

## Department of Computer Science & Engineering

### III SEMESTER B.E. (6 Theory, 2 Labs, 1 Kannada/CPH, 1 MATDIP, 1 AICTE Activity)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	Type	Code			L	T	P					
1	BSC	MVJ19MCS31	Discrete Mathematical Structures And Probability	Mathematics	3	0	0	3	50	50	100	3
2	PCC	MVJ19CS32	Data Structures and Applications	CSE Dept	3	2	0	3	50	50	100	4
3	PCC	MVJ19CS33	Object Oriented Programming	CSE/ECE Dept	3	0	0	3	50	50	100	3
4	PCC	MVJ19CS34	Unix Shell Programming	CSE Dept	3	0	0	3	50	50	100	3
5	PCC	MVJ19CS35	Computer Organization and Architecture	CSE Dept	3	0	0	3	50	50	100	3
6	PCC	MVJ19CS36	Analog and Digital Electronics	CSE Dept	3	0	0	3	50	50	100	3
7	PCC	MVJ19CSL37	Data Structures and Applications Laboratory	CSE Dept	0	2	2	3	50	50	100	2
8	PCC	MVJ19CSL38	Analog and Digital Electronics Laboratory	CSE/ECE Dept	0	2	2	3	50	50	100	2
9	HSM C	MVJ19SK/BK39	Kannada	Humanities	1	0	0	3	50	50	100	1
		MVJ19CPH39	CPH					3	50	50		
10	NMC	MVJ19MATDIP31	Additional Mathematics-1	Mathematics				3	50	50	100	-
	NMC	AICTE Activity for 80-90 hours (20 points)		-	-	-	-	-	-	-	-	-
<b>Total</b>					20	1	8	30	500	500	1000	<b>24</b>

Note: BSC: Science, Professional Course, HSMC: Humanity and Social Science MVJ19MXXDIP301-  
non-credit course, Non-credit mandatory

**IV SEMESTER B.E.(6 Theory,2 Labs,1 Kannada/CPH, 1 MATDIP, 1 AICTE Activity**

S No	Course		Course Title	Teaching Department	Teaching hours/week				Examination				Credits	
	Type	Code			Theory Lect	Tutorial	Practical / Drawing	Duration in Hours	CIE Marks	SEE Marks	Total Marks			
												L		T
1	BSC	MVJ19MCS41	Operations Research, Numerical and Statistical Methods	Mathematics	3	0	0	0	3	50	50	100	3	
2	PCC	MVJ19CS42	Analysis and Design of Algorithms	CSE Dept	3	2	0	0	3	50	50	100	4	
3	PCC	MVJ19CS43	Software Engineering	CSE Dept	3	0	0	0	3	50	50	100	3	
4	PCC	MVJ19CS44	Operating Systems	CSE Dept	3	0	0	0	3	50	50	100	3	
5	PCC	MVJ19CS45	Micro Controller and Embedded Systems	CSE Dept	3	0	0	0	3	50	50	100	3	
6	PCC	MVJ19CS46	Data Communication	CSE Dept	3	0	0	0	3	50	50	100	3	
7	PCC	MVJ19CSL47	Analysis and Design of Algorithms Lab	CSE Dept	0	2	2	2	3	50	50	100	2	
8	PCC	MVJ19CSL48	Micro Controller and Embedded Systems Lab	CSE/ECE Dept	0	2	2	2	3	50	50	100	2	
9	HSM C	MVJ19SK/BK49	Kannada	Humanities	1	0	0	0	3	50	50	100	1	
		MVJ19CPH49	CPH											
10	NCMC	MVJ19MATDIP41	Additional Mathematics-2	Mathematics					3	50	50	100	-	
	NCMC	AICTE Activity for 80-90 hours (20 points)			-	-	-	-	-	-	-	-	-	-
			<b>Total</b>		22	1	6	6	30	500	500	1000	<b>24</b>	

Note: BSC: Basic Science, PCC: Professional Core Course, HSMC: Humanity and Social Science, MVJ19MXXDIP401-Mandatory non-credit course, NCMC: Non-credit mandatory course

**V SEMESTER B.E.(5 Theory,3 Labs, 1 Environmental study, 1 AICTE Activity)**

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1	HSMC	MVJ19TIM51	Management & Entrepreneurship	CSE Dept	3	0	0	3	50	50	100	3
2	PCC	MVJ19CS52	Data base Management Systems	CSE Dept	3	2	0	3	50	50	100	4
3	PCC	MVJ19CS53	Computer Networks	CSE Dept	3	2	0	3	50	50	100	4
4	PCC	MVJ19CS54	Web Programming	CSE Dept	3	0	0	3	50	50	100	3
5	PE	MVJ19CS55X	Professional Elective – I	CSE Dept	3	0	0	3	50	50	100	3
6	PCC	MVJ19CSL56	management Systems Laboratory	CSE Dept	0	2	2	3	50	50	100	2
7	PCC	MVJ19CSL57	Communication Network Laboratory	CSE Dept	0	2	2	3	50	50	100	2
8	PCC	MVJ19CSL58	Web Programming Laboratory	CSE Dept	0	2	2	3	50	50	100	2
9	HSMC	MVJ19ENV59	Environmental Studies	Humanities	1	0	0	3	50	50	100	1
	NMC	AICTE Activity for 80-90 hours (20 points)		-	-	-	-	-	-	-	-	-
<b>Total</b>					20	8	8	27	450	450	1000	<b>24</b>

Note: PCC: Professional Core Course, PE: Professional Elective, HSMC: Humanity and Social Science, NCMC: Non-credit mandatory course

Course Code	Professional Elective-I
MVJ19CS551	Theory of Computation
MVJ19CS552	Software Testing
MVJ19CS553	Law for Engineers
MVJ19CS554	Parallel and Distributed Systems

**VI SEMESTER B.E.(5 Theory,2 Labs,1 MiniProject,1 AICTE Activity)**

S No	Course		Teaching Department	Course Title	Teaching hours/week				Examination				Credits
	Type	Code			Theory	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks		
												L	
1	PCC	MVJ19CS61	CSE Dept	Python Application Programming	3	2	0	3	50	50	100	4	
2	PCC	MVJ19CS62	CSE Dept	Cryptography and Network Security	3	2	0	3	50	50	100	4	
3	PE	MVJ19CS63 X	CSE Dept	Professional Elective-II	3	0	0	3	50	50	100	3	
4	PE	MVJ19CS64 X	CSE Dept	Professional Elective-III	3	0	0	3	50	50	100	3	
5	OE	MVJ19CS65 X	CSE Dept	Open Elective-I	3	0	0	3	50	50	100	3	
6	PCC	MVJ19CSL6 6	CSE Dept	Python Application Programming Laboratory	0	2	2	3	50	50	100	2	
7	PCC	MVJ19CSL67	CSE Dept	Cryptography and Network Security Laboratory	0	2	2	3	50	50	100	2	
8	Proj	MVJ19CSP6 8	CSE Dept	Mini-Project/product development	-	-	-	3	50	50	100	3	
9	NCMC	AICTE Activity for 80-90 hours (20 points)	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>								<b>24</b>	<b>400</b>	<b>400</b>	<b>800</b>	<b>24</b>	
Note: PCC: Professional Core Course, PE: Professional Elective, OE: Open Elective, Proj: Project Work, NCMC: Non-credit mandatory course													
<b>Course Code</b>		<b>Professional Elective-II</b>		<b>Course Code</b>		<b>Professional Elective-III</b>		<b>Course Code</b>		<b>Open Elective-I</b>			
MVJ19CS63 1	Mobile Application development		MVJ19CS641		Artificial Intelligence		MVJ19CS651		Object Oriented Analysis and Design				
MVJ19CS63 2	Cloud Computing		MVJ19CS642		Data Analytics		MVJ19CS652		Web Technologies				

MVJ19CS63 3	Agile Technologies	MVJ19CS643	Language Processors	MVJ19CS653	Networks and Security	Systems
MVJ19CS63 4	Social Network Analysis	MVJ19CS644	User Interface Design	MVJ19CS654	Mobile Computing	

VII SEMESTER B.E.(5 Theory, 2 Labs, Project Phase-I, 1 AICTE Activity)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	L	T			P							
1	PCC	MVJ19CS71	Internet of Things	CSE Dept	3	2	0	3	50	50	100	4
2	PCC	MVJ19CS72	Machine Learning	CSE Dept	3	2	0	3	50	50	100	4
3	PE	MVJ19CS73X	Professional Elective-IV	CSE Dept	3	0	0	3	50	50	100	3
4	PE	MVJ19CS74X	Professional Elective-V	CSE Dept	3	0	0	3	50	50	100	3
5	OE	MVJ19CS75X	Open Elective-II	CSE Dept	3	0	0	3	50	50	100	3
6	PCC	MVJ19CSL76	Internet of Things Lab	CSE Dept	0	2	2	3	50	50	100	2
7	PCC	MVJ19CSL77	Machine Learning Lab	CSE Dept	0	2	2	3	50	50	100	2
8	Proj	MVJ19CSP78	Project Phase-1	CSE Dept	-	-	-	-	50	-	50	2
9	NCCM	AICTE Activity for 80-90 hours (20 points)			-	-	-	-	-	-	-	-
<b>Total</b>					17	6	4	21	400	350	750	<b>23</b>

Note: PCC: Professional Core Course, PE: Professional Elective, OE: Open Elective, Proj: Project Work, NCCM: Non-credit mandatory course

Course Code	Professional Elective-IV	Course Code	Professional Elective-V	Course Code	Open Elective-II
MVJ19CS73 1	Green Computing	MVJ19CS74 1	Deep Learning	MVJ19CS751	Python Programming
MVJ19CS73 2	Ethical Hacking	MVJ19CS74 2	Natural Language Processing	MVJ19CS752	Cyber Forensics and IPR
MVJ19CS73 3	Digital Forensics	MVJ19CS74 3	Human Computer Interaction	MVJ19CS753	Mobile Application development
MVJ19CS73 4	Soft Computing	MVJ19CS74 4	Block chain Technology	MVJ19CS754	Machine Learning & its Application

**VIII SEMESTER B.E.(Project Phase-II, Internship,1 Technical Seminar,1 Certification course,1 AICTE Activity)**

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks		Total marks
	Type	Code			L	T	P					
1	Proj	MVJ19CSP81	ProjectPhase-2	CSE Dept	-	-	-	3	50	50	100	10
2	Int	MVJ19CSI82	Internship	CSE Dept	-	-	-	3	50	50	100	3
3	Sem	MVJ19CSS83	Seminar	CSE Dept	-	-	-	3	50	50	100	1
4	CRT	MVJ19CSC84	*Certification course	Industry/Institute	-	-	-	-	-	-	-	2
5	NCMC	AICTE Activity for 80-90 hours (20 points)			-	-	-	-	-	-	-	-
<b>Total</b>								<b>9</b>	<b>150</b>	<b>150</b>	<b>300</b>	<b>16</b>
Note: Proj: Project Work, Internship, Seminar, Course(Can be carried out during the program period but will reflect in the final semester grade card) NCMC: Non-credit mandatory course												

\* Students can opt maximum 2 certification courses covering minimum total of 30 Hours (for scoring 2 Credits in VIII sem). Students can opt either 1 course covering 30 Hours or maximum 2 courses covering 15 Hours by each course. Students can start certification course from V sem itself instead of waiting till VIII sem. Once they complete VIII sem, based on number of Hours of certification (Min.30 Hours) Credit will be awarded.

proposed Coursera Certification Courses	Course duration (Hours)	Link for the Course
Agile Software Development	12.8	<a href="https://www.coursera.org/learn/agile-software-development">https://www.coursera.org/learn/agile-software-development</a>
Text Mining and Analytics	15.4	<a href="https://www.coursera.org/learn/text-mining">https://www.coursera.org/learn/text-mining</a>
Web Application Development with JavaScript and MongoDB	18.4	<a href="https://www.coursera.org/learn/web-application-development">https://www.coursera.org/learn/web-application-development</a>

Using Python to Interact with the Operating System	29.6	<a href="https://www.coursera.org/learn/python-operating-system">https://www.coursera.org/learn/python-operating-system</a>
Python for Data Science and AI	11.4	<a href="https://www.coursera.org/learn/python-for-applied-data-science-ai">https://www.coursera.org/learn/python-for-applied-data-science-ai</a>
R Programming	19.5	<a href="https://www.coursera.org/learn/r-programming">https://www.coursera.org/learn/r-programming</a>
Multiplatform Mobile App Development with React Native	22.3	<a href="https://www.coursera.org/learn/react-native">https://www.coursera.org/learn/react-native</a>
Data Structures and Design Patterns for Game Developers	15.1	<a href="https://www.coursera.org/learn/data-structures-design-patterns">https://www.coursera.org/learn/data-structures-design-patterns</a>
DevOps Culture and Mindset	15.2	<a href="https://www.coursera.org/learn/devops-culture-and-mindset">https://www.coursera.org/learn/devops-culture-and-mindset</a>



