



## Curriculum and Syllabi

### M.E. BIOMETRICS AND CYBER SECURITY

#### SEMESTERS I to IV

#### Regulations 2025

**Programme: M.E. BIOMETRICS AND CYBER SECURITY**

**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	25BM101	Data Exploration and Visualization	3	0	2	3	45	0	30	45	120	4	50/50	PCC
2	25BM102	Intelligent Systems for Cyber Security	3	0	2	3	45	0	30	45	120	4	50/50	PCC
3	25BM103	Advanced Data Structure and Algorithms	3	0	2	3	45	0	30	45	120	4	50/50	PCC
<b>Theory Courses</b>														
4	25FC102	Algebra and Probability	3	1	0	4	45	15	0	60	120	4	40/60	FC
5	25RM101	Research Methodology and IPR	2	0	0	2	30	0	0	30	60	2	40/60	RMC
6	25BM104	Secure Data Analytics	3	0	0	3	45	0	0	45	90	3	40/60	PCC

**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	25BM201	Applied Cryptography	3	0	2	3	45	0	30	45	120	4	50/50	PCC
2	25BM202	Advanced Neural Networks	3	0	2	3	45	0	30	45	120	4	50/50	PCC
3	25BM203	Applied Ethical Hacking	3	0	2	3	45	0	30	45	120	4	50/50	PCC
<b>Theory Courses</b>														
4	25BM204	Biometric Data Processing	3	0	0	3	45	0	0	45	90	3	40/60	PCC
5		Professional Elective I	3	0	0	3	45	0	0	45	90	3	40/60	PEC
6		Audit Course I	2	0	0	0	30	0	0	0	30	0	100/0	AC*
<b>Practical Courses</b>														
7	25EEC202	Term Paper Writing and Seminar	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 Courses														
1		Professional Elective II	3	0	0	3	45	0	0	45	90	3	40/60	PEC
2		Professional Elective III	3	0	0	3	45	0	0	45	90	3	40/60	PEC
3		Professional Elective IV	3	0	0	3	45	0	0	45	90	3	40/60	PEC
4		Open Elective	3	0	0	3	45	0	0	45	90	3	40/60	OEC
5		Audit Course II	2	0	0	0	30	0	0	0	30	0	100/0	AC*
Practical Course														
6	25BMP301	Project Phase - I	0	0	12	0	0	0	180	0	180	6	60/40	EEC

\* Audit course is optional

### 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	25BMP401	Project Phase - II	0	0	24	0	0	0	360	0	360	12	60/40	EEC

**TOTAL NO. OF CREDITS: 70**

## 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 Courses														
1	25PBM11	Principles of Secure Coding	3	0	0	3	45	0	0	45	90	3	40/60	PEC
2	25PBM12	Network Security	3	0	0	3	45	0	0	45	90	3	40/60	PEC
3	25PBM13	Agentic AI in Cyber Security	3	0	0	3	45	0	0	45	90	3	40/60	PEC
4	25PBM14	Operating Systems Security	3	0	0	3	45	0	0	45	90	3	40/60	PEC
5	25PBM15	Security Practices	3	0	0	3	45	0	0	45	90	3	40/60	PEC
6	25PBM16	Biometric System and Security	3	0	0	3	45	0	0	45	90	3	40/60	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 Courses														
1	25PBM21	Cyber Forensics and Investigations	3	0	0	3	45	0	0	45	90	3	40/60	PEC
2	25PBM22	Secure Systems Engineering	3	0	0	3	45	0	0	45	90	3	40/60	PEC
3	25PBM23	Cloud Security	3	0	0	3	45	0	0	45	90	3	40/60	PEC
4	25PBM24	Firewall and VPN Security	3	0	0	3	45	0	0	45	90	3	40/60	PEC
5	25PBM25	Mobile	3	0	0	3	45	0	0	45	90	3	40/60	PEC

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				
		Security and Device Forensics												
6	25PBM26	Advanced Persistent Threat	3	0	0	3	45	0	0	45	90	3	40/60	PEC

### 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 Courses														
1	25PBM31	Access Control and Identity Management Systems	3	0	0	3	45	0	0	45	90	3	40/60	PEC
2	25PBM32	Social Network Analysis	3	0	0	3	45	0	0	45	90	3	40/60	PEC
3	25PBM33	Data Privacy and Protection	3	0	0	3	45	0	0	45	90	3	40/60	PEC
4	25PBM34	Energy Aware Computing	3	0	0	3	45	0	0	45	90	3	40/60	PEC
5	25PBM35	Cryptanalysis	3	0	0	3	45	0	0	45	90	3	40/60	PEC
6	25PBM36	Design and Analysis of Security Protocols	3	0	0	3	45	0	0	45	90	3	40/60	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 Courses														
1	25PBM41	Malware Analysis	3	0	0	3	45	0	0	45	90	3	40/60	PEC
2	25PBM42	Secure Software Design and Development	3	0	0	3	45	0	0	45	90	3	40/60	PEC
3	25PBM43	Security Assessment and Risk Analysis	3	0	0	3	45	0	0	45	90	3	40/60	PEC
4	25PBM44	Steganography and Digital Watermarking	3	0	0	3	45	0	0	45	90	3	40/60	PEC
5	25PBM45	Block Chain and Crypto Currencies	3	0	0	3	45	0	0	45	90	3	40/60	PEC
6	25PBM46	Web Security	3	0	0	3	45	0	0	45	90	3	40/60	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				
Theory Courses														
1	25OCS54	Cyber-Physical Systems	3	0	0	3	45	0	0	45	90	3	40/60	OEC
2	25OCS55	E-Commerce Security	3	0	0	3	45	0	0	45	90	3	40/60	OEC
3	25OCS56	Quantum Computing	3	0	0	3	45	0	0	45	90	3	40/60	OEC
4	25OCS57	Embedded Systems and Automation	3	0	0	3	45	0	0	45	90	3	40/60	OEC
5	25OCS58	Edge Analytics and IoT	3	0	0	3	45	0	0	45	90	3	40/60	OEC
6	25OCS59	Computational Finance	3	0	0	3	45	0	0	45	90	3	40/60	OEC

### SUMMARY

S.No.	COURSE CATEGORY	CREDITS AS PER SEMESTER				TOTAL CREDITS
		I	II	III	IV	
1	FC	4				4
2	PCC	15	15			30
3	PEC		3	9		12
4	RMC	2				2
5	OEC			3		3
6	EEC		1	6	12	19
7	AC		✓	✓		
TOTAL CREDITS		21	19	18	12	70