Complementary Course Outcome

Chemistry

Sl No	Name of the paper	Outcome
1	General Chemistry	• To familiarize with the history, basic concepts and theories of chemistry. • To gain basic knowledge of qualitative and quantitative analysis. • To make a clear picture about atomic structure by understanding the impact of quantum revolution. • To analyze various theories of chemical bonding. • To understand the concepts of nuclear chemistry from the bottom and its applications to various emerging fields. • To understand the biological aspects of chemistry and applications in biological systems.
2	Physical Chemistry	• To gain detailed knowledge of laws of thermodynamics. • To understand the principles and properties of gaseous, liquid and solid states. • To understand what are solutions and to be familiar with colligative properties and their applications. • To understand different laws of electrochemistry and its applications in relevant areas. To compare different electrochemical cells
3	Organic Chemistry	• To understand basic concepts of organic chemistry with a knowledge of different electron displacement effects and reaction intermediates. • To familiarize conformations of some simple molecules and understand the concepts of optical and geometrical isomerism with examples. • To understand preparation, reactions and applications of halogen compounds, alcohols, phenols, ethers, aldehydes, ketones, carboxylic acids, nitro compounds, amines and diazonium salts. • To familiarize with various important naming reactions of organic chemistry. • To understand the chemistry of biological molecules like carbohydrates, lipids, proteins and nucleic acids including their classification, structure and applications. • To familiarize with natural products particularly alkaloids and terpenes with example
4	Physical and Applied Chemistry	• To understand what are colloids, their classification, preparation, properties and applications.

		• To understand of concepts and theories of chemical kinetics in detail and differentiate theories of catalysis. • To familiarize various chromatographic techniques, their principle and applications. • To gain deep knowledge of principle of different spectroscopic techniques like IR, UV-Visible and NMR spectroscopy. • To understand classifications, structure and applications of various polymers with examples. • To understand different type of pollutions in its chemical aspect as familiarizing the reasons of pollution and find out how to reduce them. • To understand deeply how chemistry is related to day to day life.
5	Chemistry Practical	• To develop awareness of handling laboratory instruments and laboratory safety like first aid and treatment of fires. • To develop analytical skills in volumetric analysis. • To understand the principles behind the gravimetry and to apply it in quantitative analysis. • To develop talent in inorganic qualitative analysis. • To determine physical constants like melting and boiling points. • To develop skills in organic preparations to ensure maximum yield.