

BS Biochemistry (BS-BCH)

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
BCH-501	Introductory Biochemistry	2	Major
BCH-501-L	Introductory Biochemistry Lab	1	Major
BCH-502	Cell Biology	2	Major
BCH-502-L	Cell Biology Lab	1	Major
Total Credit Hours = 18			

SEMESTER II			
S.N.	COURSE	CREDIT HOURS	CATEGORY
QRE-501	Quantitative Reasoning-I	3	General Education
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
BIO-502	Principles of Genetics	3	Interdisciplinary
BCH-503	Proteins & Nucleic Acids	2	Major
BCH-503-L	Proteins & Nucleic Acids 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
BCH-504	Human Physiology	2	Major
BCH-504-L	Human Physiology Lab	1	Major

L			
QRE-502	Quantitative Reasoning II	3	General Education
CCE-501	Civics & Community Engagement	2	General Education
BCH-505	Carbohydrates & Lipids	2	Major
BCH-505-L	Carbohydrates & Lipids Lab	1	Major
BIO-503	Fundamental of Microbiology	2	Interdisciplinary
BIO-503-L	Fundamental of Microbiology Lab	1	Interdisciplinary
CHEM-501	Organic Chemistry	2	Interdisciplinary
CHEM-501-L	Organic Chemistry Lab	1	Interdisciplinary
UHQ-502	Understanding of Holy Quran II	1	General Education
Total Credit Hours = 18			

SEMESTER IV			
S.N.	COURSE	CREDIT HOURS	CATEGORY
CHEM-502	Physical Chemistry	3	Interdisciplinary
BCH-506	Immunology	3	Major
BCH-507	Nutritional Biochemistry	2	Major
BCH-507-L	Nutritional Biochemistry 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
BCH-508	Metabolism of Carbohydrates & Lipids	3	Major
Total Credit Hours = 18			

SEMESTER V			
S.N.	COURSE	CREDIT HOURS	CATEGORY
BCH-601	Plant Biochemistry	2	Major
BCH-601-L	Plant Biochemistry Lab	1	Major
BCH-602	Analytical Techniques in Biochemistry	2	Major
BCH-602-L	Analytical Techniques in Biochemistry Lab	1	Major
XXX	Elective-I	3	Major

BCH-603	Molecular Biology	2	Major
BCH-603-L	Molecular Biology Lab	1	Major
BCH-604	Clinical Biochemistry	2	Major
BCH-604-L	Clinical Biochemistry Lab	1	Major
BCH-605	Metabolism of Proteins & Nucleic Acids	3	Major
Total Credit Hours = 18			

SEMESTER VI			
S.N.	COURSE	CREDIT HOURS	CATEGORY
BCH-607	Genomics & Proteomics	3	Major
BCH-608	Enzymology	2	Major
BCH-608-L	Enzymology Lab	1	Major
BST-601	Biostatistics	2	Interdisciplinary
BST-601-L	Biostatistics Lab	1	Interdisciplinary
BCH-609	Environmental Biochemistry	2	Major
BCH-609-L	Environmental Biochemistry Lab	1	Major
BCH-610	Methods in Molecular Biology	2	Major
BCH-610-L	Methods in Molecular Biology Lab	1	Major
BCH-611	Cancer Biology	3	Major
Total Credit Hours = 18			

SEMESTER VII			
S.N.	COURSE	CREDIT HOURS	CATEGORY
BCH-612	Computational Biology	2	Major
BCH-612-L	Computational Biology Lab	1	Major
BCH-613	Genomics, Transcriptomics & Proteomics	3	Major
BCH-614	Bioinformatics	2	Major
BCH-614-L	Bioinformatics Lab	1	Major
BCH-615	Biosafety, Biosecurity & Bioethics	2	Major
XXX	Elective-II	3	Major
BCH-616	Internship	3	Major
Total Credit Hours = 17			

SEMESTER VIII			
S.N.	COURSE	CREDIT HOURS	CATEGORY
BCH-618	Industrial Biochemistry	3	Major
XXX	Elective-III	3	Major
BCH-619	Artificial Intelligence in Biochemistry	2	Major
BCH-619-L	Artificial Intelligence in Biochemistry Lab	1	Major
BCH-620	Capstone	3	Capstone
BCH-621	Scientific Inquiry & Research Methods	3	Major
XXX	Elective-IV	3	Major
Total Credit Hours = 18			