

MVJ College of Engineering, Bengaluru

(An Autonomous Institute)

Affiliated to VTU, Belagavi, Approved by AICTE, New Delhi, Recognised by UGC with 2(f) & 12 (B), Accredited by NBA & NAAC

Scheme of Teaching and Examination 2021-22

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

Department of Computer Science and Design

III SEMESTER

					Tea	ching H	ours/We	ek		Exa	mination		
Sl. No.		Course	Course Title		Theory/ lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
	Type	Code			L	T	P	S	Du				
1	BSC	MVJ21MA31B	Discrete Mathematical Structures and Probability	MA	3	2	0	-	3	50	50	100	4
2	PCC	MVJ21CG32	Object Oriented Programming	CG	3	2	0	-	3	50	50	100	4
3	PCC	MVJ21CG33	Operating System	CG	3	0	0	-	3	50	50	100	3
4	IPCC	MVJ21CG34	Data Structure and Applications	CG	3	0	2	-	3	100	100	200	4
5	IPCC	MVJ21CG35	Analog and Digital Electronics	CG	3	0	2	Y	3	100	100	200	4
6	HSMC	MVJ21SK/BK36	Kannada	Any Department	1	0	0	ı	2	50	50	100	1
7	AEC	MVJ21CGA37	UNIX Shelling Programming	CG	1	0	2	-	2	50	50	100	2
8	BSC	MVJ21MATDIP-I	Additional Mathematics-I	MA	1	2	0	-	3	50	50	100	-
				Total	18/19	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 programs. The successful completion of the program is mandatory for the award of the degree.

IV SEMESTER

					Tea	ching I	Tours/We	ek		Exa	amination		
Sl. No.		Course	Course Title		Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
	Type	Code			L	Т	P	S	Du				
1	BSC	MVJ21MA41B	Operations Research, Numerical and Statistical Methods	MA	2	2	0	-	3	50	50	100	3
2	PCC	MVJ21CG42	Microcontroller and Embedded Systems	CG	3	0	0	-	3	50	50	100	3
3	PCC	MVJ21CG43	Computer Organisations and Architecture	CG	3	0	0	-	3	50	50	100	3
4	IPCC	MVJ21CG44	Python Programming	CG	3	0	2	-	3	100	100	200	4
5	IPCC	MVJ21CG45	Design And Analysis of Algorithms	CG	3	0	2	Y	3	100	100	200	4
6	HSMC	MVJ21CPH46	Constitution of India and Professional Ethics and Cyber Law	Any department	1	0	0	-	2	50	50	100	1
7	AEC	MVJ21CGA47	.Net and C# Framework	CG	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					ınd III	-	-	-	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	450/500	450/500	900/1000	22	

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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 02 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

					Tea	ching H	ours/We	ek		Exa	mination			
SI. No.		Course	Course Title	BOS	Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	Credits	
	Type Code				L	Т	P	S	Du					
1	HSMC	MVJ21CG51	Software Engineering Management	CG	3	0	0	-	3	50	50	100	3	
2	PCC	MVJ21CG52	Theory of Computation	CG	3	0	0	-	3	50	50	100	3	
3	IPCC	MVJ21CG53	Database Management Systems	CG	2	2	2	-	3	100	100	200	4	
4	IPCC	MVJ21CG54	Data Communication and Computer Networks	CG	2	2	2	Y	3	100	100	200	4	
5	PEC	MVJ21CG55X	Professional Elective – I	CG	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	3 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
MVJ21CG551	Cyber Forensics and IPR
MVJ21CG552	Complier Design
MVJ21CG553	Cryptography and Network Security
MVJ21CG554	Cloud Computing

VI SEMESTER

					Те	eaching l	Hours/We	ek		Exam	ination		
Sl. No.		Course	Course Title	BOS	Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	Duration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
	Type	Code			L	Т	P	S	Ω				
1	HSMC	MVJ21CG61	Project management with OOMD	CG	3	0	0	-	3	50	50	100	3
2	IPCC	MVJ21CG62	Web Development	CG	3	0	2	Y	3	100	100	200	4
3	IPCC	MVJ21CG63	Machine Learning	CG	3	0	2	-	3	100	100	200	4
4	OEC	MVJ21CG64X	Open Elective-I	CG	3	0	0	-	3	50	50	100	3
5	OEC	MVJ21CG65X	MOOC Courses (Open Elective-II)	CG			course sl WAYAM		selecte	d from o	nline pla	ntforms	3
6	AEC	MVJ21CGA66	ANGULAR JS AND NODE JS	CG	2	0	0	-	2	50	50	100	1
7	PRJ	MVJ21CGMP67	Mini Project	CG	0	0	4	-	3	50	50	100	2
8					ing the in		g	50	50	100	2		
				Total	14	0	8	-	17	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
MVJ21CG641	Brain Computer Interface
MVJ21CG642	Visual Design and Communication
MVJ21CG643	Information Retrieval
MVJ21CG644	GPU Computing

					Tea	aching I	Hours/W	eek		Exami	nation		
S1. No.		Course	Course Title	BOS	Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	uration in Hours	CIE Marks	SEE Marks	Total Marks	Credits
	Type	Code			L	T	P	S	О				
1	IPCC	MVJ21CG71	Internet of Things	CG	3	0	2		3	100	100	200	4
2	PEC	MVJ21CG72X	Professional Elective-II	CG	3	0	0		3	50	50	100	3
3	PEC	MVJ21CG73X	Professional Elective-III	CG	3	0	0		3	50	50	100	3
4	OEC	MVJ21CG74X	Open Elective-III	CG	3	0	0		3	50	50	100	3
5	PRJ	MVJ21CGP75	Project Phase-I	CG	0	0	4		3	50	50	100	2
6	AEC	MVJ21CGA76	Ability Enhancement Course-4	CG	A four platfor		ourse sh	ould be	selected	from o	online		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
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	Computer graphics	MVJ21CG743	Motion Graphics
MVJ21CG724	Cognitive science	MVJ21CG734	3D animation	MVJ21CG744	Computer Vision

VIII SEMESTER

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	Course	Course Title	BOS	Teaching Hours/Week	Examination	C

SI. No.					Theory lecture	Tutorials	Practical/ Drawing	Self-Study Components	uration in Hours	CIE Marks	SEE Marks	Total Marks	
	Type	Code			L	T	P	S	Du			·	
1	PRJ	MVJ21CGP81	Project Phase-II	CG	-	-	20	-	3	50	50	100	10
2	INT	MVJ21INT82	Research /Industrial Internship	CG	the sixth ser		24 weeks, begontinuing throsters.		3	50	50	100	5
3	SEM	MVJ21CGS83	Seminar	CG	-	-	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.

HOD CG Dean Academics