Curriculum & Contents

Department of Computer Science and Engineering

M. Tech. in
Information and Cyber Security

ABV-Indian Institute of Information Technology & Management, Gwalior

For Batch 2025 Onwards

Semester – 1

SN	Subject Code	Course Title	L-T-P	Credits
1	CS-601	Modelling and Simulation	3-0-0	3
2	CS-602	Fundamentals of Cryptography	3-1-0	4
3	CS-604	Advanced Data Structures and Algorithms	3-0-2	4
4	CS-605	Cyber Laws and Information Crime	3-0-0	3
5	CS-607	Machine Learning Techniques	3-0-2	4
6	CS-6XX	Elective-I	3-0-0	3
			Total	21

Semester – 2

SN	Subject Code	Course Title	L-T-P	Credits
1	CS-603	Advanced Computer Networks and Security	3-0-2	4
2	CS-606	Engineering Research Methodology	2-1-0	3
3	CS-608	Cyber Forensics: Tools and Techniques	3-0-2	4
4	CS-609	Information Privacy and Security	3-1-0	4
5	CS-6XX	Elective-II	3-0-0	3
6	CS-6XX	Elective-III	3-0-0	3
			Total	21

EXIT AFTER YEAR-1: Post Graduate Diploma in Information and Cyber Security

Semester – 3

SN	Subject Code	Course Title	L-T-P	Credits
1	CS-6XX	Elective-III/MOOC	3-0-0	3
2	CS-698	Dissertation Part - I		12
			Total	15

Semester – 4

S.No.	Subject Code	Course Title	L-T-P	Credits
1	CS-699	Dissertation Part – II		15*
			Total	15

*For students going on internship in Semester IV: Major Project Part II: 12 credits and additional Colloquium/Industrial Seminar: 3 credits.

Semester-1	Semester-1	Semester-3	Semester-4	Total Credits
21	21	15	15	72

Electives courses

S.No.	Title of Courses	L-T-P
1.	Wireless & Mobile Security	3-0-0
2.	Intrusion Detection and Prevention	3-0-0
3.	Web application and Cloud Security	3-0-0
4.	Malware Analysis	3-0-0
5.	Authentication and Access Control	3-0-0
6.	Digital Watermarking and Steganalysis	3-0-0
7.	IoT Protocols and Security	3-0-0
8.	Data Privacy in Social Networks	3-0-0
9.	Blockchain Technology	3-0-0
10.	Software System Design	3-0-0
11.	Modern Cryptography	3-0-0
12.	Database Security	3-0-0
13.	Hardware Security	3-0-0
14.	Operating Systems Security	3-0-0
15.	Fault Tolerant System	3-0-0
16.	Quantum Cryptography	3-0-0
17.	Big Data and Cyber fraud analysis	3-0-0
18.	Secure System Engineering	3-0-0
19.	Formal Verification of Security Protocols	3-0-0
20.	Digital Forensics	3-0-0
21.	Natural Language Processing	3-0-0
22.	Information Retrieval	3-0-0
23.	Recommender Systems	3-0-0
24.	Reinforcement Learning	3-0-0
25.	Fair, Accountable, Transparent AI	3-0-0
26.	Machine Learning System Optimization	3-0-0
27.	Pattern Recognition	3-0-0
28.	Deep Learning Techniques	3-0-0