B.Sc. Chemistry

(Course outcome)

B.Sc. First year

Paper I : Fundamentals of Chemistry

CO1: Students should be able to understand ancient Indian chemical techniques and various theories and principles applied to reveal atomic structure.

CO2: Students should be able to understand significant of quantum numbers.

CO3: Students should be able to understand concepts of periodic properties of elements and theories related to chemical bonding.

CO4: Students should be able to understand acid base concept, Ph, buffer and factors responsible for reactivity of organic molecules.

CO5: Students should be able to understand basics and mechanism of chemical kinetics and properties of electrolytes.

Paper II : Analytical Chemistry

CO1: Students should be able to understand basic concepts of mathematics for chemists.

CO2: Students should be able to understand fundamentals of analytical chemistry and steps involved in analysis.

CO3: Students should be able to understand basic knowledge of computer for chemists and basic concepts of chemical equilibrium.

CO4: Students should be able to understand principles of chromatography and chromatographic techniques.

CO5: Students should be able to understand various techniques of spectroscopic analysis

B.Sc. Second Year

Paper I : Reactions, Reagents and Mechanisms in organic chemistry

CO1: Students should be able to understand various organic reactions, reagents and their mechanisms, which will be helpful in understanding organic synthesis.

CO2: Students should be able to understand application of the reactions in the various industries like pharmaceutical, polymer, pesticides, textile, dyes etc.

CO3: Students should be able to understand important key reactions used in furter study and research work.

Paper II : Transition elements, Chemi-energetics, Phase Equilibria

CO1: Students should be able to understand introductory idea about traditional Indian chemistry

CO2: Students should be able to understand Chemistry of d= & f-block elements, basic concepts of coordination chemistry.

CO3: Students should be able to understand stereochemistry of transition metal complexes.

CO4: Students should be able to understand laws of thermodynamics.

CO5: Students should be able to understand concept of phase equilibrium with reference to solid solution, Liquid-Liquid mixtures, partially miscible liquids.

CO6: Students should be able to understand basic concepts of electrochemistry.

B.Sc. Third Year

Paper I : Physical chemistry

By the end of this course students will be able to explain:

CO1: Introduction about elementary quantum mechanisms and nuclear orbital theory.

CO2: Spectroscopy introduction types.

CO3: Raman Spectrum and Selection rules.

CO4: About photo chemistry and laws f photo chemistry.

CO5: Basic concepts of physical properties.

Paper II : Inorganic Chemistry

By the end of this course students will be able to explain:

CO1: Introductory about hard and soft acids silicons and phosphogenes.

CO2: Metal ligand bonding in transition metal complexes.

CO3: Magnetic properties of complexes.

CO4: Electronic spectra of complexes.

CO5: Basic concepts of bio inorganic chemistry.

Paper III : Organic Chemistry

By the end of this course students will be able to explain:

CO1: Organo metallic compounds application of organometalic compounds.

CO2: Introduction about carbohydrates, differentiation between fats and oils.

CO3: Classification of amino acids, structure of peptide and proteins.

CO4: Concept of dyes and pericyclic reactions.

CO5: Introductory idea of NMR, PMR spectrometry of simple organic compounds.