Scheme of Teaching and Examination 2021-22

Outcome Based Education (OBE) and Choice Based Credit System (CBCS) Effective from the academic year 2021-22

III SEMESTER

Sl. No.	Course		Course Title	BOS	Teaching Hours/Week				Examination				Credits
	Type	**Code**			Theory/ lecture **L**	Tutorials **T**	Practical/ Drawing **P**	Self-Study Components **S**	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
1	BSC	MVJ21MA31D	Transforms and Numerical Methods	MA	3	2	0	-	3	50	50	100	4
2	PCC	MVJ21EC32	Network Analysis	EC	3	2	0	-	3	50	50	100	4
3	PCC	MVJ21EC33	Electromagnetic Waves and Transmission Lines	EC	3	0	0	-	3	50	50	100	3
4	IPCC	MVJ21EC34	Analog Electronic Circuits	EC	3	0	2	-	3	100	100	200	4
5	IPCC	MVJ21EC35	Digital System Design with Verilog	EC	3	0	2	Y	3	100	100	200	4
6	HSMC	MVJ21CPH36	Constitution of India and Professional Ethics and Cyber Law	Any Department	1	0	0	-	2	50	50	100	1
7	AEC	MVJ21EEA37	Lab View	EC	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**, PCC:** Professional Core Course, **IPCC:** Integrated Professional Core Course, **HSMC:** Humanity and Social Science & Management Course, **AEC:** Ability Enhancement Course, **L:** Lecture, **T:** Tutorial, **P:** Practical, **S:** Self Study, **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 Type	Course Code	Course Title	BOS	Theory lecture L	Tutorials T	Practical/ Drawing P	Self-Study Components S	Duration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
1	BSC	MVJ21MA41D	Probability distribution, optimization and complex variables	MA	2	2	0	-	3	50	50	100	3
2	PCC	MVJ21EC42	Basic Signal Processing	EC	3	0	0	-	3	50	50	100	3
3	PCC	MVJ21EC43	Control System	EC	3	0	0	-	3	50	50	100	3
4	IPCC	MVJ21EC44	Data Structure and Algorithms using PYTHON	EC	3	0	2	-	3	100	100	200	4
5	IPCC	MVJ21EC45	Communication Systems	EC	3	0	2	Y	3	100	100	200	4
6	HSMC	MVJ21SK/BK46	Kannada	KAN	1	0	0	-	2	50	50	100	1
7	AEC	MVJ21ECA47	Robotics	EC	1	0	2	-	2	50	50	100	2
8	INT	MVJ21INT48	Summer Internship-I	Should be completed during the intervening period of II and III semesters. **Intra-College Internship**					-	-	-	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	450/550	450/550	900/1000	22

Note: BSC: Basic Science Course**, PCC:** Professional Core Course, **IPCC:** Integrated Professional Core Course, **HSMC:** Humanity and Social Science & Management Course, **AEC:** Ability Enhancement Course, **INT:** Internship, **L:** Lecture, **T:** Tutorial, **P:** Practical, **S:** Self Study, **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.

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 Type	Course Code	Course Title	BOS	Theory lecture (L)	Tutorials (T)	Practical/ Drawing (P)	Self-Study Components (S)	Duration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
1	HSMC	MVJ21EC51	Technical Management & Entrepreneurship	EC	3	0	0	-	3	50	50	100	3
2	PCC	MVJ21EC52	Computer Organization and Architecture	EC	3	0	0	-	3	50	50	100	3
3	IPCC	MVJ21EC53	Digital Signal Processing	EC	2	2	2	-	3	100	100	200	4
4	IPCC	MVJ21EC54	Microcontroller and Embedded systems	EC	2	2	2	Y	3	100	100	200	4
5	PEC	MVJ21EC55X	Professional Elective – I	EC	3	0	0	-	3	50	50	100	3
6	HSMC	MVJ21ENV56	Environmental Studies	CV	1	0	0	-	2	50	50	100	1
7	AEC	MVJ21RMI57	Research Methodology & IPR	AE	1	2	0	-	2	50	50	100	2
8	UHV	MVJ21UHV58	Universal Human Values	CV	2	0	0	-	2	50	50	100	2
			Total		**17**	**6**	**4**	**-**	**21**	**500**	**500**	**1000**	**22**

Note: HSMC: Humanity and Social Science & Management Course, **PCC:** Professional Core Course, **IPCC:** Integrated Professional Core Course, **PEC:** Professional Elective Course, **AEC:** Ability Enhancement Course, **UHV:** Universal Human Values, **L:** Lecture, **T:** Tutorial, **P:** Practical, **S:** Self Study, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation.

Course Code	Professional Elective – I
MVJ21EC551	Machine Learning Design and Application
MVJ21EC552	Operating System
MVJ21EC553	MEMS & Sensor Design
MVJ21EC554	Applications with MATLAB programming and Simulink

VI SEMESTER

Sl. No.	Course Type	Course Code	Course Title	BOS	Theory lecture L	Tutorials T	Practical/ Drawing P	Self-Study Components S	Duration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
1	HSMC	MVJ21EC61	Wireless Network Management	EC	3	0	0	-	3	50	50	100	3
2	IPCC	MVJ21EC62	Microwave and Antennas	EC	3	0	2	-	3	100	100	200	4
3	IPCC	MVJ21EC63	Computer Networks	EC	3	0	2	Y	3	100	100	200	4
4	OEC	MVJ21EC64X	Open Elective-I	EC	3	0	0	-	3	50	50	100	3
5	OEC	MVJ21EC65X	MOOC Courses (Open Elective-II)	EC	A twelve-week course should be selected from online platforms like NPTEL/SWAYAM								3
6	AEC	MVJ21ECA66	3D Printing	EC	0	0	2	-	2	50	50	100	1
7	PRJ	MVJ21ECMP67	Mini Project	EC	0	0	4	-	3	50	50	100	2
8	INT	MVJ21INT68	Summer Internship-II	EC	Completed during the intervening period of IV and V semesters					50	50	100	2
			Total		**12**	**0**	**10**	**-**	**18**	**450**	**450**	**900**	**22**

Note: HSMC: Humanity and Social Science & Management Course, **IPCC:** Integrated Professional Core Course, **OEC:** Open Elective Course, **AEC:** Ability Enhancement Course, **PRJ:** Project, **INT:** Internship, **L:** Lecture, **T:** Tutorial, **P:** Practical, **S:** Self Study, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation.

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
MVJ21EC641	Principles of Communication
MVJ21EC642	Digital Image Processing
MVJ21EC643	Sensor Technology
MVJ21EC644	Introduction to MATLAB & Simulink

VII SEMESTER

Sl. No.	Course Type	Course Code	Course Title	BOS	Theory lecture (L)	Tutorials (T)	Practical/ Drawing (P)	Self-Study Components (S)	Duration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
1	IPCC	MVJ21EC71	VLSI System Design	EC	3	0	2		3	100	100	200	4
2	PEC	MVJ21EC72X	Professional Elective-II	EC	3	0	0		3	50	50	100	3
3	PEC	MVJ21EC73X	Professional Elective-III	EC	3	0	0		3	50	50	100	3
4	OEC	MVJ21EC74X	Open Elective-III	EC	3	0	0		3	50	50	100	3
5	PRJ	MVJ21ECP75	Project Phase-I	EC	0	0	4		3	50	50	100	2
6	AEC	MVJ21ECA76	Ability Enhancement Course-4	EC	A four-week course should be selected from online platforms								1
				Total	12	0	6		15	300	300	600	16

Note: IPCC: Integrated Professional Core Course, **PEC:** Professional Elective Course, **OEC:** Open Elective Course, **PRJ:** Project, **AEC:** Ability Enhancement Course, **L:** Lecture, **T:** Tutorial, **P:** Practical, **S:** Self Study, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation.

Course Code	Professional Elective-II	Course Code	Professional Elective-III	Course Code	Open Elective-II
MVJ21EC721	Medical Electronics	MVJ21EC731	Digital Image Processing	MVJ21EC741	Lab View
MVJ21EC722	Satellite & Radar Communication	MVJ21EC732	IoT & Wireless Sensor Networks	MVJ21EC742	MEMS and Sensor Design
MVJ21EC723	Real Time Operating Systems	MVJ21EC733	Optical Communication	MVJ21EC743	Medical Electronics
MVJ21EC724	Cryptography & Network Security	MVJ21EC734	Artificial Intelligence & Data Science	MVJ21EC744	Industrial IOT

VIII SEMESTER

Sl. No.	Course Type	Course Code	Course Title	BOS	Theory lecture (L)	Tutorials (T)	Practical/ Drawing (P)	Self-Study Components (S)	Duration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
1	PRJ	MVJ21ECP81	Project Phase-II	EC	-	-	20	-	3	50	50	100	10
2	INT	MVJ21INT82	Research /Industrial Internship	EC	Should be completed in 24 weeks, beginning after the sixth semester, and continuing through the seventh and eighth semesters.				3	50	50	100	5
3	SEM	MVJ21ECS83	Seminar	EC	-	-	2	-	-	100	-	100	1
				Total	-	-	22	-	6	200	100	300	16

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

Research/Industrial Internship: Viva voice will be conducted for the 24 weeks Research/Industrial/Rural Internship activities carried out during beginning after the sixth semester test and continuing through the seventh and eighth 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.