



SHAHEED BENAZIR BHUTTO WOMEN UNIVERSITY PESHAWAR

SCHEME OF STUDIES OF BIOINFORMATICS 4-YEAR PROGRAM (SESSION- 2015)

Semester I

Course Code	Course Title	Credit Hrs	
		Lectures	Lab
Hum-101	English comprehension	3	0
Hum-102	Pak Studies	2	0
MTH-101	Basic Mathematics	3	0
CS-101	Computer Fundamentals	3	1
Bio-101	Basic Cell Biology	3	1
Total Credit Hours		14	2

Semester II

Course Code	Course Title	Credit Hrs.	
		Lectures	Lab
Hum-103	Communication skills	3	0
Hum-104	Islamic studies	2	0
CS-102	Programing Fundamentals	3	1
MTH-102	Basic Calculus	3	0
Bio-102	Biochemistry I	3	1
Total Credit Hours		14	2

Semester III

Course Code	Course Title	Credit Hrs	
		Lectures	Lab
Hum-201	Technical Report writing	3	0
MTH-201	Linear Algebra and Differential Equation	3	0
Bio-201	Molecular Biology	3	1
Bio-202	Bio-chemistry II	3	1
BI-201	Data Structure and Algorithms	3	1
Total Credit Hours		15	3

Semester IV

Course Code	Course Title	Credit Hrs	
		Lectures	Lab
BI-202	Bioinformatics I	3	1
Bio-203	Biostatistics	2	1
MTH-202	Mathematical Modeling	3	0
Bio-204	Essential of genetics	2	1
BI-203	Object Oriented programming	3	1
Total Credit Hours		14	3

Semester V

Course Code	Course Title	Credit Hrs	
		Lectures	Lab
CS-301	Discrete Structures	3	0
Bio-301	Research Methodology	2	0
CS-302	Data Base Management System	3	1
BI-301	Bioinformatics II	3	1
BI-302	Ethical and Legal issues in Bioinformatics	2	0
Bio-302	Genomics	3	0
Total Credit Hours		16	2

Semester VI

Course Code	Course Title	Credit Hrs	
		Lectures	Lab
BI-303	Bioinformatics Computing I	3	1
BI-304	Modeling and Simulation	2	1
Bio-303	Proteomics	3	0
BI-305	Graphics and Visualization	3	1
BI-306	Elective-I (Microbiology and immunology)	3	0
Total Credit Hours		14	3

Semester VII

Course Code	Course Title	Credit Hrs	
		Lectures	Lab
BI-401	Bioinformatics Computing II	3	1
BI-402	Artificial Intelligence	3	0
BI-403	Elective-II (Operating System)	3	1
BI-404	Elective-III (Modern Programming Languages)	3	1
BI-689	*Research Project/Internship/Optional Subject	0	3
Total Credit Hours		12	6

Semester VIII

Course Code	Course Title	Credit Hrs	
		Lectures	Lab
BI-405	Bioinformatics Software Engineering	2	1
BI-406	Special Topics in Bioinformatics	3	0
BI-407	Elective-IV (Modern Phylogeny and Evolution)	3	0
BI-689	*Research Project/Internship/Optional Subject	0	3
Total Credit Hours		8	4

* Students will opt Research Project, worth of 06 credit hours **OR** Internship worth of 03 credit hours along with one optional subject **OR** Two optional subjects each worth of 03 credit hours.