Scheme of Studies
BS - Artificial Intellignece

First Year - Semester - I

S.No	Code	Course Title Domain	Domain	Cr Hr (Cont Hr)	Pre-Reqs
1		Programming Fundamentals	Computing Core	4 (3-3)	
2		Application of Information & Communication Technologies	GER	3 (2-3)	
3		Functional English	GER	3 (3-0)	
4		Calculus and Analytic Geometry	GER	3 (3-0)	
5		Islamic Studies	GER	2 (2-0)	
6		Ideology and Constitution of Pakistan	GER	2 (2-0)	
			Total Cr Hrs	17 (15-6)	

First Year - Semester - II

S.No	Code	Course Title Domain	Domain	Cr Hr (Cont Hr)	Pre-Reqs
1		Object Oriented Programming	Computing Core	4 (3-3)	
2		Digital Logic Design	Computing Core	3 (2-3)	
3		Linear Algebra	Maths	3 (3-0)	
4		Discrete Structure	GER	3 (3-0)	
5		Expository Writing	GER	3 (3-0)	
			Total Cr Hrs	16 (14-6)	

Second Year - Semester - III

S.No	Code	Course Title Domain	Domain	Cr Hr (Cont Hr)	Pre-Reqs
1		Data Structures	Computing Core	4 (3-3)	
2		Computer Networks	Computing Core	3 (2-3)	
3		Software Engineering	Computing Core	3 (3-0)	
4		Multivariable Calculus	Maths	3 (3-0)	
5		Natural Sciences (Applied Physics)	GER	3 (2-3)	
6		Ideology and Constitution of Pakistan	GER	2 (2-0)	
			Total Cr Hrs	16 (16-9)	

Second Year - Semester - IV

S.No	Code	Course Title Domain	Domain	Cr Hr (Cont Hr)	Pre-Reqs
1		Database Systems	Computing Core	4 (3-3)	
2		Operating Systems	Computing Core	3 (2-3)	
3		Analysis of Algorithms	Computing Core	3 (3-0)	
4		Artificial Intelligence	Computing Core	3 (2-3)	
5		Programming for AI	Domain Core	3 (3-0)	
6		Probability and Statistics	Maths	3 (3-0)	
			Total Cr Hrs	19 (16-9)	

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Third Year - Semester - V

S.No	Code	Course Title Domain	Domain	Cr Hr (Cont Hr)	Pre-Reqs
1		Information Security	Computing Core	3 (3-0)	
2		Computer Organization and Assembly Language	Computing Core	3 (2-3)	
3		Machine Learning	Domain Core	3 (3-0)	
4		Natural Language Processing	Domain Elective	3 (3-0)	
5		Web Programming for AI	Domain Elective	3 (3-0)	
6		Introduction to Management	GER	3 (3-0)	
			Total Cr Hrs	18 (17-3)	

Third Year - Semester - VI

S.No	Code	Course Title Domain	Domain	Cr Hr (Cont Hr)	Pre-Reqs
1		Artificial Neural Network and Deep Learning	Domain Core	3 (3-0)	
2		Computer Vision	Domain Core	3 (3-0)	
3		Human Computer Interaction	Domain Elective	3 (3-0)	
4		Multimedia Mining	Domain Elective	3 (3-0)	
5		Civics and Community Engagement	GER	3 (3-0)	
6		Technical & Business Writing	Math and Supporting Courses	3 (3-0)	
			Total Cr Hrs	16 (14-6)	

Fourth Year - Semester - VII

S.No	Code	Course Title Domain	Domain	Cr Hr (Cont Hr)	Pre-Reqs
1		Final Year Project - I	Computing Core	3 (0-9)	
2		Knowledge Representation & Reasoning	Domain Core	3 (3-0)	
3		Introduction to Marketing	Elective Supporting Course GER	3 (3-0)	
4		Generative Artificial Intelligence	Domain Elective	3 (3-0)	
5		MLOPS (Machine Learning Operations and Deployment)	Domain Elective	3 (3-0)	
6		Entrepreneurship	GER	3 (3-0)	
			Total Cr Hrs	15 (12-9)	

Fourth Year - Semester - VIII

S.No	Code	Course Title Domain	Domain	Cr Hr (Cont Hr)	Pre-Reqs
1		Final Year Project – II	Computing Core	3 (0-9)	
2		Parallel & Distributed Computing	Domain Core	3 (3-0)	
3		Reinforcement Learning	Domain Elective	3 (3-0)	
4		Professional Practices	GER	3 (3-0)	
			Total Cr Hrs	12 (9-9)	