

BSc. Chemistry Course Outcomes & Objectives

The B.Sc. Chemistry Course is successful in imparting the students with the following qualities.

- Students have a firm foundation in the fundamentals and application of current chemical and scientific theories including those in Analytical, Inorganic, Organic and Physical branches of chemistry.
- Study the periodic properties of elements
- Explain the formation of different types of bonds
- Predict the geometry of simple molecules
- Explain the different types of hybridization and draw shapes of simple covalent molecules
- Understand the molecular orbital theory of diatomic molecules
- Develop interest in various branches of inorganic chemistry.
- Study nuclear models and nuclear reactions.
- Have a basic understanding about the classification and nomenclature of organic compounds, fundamentals of organic reaction mechanism, aromaticity and stereochemistry
- Students capable of understanding and studying organic reactions
- Have exposure to various emerging new areas of organic chemistry.
- Develop skills required for the qualitative analysis of organic compounds
- Learn the chemistry of alcohols, phenols, carboxylic acids, derivatives of Carboxylic acids, Sulphonic acids, carbonyl compounds, poly nuclear hydrocarbons, active methylene compounds and Grignard reagents.
- Understand and study Organic reaction mechanisms.

- Understand the general characteristics of the d and f block elements.
- Study the physical and chemical properties of d and f block elements.
- Study the Werner's theory of coordination compounds.
- Study isomerism in metal complexes.
- Study the bonding in coordination compounds. 24
- Understand the applications of coordination compounds.
- Understand the classification, properties and applications of organo metallic compounds.
- Study the methods of preparation, properties, structure and bonding of metal carbonyls and metal clusters.
- Understand the role of metals in biological systems.
- Learn the chemistry of nitro compounds, amines, dyes, organic polymers, soaps, detergents and organic reagents.
- Understand and study mechanism of reactions of nitro compounds and amines.
- Have an elementary idea of chemotherapy, organic spectroscopy and photochemistry
- Identify organic compound using UV, IR and PMR spectroscopic techniques
- Develop basic skills required for crystallization, distillation, solvent extraction, TLC and column chromatography.