

PROGRAMME OUTCOME (PO):

To create enthusiasm among students for chemistry and its application in the various fields

To provide students with the ability to plan and carry out experiments independently and assess the significance of outcomes and to cater to the demands of chemical industries of well-trained graduates.

To develop the ability to adapt and apply methodology to the solution of unfamiliar types of problems

To instill critical awareness of advances at the forefront of chemical sciences, to prepare students effectively for professional employment or research degrees in chemical sciences and to develop an independent and responsible work ethics.

COURSE OUTCOME

SUBJECT NAME	SUBJECT CODE	COURSE OUTCOME
Analytical and Organic chemistry -I	BSCCHCN101	1. Understand the concept of rate of a chemical reaction, integrated rate equations, energy of activation and determination of order of a reaction based on experimental data 2. Know different types of electrolytes, usefulness of conductance and ionic mobility measurements 3. Determine the transport numbers
Inorganic and Physical Chemistry-I	BSCCHCN201	1.The student will be able to understand the importance of fundamental laws and validation parameters in chemical analysis. 2.The student will be able to explain the mechanism, importance of stereochemistry in predicting the structure and property of organic molecules. 3.The student will be able to understand the instrumental methods of colorimetry, potentiometry, refractometry, conductometry. 4.The student will learn to fit experimental data with theoretical models and Interpret the data.

		<p>5.The student will be able to interpret the behavior of interfaces, the phenomena of physisorption and chemisorption's and their applications in chemical and Industrial processes</p>
Analytical and Organic Chemistry-II	BSCCHCN301	<p>1.Understand the importance of fundamental law and validation parameters in chemical analysis</p> <p>2. Know how different analytes in different matrices (water and real samples) can be determined by spectrophotometric, nephelometric and turbidometric methods.</p> <p>3.Understand the requirement for chemical analysis by paper, thin layer and column chromatography.</p> <p>4.Apply solvent extraction method for quantitative determination of metal ions in different samples</p> <p>5.The ion-exchange chromatography for domestic and industrial applications</p> <p>6. Explain mechanism for a given reaction.</p> <p>7. Predict the probable mechanism for an reaction and the importance of reaction intermediates, its role and techniques of generating such intermediates</p>
Inorganic and Physical Chemistry-II	BSCCHCN401	<p>1. Predict the nature of the bond formed between different elements</p> <p>2. Identify the possible type of arrangements of ions in ionic compounds</p> <p>3. Write Born - Haber cycle for different ionic compounds</p> <p>4. Relate different energy parameters like, lattice energy, entropy, enthalpy and solvation energy in the dissolution of ionic solids</p> <p>5. Explain covalent nature in ionic compounds</p> <p>6. Write the M.O. energy diagrams for simple molecules</p>

		<p>7. Differentiate bonding in metals from their compounds</p> <p>8. Learn important laws of thermodynamics and their applications to various thermodynamic systems</p> <p>9. Understand adsorption processes and their mechanisms and the function and purpose of a catalyst</p>
Inorganic and Physical Chemistry	BSCCHCN501	<p>1. Understand the types of bonding in compounds and the theories to explain them.</p> <p>2. Understand nuclear reactions, the importance of nuclear phenomenon, radiation chemistry & its applications.</p> <p>3. Know the application of Quantum mechanics to particle in a box and hydrogen atom.</p> <p>4. Know chemistry of main group elements and acid base concepts.</p> <p>5. Know chemical dynamics and kinetics of chemical reactions.</p>
Organic Chemistry and Spectroscopy	BSCCHCN502	<p>1. Differentiate aliphatic and aromatic compounds, understand the concept of resonance and write simple reaction mechanisms.</p> <p>2. Identify some of the heterocyclic compounds, their structure and physiological properties.</p> <p>3. Have the basic knowledge of molecular spectroscopic methods like rotational, vibrational, Raman, NMR and UV Spectroscopy.</p> <p>4. Explain the importance of Stereochemistry in predicting the structure and property of organic molecules.</p> <p>5. Predict the configuration of an organic molecule and able to designate it.</p> <p>6. Identify the chiral molecules and predict its actual</p>

		configuration
Inorganic and Physical Chemistry	BSCCHCN601	<p>1. Know the Kinetics of complex formation and also the electronic spectra of complexes which will help them in selecting the methods of synthesis and identification of complex compounds.</p> <p>2. Understand the theories of bonding in complex compounds.</p> <p>3. Understand the principle of steam distillation and separation of components of binary mixtures.</p> <p>4. Get introduced to thermal methods of analysis.</p> <p>5. Understand the concept of galvanic cells and potentiometric methods of quantitative analysis.</p>
Organic Chemistry and Spectroscopy	BSCCHCN602	<p>1. Know the mechanism of selected electrophilic and nucleophilic substitution reactions</p> <p>2. Understand the mechanism of addition reactions in organic compounds.</p> <p>3. Get exposure to symmetry and group theory.</p> <p>4. Get introduction to photo electron spectroscopy and flame photometry.</p>