

Scheme of Study

1st Semester

Course Code	Courses	Cr. Hrs.
BIO-301	Introduction to Bioinformatics	3(2-1)
ENG-301	English I (Functional English)	3(3-0)
IST-301/ETH-301	Islamic Studies or Ethics	3(3-0)
CSC-301	Introduction to ICT (Information & Computer Technology)	3(2-1)
CHEM-301	Chemistry	3(3-0)
BOT-301 /	Biology / Mathematics	3(3-0) /
MATH-301		3(3-0)
Total Cr. Hrs.		18

2nd Semester

Course Code	Courses	Cr. Hrs.
BIO-302	Cell Biology	4(4-0)
PST-302	Pakistan Studies	3(3-0)
CSC-302	Programming Fundamental	4(3-1)
BCH-302	Biochemistry I	4(4-0)
ENG-302	English II (Communication Skills)	3(3-0)
Total Cr. Hrs.		18

3rd Semester

Course Code	Courses	Cr. Hrs.
BIO-401	Linux of Biological Sciences	3(2-1)
CSC-401	Object Oriented Programming	4(3-1)
MATH-401	Calculus I	3(3-0)
BCH-401	Biochemistry II	3(3-0)
BIO-403	Ethical and Legal Issues in Bioinformatics	2(2-0)
ENG-401	English III (Technical Writing and Presentation Skills)	3(3-0)
Total Cr. Hrs.		18

4th Semester

Course Code	Courses	Cr. Hrs.
MATH-402	Discrete Mathematics	3(3-0)
CSC-402	Data Structure & Algorithms	4(3-1)
BIO-402	Essentials of Genetics	4(4-0)
MATH-404	Linear Algebra & Differential Equations	3(3-0)
BIO-404	Molecular Biology	4(3-1)
Total Cr. Hrs.		18

5th Semester

Course Code	Courses	Cr. Hrs.
CSC-501	Modern Programming Languages	3(2-1)
BIO-501	Bioinformatics Computing I	4(2-2)
BIO-503	Introduction to Genomics and Proteomics	3(3-0)
BIO-505	Biostatistics	3(3-0)
BIO-507	Structural and Functional Bioinformatics	3(3-0)
	Elective I	3(3-0)
Total Cr. Hrs.		19

6th Semester

Course Code	Courses	Cr. Hrs.
BIO-502	Bioinformatics Database Development	3(2-1)
BIO-504	Biological Modeling & Simulation	3(2-1)
BIO-506	Bioinformatics Computing II	3(2-1)
BIO-508	Research Methodology	3(0-3)
BIO-510	Recombinant DNA Technology	3(2-1)
	Elective II	3(3-0)
Total Cr. Hrs.		18

Scheme of Study

7th Semester

Course Code	Courses	Cr. Hrs.
BIO-601	Bioinformatics Software Development	3(2-1)
BIO-603	Systems Biology	3(3-0)
CSC-601	Artificial Intelligence	3(3-0)
	Elective III	3(3-0)
BIO-605	Special Topics in Bioinformatics	3(3-0)
BIO-607	Research Project I / Internship	3(0-3)
Total Cr. Hrs.		18

8th Semester

Course Code	Courses	Cr. Hrs.
	Elective IV	3(3-0)
BIO-698	Research Project II / Internship	3(0-3)
Total Cr. Hrs.		6
Grand Total Cr. Hrs.		133