

# BS Computer Science

## Suggested Semester/Study Plan for BSCS

Semester - 1			
Code	Course Title	Pre-req	Credit Hrs
CSC-1113	Programming Fundamentals	-	3
CSC-1111	Programming Fundamentals - LAB	-	1
CSC-1012	Application of Information & Communication Technologies	-	2
CSC-1011	Application of Information & Communication Technologies - LAB	-	1
ENG-1213	Functional English	-	3
MTH-1423	QR-1 (Calculus and Analytical Geometry)	-	3
MTH-1413	QR-2 (Discrete Structures)	-	3
ISL-1011	Fehm-e-Quran I (Only for Muslims)	-	1
HUM-1011	Ethics and Culture I (Only for non-Muslims)	-	1
MTH-1410	Pre Calculus I (If mathematics was not in Intermediate)	-	3 (NC)
<b>Total</b>			<b>17</b>

Semester - 2			
Code	Course Title	Pre-req	Credit Hrs
CSC-1123	Object Oriented Programming	CSC-1113	3
CSC-1121	Object Oriented Programming - LAB	CSC-1111	1
CSC-1022	Digital Logic Design	-	2
CSC-1021	Digital Logic Design - LAB	-	1
CSC-1033	Database Systems	-	3
CSC-1031	Database Systems - LAB	-	1
CSC-1042	Computer Networks	-	2
CSC-1041	Computer Networks - LAB	-	1
MTH-1433	Linear Algebra	MTH-1423	3
ISL-1021	Fehm-e-Quran II (Only for Muslims)	-	1
HUM-1021	Ethics and Culture II (Only for non-Muslims)	-	1
MTH-1420	Pre Calculus II (If mathematics was not in Intermediate)	-	3 (NC)
<b>Total</b>			<b>18</b>

<b>Semester - 3</b>			
<b>Code</b>	<b>Course Title</b>	<b>Pre-req</b>	<b>Credit Hrs</b>
CSC-2133	<b>Data Structures</b>	<b>CSC-1123</b>	<b>3</b>
CSC-2131	<b>Data Structures - LAB</b>	<b>CSC-1121</b>	<b>1</b>
CSC-2063	<b>Software Engineering</b>	-	<b>3</b>
CSC-2082	<b>Artificial Intelligence</b>	-	<b>2</b>

CSC-2081	<b>Artificial Intelligence - LAB</b>	-	<b>1</b>
CSC-2072	<b>Information Security</b>	-	<b>2</b>
CSC-2071	<b>Information Security - LAB</b>	-	<b>1</b>
MTH-2443	<b>Probability &amp; Statistics</b>	-	<b>3</b>
MTH-2453	<b>Multivariable Calculus</b>	<b>MTH-1423</b>	<b>3</b>
<b>Total</b>			<b>19</b>

<b>Semester - 4</b>			
<b>Code</b>	<b>Course Title</b>	<b>Pre-req</b>	<b>Credit Hrs</b>
CSC-2142	<b>Computer Org. &amp; Assembly Language</b>	<b>CSC-1022</b>	<b>2</b>
CSC-2141	<b>Computer Org. &amp; Assembly Language - LAB</b>	<b>CSC-1121</b>	<b>1</b>
CSC-2513	<b>DC1 / Theory of Automata</b>	-	<b>3</b>
CSC-2522	<b>DC2 / Advance Database Management System</b>	<b>CSC-1033</b>	<b>2</b>
CSC-2521	<b>DC2 / Advance Database Management System - LAB</b>	<b>CSC-1031</b>	<b>1</b>
PHY-2462	<b>Applied Physics</b>	-	<b>2</b>
PHY-2461	<b>Applied Physics - LAB</b>	-	<b>1</b>
ENG-2223	<b>Expository Writing</b>	<b>ENG-1213</b>	<b>3</b>
CSE-2612	<b>Domain Elective I / Web Technologies</b>	-	<b>2</b>
CSE-2611	<b>Domain Elective I / Web Technologies - LAB</b>	-	<b>1</b>
<b>Total</b>			<b>18</b>

<b>Semester - 5</b>			
<b>Code</b>	<b>Course Title</b>	<b>Pre-req</b>	<b>Credit Hrs</b>
CSC-3052	Operating Systems	-	2
CSC-3051	Operating Systems - LAB	-	1
CSC-3532	DC3 / HCI & Computer Graphics	-	2
CSC-3531	DC3 / HCI & Computer Graphics - LAB	-	1
CSC-3542	DC4 / Computer Architecture	CSC-2142	2
CSC-3541	DC4 / Computer Architecture - LAB	CSC-2141	1
CSE-3622	Domain Elective 2 / Mobile Application Development 1		2
CSE-3621	Domain Elective 2 / Mobile Application Development 1 - LAB		1
CSE-3632	Domain Elective 3 / Visual Programming	CSC-1123	2
CSE-3631	Domain Elective 3 / Visual Programming - LAB	CSC-1121	1
SOC-3312	Social Science / (Introduction to Sociology)	-	2
<b>Total</b>			<b>17</b>

<b>Semester - 6</b>			
<b>Code</b>	<b>Course Title</b>	<b>Pre-req</b>	<b>Credit Hrs</b>

CSC-3552	DC5 / Compiler Construction	CSC-2513	2
CSC-3551	DC5 / Compiler Construction - LAB	CSC-2513	1
CSC-3562	DC6 / Parallel & Distributed Computing	CSC-3052	2
CSC-3561	DC6 / Parallel & Distributed Computing - LAB	CSC-3051	1
CSE-3642	Domain Elective 4 / Numerical Analysis	-	2
CSE-3641	Domain Elective 4 / Numerical Analysis - LAB	-	1
CSE-3652	Domain Elective 5 / Web Engineering	CSE-2612	2
CSE-3651	Domain Elective 5 / Web Engineering - LAB	CSE-2611	1
CSE-3662	Domain Elective 6 / Cyber Security	CSC-2072	2
CSE-3661	Domain Elective 6 / Cyber Security - LAB	CSC-2071	1
CSE-3672	Domain Elective 7 / Software Testing & Quality Assurance		2
CSE-3671	Domain Elective 7 / Software Testing & Quality Assurance - LAB		1
<b>Total</b>			<b>18</b>

<b>Semester - 7</b>			
<b>Code</b>	<b>Course Title</b>	<b>Pre-req</b>	<b>Credit Hrs</b>
CSC-4712	<b>Final Year Project - I</b>	-	<b>2</b>
CSC-4093	<b>Analysis of Algorithms</b>	<b>CSC-2133</b>	<b>3</b>
MGT-4383	<b>Elective Supporting Course / Introduction to Marketing</b>	-	<b>3</b>
ENG-4233	<b>Technical and Business Writing</b>	<b>ENG-1213</b>	<b>3</b>
HUM-4342	<b>Islamic Studies/ Ethics</b>	-	<b>2</b>
HUM-4322	<b>Entrepreneurship</b>		<b>2</b>
<b>Total</b>			<b>15</b>

<b>Semester - 8</b>			
<b>Code</b>	<b>Course Title</b>	<b>Pre-req</b>	<b>Credit Hrs</b>
CSC-4724	<b>Final Year Project – II</b>	<b>CSC-4712</b>	<b>4</b>
HUM-4352	<b>Professional Practices</b>	-	<b>2</b>
HUM-4372	<b>Ideology and Constitution of Pakistan</b>	-	<b>2</b>
HUM-4362	<b>Civics and Community Engagement</b>	-	<b>2</b>
PAK-4022	<b>Pakistan Studies</b>	-	<b>2</b>
<b>Total</b>			<b>12</b>