

**Curriculum BS (CS) –Bachelors in Computer Science  
w.e.f Fall 2016**

SEMESTER-1				SEMESTER-2			
Code	Course Title	Pre-Req.	Cr. Hr.	Code	Course Title	Pre-Req.	Cr. Hr.
NS-111	Calculus and Analytical Geometry	-	3+0	NS-121	Multivariable Calculus	NS-111	3+0
CS-111	Introduction to Computing	-	2+1	CS-121	Programming Fundamentals	CS-111	3+1
HS-111	Functional English	-	3+0	CS-122	Discrete Structures	-	3+0
CS-112	Basic Electronics	-	2+1	HS-121	Communication Skills	-	3+0
HS-112	Pakistan Studies	-	2+0	MG/SS-XXX	University Elective – I	-	3+0
				HS-113	Islamic Studies/Ethical Behavior	-	2+0
<b>Total credits</b>			<b>14</b>	<b>Total credits</b>			<b>18</b>
SEMESTER-3				SEMESTER-4			
Code	Course Title	Pre-Req.	Cr. Hr.	Code	Course Title	Pre-Req.	Cr. Hr.
NS-211	Linear Algebra	-	3+0	CS-221	Data Structures and Algorithms	CS-121	3+1
CS-211	Digital Logic Design	-	3+1	CS-222	Data Communication and Computer Networks	CS-111	3+1
CS-212	Object Oriented Programming	CS-121	3+1	CS-223	Microprocessor and Assembly Language	CS-211	3+1
NS-212	Probability and Statistics	-	3+0	NS-221	Differential Equations	NS-111	3+0
MG/SS-XXX	University Elective – II	-	3+0	MG/SS-XXX	University Elective – III	-	3+0
<b>Total credits</b>			<b>17</b>	<b>Total credits</b>			<b>18</b>
SEMESTER-5				SEMESTER-6			
Code	Course Title	Pre-Req.	Cr. Hr.	Code	Course Title	Pre-Req.	Cr. Hr.
CS-311	Database Systems	CS-221	3+1	CS-321	Theory of Automata	CS-122	3+0
CS-312	Introduction to Software Engineering	CS-221	3+0	CS-322	Design and Analysis of Algorithms	CS-221	3+0
CS-313	Operating Systems	CS-111	3+1	CS-323	Computer Architecture and Organization	CS-211	3+0
CS-314	Numerical Computing	NS-221	2+1	HS-321	Technical Report Writing	-	3+0
MG/SS-XXX	University Elective – IV	-	3+0	CS-3XX	CS Elective – I	-	3+0/ (2+1)
				CS-3XX	CS Elective – II	-	3+0/ (2+1)
<b>Total credits</b>			<b>17</b>	<b>Total credits</b>			<b>18</b>
CS-341 Internship (0+1) Non-credit							
SEMESTER-7				SEMESTER-8			
Code	Course Title	Pre-Req.	Cr. Hr.	Code	Course Title	Pre-Req.	Cr. Hr.
CS-411	Human Computer Interaction	-	3+0	HS-421	Professional Practices	-	3+0
CS-412	Compiler Construction	CS-321	3+0	CS-421	Information Security	CS-222	3+0
CS-413	Artificial Intelligence	CS-122	2+1	CS-4XX	CS Elective – V	-	3+0/ (2+1)
CS-4XX	CS Elective – III	-	3+0/ (2+1)	CS-4XX	CS Elective – VI	-	3+0/ (2+1)
CS-4XX	CS Elective – IV	-	3+0/ (2+1)	CS-425	Final Year Project – II	CS-415	0+3
CS-415	Final Year Project – I	-	0+3				
<b>Total credits</b>			<b>18</b>	<b>Total credits</b>			<b>15</b>

