

Program Roadmap

SEMESTER 1	SEMESTER 2	SEMESTER 3	SEMESTER 4	SEMESTER 5	SEMESTER 6	SEMESTER 7	SEMESTER 8
15 Credit Hours	17 Credit Hours	18 Credit Hours	17 Credit Hours	18 Credit Hours	18 Credit Hours	18 Credit Hours	15 Credit Hours
Programming Fundamentals (3+1)	Object Oriented Programming (3+1)	Data Structures and Algorithms (3+1)	Operating Systems (2+1)	Analysis of Algorithms (3)	Artificial Intelligence (2+1)	Final Year Project-I (3)	Final Year Project-II (3)
Application of ICT (2+1)	Digital Logic and Design (2+1)	Computer Organization and Assembly Language (2+1)	Database Systems (3+1)	Software Engineering (3)	Web Technologies (2+1)	Database Administration & Management (2+1)	Domain Elective 6 [IT Project Management] (3)
Functional English (3)	Calculus and Analytical Geometry (3)	Computer Networks (2+1)	Information Security (2+1)	System & Network Administration (2+1)	Parallel & Distributed Computing (2+1)	Domain Elective 4 [IT Service Management] (3)	Domain Elective 7 [Information Systems Auditing] (3)
Applied Physics (2+1)	Expository Writing (3)	Information Technology Infrastructure (2+1)	Domain Elective 1 [Web Programming] (2+1)	Domain Elective 2 [Virtual Systems & Services] (3)	Cyber Security (2+1)	Domain Elective 5 [DevOps & Site Reliability Engineering] (3)	Professional Practice (2)
	Discrete Structures (3)	Multivariable Calculus (3)	Probability & Statistics (3)	Technical & Business Writing (3)	Domain Elective 3 [Mobile Application Development] (3)	Social Sciences (2)	Civics and Community Engagement (Family Life in 21st Century) (2)
Fehme Quran I (0+1)	Fehme Quran II (0+1)	Islamic Studies (2)		Linear Algebra (3)	Entrepreneurship (2)	Introduction to Basic Teachings of Quran (2)	Introduction to Hadith & Seerah (2)
Elective Supporting 1a [Problem Solving I] (0+1)			Elective Supporting 1b [Problem Solving II] (0+1)		Elective Supporting 1c [Problem Solving III] (0+1)	Ideology and Constitution of Pakistan (2)	
Computing Core 46 Credit Hrs.	Domain Core 18 Credit Hrs.	Domain Elective 21 Credit Hrs.	Mathematics & Supporting 12 Credit Hrs.	General Education Requirement 36 Credit Hrs.	Elective Supporting Courses 3 Credit Hrs.	Total Cr. Hrs. 136	