


CURRICULUM AND ITS RELEVANCE TO LOCAL /NATIONAL /REGIONAL/GLOBAL NEEDS

B.Sc. Chemistry (H) Course Details

Sr. No.	Paper Code	Paper Name	Local/Regional/National/Global	Description need for student
1	BSCCHE-101	INORGANIC CHEMISTRY-1	National	Covers basic inorganic chemistry concepts. Topics include atomic structure, periodic properties, and bonding.
2	BSCCHE-102	PHYSICAL CHEMISTRY-1	National	Introduces principles of physical chemistry. Focuses on thermodynamics, chemical kinetics, and quantum mechanics.
3	GE-1	ANIMAL DIVERSITY	Regional	Explores classification and diversity of animals. Discusses their morphological and physiological adaptations.
4	AECC-1	ENGLISH COMMUNICATION	Global	Develops communication skills in English. Covers




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				reading, writing, speaking, and listening.
5	BSCCHE-201	ORGANIC CHEMISTRY-1	National	Introduces fundamental organic chemistry. Covers structure, properties, and reactions of organic molecules.
6	BSCCHE-202	PHYSICAL CHEMISTRY-2	National	Discusses phase equilibria, solutions, and electrochemistry. Focuses on their applications in real-world chemistry.
7	GE-2	ANIMAL CELL BIOTECHNOLOGY	Regional	Covers fundamental techniques in biotechnology. Includes cell culture, gene cloning, and molecular biology.
8	AECC-2	ENVIRONMENTAL SCIENCE	Global	Examines environmental issues and sustainability. Focuses on conservation and pollution control.
9	BSCCHE-301	INORGANIC CHEMISTRY-2	National	Studies coordination chemistry and organometallics. Explores



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				reaction mechanisms and applications.
10	BSCCHE-302	ORGANIC CHEMISTRY-2	National	Covers reaction mechanisms in organic chemistry. Discusses synthesis and properties of key organic compounds.
11	BSCCHE-303	PHYSICAL CHEMISTRY-3	National	Introduces quantum chemistry and spectroscopy. Covers statistical mechanics and thermodynamics.
12	GE-3	AQUATIC BIOLOGY	Regional	Explores aquatic ecosystems and biodiversity. Discusses adaptation and conservation strategies.
13	SEC-1	IT SKILLS FOR CHEMISTS	National	Develops IT skills relevant to chemistry. Covers data analysis, visualization, and chemical software.
14	BSCCHE-401	INORGANIC CHEMISTRY-3	National	Discusses advanced inorganic chemistry concepts. Covers



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				bioinorganic chemistry and catalysis.
15	BSCCHE-402	ORGANIC CHEMISTRY-3	National	Focuses on heterocyclic chemistry and biomolecules. Discusses drugs, dyes, and polymer synthesis.
16	BSCCHE-403	PHYSICAL CHEMISTRY-4	National	Covers surface chemistry, adsorption, and catalysis. Discusses their applications in industries.
17	GE-4	ENVIRONMENT AND PUBLIC HEALTH	Global	Examines environmental policies and public health. Focuses on pollution control and sustainable development.
18	SEC-2	FUEL CHEMISTRY	National	Discusses different types of fuels and their properties. Covers petroleum refining and alternative fuels.
19	BSCCHE-501	ORGANIC CHEMISTRY-4	National	Studies advanced organic synthesis techniques. Includes pericyclic reactions and molecular



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				rearrangements
20	BSCCHE-502	PHYSICAL CHEMISTRY-5	National	Covers electrochemistry, surface phenomena, and photochemistry. Discusses real-world applications.
21	DSE-1	ANALYTICAL METHODS IN CHEMISTRY	National	Introduces instrumental techniques for chemical analysis. Covers spectroscopy, chromatography, and electrochemical methods.
22	DSE-2	POLYMER CHEMISTRY	National	Discusses polymerization techniques and polymer properties. Covers industrial and biomedical applications.
23	BSCCHE-601	INORGANIC CHEMISTRY-4	National	Focuses on solid-state chemistry and bioinorganic chemistry. Discusses applications in medicine and industry.
24	BSCCHE-602	ORGANIC CHEMISTRY-5	National	Covers advanced synthetic strategies in organic chemistry.



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				Discusses pharmaceutical and material applications.
25	DSE-3	BIO-INORGANIC CHEMISTRY	National	Explores metal ions in biological systems. Covers metalloproteins, enzymes, and medicinal chemistry.
26	DSE-4	BIO-ORGANIC CHEMISTRY	National	Discusses organic molecules in biological systems. Covers enzyme catalysis, nucleic acids, and bio-mimetic chemistry.




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