BS Computer Science				
Proposed Scheme of Studies 2023				
BS Computer Science degree will be awarded with 130 credit hours				
YEAR –I				
SEMESTER-I				
Course Code	**Course Category**	**Course Title**	**Credit Hours**	**Pre-requisite**
GER-100	GEN	Application of Information and Communication Technologies	3(2-3)	None
CMP-103	Core	Programming Fundamentals	4 (3-3)	None
GER-105	GEN	Functional English	3(3-0)	None
GER-103	GEN	Calculus and Analytical Geometry	3(3-0)	None
GER-104	GEN	Discrete Structures	3(3-0)	None
Total Credit Hours		**16 (14-6)**		
SEMESTER-II				
Course Code	**Course Category**	**Course Title**	**Credit Hours**	**Pre-requisite**
CMP-101	Core	Digital Logic Design	3(2-3)	
CMP-112	Core	Object Oriented Programming	4(3-3)	Programming Fundamentals
GER-102	GEN	Applied Physics	3 (2-3)	
MT-111	Math&Supporting	Linear Algebra	3(3-0)	
CMP-104	Core	Software Engineering	3(3-0)	
		Total Cr Hrs	**16 (14-6)**	

SEMESTER-III				
Course Code	**Course Category**	**Course Title**	**Credit Hours**	**Pre-requisite**
CMP-214	Core	Data Structures	4 (3-3)	Object Oriented Programming
CMP-206	Core	Information Security	3 (2-3)	
CMP-201	Core	Artificial Intelligence	3 (2-3)	
CMP-202	Core	Computer Networks	3 (2-3)	
MT-202	Math&Supporting	Probability & Statistics	3 (3-0)	
GER-203	GEN	Islamic Studies	2 (2-0)	
Total Cr Hrs		**18 (15-12)**		
SEMESTER-IV				
Course Code	**Course Category**	**Course Title**	**Credit Hours**	**Pre-requisite**
CMP-213	Core	Computer Organization & Assembly Language	3 (2-3)	Digital Logic Design
CSC-201	Domain Core	Domain Core 1 (Theory of Automata)	3 (3-0)	
ITC-311	Domain Elective	Domain Elective 1 (Web Technologies)	3 (2-3)	
MT-211	Math&Supporting	Multivariable Calculus	3(3-0)	
CMP-205	Core	Database Systems	4(3-3)	
GER-211	GEN	Expository Writing	3 (3-0)	
Total Cr Hrs		**19 (16-9)**		

		SEMESTER-V		
Course Code	**Course Category**	**Course Title**	**Credit Hours**	**Pre-requisite**
CMP-302	Core	Operating Systems	3 (2-3)	
CSC-304	Domain Core	Domain Core 2 (HCI & Computer Graphics)	3 (2-3)	
CSC-314	Domain Core	Domain Core 3 (Computer Architecture)	3 (2-3)	Computer Organization & Assembly Language
	Domain Elective	Domain Elective 2	3 (2-3)	
CMP-311	Core	Analysis of Algorithms	3 (3-0)	Data Structures
GER-305	GEN	Social Science (Example: Introduction to Management)	2 (2-0)	
Total Cr Hrs		**17 (13-12)**		

		SEMESTER-VI		
Course Code	**Course Category**	**Course Title**	**Credit Hours**	**Pre-requisite**
CSC-312	Domain Core	Domain Core 4 (Compiler Construction)	3 (2-3)	Theory of Automata
SS-301	ES	Elective Supporting Course (Example: Financial Accounting)	3 (3-0)	
CSC-311	Domain Core	Domain Core 5 (Advance Database Management Systems)	3 (2-3)	Database Systems
CS-354	Domain Elective	Domain Elective 3 (Mobile Application Development 1)	3 (2-3)	
	Domain Elective	Domain Elective 4	3 (2-3)	

Course Code	Course Category	Course Title	Credit Hours	Pre-requisite
EW-411	Math&Supporting	Technical & Business Writing	3 (3-0)	
Total Cr Hrs		**18 (14-12)**		

SEMESTER-VII

Course Code	Course Category	Course Title	Credit Hours	Pre-requisite
CMP-401	Core	Final Year Project - I	2 (0-6)	
	Domain Elective	Domain Elective 5	3 (2-3)	
	Domain Elective	Domain Elective 6	3 (2-3)	
CSC-411	Domain Core	Domain Core 6 (Parallel & Distributed Computing)	3 (2-3)	Operating Systems
GER-202	GEN	Ideology and Constitution of Pakistan	2 (2-0)	
GER-402	GEN	Entrepreneurship	2 (2-0)	
		Total Cr Hrs	**15 (11-15)**	

SEMESTER-VIII

Course Code	Course Category	Course Title	Credit Hours	Pre-requisite
CMP-412	Core	Final Year Project - II	4 (0-12)	
	Domain Elective	Domain Elective 7	3 (2-3)	
GER-403	GEN	Arts & Humanities (Professional Practices)	2 (2-0)	
GER-401	GEN	Civics and Community Engagement	2 (2-0)	
		Total Cr Hrs	**11 (7-15)**	

Domain Elective Subject are decided at the start of each semester as per the availability of subject relevant faculty. Teaching of Holy Quran is offered in each semester but does not count to credit hours.