

BS. Molecular Biology and Genetics

Year 1							
Semester (I)				Semester (II)			
ENG-611	Functional English	3(3+0)	GE1	ENG-621	Expository Writing	3(3+0)	GE4
QNR-612	Quantitative Reasoning-I	3(3+0)	GE2	ISS-622	Islamic Studies /Ethics	2(2+0)	GE5
HUM-613	Arts and Humanities	2(2+0)	GE3	QNR-623	Quantitative Reasoning-II	3(3+0)	GE6
MBG-614/MIC-614/BTE-614	Inorganic Chemistry	3(2+1)	ID1	CCE-624	Civics and Community Engagement	2(2+0)	GE7
MBG-615/MIC-615/BTE-615	Cell Biology	3(2+1)	M1	MBG-625/MIC-625/BTE-625	Organic Chemistry	3(2+1)	ID2
MBG-616/MIC-616/BTE-616	Biochemistry-I	3(2+1)	M2	MBG-626/BTE-626	General Genetics	3(2+1)	M3
UHQ2-611	Understanding of Holy Quran-I	0+1	GE	UHQ2-612	Understanding of Holy Quran-II	0+1	GE
Total Credit Hours		18		Total Credit Hours		17	

Summer Break

Year 2							
Semester (III)				Semester (IV)			
Course Code	Course	Credit Hours	Course Type	Course Code	Course	Credit Hours	Course Type
NSC-631	Natural Sciences	3(3+0)	GE8	ICP-641	Ideology and Constitution of Pakistan	2(2+0)	GE10
ICT-632	Applications of Information and Communication Tech	3(2+1)	GE9	SSC-642	Social Sciences	2(2+0)	GE11
MBG-633/MIC-633/BTE-633	Probability & Biostatistics/Biometry-I	3(3+0)	ID3	ENT-643	Entrepreneurship	2(2+0)	GE12
MBG-634/MIC-634/BTE-634	Molecular Biology	3(3+0)	M4	MBG-644	Human Physiology	3(2+1)	M7
BTE-635/MBG-635	Biochemistry II	3(2+1)	M5	BTE-645/MBG-645	Methods in Molecular Biology	3(1+2)	M8
MBG-636/MIC-636/BTE-636	Enzymology	3(2+1)	M6	MBG-646/MIC-646/BTE-646	Immunology	3(2+1)	M9
Total Credit Hours		15		Total Credit Hours		15	

Summer Break

Year 3							
Semester (V)				Semester (VI)			
Course Code	Course	Credit Hours	Course Type	Course Code	Course	Credit Hours	Course Type
MBG-651/MIC-651/BTE-651	Introduction to Bioinformatics	3(2+1)	M10	BTE-661/MIC-661/MBG-661	Research Methodology and Report Writing	3(3+0)	M15
BTE-652/MBG-652	Basic Biotechnology and Genetic Engineering	3(2+1)	M11	MBG-662	Methods in Bioinformatics	3(2+1)	M16
MBG-653	Developmental Genetics	3(3+0)	M12	MBG-663/BTE-663	Health Biotechnology	3(3+0)	M17
MBG-654	Genetics and Evolution	3(3+0)	M13	MBG-664/BTE-664/MIC-664	Bacterial Genetics	3(2+1)	M18
MBG-655	Bioethics, Biosafety & Biosecurity Human Genetics	3(3+0)	M14	MBG-665	Genetic Resources and Conservation	3(3+0)	M19
Total Credit Hours		15		Total Credit Hours		15	

Summer Break

Year 4							
Semester (VII)				Semester (VIII)			
Course Code	Course	Credit Hours	Course Type	Course Code	Course	Credit Hours	Course Type
MBG-671	Cell Signalling and Signal Transduction	3(3+0)	M20	MBG-681	Population Genetics	3(2+1)	M24
MBG-672	Molecular Pathology	3(3+0)	M21	MBG-699-2	Capstone Project	3(3+0)	
MIC-673/BTE-673/MBG-673	Genomics and Proteomics	3(2+1)	M22	MIC-683/BTE-683/MBG-683	Epidemiology and Public Health	3(3+0)	ID4
MBG-674	Medical Genetics	3(3+0)	M23	MBG-684	Gene Therapy	3(3+0)	M25
MBG-699-1	Field Experience	3(3+0)		MBG-682	Epigenetics	3(3+0)	M26
Total Credit Hours		15		Total Credit Hours		15	

Summer Break