



## Curriculum and Syllabi

# MASTER OF COMPUTER APPLICATIONS

## SEMESTERS I to IV

## Regulations 2025

**Programme: MASTER OF COMPUTER APPLICATIONS**

**2025 Regulations**

**(2025-27 Batch Onwards)**

**Curriculum for Semesters I to IV**

**SEMESTER I**

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
<b>Theory Cum Practical Courses</b>														
1	25CA101	Web Design and Development	3	0	2	3	45	0	30	45	120	4	50/50	PCC
2	25CA102	Advanced Data Structures and Algorithms using Python	3	0	2	3	45	0	30	45	120	4	50/50	PCC
3	25CA103	Advanced Database Technologies	3	0	2	3	45	0	30	45	120	4	50/50	PCC
4	25CA104	Python Programming	3	0	2	3	45	0	30	45	120	4	50/50	PCC
5	25FC103	Digital IT Technology	3	0	2	3	45	0	30	45	120	4	50/50	FC
<b>Theory Courses</b>														
6	25CA105	Applied Modern Technologies	3	0	0	3	45	0	0	45	90	3	40/60	PCC
7		Audit Course I	2	0	0	0	30	0	0	0	30	0	100/0	AC*
<b>Practical Course</b>														
8	25EEC101	Professional Communication-I	0	0	4	0	0	0	60	0	60	2	100/0	EEC

\* Audit course is optional

**SEMESTER II**

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
<b>Theory Cum Practical Courses</b>														
1	25CA201	Object Oriented Programming using Java	3	0	2	3	45	0	30	45	120	4	50/50	PCC
2	25CA202	DevOps and Cloud Automation	3	0	2	3	45	0	30	45	120	4	50/50	PCC
3		Professional Elective I	3	0	2	3	45	0	30	45	120	4	50/50	PEC
4		Professional Elective II	3	0	2	3	45	0	30	45	120	4	50/50	PEC
<b>Theory Courses</b>														
5	25FC201	Mathematics for Computer Applications	3	1	0	4	45	15	0	60	120	4	40/60	FC
6	25RM101	Research	2	0	0	2	30	0	0	30	60	2	40/60	RMC

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
		Methodology and IPR												
7		Audit Course II	2	0	0	0	30	0	0	0	30	0	100/0	AC*
Practical Courses														
8	25EEC201	Professional Communication-II	0	0	4	0	0	0	60	0	60	2	100/0	EEC
9	25EEC204	Mini Project - I	0	0	2	0	0	0	30	0	30	1	100/0	EEC

\* Audit course is optional

### SEMESTER III

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Cum Practical Courses														
1	25CA301	Machine Learning	3	0	2	3	45	0	30	45	120	4	50/50	PCC
2	25CA302	Artificial Intelligence	3	0	2	3	45	0	30	45	120	4	50/50	PCC
3		Professional Elective III	3	0	2	3	45	0	30	45	120	4	50/50	PEC
4		Professional Elective IV	3	0	2	3	45	0	30	45	120	4	50/50	PEC
Theory Course														
5		Open Elective	3	0	0	3	45	0	0	45	90	3	40/60	OEC
Practical Course														
6	25CAP301	Mini Project - II	0	0	6	0	0	0	90	0	90	3	100/0	EEC

### SEMESTER IV

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Practical Course														
1	25CAP401	Project Work	0	0	24	0	0	0	360	0	360	12	60/40	EEC

**TOTAL NO. OF CREDITS: 84**

## AUDIT COURSES

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Courses														
1	25AC001	English for Research Paper Writing	2	0	0	0	30	0	0	0	30	0	100/0	AC
2	25AC002	Disaster Management	2	0	0	0	30	0	0	0	30	0	100/0	AC
3	25AC003	Constitution of India	2	0	0	0	30	0	0	0	30	0	100/0	AC
4	25AC004	நற்றமிழ் இலக்கியம்	2	0	0	0	30	0	0	0	30	0	100/0	AC

## PROFESSIONAL ELECTIVES

### PROFESSIONAL ELECTIVE I

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Cum Practical Courses														
1	25PCA11	Cloud Essentials	3	0	2	3	45	0	30	45	120	4	50/50	PCC
2	25PCA12	Front End Development	3	0	2	3	45	0	30	45	120	4	50/50	PCC
3	25PCA13	Internet of Things	3	0	2	3	45	0	30	45	120	4	50/50	PCC
4	25PCA14	NoSQL Databases	3	0	2	3	45	0	30	45	120	4	50/50	PEC
5	25PCA15	R Programming	3	0	2	3	45	0	30	45	120	4	50/50	PEC

### PROFESSIONAL ELECTIVE II

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Cum Practical Courses														
1	25PCA21	Cyber Security Essentials	3	0	2	3	45	0	30	45	120	4	50/50	PCC
2	25PCA22	Analytical Methods in Data Science	3	0	2	3	45	0	30	45	120	4	50/50	PCC
3	25PCA23	Advances in Operating Systems	3	0	2	3	45	0	30	45	120	4	50/50	PCC
4	25PCA24	Data Mining and Data Warehousing	3	0	2	3	45	0	30	45	120	4	50/50	PCC
5	25PCA25	Software Project Management and Testing	3	0	2	3	45	0	30	45	120	4	50/50	PCC

### PROFESSIONAL ELECTIVE III

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Cum Practical Courses														
1	25PCA31	Architecture, Services, and Storage	3	0	2	3	45	0	30	45	120	4	50/50	PEC
2	25PCA32	Web Server Programming	3	0	2	3	45	0	30	45	120	4	50/50	PEC
3	25PCA33	C# and .Net Framework	3	0	2	3	45	0	30	45	120	4	50/50	PEC
4	25PCA34	Data Visualization Techniques	3	0	2	3	45	0	30	45	120	4	50/50	PEC
5	25PCA35	Mobile Application Development	3	0	2	3	45	0	30	45	120	4	50/50	PEC

### PROFESSIONAL ELECTIVE IV

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
Theory Cum Practical Courses														
1	25PCA41	Cyber Forensics	3	0	2	3	45	0	30	45	120	4	50/50	PEC
2	25PCA42	Big Data Analytics	3	0	2	3	45	0	30	45	120	4	50/50	PEC
3	25PCA43	Ethical Hacking and Penetration Testing	3	0	2	3	45	0	30	45	120	4	50/50	PEC
4	25PCA44	E - Commerce Technologies	3	0	2	3	45	0	30	45	120	4	50/50	PEC
5	25PCA45	Prompt Engineering	3	0	2	3	45	0	30	45	120	4	50/50	PEC

## OPEN ELECTIVES

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	Course Category
			L	T	P	SL	L	T	P	SL				
<b>Theory Courses</b>														
1	25OME54	Electric Vehicle Technology	3	0	0	3	45	0	0	45	90	3	40/60	OEC
2	25OBA53	Human Resource Management for IT	3	0	0	3	45	0	0	45	90	3	40/60	OEC
3	25OBA54	Entrepreneurship Development	3	0	0	3	45	0	0	45	90	3	40/60	OEC
4	25OBA55	Sustainable Management	3	0	0	3	45	0	0	45	90	3	40/60	OEC
5	25OMS51	Medical Robotics	3	0	0	3	45	0	0	45	90	3	40/60	OEC
6	25OAG51	Water, Sanitation and Health	3	0	0	3	45	0	0	45	90	3	40/60	OEC
7	25OAG52	Environmental Impact Assessment	3	0	0	3	45	0	0	45	90	3	40/60	OEC
8	25OBA56	Micro and Small Business Management	3	0	0	3	45	0	0	45	90	3	40/60	OEC
9	25OHS52	Professional Ethics and Human Values	3	0	0	3	45	0	0	45	90	3	40/60	OEC
10	25OHS53	Environmental Science and Sustainability	3	0	0	3	45	0	0	45	90	3	40/60	OEC
11	25OBA57	Social and Legal Aspects of IT	3	0	0	3	45	0	0	45	90	3	40/60	OEC
12	25OBA58	Accounting and Financial Management	3	0	0	3	45	0	0	45	90	3	40/60	OEC
13	25OCS56	Quantum Computing	3	0	0	3	45	0	0	45	90	3	40/60	OEC

## BRIDGE COURSES

(For the M.C.A students admitted under non-computer science background category)

S. No.	Course Code	Course Title	Hours per week				Hours per sem				Total no. of Hours per semester	Credits	Internal/ External Marks	
			L	T	P	SL	L	T	P	SL				
Classes are to be conducted and completed before the start of the class of first semester, Examinations will be conducted along with first semester														
1	25BX001	Programming in C and C++	3	0	2	3	45	0	30	45	120	4	50/50	
2	25BX002	Computer Organization and Operating Systems	3	0	0	3	45	0	0	45	90	3	40/60	
Classes are to be conducted and completed before the start of the class of second semester, Examinations will be conducted along with second semester														
3	25BX003	Linear Algebra	3	0	0	3	45	0	0	45	90	3	40/60	
4	25BX004	Computer Networks	3	0	0	3	45	0	0	45	90	3	40/60	

### SUMMARY

S.No.	COURSE CATEGORY	CREDITS AS PER SEMESTER				TOTAL CREDITS
		I	II	III	IV	
1	FC	4	4			8
2	PCC	19	8	8		35
3	PEC		8	8		16
4	RMC		2			2
5	OEC			3		3
6	EEC	2	3	3	12	20
7	AC	✓	✓			
TOTAL CREDITS		25	25	22	12	84