

Course	Outcomes
DSC-1: Fundamentals of Chemistry 21BSC1C1CHL	<ol style="list-style-type: none"> 1. To understand and appreciate the development of various atomic theories. 2. To justify the need for quantum mechanical structure of atoms 3. The concepts of Organic reactions and techniques of writing the movement of electrons, bond breaking, bond forming 4. The Concept of aromaticity, resonance, hyper conjugation, etc. 5. Understand the preparation of alkanes, alkenes and alkynes, their reactions, etc. 6. To make familiarization with various states of matter 7. To teach how liquid state and its physical properties are related to temperature and pressure variation. 8. Prepare the solutions after calculating the required quantity of salts in preparing the reagents/solutions and dilution of stock solution. 9. The concept of volumetric and gravimetric analysis and deducing the conversion factor for determination 10. Handling of toxic chemicals, concentrated acids and organic solvents and practice safety procedures.
DSC:2 Models and Concepts in Chemistry 21BSC2C2CHL	<ol style="list-style-type: none"> 1.To develop an understanding of the periodic trends among the compounds of s and p-block elements 2.The concepts of Organic reactions and techniques of writing the movement of electrons, bond breaking, bond forming 3. Understand the preparation of alkanes, alkenes and alkynes, their reactions, etc. 4.To make familiarization with various states of matter 5.To familiarize the student with nucleophilic and electrophilic substitution reactions in aliphatic and aromatic compounds 6.To teach calculation of lattice parameters 7.To develop the concept of solids, lattice parameters – its calculation, application of symmetry and solid characteristics of simple salts 8.Treatment of analytical data using statistics
DSC 3: Analytical and Organic	<ol style="list-style-type: none"> 1. Interrelationship among frequency, wavelength and wave number and importance of validation parameters of an instrumental method will be taught 2. Principle, instrumentation and applications of spectrophotometry, nephelometry and turbidometry will be taught 3. Fundamentals of separation methods and principles of paper, thin layer and column chromatography will be taught 4. Principle, types and applications of solvent extraction will be taught

Chemistry 21BSC3C3CHL	5. Principle and mechanism of ion-exchange, types of resins and domestic and industrial applications of ion-exchange chromatography will be taught 6. The concept of mechanism and its importance will be taught to the student 7. Concept and importance of intermediates in organic chemistry will be taught taking proper examples 8. The various techniques for identification of reaction mechanism will be taught to the student taking proper examples 9. Concept of stereochemistry and its importance will be taught. 10. The various projection formulae and the techniques of designating the molecules into R, S, D, L will be taught taking proper examples 11. The theory and concept of Cis-, Trans- isomerism and its importance and the techniques to differentiate between them will be taught taking examples
DSC 4: Inorganic and Physical Chemistry 21BSC4C4CHL	1. Different types of bonding in molecules/compounds/ions 2. The structures of molecules/compounds/ions based on different models/theories 3. Properties of compounds based on bonding and structure 4. The fundamentals of thermodynamics including the laws, the concept of entropy and free energy functions and their applications. 5. The concepts of surface chemistry, catalysis and their applications. 6. The theoretical and experimental aspects of chemical kinetics including basic theories of reaction rates and methods of determining order. 7. Electrochemistry dealing with electrolytes in solution. Conductance measurements and applications. Concept of ionic mobility and their determination