DEPARTMENT OF CHEMISTRY

RSM SNDP YOGAM ART & SCIENCE COLLEGE

B.Sc. Chemistry

PROGRAMME OUTCOMES

Familiarizes the emerging areas of chemistry and their applications in various fields ofchemical sciences and to apprise the students of its significance in future studies

PROGRAMME SPECIFIC OUTCOMES

Under Graduate Programme in Chemistry

- To understand basic facts and concepts in Chemistry while maintaining the exciting aspects of Chemistry to develop an interest in the study of chemistry as a discipline.
- To develop the ability to apply the principles of Chemistry.
- To honour the achievements in Chemistry and to know the role of Chemistry in nature and society.
- To elaborate on problem-solving skills.
- Students will be able to design and carry out scientific experiments as well as accurately record and analyze the results of such experiments

COURSE OUTCOMES

Semester – I

CHE1B01. Theoretical and Inorganic Chemistry -1

To develop interest amid students in various branches of inorganic chemistry. Toimpart essential theoretical knowledge of atomic structure, periodic properties,chemical bonding, and nuclear chemistry.

Semester – II

CHE2B02. Theoretical and Inorganic Chemistry –II

To familiarize with the basic principles of quantum chemistry and to impart the students'concepts of the fundamentals of quantum mechanics and its applications in the study ofthe structure of atoms. To develop a comprehensive idea about chemical bonding and molecularstructure.

Semester – III

CHE3B03. Physical Chemistry –I

To understand the general characteristics of different states of matter. To bestowknowledge to the students about the intermolecular forces in gases and liquids, thestructure of solids and Defects in solids.

Semester – IV

CHE4B04. Organic Chemistry –I

To impart the students a thorough knowledge about the chemistry of some chosenpractical groups to develop proper talent towards the study of organiccompounds and their reactions. To enable the students to understand and study the organicreaction mechanism.

CHE4B05 (P). Inorganic Chemistry Practical-I

To develop skills for quantitative estimation using the different branches of volumetric

Analysis.

Semester – V

CHE5B06. Inorganic Chemistry –III

To give basics of analytical chemistry and to study the characteristics and properties of Sand P block elements. Basic idea about environmental pollution and solid wastemanagement.

CHE5B07. Organic Chemistry –II

To impart the students a thorough knowledge about the mechanisms of reactions ofsome selected functional groups in organic compounds and also to give an aspect ofapplied organic chemistry and the applications of organic chemistry in various fieldsof chemical sciences.

CHE5B08. Physical Chemistry –II

- To provide a perspicacity into the kinetic aspects of chemical reactions and phase equipoise.
- To derive some thermochemical equations and kinetic equations. To study phasediagrams and the elementary idea of catalysis and chromatography.
- To impart a thoroughknowledge of the fundamentals of a microwave, infrared, Raman, electronic and magneticresonance spectroscopy, mass spectrometry

CHE5D01.Environmental Chemistry (Open Course)

To acquire knowledge about the environmental issues of the present world, types ofpollution and methods to reduce pollutant. It makes awareness about wastemanagement.

Semester – VI

CHE6B09. Inorganic Chemistry –IV

To understand the general characteristics of the d and f block elements to give thestudents a thorough knowledge of the different theories to explain the bonding incoordination compounds. To improve the level of understanding of the chemistry oforganometallic compounds, metal carbonyls and metal clusters.

CHE6B10. Organic Chemistry –III

To impart the students' thorough idea in the chemistry of carbohydrates, heterocyclic

compounds, amino acids, proteins and nucleic acids. To inquire the fundamentals of

Terpenoids, alkaloids, vitamins, lipids and steroids. To have an elementary idea of

Supramolecular chemistry and Green Fluorescent Proteins.

CHE6B11. Physical Chemistry –III

To provide an insight into the characteristics of different types of solutions andelectrochemical phenomena. To learn ionic equilibria and electrical properties of ions insolution. To learn the concepts of acids and bases, pH and buffer solutions.

CHE6B12. Advanced and Applied Chemistry –III

To provide elementary ideas of advanced topics in chemistry like nanochemistry,computational, green chemistry, supramolecular and combinatorial chemistry.

CHE6B13. Polymer Chemistry –III (Elective)

To provide an insight into the types of polymerization and their properties andreactions.

CHE6B14 (P). Physical chemistry practical

To develop skills in doing experiments in kinetics, conductometry, viscosity,potentiometry and phase rule.

CHE6B15 (P). Organic chemistry practical

To develop the skills required for the qualitative analysis of organic compounds,determination of physical constants.

CHE6B16 (P). Inorganic chemistry practical

To impart the students a thorough knowledge of Systematic qualitative analysis ofinorganic mixtures by Semi-micro method. The students will get practice in thequantitative analysis of metal ions and anions using the gravimetric method.