

BS Applied Chemistry

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Semester 1

Course Code	Course Title	Credit Hours
ENG-321	English for Academic Purposes	3(3-0)
PHY-323	Applied Physics-I	4(3-1)
ISL-321	Islamic Studies/Ethics	2(2-0)
MTH-335 OR BOT-303	Functional Mathematics-I (For Medical students) OR Functional Biology-I (For Non medical students)	3(3-0)
CSI-303	Computer and its Application in Chemistry	3(3-0)
ACH-301	Fundamentals of Inorganic Chemistry	4(3-1)

Semester 2

Course Code	Course Title	Credit Hours
ENG-322	Reading, Writing, Speaking and listening Skills	3(3-0)
PST-322	Pakistan Studies	2(2-0)
PHY-324	Applied Physics-II	4(3-1)
MTH-332 OR BOT-306	Functional Mathematics-II (For Medical students) OR Functional Biology-II (For Non- medical students)	3(3-0)
ACH-302	Fundamentals of Organic Chemistry	4(3-1)
ACH-304	Environmental Chemistry	3(3-0)

Semester 3

Course Code	Course Title	Credit Hours
ENG-421	Communication Skills	3(3-0)

STA-455	Introduction to Statistical Theory	3(3-0)
MTH-429	Mathematics for Chemists-I	3(3-0)
ACH-401	Fundamentals of Physical Chemistry	4(3-1)
ACH-403	Fundamentals of Biochemistry	4(3-1)

Semester 4

Course Code	Course Title	Credit Hours
ENG-422	Technical Writing	3(3-0)
MTH-434	Mathematics for Chemists-II	3(3-0)
ACH-402	Selected Topics in Chemistry	4(3-1)
ACH-404	Fundamentals of Analytical Techniques	4(3-1)
ACH-406	Fundamentals of Applied Chemistry	4(3-1)

Semester 5

Course Code	Course Title	Credit Hours
ACH-501	Applied Inorganic Chemistry-I	4(3-1)
ACH-503	Applied Organic Chemistry-I	4(3-1)
ACH-505	Applied Physical Chemistry-I	4(3-1)
ACH-507	Analytical Techniques and Quality Control	4(3-1)
ACH-509	Chemometrics	3(3-0)

Semester 6

Course Code	Course Title	Credit Hours
ACH-502	Applied Inorganic Chemistry-II	4(3-1)
ACH-504	Applied Organic Chemistry-II	4(3-1)
ACH-506	Applied Physical Chemistry-II	4(3-1)
ACH-508	Applied Molecular Spectroscopy	3(3-0)
ACH-510	Chemical Process Industries	4(3-1)

Semester 7

In 7th semester students of both specializations have to opt to study any two practical courses and any two non-practical courses from their respective groups when offered by the department, however, ACH-635 and ENG-601 are compulsory courses.

Specialized Courses General Applied Chemistry Group

Course Code	Course Title	Credit Hours
ACH-601	Oils, Fats and Waxes	4(3-1)
ACH-603	Colour Chemistry	4(3-1)
ACH-605	Chemistry of Textiles Processing	4(3-1)
ACH-607	Inorganic Chemical Industries	3(3-0)
ACH-609	Food and Allied Industries	3(3-0)
ACH-611	Paper and Leather Industries	3(3-0)
ACH-613	Glass, Ceramics and Cement Industries	3(3-0)
ACH-635	Research Methods and Scientific Writing	2(2-0)
ENG-601	English for Employment	3(3-0)

Specialized Courses Polymer Sciences and Technology Group

Course Code	Course Title	Credit Hours
ACH-615	Synthetic Polymers	4(3-1)
ACH-617	Characterization Techniques for Polymers	4(3-1)
ACH-619	Physical Chemistry of Polymers	4(3-1)
ACH-621	Synthetic Fibers	3(3-0)
ACH-623	Introduction to Composite Materials	3(3-0)
ACH-625	Polymer Rheology and Processing	3(3-0)
ACH-633	Natural Polymers	3(3-0)
ACH-635	Research Methods and Scientific Writing	2(2-0)
ENG-601	English for Employment	3(3-0)

Semester 8

Course Code	Course Title	Credit Hours
BIM-606	Fundamentals of Marketing	2(2-0)
BIM-608	Cost & Managerial Accounting	2(2-0)
ACH-606	Biotechnology for Chemical Industries	3(3-0)
OR	OR	3(3-0)
ACH-608	Mechanism and Kinetics of	

	Polymerization	
ACH-629	Seminar	1(1-0)
ACH-630	Review Article	4(4-0)