

BS Biotechnology Program Road Map Applicable to 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	----	QM-111	Quantitative Skills & Reasoning	3	
MA-101	Calculus	3	----	BT-111	Classical Genetics	3	----
xxx	Natural Sciences Elective (Everyday Science)	3		EN112	English-II	3	EN110
IS-135	Computer Applications	3	----	PH-105	Biological Physics	3+1	----
BT-101	Cell Biology	3	----	CH-101	Principles of Chemistry-I	3	-----
xxx	Social Sciences Domain*	3	----	-	-	-	---
Semester Credit Hours		18		Semester Credit Hours		16	
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	BT-305	Biochemistry-II	3	BT-301
BT-213	Microbiology	3+1		POL-121	Pakistan Ideology, Constitution and Society	3	-----
ISL-112	Islamic Thoughts & Perspectives	3	----	xxx	Arts & Humanities Domain*	3	
CH-102	Principles of Chemistry-II	3+1	CH-101	MG-220	Innovation and Entrepreneurship	3	
BT-301	Biochemistry-I	3+1	----	SD-210	Civics and Community Engagement	2	
-	-	-	---	BT-309	Molecular Biology-I	3+1	----
Semester Credit Hours		18		Semester Credit Hours		18	
3 rd Year							
Fall Semester				Spring Semester			
Code	Course Title	Cr. Hrs.	Prerequisite	Code	Course Title	Cr. Hrs	Prerequisite
BT-301	Human Physiology	3	----	BT-311	Analytical Techniques in Biotechnology	3+1	-----
BT-302	Fundamentals of Forensic Sciences	3	-----	BT-312	Bioinformatics	3+1	
BT-313	Molecular Biology-II	3	BT-309	BT-304	Immunology	3	----
SD-100	English Immersion	0	----	SD-102	21 st Century Skills	0	----
BT-315	Environmental Biotechnology	3	----	BT-306	Enzymology	3+1	
CH-203	Principles of Chemistry-III	3	CH-102	BT-403	Biosafety and Ethics	3	

BT-404	Industrial Biotechnology	3					
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
BT-401	Food Biotechnology	3+1	----	xxx	Elective-II	3	
BT-402	Agricultural Biotechnology	3+1		xxx	Elective-III	3	----
xxx	Elective-I	3	----	xxx	Elective-IV	3	----
BT-314	Health Biotechnology	3+1	-----	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: 136

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
Aquaculture and Fisheries	ZL-420
Epigenetics	MB 416

It is hereby certified that curriculum of BS Biotechnology 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