

**Proposed Study Plan for BS (Software Engineering)**  
**4-Year Program (8 Regular Semesters of 18 weeks each)**

<b>BS (Software Engineering)</b>			
Program as per Higher Education Commission NCRC			
Nazeer Hussain University, Pakistan			

**CURRENT SCHEME OF STUDY AS PER NCRC 2017**

<b>I SEMESTER</b>			<b>Pre-Requisite</b>
<b>Code</b>	<b>Course Title</b>	<b>Cr. Hr.</b>	<b>Course Title</b>
CS-102	Introduction to Information and Communication Technology	2+1	None
CS-101	Programming Fundamentals	3+1	None
HS-101	English Composition & Comprehension	3+0	None
NS-102	Calculus and Analytical Geometry	3+0	None
HS-103	Pakistan Studies	2+0	None
NS- 103	Applied Physics	3+0	None
<b>Total Credit</b>		<b>16+2=18</b>	

<b>II SEMESTER</b>			
<b>Code</b>	<b>Course Title</b>	<b>Cr. Hr.</b>	<b>Course Title</b>
HS-102	Islamic Studies	2+0	None
HS-110	Communication & Presentation Skills	3+0	English Composition & Comprehension
CS-204	Software Engineering	3+0	None
NS-101	Discrete Structures	3+0	None
CS-111	Object Oriented Programming	3+1	Programming Fundamentals
MS-308	University Elective – I (Principles of Management)	3+0	None
<b>Total Credit</b>		<b>17+1=18</b>	

<b>III SEMESTER</b>			
<b>Code</b>	<b>Course Title</b>	<b>Cr. Hr.</b>	<b>Course Title</b>
SE-403	Human Computer Interaction	3-0	Software Engineering
SE-201	Software Requirement Engineering	3-0	Software Engineering
CS-211	Data Structures & Algorithms	3+1	Discrete Structures
NS-211	Linear Algebra	3+0	Calculus and Analytical Geometry
MS-307	University Elective – II (Principles of Marketing)	3+0	None
<b>Total Credit</b>		<b>15+1=16</b>	

**IV SEMESTER**

<b>Code</b>	<b>Course Title</b>	<b>Cr. Hr.</b>	<b>Course Title</b>
CS-312	Operating Systems	3+1	Programming Fundamentals
NS-301	Probability & Statistics	3+0	None
CS-213	Database Systems	3+1	Programming Fundamentals
SE-202	Software Design & Architecture	2+1	Software Requirement Engineering
MS-402	University Elective – III (Entrepreneurship)	3+0	None
<b>Total Credit</b>		<b>14+3=17</b>	

<b>V SEMESTER</b>			
<b>Code</b>	<b>Course Title</b>	<b>Cr. Hr.</b>	<b>Course Title</b>
SE-301	Software Construction and Development	2+1	Software Design and Architecture
HS-201	Technical and Business Writing	3-0	Communication & Presentation Skills
CS-301	Computer Networks	3+1	None
SE-304	SE Supporting – I (Business Process Engineering)	3+0	None
SE-305	SE Supporting – II (Operations Research)	3+0	None
<b>Total Credit</b>		<b>14+2=16</b>	
<b>VI SEMESTER</b>			
<b>Code</b>	<b>Course Title</b>	<b>Cr. Hr.</b>	<b>Course Title</b>
SE-302	Software Quality Engineering	3+0	Software Engineering
CS-412	Information Security	3+0	Communication Networks
HS-401	Professional Practices	3+0	None
SE-303	Web Engineering	3+0	
SE-306	SE Supporting – III (Simulation and Modeling)	3+0	None
SE-307	SE Elective – I (Computer Graphics)	3+0	None
<b>Total Credit</b>		<b>18+0=18</b>	
<b>VII SEMESTER</b>			
<b>Code</b>	<b>Course Title</b>	<b>Cr. Hr.</b>	<b>Course Title</b>
SE-401	Software Project Management	3+0	Software Engineering
SE-402	Software Re-Engineering	3+0	Software Construction & Development
SE-404	SE Elective – II (E-Commerce)	3+0	None
SE-405	SE Elective – III (Management Information Systems)	3+0	None
SE-498	Final Year Project –I	0+3	None
<b>Total Credit</b>		<b>12+3=15</b>	
<b>VIII SEMESTER</b>			
<b>Code</b>	<b>Course Title</b>	<b>Cr. Hr.</b>	<b>Course Title</b>
SE-406	SE Elective – IV (Visual Programming)	3+0	None
SE-407	SE Elective – V (Software Engineering Economics)	3+0	None
MS-403	University Elective – IV (Human Resource Management )	3+0	None
SE-499	Final Year Project –II	0+3	Final Year Project -I
<b>Total Credit</b>		<b>9+3=12</b>	

<b>Program Summary for Proposed BS (SE)</b>	
Duration of Program	4 Years
Number of Semesters	8
Total Credit Hours	130
Total Number of Courses	40 + Final Year Project (Parts – I and II)