BASAVESHWAR ENGINEERING COLLEGE, BAGALKOTE-587 102
Department of Computer Applications (MCA)

BVVS

MCA – I Semester Scheme of teaching and examinations for 2023-2024

Sl. No.	Course	Subject Code	Subject	Credits	Hours/Week			Examination Marks		
					Lecture	Tutorial	Practical	CIE	SEE	Total
1.	BSC	23PCA101C	Mathematical Foundations for Computer Applications	03	03	-	-	50	50	100
2.	PCC	23PCA102C	Python Programming	04	04	-	-	50	50	100
3.	PCC	23PCA103C	Web Programming	03	03	-	-	50	50	100
4.	PCC	23PCA104C	Operating Systems& Shell Programming	03	03	-	-	50	50	100
5.	IPCC	23PCA105C	Computer Networks	04	03		02	50	50	100
6.	MCC	23PCA106C	Research Methodology & IPR	03	03	-	-	50	50	100
7.	PCCL	23PCA107L	Python Programming Laboratory	02	-	-	04	50	50	100
8.	PCCL	23PCA108L	Web Programming Laboratory	02	-	-	04	50	50	100
9.	SEM	23PCA109S	Seminar	02	-	-	-	50	50	100
10.	BC	23PCA110M - BC*	Introduction to Programming Languages		03			100	--	100
			Total	**26**	**22**	**--**	**10**	**550**	**450**	**1000**

* BSC-Basic Science Courses, PCC- Professional Core Course, PCCL- Professional Core Courses Lab, IPCC- Integrated Professional Core Course, MCC-Mandatory Core Course, *Only for non-computer science students

Introduction to Programming Languages: Principles of Programming Languages course is a non-credit course introduced to the students who admits into MCA program from non-computer science background.

Integrated Professional Core Course: The theory part of the IPCC shall be evaluated both by CIE and SEE. The Practical part shall be evaluated by only CIE.

Seminar: The Head of the Department shall make an arrangement for conducting seminars through concerned faculty members of the Department. The committee, constituted for the purpose by the Head of the Department, shall award the CIE and SEE marks for the seminar. The committee comprising of Guide/Co-Guide, Senior faculty of the department and HoD/HoD nominee.

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MCA - II Semester Scheme of teaching and examinations for 2023-2024

Sl. No.	Course	Subject Code	Subject	Credits	Hours/Week			Examination Marks		
					Lecture	Tutorial	Practical	CIE	SEE	Total
1.	PCC	23PCA201C	Data Structures and Algorithms	03	03	-	-	50	50	100
2.	PCC	23PCA202C	Java and J2EE	04	04	-	-	50	50	100
3.	IPCC	23PCA203C	Database Management Systems	04	03	-	02	50	50	100
4.	PCC	23PCA204C	Technical Communication	03	03	-	-	50	50	100
5.	PEC	23PCAXXXE	Professional Elective-I	03	03	-	-	50	50	100
6	PEC	23PCAXXXE	Professional Elective-II	03	03	-	-	50	50	100
7.	PCCL	23PCA205L	Data Structures Laboratory	02	-	-	04	50	50	100
8.	PCCL	23PCA206L	Java and J2EE Laboratory	02	-	-	04	50	50	100
9.	MP	23PCA207P	Mini Project	02	-	-	04	50	50	100
10	AUD/AEC	23PCA001O	ONLINE Courses	Classes & evaluation procedures are as per the policy of the online course providers and BOS						PP
			Total	26	19	-	14	450	450	900

PCC: Professional Core Course, IPCC-Integrated Professional Core Course, PCCL- Professional Core Courses Lab ,PEC-Professional Elective Courses, PP-Passing is Mandatory ,MP-Mini Project, AUD/AEC –Audit Course / Ability Enhancement Course

Mini Project: Students are expected to take up mini project with a team size not exceeding 3. The objective of this course is to develop real time mini projects using latest technologies. CIE marks shall be awarded by a committee comprising of Guide/Co-guide if any, Project Coordinator/Nominee of Project Cordinaor and HoD/ HoD nominee. The CIE marks awarded, shall be based on the Application Development and Project Presentation skill ,evaluation of Project Report and performance in the Question and Answer session in the ratio of 50:25:25. SEE marks shall be awarded by a committee comprising of Internal Examiner and External Examiner. The SEE marks awarded, shall be based on the Application Development and Project Presentation skill , evaluation of Project Report and performance in the Question and Answer session in the ratio of 50:25:25.

Online Certification Course: MOOC/NPTEL is the ONLINE course. Student must register and complete the online certification courses individually. Student shall take up any online certification courses which are chosen in the area of computer science. Duration may span from 8 – 12 weeks and should complete the courses during the MCA program. Students must produce the hardcopy of the registration details and confirmation details to the concerned faculty advisor without fail.

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Professional Elective-I		Professional Elective-II	
Subject Code	**Subject**	**Subject Code**	**Subject**
23PCA208E	Data Mining	23PCA212E	Introduction to Artificial Intelligence
23PCA209E	Cloud Computing	23PCA213E	DevOps
23PCA210E	Mobile Application Development	23PCA214E	Android Programming Concepts
23PCA211E	Computer Vision	23PCA215E	Natural Language Processing

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MCA – III Semester Scheme of teaching and examinations for 2023-2024

Sl. No.	Course	Subject Code	Subject	Credits	Hours/Week			Examination Marks		
					Lecture	Tutorial	Practical	CIE	SEE	Total
1.	PCC	23PCA301C	Software Engineering and Agile Practices	3	03	-	-	50	50	100
2.	IPCC	23PCA302C	Internet of Things	3	03	-	02	50	50	100
3.	PCC	23PCA303C	Web 2.0	4	03	-	-	50	50	100
4.	PEC	23PCAXXXE	Professional Elective-III	3	03	-	-	50	50	100
5.	PEC	23PCAXXXE	Professional Elective-IV	3	03	-	-	50	50	100
6.	PCCL	23PCA304L	OOMD Laboratory	2	-	-	04	50	50	100
7.	PCCL	23PCA305L	Web 2.0 Laboratory	2	-	-	04	50	50	100
8.	SP	23PCA306P	Societal Project	2	-	-	04	100	--	100
9.	INTR	23PCA307I	Internship	04	(08 weeks of Internship completed during the intervening vacation of II and III semesters)			100	--	100
			Total	**26**	**15**	**--**	**14**	**550**	**350**	**900**

PCC: Professional Core Course, IPCC - Integrated Professional Core Course, PEC - Professional Elective Courses, PCCL - Professional Core Courses Lab, MP-Mini Project, SP-Societal Project, INT-Internship

Societal Project: Students in consultation with the internal guide for applying technology to workout/proposing viable solutions for societal problems. Students are expected to take up project with a team size not exceeding 2. CIE marks shall be awarded by a committee comprising of Guide, a senior faculty of the department and HoD/ HoD nominee. The CIE marks awarded, shall be based on the evaluation of Project Report, Project Presentation skill, and performance in the Question and Answer session in the ratio of 50:25:25. Those, who have not pursued /completed the Societal Project, shall be declared as fail in the course and have to complete the same during subsequent semester/s after satisfying the Societal Project requirements. There is no SEE for this course.

Internship: All the students shall have to undergo a mandatory internship of 08 weeks during the intervening vacation of II and III semesters. CIE marks shall be awarded by a committee comprising of Guide, a Senior faculty of the department and HoD/HoD nominee. The 100 CIE marks is awarded based on the evaluation of Report(50 marks) and Presentation skill(50 marks). Those, who have not pursued /completed the Internship, shall be declared as fail in the course and have to complete the same during subsequent semester/s after satisfying the Internship requirements.

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Professional Elective-III		Professional Elective-IV	
Subject Code	Subject	Subject Code	Subject
23PCA308E	Big Data Analytics	23PCA312E	Introduction to Machine Learning
23PCA309E	Cyber Security	23PCA313E	Block Chain Technology
23PCA310E	Dart and Flutter Framework	23PCA314E	Modern Application Development
23PCA311E	Software Testing	23PCA315E	User Interface Design

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MCA – IV Semester Scheme of teaching and examinations for 2023-2024

Sl. No.	Course	Subject Code	Subject	Credits	Hours/Week			Examination Marks		
					Lecture	Tutorial	Practical	CIE	SEE	Total
1.	PROJ	23PCA401P	Project Work	22	-	-	-	50	50	100
			Total	**22**	-	-	-	**50**	**50**	**100**

Project Work : The project work shall be carried out individually. CIE marks shall be awarded by a committee comprising of Guide/Co-guide and a senior faculty of the department and HoD/HoD Nominee. CIE evaluation shall be based on the Project Report, Project Presentation skill, and performance in the Question and Answersession in the ratio of 50:25:25. SEE shall be awarded by a committee comprising of Internal and External examiner. SEE evaluation shall be based on project report, live demo/source code analysis, question & answer session after satisfying the plagiarism check. Plagiarism checks shall be as per the University norms.