	50	100	1
7	AEC	MVJ21IPR57	Research Methodology & IPR	Humanities	1	2	0		2	50	50	100	2
8	UHV	MVJ21UHV58	Universal Human Values	Humanities	2	0	0		2	50	50	100	2
Total					19/19	2/2	4/4		21/21	500/500	500/500	1000/1000	22/22
Note: IPCC: Integrated Program Core Course, PCC: Program Core Course, HSMC: Humanity and Social Science & Management Course, AEC: Ability Enhancement Course, UHV: Universal Human Values, PEC: Professional Elective Course, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.													

Course Code	Course Name
MVJ21EE551	Introduction to IoT
MVJ21EE552	Micro-grid
MVJ21EE553	PLC and SCADA
MVJ21EE554	Embedded Systems
MVJ21EE555	Solar PV Technologies

VI SEMESTER

Sl. No.	Course		Course Title	Teaching Department	Teaching Hours/Week				Examination				Credits
	Type	Code			Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	HSMC	MVJ21EE61	Electric Vehicle and Battery Management System.	EEE	3	0	0		3	50	50	100	3
2	IPCC	MVJ21EE62	Power System Engineering-II	EEE	3	0	2		3	100	100	200	4
3	IPCC	MVJ21EE63	Signals and Digital Signal Processing	EEE	3	0	2	Y	3	100	100	200	4
4	OEC	MVJ21EE64X	Open Elective-I	EEE	3	0	0		3	50	50	100	3
5	OEC	MVJ21EE65X	MOOC Courses (Open Elective-II)	EEE	A twelve Week Course should be selected from online platforms like NPTEL, SWAYAM, Coursera etc							3	
6	AEC	MVJ21EEA66	Troubleshooting and Diagnosis of Electrical Appliances.	EEE	0	0	2		3	50	50	100	1
7	PRJ	MVJ21EEMP67	Mini Project	EEE	0	0	4		3	50	50	100	2
9	INT	MVJ21INT68	Summer Internship II	EEE	Completed during the intervening period of IV and V semesters				50	50	100	2	
Total					12/12	0/0	10/10		18/18	450/450	450/450	900/900	22/22

Note: IPCC: Integrated Program Core Course, HSMC: Humanity and Social Science & Management Course, AEC: Ability Enhancement Course, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation, OEC: Open Elective Course, PRJ: Project, INT: Internship.

Summer Internship-II: Viva voice will be conducted for the 04 weeks Industrial/Govt./ NGO/ MSME/Rural Internship/Innovation/Entrepreneurship summer internship activities carried out during the intervening period of IV and V semesters. The internship will be considered as a head of passing and will be considered for the award of degree. Those, who do not take up / complete the internship will be declared fail and will have to complete during subsequent examination after satisfying the internship requirements.

Course Code	Open Elective-I
MVJ21EE641	Industrial Instrumentation
MVJ21EE642	Non-Conventional Energy Sources
MVJ21EE643	Carbon capture & storage
MVJ21EE644	Introduction to Smart cities
MVJ21EE645	Smart Sensors and Systems for Industrial Applications

VII SEMESTER

Sl. No.	Course		Course Title	Teaching Department	Teaching Hours/Week				Examination				Credits
	Type	Code			Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	IPCC	MVJ21EE71	Switchgear and Protection	EEE	3	0	2		3	100	100	200	4
2	PEC	MVJ21EE72X	Professional Elective-II	EEE	3	0	0		3	50	50	100	3
3	PEC	MVJ21EE73X	Professional Elective-III	EEE	3	0	0		3	50	50	100	3
4	OEC	MVJ21EE74X	Open Elective-II	EEE	3	0	0		3	50	50	100	3
5	PRJ	MVJ21EEP75	Project Phase-I	EEE	0	0	4		3	50	50	100	2
6	AEC	MVJ21EEA76	Ability Enhancement Course-4 (Online- minimum of 4 weeks duration)	EEE									1
Total					12/12	0/0	6/6		15/15	300/300	300/300	600/600	16/16

Note: IPCC: Integrated Program Core Course, AEC: Ability Enhancement Course, PEC: Professional Elective Course, OEC: Open Elective Course, PRJ: Project, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.

Course Code	Professional Elective-II	Course Code	Professional Elective-III	Course Code	Open Elective-II
MVJ21EE721	IoT Applications for EEE	MVJ21EE731	Power System Operation and Control	MVJ21EE741	IoT based smart appliances
MVJ21EE722	Smart Grid	MVJ21EE732	Power Quality and FACTS	MVJ21EE742	Industrial safety and environment
MVJ21EE723	Special Electrical Machines	MVJ21EE733	Electric Drives and Control	MVJ21EE743	Disaster management
MVJ21EE724	System on Chip	MVJ21EE734	Energy Auditing	MVJ21EE744	Introduction to Electric Vehicles
MVJ21EE725	Operation and Maintenance for Solar Energy Systems	MVJ21EE735	Computer Aided Electrical Drawing	MVJ21EE745	Aircraft power system

VIII SEMESTER

Sl. No.	Course		Course Title	Teaching Department	Teaching Hours/Week				Examination			Credits	
	Type	Code			Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks		Total Marks
					L	T	P	S					
1	PRJ	MVJ21EEP81	Project Phase-II	EEE	-	-	20	-	3	50	50	100	10
2	INT	MVJ21INT82	Research /Industrial Internship	EEE					50	50	100	5	
3	SEM	MVJ21EES83	Seminar	EEE	-	-	2	-	-	100	-	100	1
Total					-	-	22	-	3	200	100	300	16

Note: PRJ: Project, INT: Internship, SEM: Seminar, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.