BS COMPUTER SCIENCE (BSCS)

In this modern era of information age, the field of computing is advancing at an ultra-high speed. With the recent advancements in different areas of computing e.g. Internet of Things, Big Data, Cloud Computing, Cyber Security, although there has been a growing demand to excel in these particular areas, however, the importance of having a strong foundation of the core principles of computing has also got more attention. The need to build the core competency in the area of foundation of the computing, the underlying hardware and software platforms, programming interfaces, complex algorithms, trends in user interface designs, emergence of new businesses, has increased.

This program of BS Computer Science is aimed to fulfil this need of the new era. The Bachelor of Science in Computer Science program will try to produce the high-quality computer scientists who will have the necessary theoretical background to understand the computing problems, will be equipped with the necessary tools and techniques to design, develop and deliver the solutions for these problems and will have the necessary ethical values to apply this skill set in the appropriately right way.

Duration

8 Semesters (4 Years)

Eligibility:

The minimum requirements for admission in a Bachelor degree program in Computer Science, is at least 50% or above marks in Intermediate (HSSC) examination with Mathematics or equivalent qualification.

The candidates for BS Computer Science with at least 50% or above marks in Intermediate with Pre-Medical background (without Mathematics) will be required to pass deficiency courses of Mathematics of 6 credit hours within one year of their regular studies.

Admission criteria:

Academic Qualification 60%

Test / Interview 40%

Class Timings:

(Monday – Friday)

Scholarships:

Talent & need based scholarship (upto 100% on tution fee)

Degree Completion:

For award of BS degree, a student must have:

- a. Passed courses totaling at least 134 credit hours, including six credit hours of Final Year Project.
- b. Obtained a CGPA of 2.0 or more.

Study Plan for BS (Computer Science)

4-Year Program (8 Regular Semesters of 18 weeks each)



Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
16 Credit Hrs.	16 Credit Hrs.	16 Credit Hrs.	18 Credit Hrs.	18 Credit Hrs.	17 Credit Hrs.	17 Credit Hrs.	12 Credit Hrs.
Programming Fundamentals (3+1)	Object Oriented Programming (3+1)	Data Structures (3+1)	Design and Analysis of Algorithms (3)	Operating Systems (2+1)	Computer Networks (2+1)	Final Year Project-I (3)	Final Year Project-II (3)
Discrete Structures (3)	Digital Logic Design (2+1)	Computer Organization and Assembly Language (2+1)	Database Systems (3+1)	Theory of Automata (3)	Artificial Intelligence (2+1)	Information Security (2+1)	Professional Practices (2)
Functional English (3)	Ideology and Constitution of Pakistan (2)	Multivariable Calculus (3)	Domain Elective 1 (Web Application Development) (2+1)	Human Computer Interaction (2+1)	Parallel & Distributed Computing (2+1)	Advance Database Management Systems (2+1)	Domain Elective 6
Applied Phys- ics (2+1)	Calculus and Analytic Geometry (3)	Technical & Business Writing (3)	Linear Algebra (3)	Domain Elective 2 (3)	Compiler Construction (2+1)	Domain Elective 5	Domain Elective 7
Application of Information & Communication Technologies (2+1)	Expository Writing (3)	Software Engineering (3)	Computer Architecture (2+1)	Domain Elective 3	Domain Elective 4	Elective Supporting Courses (3)	Social Sciences (2)
	Islamic Studies (2)	Introduction to Basic Teachings of Quran (2)	Civics and Community Engagement (Family Life in 21st Century) (2)	Probability & Statistics (3)	Entrepreneurship (2)	Introduction to Hadith & Seerah (2)	
Computing Core	Mathematics & Supporting	General Education Requirement	Elective Supporting Courses	Domain CS (Core)	Domain CS Elective		134
46 Credit Hrs.	12 Credit Hrs.	34 Credit Hrs.	3 Credit Hrs.	18 Credit Hrs.	21 Credit Hrs.		

Study Plan for BS (Computer Science)

