

Scheme of Studies; BS 4-Year Program in Chemistry

Course Title	Credit hours	
	Theory	Lab.
Semester-I		
Compulsory courses		
CHEM-1121: Inorganic Chemistry	3	1
ENG-100: English-I	3	0
MATH-100: Mathematics-I	3	0
COMP-100: Computer Applications	3	0
List General Courses: Out of the following courses only two courses will be offered depending on the availability of faculty.		
Principles of Animal Life – I (ZOO – 3131)	3	0
Diversity of Plant (BOT – 3101)	3	0
Geography	3	0
Total	18	1
Semester-II		
Compulsory Courses		
ENG-200: English-II (Functional)	3	0
GEN-200: Islamic Studies / Ethics	2	0
MATH-200: Mathematics-II	3	0
STAT-100: Statistics	3	0
CHEM-1241: Organic Chemistry	3	1
List General Courses: Out of the following courses only two courses will be offered depending on the availability of faculty.		
Plant Systematic	3	0
Principles of Animal life – II (ZOO-3202)	3	0
History of Science	3	0
Total	17	1
Semester –III		
Compulsory courses		
ENG-300: English-III (Report Writing)	3	0
GEN-300: Pakistan Studies	2	0
CHEM-2398: Environmental Chemistry	3	0
CHEM-2301 Physical Chemistry	3	1
List General Courses: Out of the following courses only two courses will be offered depending on the availability of faculty.		
Diversity of Animal Life – I (ZOO – 3202)	3	0
Physics-I	3	0
Cell Biology, Genetics & Evaluation (BOT – 4301)	3	0
Household Management	3	0
Total	17	1

Semester –IV	Theory	Lab.
Compulsory courses		
Arabic	3	0
CHEM-2461: Analytical Chemistry	2	1
CHEM-2491: Applied Chemistry	2	0
CHEM-2481: Biochemistry	2	1
List General Courses: Out of the following courses only two courses will be offered depending on the availability of faculty.		
Diversity of Animal Life – II (ZOO – 2404)	3	0
Plant Physiology & Ecology (BOT-4401)	3	0
Entrepreneurship	3	0
Ethics	3	0
Total	15	2

Only four disciplines to be selected for 5th and 6th semesters each, with option between Biochemistry and Analytical Chemistry.

Semester-V*

Course code	Course title	Credit hours	Description
CHEM-3501	Physical Chemistry-I	3(3,0)	Theory
CHEM-3502	Physical Chemistry Lab-I	1(0,1)	Laboratory
CHEM-3521	Inorganic Chemistry-I	3(3,0)	Theory
CHEM-3522	Inorganic Chemistry Lab-I	1(0,1)	Laboratory
CHEM-3541	Organic Chemistry-I	3(3,0)	Theory
CHEM-3542	Organic Chemistry Lab-I	1(0,1)	Laboratory
CHEM-3561	Analytical-I	3(3,0)	Theory
CHEM-3562	Analytical Lab-I	1(0,1)	Laboratory
CHEM-3581	Biochemistry-I	3(3,0)	Theory
CHEM-3682	Biochemistry Lab-I	1(0,1)	Laboratory

Total Credit Hours: (12+3=15)

Semester-VI*

Course code	Course title	Credit hours	Description
CHEM-3601	Physical Chemistry-II	3(3,0)	Theory
CHEM-3602	Physical Chemistry Lab-II	1(0,1)	Laboratory
CHEM-3621	Inorganic Chemistry-II	3(3,0)	Theory
CHEM-3622	Inorganic Chemistry Lab-II	1(0,1)	Laboratory
CHEM-3641	Organic Chemistry-II	3(3,0)	Theory
CHEM-3642	Organic Chemistry Lab-II	1(0,1)	Laboratory
CHEM-3661	Analytical Chem-II	3(3,0)	Theory
CHEM-3662	Analytical Lab-II	1(0,1)	Laboratory
CHEM-3681	Biochemistry-II	3(3,0)	Theory
CHEM-3682	Biochemistry Lab-II	1(0,1)	Laboratory
CHEM- 3699	Applied Computer for Chemist	2(1,1)	Theory/ Lab

Total Credit Hours: (12+3=15)

* Only four disciplines to be selected for 5th and 6th semesters each, with option between Biochemistry and Analytical Chemistry

Semester-VII

Students may opt for any one of the five sections namely, Physical, Inorganic, Organic, analytical and Biochemistry

Course code	Course title	Course Description	Credit Hours
CHEM-47aa	Physical Chemistry	Theory + Lab	3 (3,0), 3(0,3)
CHEM-47bb	Inorganic Chemistry	Theory + Lab	3 (3,0), 3(0,3)
CHEM-47cc	Organic Chemistry	Theory + Lab	3 (3,0), 3(0,3)
CHEM-47dd	Analytical Chemistry	Theory + Lab	3 (3,0), 3(0,3)
CHEM-47ee	Biochemistry	Theory + Lab	3 (3,0), 3(0,3)

Total Credit Hours: (12+3=15)

Semester-VIII

Course code	Course title	Credit hours	Description
CHEM-48aa	Physical Chemistry	3 (3,0), 3(0,3)	Theory + Lab
CHEM-48bb	Inorganic Chemistry	3 (3,0), 3(0,3)	Theory + Lab
CHEM-48cc	Organic Chemistry	3 (3,0), 3(0,3)	Theory + Lab
CHEM-48dd	Analytical Chemistry	3 (3,0), 3(0,3)	Theory + Lab
CHEM-48ee	Biochemistry	3 (3,0), 3(0,3)	Theory + Lab
	(OR)		
CHEM-48bb	Research Report	3(0,3)	Research

*Three courses will be opted from the selected discipline and there will be option between research report or a course from any other discipline.