

Scheme of Teaching and Examination

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

Effective from the academic year 2021-22

Department of Electronics and Communication Engineering

Semester III

Sl. No.	Course		Course Title	BoS	Teaching hrs./week				Examination			Credits	
	Type	Code			Lecture	Tutorial	Practical	Self-Study	Duration Hrs.	CIE Marks	SEE Marks		Total Marks
1	BSC	MVJ21MA31X	Transform, Fourier Series and Numerical Methods	Maths	2	2	-	-	3	50	50	100	4
2	PCC	MVJ21EC32	Network Analysis	ECE	4	-	-	-	3	50	50	100	4
3	PCC	MVJ21EC33	EMW and Transmission Lines	ECE	2	2	-	-	3	50	50	100	3
4	IPCC	MVJ21EC34	Analog Electronic Circuits (Theory and Practical)	ECE	3	-	2	-	3	100	100	200	4
5	IPCC	MVJ21EC35	Digital System Design with Verilog (Theory and Practical)	ECE	3	-	2	Y	3	100	100	200	4
6	HSMC	MVJ21EC36	Kannada/ Constitution of India and Professional Ethics and Cyber law	Humanities	1				2	50	50	100	1
7	AEC	MVJ21EC37	Lab View (AEC3)		1		2		2	50	50	100	2
8	BSC	MVJ21MATDI P-I	ADDITIONAL MATHEMATICS-I		1	2			3	50	50	100	-
Total					16/17	4/6	6			450/500	450/500	1000	22

Kannada will be taught by the following departments- AE, AS, CH, CS, CV, AI&ML

Constitution of India and Professional Ethics will be taught by the following departments-CG,DS,EE,EE,IS,ME

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

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Semester IV

Sl. No.	Course		Course Title	BoS	Teaching hrs./week				Examination			Credits	
	Type	Code			Lecture L	Tutorial T	Practical P	Self-Study S	Duration Hrs.	CIE Marks	SEE Marks		Total Marks
1	BSC	MVJ21MA41X	Probability Theory, Complex variables and Optimization	MA	2	2	-	-	3	50	50	100	3
2	PCC	MVJ21EC42	Basic Signal Processing	ECE	3		-	-	3	50	50	100	3
3	PCC	MVJ21EC43	Control System	ECE	3		-	-	3	50	50	100	3
4	IPCC	MVJ21EC44	Data Structure and Algorithms using PYTHON (Theory and Lab)	ECE	3		2	-	3	100	100	200	4
5	IPCC	MVJ21EC45	Communication Systems (Theory and Lab)	ECE	3		2	Y	3	100	100	200	4
6	HSMC	MVJ21EC46	Kannada/ Constitution of India and Professional Ethics and Cyber law	Humanities	1	-			2	50	50	100	1
7	AEC	MVJ21EC47	Robotics (AEC4)	ECE	1	-	2		2	50	50	100	2
8	INT	MVJ21INT48	Summer Internship I	ECE	-	-	-						2
9	BSC	MVJ21MATDIP-II	Additional Mathematics-II		1	2	-	-	3	50	50	100	-
Total						16/17	2/4	6		450/500	450/500	1000	22

Kannada will be taught by the following departments- CG, DS, EE, EE, IS, ME

Constitution of India and Professional Ethics will be taught by the following departments- AE, AS, CH, CS, CV, AI&ML

Summer Internship II Viva Voce 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 semester. The internship will be considered as a head of passing and will be considered for the award of the degree. Those who do not take up / complete the internship will be declared fail and will have to complete during the subsequent examination after satisfying the internship requirements.

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Semester V

Sl. No.	Course		Course Title	BoS	Teaching hrs./week				Examination			Credits	
	Type	Code			Lecture L	Tutorial T	Practical P	Self-Study S	Duration Hrs.	CIE Marks	SEE Marks		Total Marks
1	HSMC	MVJ21EC51	Technical Management & Entrepreneurship	ECE	3	-	-	-	3	50	50	100	3
2	PCC	MVJ21EC52	Computer Organization and Architecture	ECE	3	-	-	-	3	50	50	100	3
3	IPCC	MVJ21EC53	Digital Signal Processing (Theory and Practical)	ECE	3	-	2	-	3	100	100	200	4
4	IPCC	MVJ21EC54	Microcontroller and Embedded systems (Theory and Lab)	ECE	3	-	2	Y	3	100	100	200	4
5	PEC	MVJ21EC55X	PEC 1	ECE	3	-	-	-	3	50	50	100	3
6	HSMC	MVJ21EC56	Environmental Studies	CV	1	-	-	-	2	50	50	100	1
7	AEC	MVJ21EC57	Research Methodology & IPR/Life Science (AEC5)	ECE	1	2	-	-	2	50	50	100	2
8	UHV	MVJ21UHVI58	Universal Human Values	Humanities	2	-	-	-	3	50	50	100	2
Total					19	2	4			500	500	1000	22

Course Code	Professional Elective 1
MVJ21EC551	Machine Learning Design and Application
MVJ21EC552	Operating System
MVJ21EC553	MEMS & Sensor Design
MVJ21EC554	Applications with MATLAB programming and Simulink
MVJ21EC555	Virtual & Augmented Reality

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Semester VI

Sl. No.	Course		Course Title	BoS	Teaching hrs./week				Examination				Credits
	Type	Code			Lecture L	Tutorial T	Practical P	Self-Study S	Duration Hrs.	CIE Marks	SEE Marks	Total Marks	
1	HSMC	MVJ21EC61	Wireless and Cellular Communications	ECE	2	2	-	-	3	50	50	100	3
2	IPCC	MVJ21EC63	Microwave and Antennas (Theory and Lab)	ECE	3	-	2	-	3	100	100	200	4
3	IPCC	MVJ21EC64	Computer Networks (Theory and Lab)	ECE	3	-	2	Y	3	100	100	200	4
4	OEC	MVJ21EC62X	OEC I	ECE	3	-	-	-	3	50	50	100	3
5	OEC	MVJ21EC65	MOOC Courser (OEC 2)	ECE	3	-	-	-	3	50	50	100	3
6	AEC	MVJ21EC66	3D Printing (AEC6)	ECE	2	-	-	-	2	50	50	100	1
7	PRJ	MVJ21ECPRJ67	Mini project	ECE	-	-	4	-	3	50	50	100	2
8	INT	MVJ21INT68I	Summer Internship II	ECE	-	-	-	-	3	50	50	100	2
Total					16	2	8			500	500	1000	22

Research /Industrial Internship- shall be carried out during VI and VII-semester for 24 weeks duration. The **Research /Industrial Internship** shall be on Industrial/Govt./NGO/MSME/Rural Internship/Innovation/Entrepreneurship. **Research Internship** must be taken up at Centers of Excellence (CoE)/ Study Centers established in the institute/ at the reputed research organizations. The viva-voce examinations for **Research /Industrial Internship** shall be carried out during VIII semester.

Under open elective , departments shall offer only one course. Student will have option to select one course from any of the departments.

Course Code	Open Elective I (OEC I)
MVJ21EC62X	Principles of Communication

Course Code	Open Elective2 (OEC2)
MVJ21EC65(MOOC Course)	Microcontrollers

Course Code	AEC6
MVJ21EC66	3D Printing

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Semester VII

Sl. No.	Course		Course Title	BoS	Teaching hrs./week				Examination				Credits
	Type	Code			Lecture L	Tutorial T	Practical P	Self-Study S	Duration Hrs.	CIE Marks	SEE Marks	Total Marks	
1	IPCC	MVJ21EC71	VLSI System Design (Theory and Lab)	ECE	3	-	2	-	3	100	100	200	4
2	PEC	MVJ21EC72X	Professional Elective II	ECE	3	-	-	-	3	50	50	100	3
3	PEC	MVJ21EC73X	Professional Elective III	ECE	3	-	-	-	3	50	50	100	3
4	OEC	MVJ21EC74X	OEC 3	ECE	3	-	-	-	3	50	50	100	3
5	PRJ	MVJ21ECPR76	Project Phase I	ECE	-	-	4	-	3	50	50	100	2
6	AEC	MVJ21EC77	AEC (online minimum of 4 weeks duration)	ECE	1	-	-	-	2	50	50	100	1
Total					13	-	6	-		350	350	700	16

Course Code	Professional Elective-II	Course Code	Professional Elective-III
MVJ21EC721	Medical Electronics	MVJ21EC731	Digital Image Processing
MVJ21EC722	Satellite & Radar Communication	MVJ21EC732	IoT & Wireless Sensor Networks
MVJ21EC723	Real Time Operating Systems	MVJ21EC733	Optical Communication
MVJ21EC724	Cryptography & Network Security	MVJ21EC734	Artificial Intelligence & Data Science
MVJ21EC725	Robotics & Automation	MVJ21EC735	System on chip architecture

Course Code	OEC3
MVJ21EC74X	Introduction to MATLAB and Simulink

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Semester VIII

Sl. No.	Course		Course Title	BoS	Teaching hrs./week				Examination			Credits	
	Type	Code			Lecture L	Tutorial T	Practical P	Self-Study S	Duration Hrs.	CIE Marks	SEE Marks		Total Marks
1	PRJ	MVJ21ECP81	Project Phase II	ECE	-	-	-	-	3	50	50	100	10
2	INT	MVJ21ECINT82	Research / Industrial Internship	ECE	-	-	-	-	3	50	50	100	05
3	Seminar	MVJ21ECS83	Seminar	ECE	-	-	-	-	3	50	50	100	01
Total					-	-	-	-		150	150	300	16