

2. Scheme of Studies / Semester-wise workload

Semester - I						
Sr.	Code	Course Title	Pre-Requisite/Co-Requisite	Domain	Cr. Hrs.	
1.	MD-001	Math Deficiency – I		MD	3*	(3, 0)*
2.	MS-251	Probability & Statistics		MS	3	(3, 0)
3.	GE-160	Applications of Information & Communication Technologies		GE	3	(2, 1)
4.	GE-169	Applied Physics		GE	3	(2, 1)
5.	GE-167	Discrete Structures		GE	3	(3, 0)
6.	HQ-001	Quran Translation – I.		HQ	0.5	(0.5,0)
7.	GE-190	Functional English		GE	3	(3, 0)
Credit Hours (Semester – I)					15.5	(13.5, 2)

Semester – II						
Sr.	Code	Course Title	Pre-Requisite/Co-Requisite	Domain	Cr. Hrs.	
1.	CC-112	Programming Fundamentals		CC	3	(3, 0)
2.	CC-112-L	Programming Fundamentals Lab		CC	1	(0, 1)
3.	CC-110	Digital Logic Design		CC	2	(2, 0)
4.	CC-110-L	Digital Logic Design Lab		CC	1	(0, 1)
5.	MS-252	Linear Algebra		MS	3	(3, 0)
6.	GE-191	Expository Writing		GE	3	(3, 0)
7.	GE-163	Islamic Studies		GE	2	(2, 0)
8.	HQ-002	Quran Translation – II		HQ	0.5	(0.5,0)
9.	MD-002	Math Deficiency – II		MD	3*	(3, 0)*
Credit Hours (Semester – II)					15.5	(13.5, 2)

Semester – III						
Sr.	Code	Course Title	Pre-Requisite/Co-Requisite	Domain	Cr. Hrs.	
1.	CC-211	Object Oriented Programming	CC-112 Programming Fundamentals	CC	3	(3, 0)
2.	CC-211-L	Object Oriented Programming Lab	CC-112 Programming Fundamentals	CC	1	(0, 1)
3.	CC-215	Database Systems		CC	3	(3, 0)
4.	CC-215-L	Database Systems Lab		CC	1	(0, 1)
5.	CC-210	Computer Organization & Assembly Language	CC-110 Digital Logic Design	CC	3	(2,1)
6.	GE-162	Calculus & Analytical Geometry		GE	3	(3,0)
7.	GE-192	Introduction to Management		GE	2	(2, 0)
8.	HQ-003	Quran Translation – III		HQ	0.5	(0.5,0)
Credit Hours (Semester – III)					16.5	(13.5, 3)

Semester – IV						
Sr.	Code	Course Title	Pre-Requisite/Co-Requisite	Domain	Cr. Hrs.	
1.	CC-213	Data Structures	CC-211 Object Oriented Programming	CC	3	(3,0)
2.	CC-213-L	Data Structures Lab	CC-211 Object Oriented Programming	CC	1	(0,1)
3.	CC-312	Information Security		CC	3	(2,1)
4.	CC-214	Computer Networks		CC	3	(2, 1)
5.	CC-212	Software Engineering		CC	3	(3,0)
6.	DC-220	Advanced Database Management Systems	CC-215 Database Systems	DC	3	(2, 1)
7.	HQ-004	Quran Translation – IV		HQ	0.5	(0.5,0)
Credit Hours (Semester – IV)					16.5	(12.5, 4)

Semester – V						
Sr.	Code	Course Title	Pre-Requisite/Co-Requisite	Domain	Cr. Hrs.	
1.	CC-313	Analysis of Algorithms	CC-213 Data Structures	CC	3	(3, 0)
2.	CC-310	Artificial Intelligence	CC-313 Data Structures	CC	3	(2, 1)
3.	DC-320	Theory of Automata and Formal Languages		DC	3	(3, 0)
4.	DC-321	Human Computer Interaction		DC	3	(2, 1)
5.	DC-322	Computer Architecture	CC-210 Computer Organization & Assembly Language	DC	3	(2, 1)
6.	EC-330	Web Technologies / Elective		EC	3	(2, 1)
7.	HQ-005	Quran Translation – V		HQ	0.5	(0.5,0)
Credit Hours (Semester – V)					18.5	(14.5, 4)

Semester – VI						
Sr.	Code	Course Title	Pre-Requisite/Co-Requisite	Domain	Cr. Hrs.	
1.	CC-311	Operating System		CC	3	(2, 1)
2.	EC-333	Mobile Application Development / Elective	CC-211 Object Oriented Programming	EC	3	(2, 1)
3.	EC-324	Software Construction & Development / Elective		EC	3	(2, 1)
4.	EC-335	Machine Learning / Elective		EC	3	(2, 1)
5.	EC-334	Game Design and Development / Elective		EC	3	(2,1)
6.	MS-253	Multivariable Calculus	GE-162 Calculus & Analytical Geometry	MS	3	(3, 0)
7.	HQ-006	Quran Translation – VI		HQ	0.5	(0.5,0)
Credit Hours (Semester – VI)					18.5	(13.5, 5)

Semester – VII						
Sr.	Code	Course Title	Pre-Requisite/Co-Requisite	Domain	Cr. Hrs.	
1.	CC-411	Final Year Project – I		CC	2	(0, 2)
2.	DC-328	Parallel & Distributed Computing	CC-311 Operating Systems	DC	3	(2, 1)
3.	EC-345	Computer Vision / Elective		EC	3	(2, 1)
4.	EC-425	Software Quality Engineering / Elective	CC-212 Software Engineering	EC	3	(2, 1)
5.	MS-254	Technical and Business Writing		MS	3	(3, 0)
6.	GE-263	Entrepreneurship		GE	2	(2, 0)
7.	GE-262	Professional Practices		GE	2	(2, 0)
8.	HQ-007	Quran Translation – VI		HQ	0.5	(0.5,0)
Credit Hours (Semester – VII)					18.5	(14.5, 5)

Semester – VIII						
Sr.	Code	Course Title	Pre-Requisite/Co-Requisite	Domain	Cr. Hrs.	
1.	CC-412	Final Year Project – II	CC-411 Final Year Project - I	CC	4	(0, 4)
2.	DC-421	Compiler Construction	DC-320 Theory of Automata and Formal Languages	DC	3	(2, 1)
3.	UE-272	Introduction to Marketing		UE	3	(3, 0)
4.	GE-168	Ideology and Constitution of Pakistan		GE	2	(2, 0)
5.	GE-363	Civics and Community Engagement		GE	2	(2, 0)
6.	HQ-008	Quran Translation – VIII		HQ	0.5	(0.5,0)
Credit Hours (Semester – VIII)					14.5	(9.5,5)
Total Credit Hours					134	(104, 30)