MVJ College of Engineering, Whitefield, Bangalore 560067
An Autonomous Institution, Affiliated to VTU, Belagavi
Scheme of Teaching and Examination
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)
Effective from the academic year 2021-22
Department of Computer Science and Engineering

Semester III

S.No.	Course Type	Course Code	Course Title	BoS	Lecture L	Tutorial T	Practical P	Self-Study S	Duration Hrs.	CIE Marks	SEE Marks	Total Marks	Credits
1	BSC	MVJ21MCS31	Transforms and statistical methods	Mathematics	2	2	-	-	3	50	50	100	4
2	PCC	MVJ21CS32	Object Oriented Programming	CSE	4	-	-	-	3	50	50	100	4
3	PCC	MVJ21CS33	Operating Systems	CSE	2	2	-	-	3	50	50	100	3
4	IPCC	MVJ21CS34	Data Structures and Applications Lab	CSE	3	-	2	Y	3	100	100	200	4
5	IPCC	MVJ21CS35	Analog and Digital Electronics and Lab	CSE	3	-	2	-	3	100	100	200	4
6	HSMC	MVJ21CS36	Kannada/ Constitution of India and Professional Ethics and Cyber law	Humanities	1				2	50	50	100	1
7	AEC	MVJ21AEC37	Unix Shell Programming		2				2	50	50	100	2
8	BSC	MVJ21MATDIP-I	Additional Mathematics-1	Mathematics	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

S.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	MVJ21MCS41	Complex variables and numerical methods	Mathematics	2	2	-	-	3	50	50	100	3
2	PCC	MVJ21CS42	Micro Controller and Embedded System and Lab	CSE	3		-	-	3	50	50	100	3
3	PCC	MVJ21CS43	Computer Organization and Architecture	CSE	3		-	-	3	50	50	100	3
4	IPCC	MVJ21CS44	Python Programming	CSE	3		2	-	3	100	100	200	4
5	IPCC	MVJ21CS45	Design Analysis of Algorithms and Lab	CSE	3		2	Y	3	100	100	200	4
6	HSMC	MVJ21CS46	Kannada/ Constitution of India and Professional Ethics and Cyber law	Humanities	1	-			2	50	50	100	1
7	AEC	MVJ21AEC47	C# and .NET Framework		2				2	50	50	100	2
8	INT	MVJ21INT48	Summer Internship I		-	-	-						2
9	BSC	MVJ21MATDIP-II	Additional Mathematics-1	Mathematics	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

S.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	MVJ21SPM51	Software Engineering and Project Management	CSE	3	-	-	-	3	50	50	100	3
2	PCC	MVJ21CS52	Theory of Computation	CSE	3	-	-	-	3	50	50	100	3
3	IPCC	MVJ21CS53	Database Management Systems and Lab	CSE	3	-	2	-	3	100	100	200	4
4	IPCC	MVJ21CS54	Web Programming and Lab	CSE	3	-	2	Y	3	100	100	200	4
5	PEC	MVJ2155X	Professional Elective- 1		3	-	-	-	3	50	50	100	3
6	HSMC	MVJ21CIV56	Environmental Studies	CV	1	-	-	-	2	50	50	100	1
7	AEC	MVJ21AEC57	Research Methodology &IPR/Life Science	CSE	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-I
MVJ21CS551	Mobile Computing
MVJ21CS552	Visualization Techniques
MVJ21CS553	Ethical Hacking
MVJ21CS554	Compiler Design
MVJ21CS555	Digital Forensics

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Semester VI

S.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	MVJ21CS61	Mobile Application development	CSE	2	2	-	-	3	50	50	100	3
2	IPCC	MVJ21CS62	Machine Learning and lab	CSE	3	-	2	-	3	100	100	200	4
3	IPCC	MVJ21CS63	Cryptography and Network Security and lab	CSE	3	-	2	Y	3	100	100	200	4
4	OEC	MVJ21CS64	Open Elective- I		3	-	-	-	3	50	50	100	3
5	OEC	MVJ21CS65	MOOC Courser (OEC 2)		3	-	-	-	3	50	50	100	3
6	AEC	MVJ21AEC66	Angular JS Node JS	CSE	2	-	-	-	2	50	50	100	1
7	PRJ	MVJ21CSPRJ67	Mini project	CSE	-	-	4	-	3	50	50	100	2
8	INT	MVJ21INT68I	Summer Internship II	CSE	-	-	-		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
MVJ21CS641	Python Programming
MVJ21CS642	Web Technologies
MVJ21CS643	Operating Systems
MVJ21CS644	Mobile Application development
MVJ21CS645	Natural Language Processing

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Semester VII

S.No.	Course Type	Course Code	Course Title	BoS	Lecture L	Tutorial T	Practical P	Self-Study S	Duration Hrs.	CIE Marks	SEE Marks	Total Marks	Credits
1	IPCC	MVJ21CS71	Internet of Things and Lab	CSE	3	-	2	-	3	100	100	200	4
2	PEC	MVJ21CS72X	Professional Elective II	CSE	3	-	-	-	3	50	50	100	3
3	PEC	MVJ21CS73X	Professional Elective III	CSE	3	-	-	-	3	50	50	100	3
4	OEC	MVJ21CS74X	Open Elective-III		3	-	-	-	3	50	50	100	3
5	PRJ	MVJCSPR75	Project Phase I	CSE	-	-	4		3	50	50	100	2
6	AEC	MVJ21AEC76	AEC (online minimum of 4 weeks duration)		1	-	-	-	2	50	50	100	1
			Total		13	-	6			350	350	700	16

Course Code	Professional Elective-II	Course Code	Professional Elective-III	Course Code	Open Elective-II
MVJ21CS721	Artificial Intelligence	MVJ21CS731	Game Design and Development	MVJ21CS741	Introduction to Data Science
MVJ21CS722	Green Computing	MVJ21CS732	Cloud Computing	MVJ21CS742	Internet of Things
MVJ21CS723	Ethical Hacking	MVJ21CS733	Block chain Technology	MVJ21CS743	Visualization Techniques
MVJ21CS724	Cyber Security	MVJ21CS734	Big Data Analytics	MVJ21CS744	Ethical Hacking
MVJ21CS725	Digital Image Processing	MVJ21CS735	Agile Technologies	MVJ21CS745	Block chain Technology

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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	MVJ21CSP81	Project Phase II	CSE	-	-	-	-	3	50	50	100	10
2	INT	MVJ21INT82	Research / Industrial Internship	CSE	-	-	-	-	3	50	50	100	05
3	Seminar	MVJ21CSS83	Seminar	CSE	-	-	-	-	3	50	50	100	01
			Total		-	-		-		150	150	300	16

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Scheme of study - 2021 Scheme- Semester VIII

Distribution of Credits

Course Type/Semester	Semester I	Semester II	Semester III	Semester IV	Semester V	Semester VI	Semester VII	Semester VIII	Total
HSMC	2	2	1	1	3+1	3	-	-	13
BSC	7	7	4	3	-	-	-	-	21
ESC	10	10	-	-	-	-	-	-	20
PCC	-	-	7	6	3	-	-	-	16
IPCC	-	-	8	8	8	8	4	-	36
PEC	-	-	-	-	-3		6	-	9
OEC	-	-	-	-		6	3		9
INT	-	-	-	2	-	2	-	5	9
Project	-	-	-	-	-	2	2	10	14
AEC	1	1	2	2	2	1	1	-	10
UHV	-	-	-	-	2	-	-	-	2
Seminar	-	-	-	-	-	-	-	1	1
Total	20	20	22	22	22	22	16	16	160