BS Microbiology and Molecular Genetics

Course Title	Course Code	Course Type	Credit Hour
Semester 1			
GEN(NS)		General	3
Functional English	GENG-101	General	3
Civics and Community Engagement	GCCE-101	General	2
Islamic Studies / Ethics (for Non-Muslims)	GISL-101 / GETH-101	General	2
Fundamentals of Microbiology	MMG-101	Major	3
General Genetics	MMG-102	Major	3
Tarjuma-e-Quran	HQ-001	Compulsory	0
			Total Credit Hours 16
Semester 2			
GEN(AH)		General	2
Quantitative Reasoning (I)	GQR-101	General	3
Entrepreneurship	GENT-101	General	2
Ideology and Constitution of Pakistan	GICP-101	General	2
Microbial Diversity and Systematics	MMG-103	Major	3
Microbial Genetics	MMG-104	Major	3
Tarjuma-e-Quran	HQ-002	Compulsory	1
Principles of Biochemistry	MMG-105	Interdisciplinary	3
			Total Credit Hours 19
Semester 3			
Applications of Information and Communication Technologies	GICT-201	General	3
Expository Writing	GENG-201	General	3
Ecosystem	MMG-201	Interdisciplinary	3
Microbial Physiology and Metabolism	MMG-202	Major	3
Cell Biology	MMG-203	Major	3
Tarjuma-e-Quran	HQ-003	Compulsory	0
Biosafety, Biosecurity and Bioethics	MMG-204	Interdisciplinary	2
Pakistan Studies.	GPST-201	General	2
			Total Credit Hours 19
Semester 4			
GEN(SS)		General	2
Quantitative Reasoning (II)	GQR-201	General	3
Soil, Agriculture and Environmental Microbiology	MMG-207	Major	3
Mycology	MMG-204	Major	3
Aquatic Microbiology	MMG-205	Major	3
Tarjuma-e-Quran	HQ-004	Compulsory	1
Biodiversity of Plants and Animals	GNMMG206	Major	3
			Total Credit Hours 18
Semester 5			
Sustainable Development Goals	MMG-306	Interdisciplinary	3
Medical Microbiology	MMG-305	Major	3
Human Genetics	MMG-303	Major	3
Virology	MMG-302	Major	3
Food Microbiology	MMG-301	Major	3
Tarjuma-e-Quran	HQ-005	Compulsory	0
Immunology	MMG-304	Major	3
			Total Credit Hours 18
Semester 6			
Elective-I**	MMG-312	Major	3
Scientific Inquiry and Research Methods	MMG-311	Interdisciplinary	3
Industrial Microbiology	MMG-309	Major	3
Molecular Biology	MMG-308	Major	3
Epidemiology and Public Health	MMG-307	Major	3
Tarjuma-e-Quran	HQ-006	Compulsory	1
Diagnostic Microbiology	MMG-310	Major	3
			Total Credit Hours 19
Semester 7			
Fieldwork / Intership		Major	3
Elective-III**	MMG-407	Major	3
Elective-II**	MMG-404	Major	3
Antimicrobial Agents and Resistance	MMG-402	Major	3
Microbial Biotechnology	MMG-401	Major	3
Tarjuma-e-Quran	HQ-007	Compulsory	0
Biostatistics	MMG-403	Interdisciplinary	3
			Total Credit Hours 18
Semester 8			
Capstone Project		Major	3
Elective-IV**	MMG-417	Major	3
Artificial Intelligence in Microbiology and Molecular Genetics	MMG-412	Interdisciplinary	3
Vaccinology	MMG-411	Major	3
Bioinformatics	MMG-410	Major	3
Tarjuma-e-Quran	HQ-008	Compulsory	1
			Total Credit Hours 16

Signature