

BS Biological Sciences (Microbiology)

Year 1							
Semester (I) - Fall				Semester (II) - Spring			
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)	G3
SBS-641	Philosophy of Health	3(3+0)	G2	BBS-625	Biochemistry-I	3(2+1)	G4
MIC-615	Cell Biology	3(2+1)	F1	MIC-626	Fundamentals of Microbiology-I	3(2+1)	F2
Total Credit Hours		17		Total Credit Hours		17	

Summer Break

Year 2							
Semester (III) - Fall				Semester (IV) - Spring			
Course Code	Course	Credit Hours	Course Type	Course Code	Course	Credit Hours	Course Type
AHS-631	English III	3	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	MIC-643	Fundamentals of Microbiology-II	3(2+1)	F4
MIC-635	Biochemistry II	3(2+1)	F3	MIC-644	General Virology	3(2+1)	F5
Total Credit Hours		15		Total Credit Hours		15	

Summer Break

Year 3							
Semester (V) - Fall				Semester (VI) - Spring			
Course Code	Course	Credit Hours	Course Type	Course Code	Course	Credit Hours	Course Type
MIC-651	Introduction to Bioinformatics	3(2+1)	F6	MIC-661	Research Methodology and Report Writing	3(3+0)	F8
MIC-652	Molecular Biology	3(3+0)	F7	MIC-662	Bacterial Genetics	3(2+1)	F9
MIC-653	Microbial taxonomy	3(3+0)	M1	MIC-663	Introduction to Medical Microbiology	3(3+0)	M4
MIC-654	Microbial anatomy and physiology	3(2+1)	M2	MIC-664	Mycology	3(3+0)	M5
MIC-655	Food Microbiology	3(3+0)	M3	MIC-665	Biosafety and Bioethics	3(3+0)	M6
Total Credit Hours		15		Total Credit Hours		15	

Summer Break

Year 4								
Semester (VII) - Fall				Semester (VIII) - Spring				Summer Break
Course Code	Course	Credit Hours	Course Type	Course Code	Course	Credit Hours	Course Type	
MIC-671	Medical Virology	3(2+1)	M7	MIC-681	Epidemiology and Public health	3(3+0)	M10	
MIC-672	Molecular Mechanism of Anti microbial Agent	3(3+0)	M8	MIC-682	Immunology-II	3(3+0)	M11	
MIC-699-1	Project I (Systematic review and Meta-analysis)	3(1+2)	M9	MIC-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	GEN-603	Population Genetics	3(2+1)	E	
GEN-652/BTE-601	Methods in molecular biology	3(1+2)	E	BBS-602	Gene Therapy	3(3+0)	E	
MIC-601	Medical Parasitology	3(3+0)	E	MIC-602	Applied Microbial Technology	3(2+1)	E	
GEN-653	Genetics and Evolution	3(3+0)	E	EN-642/BTE-603	Basic Biotechnology and Genetic Engineering	3(2+1)	E	
GEN-672	Genomics and Proteomics	3(2+1)	E	BTE-663	Agriculture Biotechnology	3(2+1)	E	
BTE-653	Analytical chemistry & instrumentation	3(2+1)	E	BTE-681	Industrial Biotechnology	3(3+0)	E	
BTE-654	Principles of Biochemical Engineering	3(2+1)	E	BTE-682	Food Biotechnology	3(2+1)	E	
BTE-655	Nano Biotechnology	3(3+0)	E	GEN-663	Methods in Bioinformatics	3(2+1)	E	