

M.Sc. in Computer Science with Specialization in Cyber Security

Semester 1			
Title of the Course	Credits	Credit Split Lecture/Lab/ Seminar/Project	Level
Digital Experience Laboratory	4	1-3-0-0	300
Design Thinking and Innovation	3	3-0-0-0	300
Mathematics for Computer Science	4	3-0-1-0	200
Cyber Security and Digital Forensics	3	3-0-0-0	300
Computer Networks and Security	3	3-0-0-0	200
Computer Architecture	3	3-0-0-0	200
Python Programming	4	3-1-0-0	100
Cyber Security and Forensics Lab	1	0-1-0-0	300
Total Credits	25		

Semester 2			
Title of the Course	Credits	Credit Split Lecture/Lab/ Seminar/Project	Level
Digital Access for Community Empowerment	3	0-0-0-3	300
Modern Cryptography	4	3-1-0-0	300
Cyber Analytics	3	3-0-0-0	300
Operating Systems	3	3-0-0-0	200
Data Structures and Algorithms	4	3-1-0-0	200
Elective 1	4		300
Security Auditing Lab	1	0-1-0-0	200
Cyber Analytics Lab	1	0-1-0-0	300
Total Credits	23		

Electives for Semester 2			
Title of the Course	Credits	Credit Split Lecture/Lab/ Seminar/Project	Level
Augmented and Virtual Reality	4	3-1-0-0	300
Biometrics	4	3-1-0-0	300
Information Retrieval	4	3-0-0-1	300
Malware Analysis and Reverse Engineering	4	3-1-0-0	300
Cloud and Edge Computing	4	3-0-0-1	300
Hardware Security	4	3-1-0-0	300

Semester 2 Internship			
Title of the Course	Credits	Credit Split Lecture/Lab/ Seminar/Project	Level
M.Sc. Summer Internship/Team Project	2	0-0-0-2	300
Total Credits	2		

Semester 3			
Title of the Course	Credits	Credit Split Lecture/Lab/ Seminar/Project	Level
Database Security	4	3-0-0-1	300
Ethical Hacking and Defensive Techniques	3	3-0-0-0	300
Elective 2	4		300
Elective 3	4		300
Elective 4	4		300
Ethical Hacking and Penetration Testing Lab	1	0-1-0-0	300
IoT Experience Lab	2	0-2-0-0	300
M.Sc. Mini Project	4	0-0-0-3	300
Total Credits	26		

Electives for Semester 3			
Title of the Course	Credits	Credit Split Lecture/Lab/ Seminar/Project	Level
Applied Cryptography	4	3-0-1-0	300
Blockchain Technology	4	3-1-0-0	300
Cognitive Computing	4	3-0-0-1	300
Artificial Intelligence for Cyber Security	4	3-0-0-1	300
Mobile Application Security	4	3-0-0-1	300
Embedded Systems	4	3-0-0-1	300
Secure Software Engineering	4	3-0-0-1	300
Natural Language Processing	4	3-0-0-1	300
Quantum Computing & Cryptography	4	3-0-1-0	300
Object-Oriented Analysis and Design	4	3-0-0-1	300
Security in Digital Transformation	4	3-0-0-1	300
Soft Computing	4	3-0-0-1	300
Web Technology	4	3-0-0-1	300

Semester 4			
Title of the Course	Credits	Credit Split Lecture/Lab/ Seminar/Project	Level
M.Sc. Internship/Project	24	0-0-0-24	400
Total Credits	24		