

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

<b>Semester 1</b>				
Course Code	Title of the Course	Credits	Credit Split Lecture/Lab/ Seminar/Project	Level
M3020001	Digital Experience Laboratory	4	1-3-0-0	300
	Design Thinking and Innovation	3	3-0-0-0	300
M2020101	Mathematics for Computer Science	4	3-0-1-0	200
M3022102	Cyber Security and Digital Forensics	3	3-0-0-0	300
M2020103	Data Structures and Algorithms	4	3-1-0-0	200
M2020104	Computer Architecture	3	3-0-0-0	200
M1020105	Python for Data Science	3	3-0-0-0	100
M3022106	Cyber Security and Forensics Lab	1	0-1-0-0	300
M1020107	Python Programming Lab	1	0-1-0-0	100
Total Credits		26		

<b>Semester 2</b>				
Course Code	Title of the Course	Credits	Credit Split Lecture/Lab/ Seminar/Project	Level
	Digital Access for Community Empowerment	3	0-0-0-3	300
M3022201	Modern Cryptography	4	3-1-0-0	300
M3022202	Cyber Analytics	3	3-0-0-0	300
M2020203	Operating Systems	3	3-0-0-0	200
M2022204	Computer Networks and Security	3	3-0-0-0	200
	Elective 1	4		300
M2022206	Security Auditing Lab	1	0-1-0-0	200
M3022207	Cyber Analytics Lab	1	0-1-0-0	300
M3020208	M.Sc. Mini Project 1	1	0-0-0-1	300
Total Credits		23		

<b>Electives for Semester 2</b>				
Course Code	Title of the Course	Credits	Credit Split Lecture/Lab/ Seminar/Project	Level
M3020205	Augmented and Virtual Reality	4	3-1-0-0	300
M3020215	Biometrics	4	3-1-0-0	300
M3020225	Information Retrieval	4	3-0-0-1	300
M3020235	Malware Analysis and Reverse Engineering	4	3-1-0-0	300
M3020245	Cloud and Edge Computing	4	3-0-0-1	300
M3020255	Hardware Security	4	3-1-0-0	300
Total Credits		4		

<b>Semester 2 Internship</b>				
<b>Course Code</b>	<b>Title of the Course</b>	<b>Credits</b>	<b>Credit Split Lecture/Lab/ Seminar/Project</b>	<b>Level</b>
M3020265	M.Sc. Summer Internship/Team Project	2	0-0-0-2	300
Total Credits		2		

<b>Semester 3</b>				
<b>Course Code</b>	<b>Title of the Course</b>	<b>Credits</b>	<b>Credit Split Lecture/Lab/ Seminar/Project</b>	<b>Level</b>
M3022301	Database Security	4	3-0-0-1	300
M3022302	Ethical Hacking and Defensive Techniques	3	3-0-0-0	300
	Elective 2	4		300
	Elective 3	4		300
	Elective 4	4		300
M3022306	Ethical Hacking and Penetration Testing Lab	1	0-1-0-0	300
M3020307	IoT Experience Lab	2	0-2-0-0	300
M3020308	M.Sc. Mini Project 2	3	0-0-0-3	300
Total Credits		25		

<b>Electives for Semester 3</b>				
<b>Course Code</b>	<b>Title of the Course</b>	<b>Credits</b>	<b>Credit Split Lecture/Lab/ Seminar/Project</b>	<b>Level</b>
M3020303	Applied Cryptography	4	3-0-1-0	300
M3020313	Block Chain Technology	4	3-1-0-0	300
M3020323	Cognitive Computing	4	3-0-0-1	300
M3020333	Artificial Intelligence for Cyber Security	4	3-0-0-1	300
M3020343	Mobile Application Security	4	3-0-0-1	300
M3020353	Embedded Systems	4	3-0-0-1	300
M3020363	Secure Software Engineering	4	3-0-0-1	300
M3020373	Natural Language Processing	4	3-0-0-1	300
M3020383	Quantum Computing & Cryptography	4	3-0-1-0	300
M3020393	Object-Oriented Analysis and Design	4	3-0-0-1	300
M3020304	Security in Digital Transformation	4	3-0-0-1	300
M3020314	Soft Computing	4	3-0-0-1	300
M3020324	Web Technology	4	3-0-0-1	300
Total Credits				

<b>Semester 4</b>				
<b>Course Code</b>	<b>Title of the Course</b>	<b>Credits</b>	<b>Credit Split Lecture/Lab/ Seminar/Project</b>	<b>Level</b>
M4020401	M.Sc. Internship/Project	24	0-0-0-24	400
Total Credits		24		