

# BS (4 Years) Chemistry (COMBINATION-I)

## Scheme of Studies for Eight Semesters (valid from November, 2012)

Course Title	Course Code	Course Hours
<b>SEMESTER-I</b>		
Islamiat/Ethics	ISE-111	2
English-I (Language in Use)	ENG-111	3
Computer (Introduction and Applications)	COMP-111	3
Botany-I (Plant Diversity)	BOT-101	3
Botany Lab-I (Plant Diversity)	BOT-102	1
Zoology-I (Invertebrate Diversity)	ZOOL-101	3
Zoology Lab-I (Invertebrate Diversity)	ZOOL-102	1
Chemistry-I (Physical Chemistry)	CHEM-101	3
Chemistry Lab-I (Physical Chemistry)	CHEM-102	1
<b>Semester's Total Credits</b>		<b>20</b>
<b>SEMESTER-II</b>		
Pakistan Studies	PST-111	2
English-II (Academic Reading and Writing)	ENG-112	3
Botany-II (Plant Systematic Anatomy & Development Theory)	BOT-103	3
Botany Lab-II (Plant Systematic Anatomy & Development Theory)	BOT-104	1
Zoology-II (Chordate Diversity)	ZOOL-103	3
Zoology Lab-II (Chordate Diversity)	ZOOL-104	1
Chemistry-II (Inorganic Chemistry)	CHEM-103	3
Chemistry Lab-II (Inorganic Chemistry)	CHEM-104	1
Elementary Mathematics-I (Algebra)	MATH-111	3
<b>Semester's Total Credits</b>		<b>20</b>
<b>SEMESTER-III</b>		
English-III (Communication Skills)	ENG-211	3
Botany-III (Cell Biology, Genetics and Evolution)	BOT-201	3
Botany Lab-III (Cell Biology, Genetics and Evolution)	BOT-202	1
Zoology-III (Biochemistry)	ZOOL-201	3
Zoology Lab-III (Biochemistry)	ZOOL-202	1
Chemistry-III (Organic Chemistry)	CHEM-201	3
Chemistry Lab-III (Organic Chemistry)	CHEM-202	1
Elementary Mathematics-II (Calculus)	MATH-211	3
<b>Semester's Total Credits</b>		<b>18</b>
<b>SEMESTER-IV</b>		
English-IV (English for Practical Aims)	ENG-212	3
Botany-IV (Plant Physiology and Ecology)	BOT-203	3
Botany Lab-IV (Plant Physiology and Ecology)	BOT-204	1
Zoology-IV (Physiology)	ZOOL-203	3
Zoology Lab-IV (Physiology)	ZOOL-204	1
Chemistry-IV (General Chemistry)	CHEM-203	3
Chemistry Lab-IV (General Chemistry)	CHEM-204	1
Introduction to Sociology	SOC-211	3
<b>Semester's Total Credits</b>		<b>18</b>
<b>SEMESTER-V</b>		
Physical Chemistry	CHEM-301	4
Physical Chemistry Lab	CHEM-302	2
Inorganic Chemistry	CHEM-303	4
Inorganic Chemistry Lab	CHEM-304	2
Organic Chemistry	CHEM-305	4

Organic Chemistry Lab	CHEM-306	2
ONE PAIR OF THE FOLLOWING THREE (OPTIONAL)		
Analytical Chemistry	CHEM-307	4
Analytical Chemistry Lab	CHEM-308	2
OR		
Applied Chemistry	CHEM-309	4
Applied Chemistry Lab	CHEM-310	2
OR		
Bio Chemistry	CHEM-311	4
Bio Chemistry Lab	CHEM-312	2
<b>Semester's Total Credits</b>		<b>24</b>
<b>SEMESTER-VI</b>		
Physical Chemistry	CHEM-313	4
Physical Chemistry Lab	CHEM-314	2
Inorganic Chemistry	CHEM-315	4
Inorganic Chemistry Lab	CHEM-316	2
Organic Chemistry	CHEM-317	4
Organic Chemistry Lab	CHEM-318	2
ONE PAIR OF THE FOLLOWING THREE (OPTIONAL)		
Analytical Chemistry	CHEM-319	4
Analytical Chemistry Lab	CHEM-320	2
OR		
Applied Chemistry	CHEM-321	4
Applied Chemistry Lab	CHEM-322	2
OR		
Bio Chemistry	CHEM-323	4
Bio Chemistry Lab	CHEM-324	2
<b>Semester's Total Credits</b>		<b>24</b>
<b>SEMESTER-VII</b>		
Thesis or Any Paper (Sp. Theory-I) except Specialization	THESIS-400	4
Environmental Chemistry	CHEM-401	2
ONE GROUP OF THE FOLLOWING SIX (OPTIONAL)		
Physical Chemistry (Sp. Theory-I)	CHEM-403	4
Physical Chemistry (Sp. Theory-II)	CHEM-404	4
Physical Chemistry (Sp. Practical)	CHEM-405	2
OR		
Inorganic Chemistry (Sp. Theory-I)	CHEM-406	4
Inorganic Chemistry (Sp. Theory-II)	CHEM-407	4
Inorganic Chemistry (Sp. Practical)	CHEM-408	2
OR		
Organic Chemistry (Sp. Theory-I)	CHEM-409	4
Organic Chemistry (Sp. Theory-II)	CHEM-410	4
Organic Chemistry (Sp. Practical)	CHEM-411	2
OR		
Analytical Chemistry (Sp. Theory-I)	CHEM-412	4
Analytical Chemistry (Sp. Theory-II)	CHEM-413	4
Analytical Chemistry (Sp. Practical)	CHEM-414	2
OR		
Applied Chemistry (Sp. Theory-I)	CHEM-415	4
Applied Chemistry (Sp. Theory-II)	CHEM-416	4
Applied Chemistry (Sp. Practical)	CHEM-417	2
OR		

Bio Chemistry (Sp. Theory-I)	CHEM-418	4
Bio Chemistry (Sp. Theory-II)	CHEM-419	4
Bio Chemistry (Sp. Practical)	CHEM-421	2
<b>Semester's Total Credits</b>		<b>16</b>
<b>SEMESTER-VIII</b>		
Thesis or Any Paper (Sp. Theory-I) except Specialization	THESIS-400	4
Environmental Chemistry	CHEM-402	2
ONE GROUP OF THE FOLLOWING SIX (OPTIONAL)		
Physical Chemistry (Sp. Theory-I)	CHEM-422	4
Physical Chemistry (Sp. Theory-II)	CHEM-423	4
Physical Chemistry (Sp. Practical)	CHEM-424	2
OR		
Inorganic Chemistry (Sp. Theory-I)	CHEM-425	4
Inorganic Chemistry (Sp. Theory-II)	CHEM-426	4
Inorganic Chemistry (Sp. Practical)	CHEM-427	2
OR		
Organic Chemistry (Sp. Theory-I)	CHEM-428	4
Organic Chemistry (Sp. Theory-II)	CHEM-429	4
Organic Chemistry (Sp. Practical)	CHEM-430	2
OR		
Analytical Chemistry (Sp. Theory-I)	CHEM-431	4
Analytical Chemistry (Sp. Theory-II)	CHEM-432	4
Analytical Chemistry (Sp. Practical)	CHEM-433	2
OR		
Applied Chemistry (Sp. Theory-I)	CHEM-434	4
Applied Chemistry (Sp. Theory-II)	CHEM-435	4
Applied Chemistry (Sp. Practical)	CHEM-436	2
OR		
Bio Chemistry (Sp. Theory-I)	CHEM-437	4
Bio Chemistry (Sp. Theory-II)	CHEM-438	4
Bio Chemistry (Sp. Practical)	CHEM-439	2
<b>Semester's Total Credits</b>		<b>16</b>