

## BS CYBER SECURITY (BS CySec)

In this modern era of information age, the field of computing is advancing at an ultra-high speed. With the recent advancements in Cyber Security, 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 Cyber Security has also got more attention. The need to build the core competency in the area of foundation of the Cyber Security, the underlying hardware and software security platforms, programming interfaces, complex algorithms, trends in user interface designs, emergence of new businesses, has increased. This program of Bachelor of Science in Cyber Security (BS CySec) is aimed to fulfil this need of the new era. The BS Cyber Security program will try to produce the high-quality Cyber Security specialists 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. This program will equip to master the foundational goals of Cyber Security. This will apply current technical tools and methodologies to solve security problems. Upon completion, students will be able to evaluate security trends, recognize best practices, and understand IT security products and threats.

### Duration

8 Semesters (4 Years)

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

The candidates for BS Cyber Security 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 tuition fee)

**Degree Completion:** For award of bachelor degree, a student must have:

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

### Study Plan for BS (Cyber Security)

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



## Study Plan for BS (Cyber Security)

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
16 Credit Hrs.	17 Credit Hrs.	16 Credit Hrs.	18 Credit Hrs.	18 Credit Hrs.	16 Credit Hrs.	18 Credit Hrs.	11 Credit Hrs.
Programming Fundamentals (3+1)	Object Oriented Programming (3+1)	Data Structures (3+1)	Analysis of Algorithms (3)	Linear Algebra (3)	Artificial Intelligence (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)	Network Security (2+1)	Digital Forensics (2+1)	Introduction to Hadith & Seerah (2)	Professional Practices (2)
Functional English (3)	Ideology and Constitution of Pakistan (2)	Multivariable Calculus (3)	Software Engineering (3)	Secure Software Design and Development (2+1)	Parallel & Distributed Computing (2+1)	Civics and Community Engagement (Family Life in 21st Century) (2)	Domain Elective 6
Applied Physics (2+1)	Calculus and Analytic Geometry (3)	Cyber Security (2+1)	Operating Systems (2+1)	Domain Elective 1	Domain Elective 2	Domain Elective 4	Domain Elective 7
Application of Information & Communication Technologies (2+1)	Expository Writing (3)	Computer Networks (2+1)	Information Assurance (2+1)	Technical & Business Writing (3)	Domain Elective 3	Domain Elective 5	Social Sciences (2)
	Information Security (2+1)	Islamic Studies (2)	Introduction to Basic Teachings of Quran (2)	Probability & Statistics (3)	Entrepreneurship (2)	Elective Supporting Courses (3)	
Computing Core	Mathematics & Supporting	General Education Requirement	Elective Supporting Courses	Domain Core	Domain Elective		<b>134</b>
46 Credit Hrs.	12 Credit Hrs.	34 Credit Hrs.	3 Credit Hrs.	18 Credit Hrs.	21 Credit Hrs.		

