

BS Biological Sciences (Biotechnology)

Year 1								
Semester (I) - Fall				Semester (II) - Spring				Summer Break
Course Code	Course	Credit Hours	Course Type	Course Code	Course	Credit Hours	Course Type	
AHS-611	English I	3(3+0)	C1	AHS-621	English II	3(3+0)	C4	
AHS-612	Pakistan Studies	2(2+0)	C2	AHS-622	Islamic Studies	2(2+0)	C5	
AHS-613	Mathematics-I	3(3+0)	C3	BBS-623	Calculus	3(3+0)	C6	
BBS-614	Organic Chemistry	3(2+1)	G1	BBS-624	Inorganic Chemistry	3(2+1)	G4	
SBS-641	Philosophy of Health	3(3+0)	G2	BBS-625	Biochemistry-I	3(2+1)	G3	
BTE-615	Cell Biology	3(2+1)	F1	BTE-626	General Genetics	3(2+1)	F2	
Total Credit Hours		17		Total Credit Hours		17		

Year 2								
Semester (III) - Fall				Semester (IV) - Spring				Summer Break
Course Code	Course	Credit Hours	Course Type	Course Code	Course	Credit Hours	Course Type	
AHS-631	English-III	3(3+0)	C7	BBS-641	Probability & Biostatistics/Biometry-I	3(3+0)	C9	
AHS-632	Introduction to Computer	3(2+1)	C8	BBS-642	Immunology -I	3(3+0)	G7	
BBS-633	Enzymology	3(2+1)	G5	SBS-685	Logic and Critical Reasoning	3(3+0)	G8	
BBS-634	Entrepreneurship	3(3+0)	G6	BTE-643	Ecology, Biodiversity & Evolution	3(3+0)	F4	
BTE-635	Molecular Biology	3(3+0)	F3	BTE-644	Basic Biotechnology and Genetic Engineering	3(2+1)	F5	
Total Credit Hours		15		Total Credit Hours		15		

Year 3								
Semester (V) - Fall				Semester (VI) - Spring				Summer Break
Course Code	Course	Credit Hours	Course Type	Course Code	Course	Credit Hours	Course Type	
BTE-651	Introduction to Bioinformatics	3(2+1)	F6	BTE-661	Research Methodology and Report Writing	3(3+0)	F8	
BBS-652	Methods in Molecular Biology	3(1+2)	F7	BTE-662	General Virology	3(2+1)	F9	
BTE-653	Analytical chemistry & instrumentation	3(2+1)	M1	BTE-663	Agriculture Biotechnology	3(2+1)	M4	
BTE-654	Principles of Biochemical Engineering	3(2+1)	M2	BTE-664	Bacterial Genetics	3(2+1)	M5	
BTE-655	Nano Biotechnology	3(3+0)	M3	BTE-665	Bioethics and Biosafety	3(3+0)	M6	
Total Credit Hours		15		Total Credit Hours		15		

Year 4								
Semester (VII) - Fall				Semester (VIII) - Spring				Summer Break
Course Code	Course	Credit Hours	Course Type	Course Code	Course	Credit Hours	Course Type	
BTE-671	Health Biotechnology	3(3+0)	M7	BTE-681	Industrial Biotechnology	3(3+0)	M10	
BTE-672	Fungal Biotechnology	3(3+0)	M8	BTE-682	Food Biotechnology	3(2+1)	M11	
BTE-699-1	Project I (Systematic review and Meta-anal	3(1+2)	M9	BTE-699-2	Project II (research/internship)	3(3+0)	M12	
	Elective-I	3	E1		Elective-III	3	E3	
	Elective-II	3	E2		Elective-IV	3	E4	
	Total Credit Hours	15			Total Credit Hours	15		

Electives								
Semester (VII) - Fall				Semester (VIII) - Spring				Summer Break
Course Code	Course	Credit Hours	Course Type	Course Code	Course	Credit Hours	Course Type	
BBS-601	Biophysics	3(3+0)	E	BBS-602	Gene Therapy	3(3+0)	E	
BTE-601	Environment Biotechnology	3(3+0)	E	BTE-602	Animal Biotechnology	3(3+0)	E	
MIC-671	Medical Virology	3(2+1)	E	MIC-663	Introduction to Medical Microbiology	3(3+0)	E	
GEN-654	Biometry-II	3(3+0)	E	MIC-681	Epidemiology and Public health	3(3+0)	E	
GEN-672	Genomics and Proteomics	3(2+1)	E	MIC-682	Immunology-II	3(3+0)	E	
MIC-655	Food Microbiology	3(3+0)	E	GEN-663	Methods in Bioinformatics	3(2+1)	E	
GEN-655	Biochemistry II	3(2+1)	E	GEN-682	Genetic Resources and Conservation	3(3+0)	E	

C	COMPULSORY
G	GENERAL
F	FOUNDATION
M	MAJOR
E	ELECTIVE