

## BSc Chemistry

CHE1B01	CORE COURSE I : THEORETICAL AND INORGANIC CHEMISTRY -I	CO1-To apply the methods of a research project CO2-To understand the principles behind volumetry CO3-To analyse the characteristics of different elements CO4-To distinguish between different acid base concepts CO5-To analyse the stability of different nuclei
CHE1B02	CORE COURSE II: THEORETICAL AND INORGANIC CHEMISTRY -II	CO1-To realize the importance and the impact of quantum revolution in science. CO2-To understand and apply the concept that the wave functions of hydrogen atom are nothing but atomic orbitals. CO3-To realize that chemical bonding is the mixing of wave functions of the two combining atoms. CO4-To understand the concept of hybridization as linear combination of orbitals of the same atom. CO5-To inculcate an atomic/molecular level philosophy in the mind.

CHE3B03	PHYSICAL CHEMISTRY -I	<p>CO1-To understand the properties of gaseous state and how it links to thermodynamic systems</p> <p>CO2-To understand the concepts of thermodynamics and it's relation to statistical thermodynamics</p> <p>CO3-To apply symmetry operations to categorize different molecules</p>
CHE4B04	ORGANIC CHEMISTRY-I	<p>CO1-To apply the concept of stereochemistry to different compounds</p> <p>CO2-To understand the basic concepts of reaction mechanism</p> <p>CO3-To analyse the mechanism of a chemical reaction</p> <p>CO4-To analyse the stability of different aromatic systems</p>
CHE4B05(P)	INORGANIC CHEMISTRY PRACTICAL -I	<p>CO1-To enable the students to develop skills in quatitative analysis and preparing inorganic complexes.</p> <p>CO2-To understand the principles behind quantitative analysis</p> <p>CO3-To apply appropriate techniques of volumetric quantitative analysis in estimations</p> <p>CO4-To analyze the strength of different solutions</p>

CHE5B06	INORGANIC CHEMISTRY III	CO1-To understand the principles behind qualitative and quantitative analysis CO2-To understand basic processes of metallurgy and to analyse the merit of different alloys CO3-To understand the applications of different inorganic polymers CO4-To analyse different polluting agents CO5-To apply the principles of solid waste management
CHE5B07	ORGANIC CHEMISTRY II	CO1-To understand the difference between alcohols and phenols CO2-To understand the importance of ethers and epoxides CO3-To apply organometallic compounds in preparation of different functional groups CO4-To apply different reagents for the inter conversion of aldehydes, carboxylic acids and acid derivatives CO5-To apply active methylene compounds in organic preparations

CHE5B08	PHYSICAL CHEMISTRY II	<p>CO1-To apply the concept of kinetics, catalysis and photochemistry to various chemical and physical processes</p> <p>CO2-To characterize different molecules using spectral methods</p> <p>CO3-To understand various phase transitions and its applications</p>
CHE5D01	ENVIRONMENTAL CHEMISTRY (OPEN COURSE) ELECTIVE	<p>CO 1: Recall the terms involved in pollution.</p> <p>CO 2: Understand the sources and effects of air pollution.</p> <p>CO 3: Understand the sources, types and effects of water pollution. CO 4: Describe water quality parameters</p> <p>CO 5: Know Soil, Noise, Thermal and Radioactive Pollutions and their effects. CO 6: Study various pollution control measures.</p> <p>CO 7: Understand the basics of green chemistry</p>

CHE6B09	INORGANIC CHEMISTRY IV	CO1-To understand the principles behind different instrumental methods CO2-To distinguish between lanthanides and actinides CO3-To appreciate the importance of CFT CO4-To understand the importance of metals in living systems CO5-To distinguish geometries of coordination compounds
CHE6B10	ORGANIC CHEMISTRY III	CO1-To elucidate structure of simple organic compounds using spectral techniques CO2-To understand the basic structure and tests for carbohydrates CO3-To understand the basic components and importance of DNA CO4-To understand the basic structure and applications of alkaloids and terpenes CO5-To distinguish different pericyclic reactions

CHE6B11	PHYSICAL CHEMISTRY III	<p>CO1-To understand the basic concepts of electrochemistry</p> <p>CO2-To realize the importance of colligative properties</p> <p>CO3-To relate the properties of material/solids to the geometrical properties and chemical compositions</p>
CHE6B12	ADVANCED & APPLIED CHEMISTRY	<p>CO1-To understand the importance of nanomaterials</p> <p>CO2-To appreciate the importance of green approach in chemistry</p> <p>CO3-To understand the uses and importance of computational calculations in molecular design</p> <p>CO4-To realize the extent of chemistry in happiness index and life expectancy</p>
CHE6B13(E2)	POLYMER CHEMISTRY	<p>CO1-To understand the important characteristics of polymers such as average molecular weight, glass transition temperature, viscoelasticity and degradation</p> <p>CO2-To appreciate the importance of processing techniques</p> <p>CO3-To 62evlar62iz different commercial polymers and to understand the significance of recycling</p>

CHE6B14(P)	PHYSICAL CHEMISTRY PRACTICAL	To gain detailed knowledge about classification of polymers and various mechanisms and technology adopted for 62evlar62ization. To give a basic understanding of properties of polymers like glass transition temperature, molecular weight and degradation of polymers. To give detailed idea about different commercial polymers
CHE6B15(P)	ORGANIC CHEMISTRY PRACTICAL	The relation between physical properties and chemical composition is used for analysis. Get an idea of designing experimental methods to analyze the physical properties of molecules or materials
CHE6B16(P)	INORGANIC CHEMISTRY PRACTICAL II	CO1-To enable the students to develop analytical skills in inorganic quantitative analysis CO2-To understand the principles behind gravimetry and to apply it in quantitative analysis. CO3-To understand the principles behind colorimetry and to apply it in quantitative analysis.

CHE6B17(P)	INORGANIC CHEMISTRY PRACTICAL III	CO1-To enable the students to develop skills in inorganic quantitative analysis. CO2-To understand the principles behind inorganic mixture analysis and to apply it in quantitative analysis. CO3-To analyse systematically mixtures containing two cations and two anions.
CHE6B18(Pr)	PROJECT WORK	CO1-To understand the scientific methods of research project. CO2-To apply the scientific method in life situations. CO3-To analyse scientific problems systematically.