SACRED HEART COLLEGE (AUTONOMOUS)

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Ready for Every Good Work

A Don Bosco Institution of Higher Education, Founded in 1951 * Affiliated to Thiruvalluvar University, Vellore * Autonomous since 1987

Accredited by NAAC (4th Cycle – under RAF) with CGPA of 3.31 / 4 at 'A+' Grade

Name of the Programme: B Sc. Chemistry

S No	Title of the Paper	Course Code	Course Objectives	Course Outcomes	Relevance
1	ORGANIC CHEMISTRY – I	CH116	• Understanding the fundamentals of acidity and basicity. • Understanding the structure of organic compounds. • Fathom the acidity and basicity of organic molecules. • Provide the rudimentaries of stereochemistry. • Conceptualize the correlation between structure, acidity and reactivity. • Discern the reactivity of alkenes and alkynes.	• On successful completion of this Course, students will be able to • Network structure, hybridization, acidity, basicity and reactivity of organic molecules, identify the molecular structure. • Categorize molecules on the basis of hybridization; predict the acidity and basicity of the molecules based on functional groups; predict products for organic reactions. • Represent molecules dimensionally; infer the reactivity of molecules from their hybridization; Chart out the mechanism for organic reactions. • Distinguish the stereochemistry of molecules; rationalize the reactivities of alkenes and alkynes.	Local developmental needs

				• Evaluate and hypothesize the stability of molecular intermediates and alicyclic molecules. • Collaboratively assess the reactivity of molecules based on structure, stereochemistry, hybridization, acidity and basicity; Build on understanding the reactivity and mechanism of molecules and reagents.	
2	ALLIED CHEMISTRY - I (BIOCHEMISTRY)	ACH110	• To understand the basics of solution chemistry • To categorize the organic compounds based on aromaticity, hybridization, bonding • To integrate the concept of organic molecules chemistry in biological systems • To tabulate acidity and basicity concepts based on various theories • To reflect chemical kinetics concept through biological systems • To build relationship between the drug actions with chemical structure	• On successful completion of this Course, students will be able to • Understand the basics of solution chemistry and knowledge of preparing solutions with different concentrations • Categorise the organic compounds based on aromaticity, hybridization, types of bonding • Integrate the concept of buffer solution in chemistry with biological systems • Tabulate acidity and basicity concepts based on various acid-base theories • Reflect the concept of chemical kinetics in biological systems • Develop relationship and synthetic methodology of drugs such as anesthetics and antibiotics and establish the mode of action with biological systems.	Local developmental needs

3	INORGANIC CHEMISTRY – I	CH216	• To understand the basic atomic structure of elements their periodic properties and chemical bonding. • To evaluate the nature of bonding by applying various fundamental theories. • To learn the properties and applications of s and p block elements. • To compare and contrast the relationship between groups. • To understand the principles and theories of Acids and Bases. • To apply fundamental theories of acids and bases and identify the progress of the chemical reaction.	• On successful completion of this Course, students will be able to • Understand the behaviour and properties of the elements in the periodic table and comprehend them • Comprehend the fundamentals of electronic configuration, oxidation states, and specific properties of the major group elements. • Compare and contrast the properties of acids and bases and justify their applications • Predict atomic structure, chemical bonding, Hybridization, and molecular geometry. • Analyze and understand the diagonal relationship between alkali and alkaline earth metals their properties and applications. • Evaluate the properties of elements based on their atomic structure, bonding nature, etc., and relate the uses and significance of the s and p block elements. • Devise and validate acid and base using the metal oxides and predict the feasibility of the reaction	Local developmental needs
4	CHEMISTRY IN EVERY DAY LIFE	NCH604	• To appreciate the importance of chemistry in day-to-day appliances • To understand the role of chemicals involved in	• List the different types of soil and classify the fertilizers • Recognize the different household chemicals used and analyse their adverse effects	Local developmental needs

			different substances, their uses and precautions to be taken.	• Tabulate the variety of glasses and ceramics available and apply them for specific purpose intended • Identify the various types of adulterants present in food and demonstrate to identify them • Evaluate the chemicals used in various cosmetic items and compare them • Identify the components present in different plastics and hypothesize its uses	