

**S.S.K.Basaveshwar Arts, Science, Commerce UG & PG College,
Basavakalyan-585327, Dist:Bidar, Karnataka**

**Programme Outcomes, Programme Specific Outcomes (PSO) & Course Outcomes (CO)
of B.Sc. Chemistry (Department of Chemistry)**

Programme Outcome:
<p>After successful completion of three year B.Sc. degree program in Chemistry a student should be able to,</p> <p>PO-1. Demonstrate, solve and an understanding of major concepts in all disciplines of chemistry.</p> <p>PO-2. Solve the problem and also think methodically, independently and draw a logical conclusion.</p> <p>PO-3. Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of chemical reactions.</p> <p>PO-4. Create an awareness of the impact of chemistry on the environment, society, and development outside the scientific community.</p> <p>PO-5. Find out the green route for chemical reaction for sustainable development.</p> <p>PO-6. To inculcate the scientific temperament in the students and outside the scientific community.</p> <p>PO-7. Use modern techniques, decent equipment and Chemistry softwares</p>
Programme Specific Outcome:
<p>PSO-1. Gain the knowledge of Chemistry through theory and practicals.</p> <p>PSO-2. To explain nomenclature, stereochemistry, structures, reactivity, and mechanism of the chemical reactions.</p> <p>PSO-3. Identify chemical formulae and solve numerical problems.</p> <p>PSO-4. Use modern chemical tools, Models, Chem-draw, Charts and Equipment.</p> <p>PSO-5. Know structure-activity relationship.</p> <p>PSO-6. Understand good laboratory practices and safety</p> <p>PSO-7. Develop research oriented skills.</p> <p>PSO-8. make aware and handle the sophisticated instruments/ equipments</p>
Course Outcome
<p>CO 1: Understanding the atomic structure, by the help of different theories and principles</p> <p>CO 2: Study of elements in the Periodic table and their properties</p>

CO 3: Study of different types of bonds and the different types of molecular structures formed by them

CO 4: Study of fundamentals of Organic Chemistry, physical effects, structures and strengths of acids and bases

CO 5: To understand the stereochemistry of molecules with the help of different configurations and Nomenclature of the compounds.

CO 6: To study the functional groups and preparation and reactions of Aliphatic Hydrocarbons.

CO 1: To know the thermodynamic laws and understand the concepts related to thermochemistry.

CO 2: To study the conductance P^H of different electrolytes and their applications.

CO 3: To study the properties of the S-block elements.

CO 4: To study Aromatic hydrocarbons, Alkyl and arylhalides and their Preparation and reaction

CO 5: To study Alcohols, Phenols, Ethers aldehyde and ketones Preparation and reaction

CO 1: To Study the thermodynamic of ideal solution and some of the rules related to solutions.

CO 2: To know the degrees of freedom of number components.

CO 3: To study the conductance of different electrolytes and Conductometric titrations and their applications.

CO 4: To study the different types of Cells and Potentiometric titrations and their applications.

CO 5: To study the elements belonging to p-block in the periodic table

CO 6: To study amines, diazonium salts, aminoacids, peptides and proteins. Their preparation and reactions

CO 7: To study the classification, properties of carbohydrates

CO 1: To study the elements belonging to d block and their properties.

CO 2: To study Valence bond theory, structure and stereochemistry of coordination compounds.

CO 3: To study the kinetic theory of gases, Maxwell Boltzmann distribution laws of molecular velocities and molecular energies

CO 4: To study surface tension, viscosity. Forms of solids, laws of crystallography, theories of reaction rates.

CO 1: To study Inorganic polymers, classification, synthesis and application.

CO 2: To study different chromatographic techniques. Corrosion theories, reactions, prevention.

CO 3: To Study different spectroscopic techniques. Study of Organometallic and organosulphur compounds their synthesis and application. And rearrangement reactions.

CO 4: To study osmosis and osmotic pressure, lowering of vapour pressure, elevation in boiling point and depression in freezing point.

CO 5: To study adsorption of gases by solids, derivation of Freundlich adsorption isotherm.

CO 6: To study essential and trace elements in biological system.

CO 7: To study classification of fertilizers and their uses, advantages and disadvantages of organic reagents.

CO 8: To study reactive methylene compounds, carbohydrates, oils, fats, soaps & detergents.

CO 9: To study the classification synthesis and uses of synthetic dyes and synthetic polymers

CO 10: To study specific, molar and equivalent conductance. Application of conductance measurements. Study of Debye-

Huckel-Onsager equation. Clausius - Mossotti equation and its importance

CO 1: To study evaluation of analytical data. Principles of gravimetric analysis. Analysis of water by different techniques.

CO 2: To study the classification and synthesis of alkaloids, terpenes, amino acids, peptides, proteins enzymes, hormones, vitamins.

CO 3: To study molecular spectroscopy. Rotational, Vibrational and Raman spectrum. Also the study of radiation chemistry.

CO 4: To study the importance of cement, ceramics, refractories and glass. Paints, pigments and varnishes.

CO 5: To study the preparation and application of different reagents in organic synthesis. Chemistry in day today life, green synthesis of adipic acid, urethane and ibuprofen.

CO 6: To study protecting and deprotecting groups. To understand the definition of drug. Synthesis and uses of aspirin, paracetamol etc.

CO 7: To study electrolytic and galvanic cells. Nernst equation for electrode potential. Primary cell, secondary cell and Nickel-cadmium cell