

MCA CURRICULUM R-2022

SEMESTER I

Table – I

Subject Code	Course Title	Category	L	T	P	C
Theory						
122CAT01	Applied Statistics For Data Analysis	FC	3	1	0	4
122CAT02	Python Programming	PCC	3	0	0	3
122CAT03	Database Management Systems	PCC	3	0	0	3
122CAT04	Data Structures and Algorithms	PCC	3	0	0	3
122CAT05	Research Methodology	RMC	2	0	0	2
122CAE--	Choice – 1 (Professional Elective - I)	PEC	3	0	0	3
Audit - I Course (Optional)						
122CAE--	Choice – 2 (Audit – I)	AC	2	0	0	0
Practical						
122CAP01	Database Management Systems Lab	PCC	0	0	4	2
122CAL--	Choice – 3 (Professional Elective Lab – I)	PEC	0	0	4	2
122CAL--	Choice – 4 (Professional Elective Lab – I)	PEC	0	0	4	2

Table – II

Subject Code	Course Title	Category	L	T	P	C
Professional Elective - I Courses						
122CAE01	Software Engineering	PEC	3	0	0	3
122CAE02	Computer Networks	PEC	3	0	0	3
122CAE03	Problem Solving Techniques	PEC	3	0	0	3
122CAE04	Digital Fundamental and Computer Organization	PEC	3	0	0	3
122CAE05	Artificial Intelligence	PEC	3	0	0	3
Professional Elective Lab – I Courses						
122CAL01	Data Structures and Algorithms Lab	PEC	0	0	4	2
122CAL02	Network Programming Lab	PEC	0	0	4	2
122CAL03	Applied Statistics For Data Analysis Lab	PEC	0	0	4	2
122CAL04	Problem Solving Techniques Lab	PEC	0	0	4	2
122CAL05	Python Programming Lab	PEC	0	0	4	2

SEMESTER II

Table – I

Subject Code	Course Title	Category	L	T	P	C
Theory						
222CAT01	Advanced Java Programming	PCC	3	0	0	3
222CAT02	Data Mining and Data Warehousing	PCC	3	0	0	3
222CAT03	Full Stack Web Development	PCC	3	0	0	3
222CAT04	Cloud Computing	PCC	3	0	0	3
222CAE--	Choice – 5 (Professional Elective – II)	PEC	3	0	0	3
222CAE--	Choice – 6 (Employability Enhancement Courses)	EEC	3	0	0	3
Audit – II Course (Optional)						
222CAE--	Choice – 7 (Audit – II)	AC	2	0	0	0
Practical						
222CAP01	Advanced Java Programming Lab	PCC	0	0	4	2
222CAL--	Choice – 8 (Professional Elective Lab – II)	PEC	0	0	4	2
222CAL--	Choice – 9 (Employability Enhancement Lab)	EEC	0	0	4	2
MOOC – I (Optional)						
---	MOOC – I	ECC	0	0	0	(0-3)

Table – II

Subject Code	Course Title	Category	L	T	P	C
Professional Elective - II Courses						
222CAE01	Machine Learning Techniques	PEC	3	0	0	3
222CAE02	Internet of Things	PEC	3	0	0	3
222CAE03	Block Chain Technology	PEC	3	0	0	3
222CAE04	Mobile Computing	PEC	3	0	0	3
222CAE05	C# and Dot Net Programming	PEC	3	0	0	3
Employability Enhancement Courses						
222CAE06	Professional Communication	EEC	3	0	0	3
222CAE07	Personality Development	EEC	3	0	0	3
222CAE08	Aptitude Skill Training	EEC	3	0	0	3
222CAE09	Entrepreneurship Development	EEC	3	0	0	3
Professional Elective Lab – II Courses						
222CAL01	Machine Learning Techniques Lab	PEC	0	0	4	2
222CAL02	Web Development Lab	PEC	0	0	4	2
222CAL03	C# and Dot Net Programming Lab	PEC	0	0	4	2
222CAL04	Data Mining and Data Warehousing Lab	PEC	0	0	4	2
222CAL05	Cloud Computing Lab	PEC	0	0	4	2
Employability Enhancement Lab Courses						
222CAL06	Executive Communication Lab	EEC	0	0	4	2
222CAL07	Report Writing Lab	EEC	0	0	4	2

SEMESTER III**Table – I**

Subject Code	Course Title	Category	L	T	P	C
Theory						
322CAT01	Mobile Application Development	PCC	3	0	0	3
322CAT02	Devops	PCC	3	0	0	3
322CAT03	Service Oriented Architecture	PCC	3	0	0	3
322CAE--	Choice – 10 (Professional Elective – III)	PEC	3	0	0	3
322CAE--	Choice – 11 (Open Elective)	OEC	3	0	0	3
Practical						
322CAP01	Mini Project	EEC	0	0	4	2
322CAL--	Choice–12 (Professional Elective Lab – III)	PEC	0	0	4	2
322CAL--	Choice–13 (Professional Elective Lab – III)	PEC	0	0	4	2
MOOC – II (Optional)						
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Table – II

Subject Code	Course Title	Category	L	T	P	C
Professional Elective – III Courses						
322CAE01	Data Visualization Techniques	PEC	3	0	0	3
322CAE02	Advanced Java Scripting Language	PEC	3	0	0	3
322CAE03	Agile Software Development	PEC	3	0	0	3
322CAE04	Deep Learning Techniques	PEC	3	0	0	3
322CAE05	Information Security	PEC	3	0	0	3
Open Elective Courses						
322CAE06	Fundamentals of Accounting	OEC	3	0	0	3
322CAE07	Business Process	OEC	3	0	0	3
322CAE08	Digital Marketing	OEC	3	0	0	3
322CAE09	Human Resource Management	OEC	3	0	0	3
322CAE10	Wireless Sensor Networks	OEC	3	0	0	3
Professional Elective Lab – III Courses						
322CAL01	Data Visualization Techniques Lab	PEC	0	0	4	2
322CAL02	Mobile Application Development Lab	PEC	0	0	4	2
322CAL03	Advanced Java Scripting Language Lab	PEC	0	0	4	2
322CAL04	Information Security Lab	PEC	0	0	4	2
322CAL05	Software Testing Lab	PEC	0	0	4	2

SEMESTER IV**Table – I**

Subject Code	Course Title	Category	L	T	P	C
Project						
422CAP01	Project Work	ECC	0	0	35	15

BRIDGE COURSES**(For the Students admitted under Non-Computer background)****Table – I**

Subject Code	Course Title	Category	L	T	P	C
Semester - I						
122CAB01	Fundamentals of Computing And Programming - I	***	3	0	0	0
122CBP01	Fundamentals of Computing And Programming Lab - I	***	0	0	3	0
Semester - II						
222CAB01	Fundamentals of Computing And Programming - II	***	3	0	0	0
222CBP01	Fundamentals of Computing And Programming Lab - II	***	0	0	3	0

AUDIT COURSES (Optional)**Table – I**

Subject Code	Course Title	Category	L	T	P	C
Audit – I Courses						
122CAE06	Constitution Of India	AC	2	0	0	0
122CAE07	Disaster Management	AC	2	0	0	0
Audit – II Courses						
222CAE11	Waste to Energy	AC	2	0	0	0
222CAE12	Fundamentals Law and Ethics	AC	2	0	0	0

EXTRA CREDIT COURSES (Optional)

Students may opt any one computer science discipline courses from Swayam NPTEL during the period of their second and third semester. The actual credit earned by them will be considered as **over and above credits**. Maximum credit is 3 per semester (one course only).

Total Credit Summary

S.No.	Category	Credits Per Semester				Total Credits
		I	II	III	IV	
1.	FC	04	00	00	00	04
2.	PCC	11	14	09	00	34
3.	PEC	07	05	07	00	19
4.	OEC	00	00	03	00	03
5.	EEC	00	05	02	15	22
6.	RMC	02	00	00	00	02
7.	ECC	00	(0-3)	(0-3)	00	(0-6)
8.	AC	00	00	00	00	00
Total Credits		24	24(0-3)	21(0-3)	15	84(0-6)

- FC Foundation Courses
- PCC Professional Core Courses
- PEC Professional Elective Courses
- OEC Open Elective Courses
- EEC Employability Enhancement Courses
- RMC Research Methodology Courses
- ECC Extra Credit Courses
- AC Audit Courses