BS Information Technology

Proposed Scheme of Studies 2024

BS Information Technology degree will be awarded with 132 credit hours

SEMESTER-I

Course Code	Course Category	Course Title	Credit Hours	Pre-requisite
GER-100	GER	Application of Information and Communication Technologies	3(2-3)	None
CMP-103	Core	Programming Fundamentals	4 (3-3)	None
GER-105	GER	Functional English	3(3-0)	None
MT-101	GER	Calculus and Analytical Geometry	3(3-0)	None
GER-104	GER	Discrete Structures	3(3-0)	None
MT-100		Mathematics-I	3(3-0)	None
Total Cr Hrs			**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	GER	Natural Science (Applied Physics)	3 (2-3)	
GER-202	GEN	Ideology and Constitution of Pakistan	2(2-0)	

MT-202	Maths	Probability & Statistics	3 (3-0)	
GER-203	GER	Islamic Studies	2 (2-0)	
MT-101		Mathematics-II	3(3-0)	None
Total Cr Hrs			**17 (14-9)**	

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)	
GER-204	Gen	Pakistan Studies	2(2-0)	
MT-111	Math	Linear Algebra	3(3-0)	Calculus and Analytical Geometry
Total Cr Hrs			**18 (14-12)**	

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
CMP-302	Core	Operating Systems	3 (2-3)	

Course Code	Course Category	Course Title	Credit Hours	Pre-requisite
CMP-205	Core	Database Systems	4 (3-3)	
ITC-315	Domain Core	Domain Core 1 (Web Technologies)	3 (2-3)	
GER-211	GER	Expository Writing	3 (3-0)	
MT-211	Math	Multivariable Calculus	3(3-0)	Calculus and Analytical Geometry
Total Cr Hrs			19 (15- 12)	

SEMESTER-V

Course Code	Course Category	Course Title	Credit Hours	Pre-requisite
CMP-104	Core	Software Engineering	3 (3-0)	
ITC-302	Domain Core	Domain Core 3 (Database Administration and management)	3 (2-3)	
ITC-304	Domain Core	Domain Core 4 (System and Network Administration)	3 (2-3)	
	Domain Elective	Domain Elective 1	3 (2-3)	
	Domain Elective	Domain Elective 2	3 (2-3)	
CMP-311	Core	Analysis of Algorithms	3 (3-0)	Data Structures
Total Cr Hrs			18 (14-12)	

SEMESTER-VI

Course Code	Course Category	Course Title	Credit Hours	Pre-requisite
ITC-303	Domain Core	Domain Core 5 (IT Infrastructures)	3 (2-3)	

ITC-411	Domain Core	Domain Core 6 (Parallel & Distributed Computing)	3 (2-3)	Operating Systems
IT-355	Domain Elective	Domain Elective 3 (Example: Mobile Application Development 1)	3 (2-3)	
	Domain Elective	Domain Elective 4	3 (2-3)	
GER-305	GER	Social Science (Example: Introduction to Management)	2 (2-0)	
EW-411	EN	Technical & Business Writing	3 (3-0)	
Total Cr Hrs			**17 (13-12)**	

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)	
SS-306	SC	Elective Supporting Course (Example: Introduction to Marketing)	3 (3-0)	
	Domain Elective	Domain Elective 7	3 (2-3)	
GER-402	GER	Entrepreneurship	2 (2-0)	
Total Cr Hrs			**16 (11-15)**	

SEMESTER-VIII

Course Code	Course Category	Course Title	Credit Hours	Pre-requisite

CMP-401	Core	Final Year Project - II	4 (0-12)	
ITC-311	Domain Core	Domain Core 2 (Cyber Security)	3 (2-3)	
GER-403	GER	Arts & Humanities (Professional Practices)	2 (2-0)	
GER-401	GER	Civics and Community Engagement	2 (2-0)	
		Total Cr Hrs	**11 (7-15)**	

Note:

- 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.
- Subject of Pakistan studies 2(2-0) is added as per HEC Notification.
- Mathematics I and II are non-credited but its compulsory for students to pass these courses in first year.