

BS Microbiology (BS MIC)

SEMESTER I			
S.N.	COURSE	CREDIT HOURS	CATEGORY
ARB-500	Arabic Languages	2	General Education
SOC-500	Introduction to Sociology	2	General Education
ENG-501	Functional English	3	General Education
BIO-501	Principles of Biology	2	General Education
BIO-501-L	Principles of Biology Lab	1	General Education
ISL-501	Islamic Studies	2	General Education
MIC-501	Introduction to Microbiology	2	Major
MIC-501-L	Introduction to Microbiology Lab	1	Major
MIC-502	Cell Biology	2	Major
MIC-502-L	Cell Biology Lab	1	Major
Total Credit Hours = 18			

SEMESTER II			
S.N.	COURSE	CREDIT HOURS	CATEGORY
MIC-503	Principles of Genetics	3	Major
ENG-502	Expository Writing	3	General Education
ICT-501	Applications of Information & Communication Technologies (ICT)	2	General Education
ICT-501-L	Applications of Information & Communication Technologies (ICT) Lab	1	General Education
QRE-501	Quantitative Reasoning-I	3	General Education
MIC-504	Principles of Biochemistry	2	Major
MIC-504-L	Principles of Biochemistry Lab	1	Major
UHQ-501	Understanding of Holy Quran I	1	General Education
Total Credit Hours = 16			

SEMESTER III			
S.N.	COURSE	CREDIT HOURS	CATEGORY
MIC-505	Microbial Diversity & Systematics	2	Major
MIC-505-L	Microbial Diversity & Systematics Lab	1	Major
QRE-502	Quantitative Reasoning II	3	General Education

CCE-501	Civics & Community Engagement	2	General Education
BIO-502	Microbial Physiology & Metabolism	3	Interdisciplinary
MIC-506	Virology	2	Major
MIC-506-L	Virology Lab	1	Major
BIO-503	Epidemiology & Public Health	3	Interdisciplinary
UHQ-502	Understanding of Holy Quran II	1	General Education
Total Credit Hours = 18			

SEMESTER IV			
S.N.	COURSE	CREDIT HOURS	CATEGORY
MIC-507	Mycology	2	Major
MIC-507-L	Mycology Lab	1	Major
MIC-508	Immunology	3	Major
MIC-509	Microbial Genetics	2	Major
MIC-509-L	Microbial Genetics Lab	1	Major
PKS-501	Pakistan Studies	2	General Education
ENT-501	Entrepreneurship	2	General Education
ICP-501	Ideology & Constitution of Pakistan	2	General Education
Total Credit Hours = 15			

SEMESTER V			
S.N.	COURSE	CREDIT HOURS	CATEGORY
MIC-601	Medical Microbiology	2	Major
MIC-601-L	Medical Microbiology Lab	1	Major
MIC-602	Industrial Microbiology	2	Major
MIC-602-L	Industrial Microbiology Lab	1	Major
MIC-603	Environmental Microbiology	2	Major
MIC-603-L	Environmental Microbiology Lab	1	Major
MIC-604	Food Microbiology	2	Major
MIC-604-L	Food Microbiology Lab	1	Major
MIC-605	Soil & Agricultural Microbiology	2	Major
MIC-605-L	Soil & Agricultural Microbiology Lab	1	Major

MIC-606	Soil & Agricultural Microbiology	2	Major
MIC-606-L	Soil & Agricultural Microbiology Lab	1	Major
Total Credit Hours = 18			

SEMESTER VI			
S.N.	COURSE	CREDIT HOURS	CATEGORY
MIC-607	Aquatic Microbiology	2	Major
MIC-607-L	Aquatic Microbiology Lab	1	Major
MIC-608	Clinical & Diagnostic Microbiology	2	Major
MIC-608-L	Clinical & Diagnostic Microbiology Lab	1	Major
BST-601	Biostatistics	2	Interdisciplinary
BST-601-L	Biostatistics Lab	1	Interdisciplinary
MIC-609	Microbial Biotechnology	2	Major
MIC-609-L	Microbial Biotechnology Lab	1	Major
MIC-610	Antimicrobial Agents & Resistance	2	Major
MIC-610-L	Antimicrobial Agents & Resistance Lab	1	Major
Total Credit Hours = 15			

SEMESTER VII			
S.N.	COURSE	CREDIT HOURS	CATEGORY
MIC-611	Vaccinology	2	Major
MIC-611-L	Vaccinology Lab	1	Major
XXX	Elective I	3	Major
BCH-614	Bioinformatics	2	Interdisciplinary
BCH-614-L	Bioinformatics Lab	1	Interdisciplinary
MIC-612	Biosafety, Biosecurity & Bioethics	2	Major
XXX	Elective II	3	Major
MIC-613	Internship	3	Major
Total Credit Hours = 17			

SEMESTER VIII			
S.N.	COURSE	CREDIT HOURS	CATEGORY
XXX	Elective-III	3	Major
AIM-601	Artificial Intelligence in Microbiology	2	Interdisciplinary
AIM-601-L	Artificial Intelligence in Microbiology Lab	1	Interdisciplinary

MIC-616	Capstone	3	Capstone
BCH-621	Scientific Inquiry & Research Methods	3	Interdisciplinary
XXX	Elective IV	3	Major
Total Credit Hours = 15			