

**Scheme of Teaching and Examination**

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

Effective from the academic year 2021-22

Department of IIOT

## Semester III

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	MVJ21MA31X	Transform, Fourier Series and Numerical Methods	MA	2	2	-	-	3	50	50	100	4
2	PCC	MVJ21IO32	Computer Organization	IIOT	4	-	-	-	3	50	50	100	4
3	PCC	MVJ21IO33	Object Oriented Concepts with Java	IIOT	2	2	-	-	3	50	50	100	3
4	IPCC	MVJ21IO34	Introduction to embedded system design (Theory and Practical)	IIOT	3	-	2	-	3	100	100	200	4
5	IPCC	MVJ21IO35	Analog and Digital Electronics (Theory and Practical)	IIOT	3	-	2	Y	3	100	100	200	4
6	HSMC	MVJ21IO36	Kannada/ Constitution of India and Professional Ethics and Cyber law	Humanities	1				2	50	50	100	1
7	AEC	MVJ21IO37	Lab View (AEC3)	IIOT	1		2		2	50	50	100	2
8	BSC	MVJ21MATDIP-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.

# MVJ College of Engineering, Whitefield, Bangalore 560067

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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	MVJ21IO42	Operating System	IIOT	3		-	-	3	50	50	100	3
3	PCC	MVJ21IO43	Data Base Management System	IIOT	3		-	-	3	50	50	100	3
4	IPCC	MVJ21IO44	Sensor and Virtual Instrumentation (Theory and Practical)	IIOT	3		2	-	3	100	100	200	4
5	IPCC	MVJ21IO45	Data Structures and Applications (Theory and Practical)	IIOT	3		2	Y	3	100	100	200	4
6	HSMC	MVJ21IO46	Kannada/ Constitution of India and Professional Ethics and Cyber law	Humanities	1	-			2	50	50	100	1
7	AEC	MVJ21IO47	Robotics (AEC 4)	IIOT	1	-	2		2	50	50	100	2
8	INT	MVJ21INT48	Summer Internship I	IIOT	-	-	-						2
9	BSC	MVJ21MATDIP-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	MVJ21IO51	Technical Management & Entrepreneurship	IIOT	3	-	-	-	3	50	50	100	3
2	PCC	MVJ21IO52	Machine Learning	IIOT	3	-	-	-	3	50	50	100	3
3	IPCC	MVJ21IO53	Python for IOT (Theory and Practical)	IIOT	3	-	2	-	3	100	100	200	4
4	IPCC	MVJ21IO54	IOT (Theory and Practical)	IIOT	3	-	2	Y	3	100	100	200	4
5	PEC	MVJ21IO55X	PEC 1	IIOT	3	-	-	-	3	50	50	100	3
6	HSMC	MVJ21IO56	Environmental Studies	CV	1	-	-	-	2	50	50	100	1
7	AEC	MVJ21IO57	Research Methodology & IPR/Life Science (AEC5)	IIOT	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
MVJ21IO551	Industry 4.0 and IIoT
MVJ21IO552	Linear IC's and Applications
MVJ21IO553	Software Engineering

MVJ21IO554	Wireless and Cellular Communication
MVJ21IO555	Optical Communication

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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	MVJ21IO61	IIOT and Wireless Sensor Network	IIOT	2	2	-	-	3	50	50	100	3
2	IPCC	MVJ21IO63	Artificial Intelligence Theory and Practical)	IIOT	3	-	2	-	3	100	100	200	4
3	IPCC	MVJ21IO64	Cloud Computing (Theory and Practical)	IIOT	3	-	2	Y	3	100	100	200	4
4	OEC	MVJ21IO62X	OEC I	IIOT	3	-	-	-	3	50	50	100	3
5	OEC	MVJ21IO65	MOOC Courser (OEC 2)	IIOT	3	-	-	-	3	50	50	100	3
6	AEC	MVJ21IO66	3D Printing (AEC6)	IIOT	2	-	-	-	2	50	50	100	1
7	PRJ	MVJ21IOPRJ67	Mini project	IIOT	-	-	4	-	3	50	50	100	2
8	INT	MVJ21INT68I	Summer Internship II	IIOT	-	-	-	-	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.

<b>Course Code</b>	<b>Open Elective I</b>
MVJ21IO621	Industrial IoT and Applications

Course Code	Open Elective2
MVJ21IO65(MOOC Course)	Privacy and Security in IOT

Course Code	AEC6
MVJ21IO66	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	MVJ21IO71	Computer Communication Network (Theory and Practical)	IIOT	3	-	2	-	3	100	100	200	4
2	PEC	MVJ21IO72X	Professional Elective II	IIOT	3	-	-	-	3	50	50	100	3
3	PEC	MVJ21IO73X	Professional Elective III	IIOT	3	-	-	-	3	50	50	100	3
4	OEC	MVJ21IO74X	OEC 3	IIOT	3	-	-	-	3	50	50	100	3
5	PRJ	MVJ21IOPR76	Project Phase I	IIOT	-	-	4	-	3	50	50	100	2
6	AEC	MVJ21IO77	AEC (online minimum of 4 weeks duration)	IIOT	1	-	-	-	2	50	50	100	1
Total					13	-	6			350	350	700	16

Course Code	Professional Elective-II	Course Code	Professional Elective-III
MVJ21IO721	Design of Smart Cities	MVJ21IO731	Satellite and Radar Communication
MVJ21IO722	Cryptography and Cyber Security	MVJ21IO732	Fuzzy Logic and Neural Networks
MVJ21IO723	Applications of IOT in Robotics	MVJ21IO733	Information Theory and Coding
MVJ21IO724	Mobile Application Development for IOT	MVJ21IO734	Industrial and Medical IOT

MVJ21IO725	Digital Image Processing	MVJ21IO735	Virtual and Augmented Reality
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Course Code	Open Elective III
MVJ21IO74X	MEMS and Microsystems

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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	MVJ21IOP81	Project Phase II	IIOT	-	-	-	-	3	50	50	100	10
2	INT	MVJ21IOINT82	Research / Industrial Internship	IIOT	-	-	-	-	3	50	50	100	05
3	Seminar	MVJ21IOS83	Seminar	IIOT	-	-	-	-	3	50	50	100	01
Total					-	-		-		150	150	300	16

