

BS Biochemistry Program Road Map Applicable to Batch No. _____ Session: Fall 2023

1 st Year							
Fall Semester				Spring Semester			
Code	Course Title	Cr. Hrs.	Prerequisite	Code	Course Title	Cr. Hrs	Prerequisite
EN110	English-I	3	----	EN112	English-II	3	EN110
xxx	Arts &Humanities Domain*	3	----	ISL-112	Islamic thought and Perspectives	3	----
IS-135	Computer Applications	3	----	CH-102	Principles of Chemistry-II	3+1	CH-101
BC-101	Cell Biology	3	----	PH-105	Biological Physics	3+1	----
xxx	Natural Sciences Elective (Everyday Science)	3		BT-111	Classical Genetics	3	----
CH-101	Principles of Chemistry-I	3	----	-	-	-	---
Semester Credit Hours		18		Semester Credit Hours		17	
2 Year							
Fall Semester				Spring Semester			
Code	Course Title	Cr. Hrs.	Prerequisite	Code	Course Title	Cr. Hrs	Prerequisite
PH-106	Medical physics	3	PH-105	QM-111	Quantitative Skills & Reasoning	3	-----
				POL-121	Pakistan Ideology, Constitution and Society	3	-----
BC-211	Amino Acids, Proteins and Nucleic Acids	3+1	----	SD-210	Civics & Community Engagement	2	
BC-213	Microbiology	3+1	----	MG-220	Innovation and Entrepreneurship	3	
CH-203	Principles of Chemistry-III	3	CH-102	xxx	Social Science Domain*	3	----
MA-101	Calculus	3	----	BC-202	Carbohydrates and Lipids	3+1	----
Semester Credit Hours		17		Semester Credit Hours		18	
3 rd Year							
Fall Semester				Spring Semester			
Code	Course Title	Cr. Hrs.	Prerequisite	Code	Course Title	Cr. Hrs	Prerequisite
BC-301	Human Physiology	3		BT-304	Immunology	3	----
BC-302	Fundamentals of Forensic Sciences	3	-----	BC-306	Enzymology	3	----
SD-100	English Immersion	0		SD-102	21st Century Skills	0	
BC-311	Analytical Techniques in Biochemistry	3+1	-----	BC-313	Metabolism and Bioenergetics	3	-----
BC-307	Molecular Biology	3+1	----	BC-314	Clinical Biochemistry	3+1	-----
BC-312	Bioinformatics	3+1		BC-401	Nutritional Biochemistry	3+1	----
Semester Credit Hours		18		Semester Credit Hours		18	

4 th Year							
Fall Semester				Spring Semester			
Code	Course Title	Cr. Hrs.	Prerequisite	Code	Course Title	Cr. Hrs	Prerequisite
BC-315	Environmental Biochemistry	3	----	BC-404	Industrial Biochemistry	3	
BC-402	Plant Biochemistry	3	----	xxx	Elective-III	3	
BC-403	Biosafety and Ethics	3	----	xxx	Elective-IV	3	----
xxx	Elective-I	3	----				
xxx	Elective-II	3	----	xxx	Capstone Project-II/ /Internship/Elective Course/ COOP-II	3	----
xxx	Capstone Project-I/ Elective Course/COOP-I	3	----	-	-	-	----
Semester Credit Hours		18		Semester Credit Hours		12	

*Any course offered from UG2.0 in the relevant domain.

Total Credit Hours: 135

List of Electives

Commercialization of Biological Products	BT-420
Nano-Biotechnology	BT-421
Cell and Tissue Culture	BT-413
General Virology	MB-202
Proteomics and Genomics	BT-422
Laboratory Quality Assurance and Quality Control	BT-419
Animal Biotechnology	BT-427
Marine Biotechnology	BT-425
Biochemistry of Drugs and Resistance	BT-417
Biosensors	BT 426
Pharmaceutical Biotechnology	BT-416
Epigenetics	MB-416

It is hereby certified that curriculum of **BS Biochemistry** program, Session **Fall 2023** is compliant to Undergraduate 2.0 Policy. All the courses of UG 2.0 are incorporated in the roadmap accordingly.

Chairperson, Department of Life Sciences

Dean, SSc

Director AAQIC

Registrar