

Scheme of Studies BS Computer Science (Specialisation in Cyber Security)

First Year									
Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Tota			Th	Pr	Total
CT-175	Programming Fundamentals	3	1	4	CS-251	Logic Design & Switching Theory.	3	1	4
CT-174	Fundamentals of Information Technology	2	1	3	CT-162	Discrete Structures.	3	0	3
MT-171	Differential & Integral Calculus	3	0	3	CT-260	Object Oriented Programming.	3	1	4
PH-122	Applied Physics.	3	1	4	HS-104	Functional English	3	0	3
HS-205	Islamic Studies. OR	2	0	2	HS-105	Pakistan Studies. OR	2	0	2
HS-209	Ethical Behaviour.				HS-127	Pakistan Studies. (For Foreigners)			
MT-001	Mathematics-1 (Pre-Medical)	-	-	NC	HSK-I	Chinese Language OR	-	-	NC
					HS-231	Turkish Language - I	-	-	NC
					MT-002	Mathematics-2 (Pre-Medical)	-	-	NC

Second Year									
Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Tota			Th	Pr	Total
CT-159	Data Structure Algorithms & Applications.	3	1	4	CS-252	Computer Architecture & Organization.	3	1	4
CT-259	System Analysis and Design.	3	0	3	CT-261	Database Management Systems.	3	1	4
MT-227	Differential Equations.	3	0	3	HS-218	Business Communication	2	1	3
HS-115	Academic Reading and Writing	3	0	3	MT-272	Linear Algebra & Geometry..	3	0	3
HS-219	Professional Ethics	2	0	2	EC-209	Financial & Cost Accounting.	3	0	3
HSK-II	Chinese Language. OR	-	-	NC	HS-200	Community Service	-	-	NC
HS-232	Turkish Language-II	-	-	NC					

Third Year									
Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Tota			Th	Pr	Total
CT-363	Design & Analysis of Algorithms	3	0	3	CT-371	Vulnerability Assessment & Reverse Engineering	3	1	4
CT-353	Operating Systems	3	1	4	CT-376	Computer Communication Networks.	3	1	4
CT-365	Software Engineering	3	0	3	CT-476	Information Assurance	3	0	3
CT-###	Cyber Security Elective I	3	0	3	CT-361	Artificial Intelligence & Expert Systems	3	1	4
CT-355	Information Security	3	0	3	CT-###	Cyber Security Elective II	3	0	3

Final Year									
Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Tota			Th	Pr	Total
MG-482	Organisational Behaviour.	3	0	3	CT-477	Secure Software Design & Development	3	1	4
CT-486	Network and Information Security	3	1	4	MG-481	Entrepreneurship.	3	0	3
CS-428	Parallel & Distributed Computing	3	1	4	CT-478	Digital Forensics	2	1	3
CT-###	Cyber Security Elective-III	3	0	3	CT-##	Cyber Security Elective-IV.	3	0	3
CT-499	Software Based Project.	-	3	3	CT-499	Software Based Project.	0	3	3

Elective-I and Elective-II Courses	
CT-372	Wireless & Mobile Security
CT-373	Penetration Testing
CT-374	Cyber Security Laws & Regulations
CT-375	Cryptography & Cryptanalysis

Elective-III & Elective-IV Courses	
CT-479	Hardware Security
CT-480	Malware Analysis
CT-482	Embedded Systems Security
CT-483	Quantum Security