

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 Design Engineering

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	Mathematics	MA	2	2	-	-	3	50	50	100	4
2	PCC	MVJ21CG32	Object Oriented Programming		4	-	-	-	3	50	50	100	4
3	PCC	MVJ21CG33	Operating Systems		2	2	-	-	3	50	50	100	3
4	IPCC	MVJ21CG34	Data Structures & Applications & Lab		3	-	2	y	3	100	100	200	4
5	IPCC	MVJ21CG35	Analog and Digital Electronics & Lab		3	-	2	-	3	100	100	200	4
6	HSMC	MVJ21BK/SK36 MVJ21CPH36	Kannada/ Constitution of India and Professional Ethics and Cyber law		1				2	50	50	100	1
7	AEC	MVJ21AEC37	Unix Shell Programming		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.

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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	Mathematics	MA	2	2	-	-	3	50	50	100	3
2	PCC	MVJ21CG42	Microcontroller and Embedded Systems		3		-	-	3	50	50	100	3
3	PCC	MVJ21CG43	Computer Organisation and Architecture		3		-	-	3	50	50	100	3
4	IPCC	MVJ21CG44	Python Programming and lab		3		2	Y	3	100	100	200	4
5	IPCC	MVJ21CG45	Design and Analysis of Algorithms and Lab		3		2	-	3	100	100	200	4
6	HSMC	MVJ21BK/SK46 MVJ21CPH46	Kannada/ Constitution of India and Professional Ethics and Cyber law		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			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	MVJ21SPM51	Software Engineering and Project Management		3	-	-	-	3	50	50	100	3
2	PCC	MVJ21CG52	Theory of Computation		3	-	-	-	3	50	50	100	3
3	IPCC	MVJ21CG53	Database & Management Systems and Lab		3	-	2	-	3	100	100	200	4
4	IPCC	MVJ21CG54	Data Communication and Computer Networks & Lab		3	-	2	Y	3	100	100	200	4
5	PEC	MVJ21CG55X	Professional Elective-I		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 AEC5		1	2	-		2	50	50	100	2
8	UHV	MVJ21UHVI58	Universal Human Values		2	-			3	50	50	100	2
Total					19	2	4			500	500	1000	22

Course Code	Professional Elective-I
MVJ21CG551	CYBER FORENSICS AND IPR
MVJ21CG552	COMPILER DESIGN
MVJ21CG553	CRYPTOGRAPHY AND NETWORK SECURITY
MVJ21CG554	CLOUD COMPUTING
MVJ21CG555	WAVELET TRANSFORMS & ITS APPLICATIONS

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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	MVJ21CG61	Data Science		2	2	-	-	3	50	50	100	3
2	IPCC	MVJ21CG62	Web Development and Lab		3	-	2	-	3	100	100	200	4
3	IPCC	MVJ21CG63	Machine Learning and Lab		3	-	2	Y	3	100	100	200	4
4	OEC	MVJ21CG64X	Open Elective-I		3	-	-	-	3	50	50	100	3
5	OEC	MVJ21CG65	MOOC Courser (OEC 2)		3	-	-	-	3	50	50	100	3
6	AEC	MVJ21AEC66	ANGULAR JS AND NODE JS		2	-	-	-	2	50	50	100	1
7	PRJ	MVJ21CGPRJ67	Mini project		-	-	4	-	3	50	50	100	2
8	INT	MVJ21INT68I	Summer Internship II		-	-	-	-	3	50	50	100	2
Total					16	2	8			500	500	1000	22

Research /IndustrialInternship- shall be carried out during VI and VII-semester for 24 weeks duration. The **Research /IndustrialInternship** 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 /IndustrialInternship** 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
MVJ21CG641	BRAIN COMPUTER INTERFACE
MVJ21CG642	VISUAL DESIGN & COMMUNICATION
MVJ21CG643	INFORMATION RETRIEVAL
MVJ21CG644	GPU COMPUTING
MVJ21CG645	VISUALIZATION TECHNIQUES

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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	MVJ21CG71	Internet of Things and Lab		3	-	2	-	3	100	100	200	4
2	PEC	MVJ21CG72X	Professional ElectiveII		3	-	-	-	3	50	50	100	3
3	PEC	MVJ21CG73X	Professional ElectiveIII		3	-	-	-	3	50	50	100	3
4	OEC	MVJ21CG74X	OEC 3		3	-	-	-	3	50	50	100	3
5	PRJ	MVJ21CGPR75	Project Phase I		-	-	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-III
MVJ21CG721	ARTIFICIAL INTELLIGENCE	MVJ21CG731	MOBILE AND PERVASIVE COMPUTING	MVJ21CG741	PHOTOGRAPHY
MVJ21CG722	AGILE TECHNOLOGIES	MVJ21CG732	COMPUTER APPLICATIONS IN DESIGN	MVJ21CG742	VIDEO PRODUCTION TECHNIQUES
MVJ21CG723	SPATIAL INFORMATION SYSTEM	MVJ21CG733	GAME DESIGN & DEVELOPMENT	MVJ21CG743	EDITING TECHNIQUES
MVJ21CG724	COMPUTATIONAL PHOTOGRAMMETRY	MVJ21CG734	COMPUTER GRAPHICS	MVJ21CG744	MOTION GRAPHICS
MVJ21CG725	COGNITIVE SCIENCE	MVJ21CG735	3D ANIMATION	MVJ21CG745	COMPUTER VISION

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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	MVJ21CGP81	Project Phase II		-	-	-	-	3	50	50	100	10
2	INT	MVJ21CGINT82	Research / Industrial Internship		-	-	-	-	3	50	50	100	05
3	Seminar	MVJ21CGS83	Seminar		-	-	-	-	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