

Course Outcome

I B.Sc.

GENERAL CHEMISTRY-I

COURSE OUT COMES	CO1	Explain the atomic structure, wave particle duality of matter, periodic properties bonding, and properties of compounds.
	CO2	Classify the elements in the periodic table, types of bonds, reaction intermediates electronic effects in organic compounds, types of reagents.
	CO3	Apply the theories of atomic structure, bonding, to calculate energy of a spectral-transition, Δx , Δp electronegativity, percentage ionic character and bond order.
	CO4	Evaluate the relationship existing between electronic configuration, bonding, geometry of molecules and reactions; structure reactivity and electronic effects.
	CO5	Construct MO diagrams, predict trends in periodic properties, assess the properties of elements, and explain hybridization in molecules, nature of H- bonding and organic reaction mechanisms.

FOOD CHEMISTRY

COURSE OUTCOMES	CO1	Learning about food adulteration – contamination of Wheat, rice ,milk butter.
	CO2	Get an awareness about food poisons like natural poisons(alkaloids-nephrotoxin) pesticides, DDT, BHC, Malathion,
	CO3	Get an exposure on food additives, artificial sweeteners, saccharin, cyclamate and aspartate in the food industries.
	CO4	Acquire knowledge on beverages, soft drinks, soda, fruit juices and alcoholic beverages examples.
	CO5	Study about fats and oils – source of oils – production of refined vegetable oils- preservation. Saturated and unsaturated-MUFA and PUFA.

Role of Chemistry in Daily life

COURSE OUT COMES	CO 1	Learn about the chemicals used in everyday life as well as air pollution and water pollution.
	CO 2	Get knowledge on building materials cement, ceramic, glass and plastics, Polythene, PVC, bakelite, polyesters.
	CO 3	Acquire information about food and nutrition. Carbohydrates, proteins, fats also have an awareness about cosmetics tooth pastes, face powder, soaps and detergents.
	CO 4	Discuss about the fertilizers like urea, NPK fertilizers and super phosphate. Fuel classification solid, liquid and gaseous; nuclear fuel- examples and uses.
	CO 5	Have an idea about the pharmaceutical drugs analgesics and antipyretics like paracetamol and aspirin and also about pigments and dyes and its applications.

GENERAL CHEMISTRY-II

COURSE OUT COMES	CO1	Explain the concept of acids, bases and equilibria, periodic properties of s and p block elements, preparation and properties of aliphatic and aromatic hydrocarbons
	CO2	Discuss the periodic properties of s and p block elements, reactions of aliphatic and aromatic hydro carbons and strength of acids
	CO3	Classify hydro carbons, types of reactions, acids and bases ,example the properties S and p block elements, reaction mechanisms of aliphatic and aromatic hydrocarbons
	CO4	Explain theories of acids, bases and indicators, buffer action and important compounds of S block elements
	CO5	Assess the application of hard and soft acids indicators, buffers, compounds of S and P block elements and hydrocarbons

DAIRY CHEMISTRY

COURSE OUT COMES	C01	Understand about general composition of milk- constituents and physical properties
	C02	Acquire knowledge about pasteurization of milk and various types of pasteurization – Batch and HTST Ultra high Temperature pasteurization
	C03	Learn about Cream and Butter their composition and how to estimate fat in cream and Ghee.
	C04	Explain about Homogenized milk , flavoured milk, vitaminised milk and toned milk.
	C05	Have an idea about how to make milk powder and its drying process- types of drying process.

COSMETICS AND PERSONAL CARE

PRODUCTS

COURSE OUT COMES	C01	Know about the composition of various cosmetic products
	C02	Understand chemical aspects and applications of hair care and dental care and skincare products.
	C03	Understand chemical aspects and applications of perfumes and skin care products..
	C04	To understand the methods of beauty treatments their advantages and disadvantages.
	C05	Understand the hazards of cosmetic products.

Course Outcome

II B.Sc

GENERAL CHEMISTRY-III

COURSE OUT COMES	C01	Explain the kinetic properties of gases by using mathematical concepts.
	C02	Describe the physical properties of liquid and solids; identify various types of crystals with respect to its packing and apply the XRD method for crystal structure determination.
	C03	Investigate the radioactivity nuclear energy and its production also the nuclear waste management.
	C04	Write the nomenclature, physical & chemical properties and basic mechanisms of halo organic compounds and alcohols.
	C05	Investigate the named organic reactions related to phenol; explain preparation and properties of aromatic alcohol including thiol.

PESTICIDE CHEMISTRY

COURSE OUT COMES	C01	Teach about pesticides and their toxicity with respect to structure and category.
	C02	Explain the preparation and property of pesticides.
	C03	Investigate the pesticide residues, prevention and care
	C04	Demonstrate the extraction and analytical methods of pesticide residues.
	C05	Make awareness to the public on bio-pesticides.

GENERAL CHEMISTRY-IV

COURSE OUT COMES	C01	Explain the terms and processes in thermodynamics; discuss the various laws of thermodynamics and thermo chemical calculations.
	C02	Discuss the second law of thermodynamics and its application to heat engine; discuss third law and its application on heat capacity measurement.
	C03	Investigate the chemistry of transition elements with respect to various periodic properties and group wise discussions.
	C04	Discuss the fundamental organic chemistry of ethers, epoxides and carbonyl compounds including named organic reactions.
	C05	Discuss the chemistry and named reactions related to carboxylic acids and their derivatives; discuss chemistry of active methylene compounds, halogen substituted acids and hydroxyl acids.

INSTRUMENTAL METHODS OF CHEMICAL ANALYSIS

COURSE OUT COMES	C01	Apply error analysis in the calibration and use of analytical instruments, explain theory, instrumentation and application of flame photometry and Atomic Absorption.
	C02	Explain theory, instrumentation and application of UV visible and Infrared spectroscopy.
	C03	Able to discuss instrumentation, theory and applications of thermal and electrochemical techniques.
	C04	Explain the use of chromatographic techniques in the separation and identification of mixtures.
	C05	Explain preparation of solutions, stoichiometric calculations.

FORENSIC SCIENCE

COURSE OUT COMES	C01	Learn about the poisons-types and classification of poisons in the living and the dead organisms and also get information about Postmortem.
	C02	Get awareness on Human bombs, possible explosives (gelatin sticks and RDX) and metal defector devices and other security measures for VVIP –composition of bullets and detecting power burns.
	C03	Detect the forgery documents, different types of forged signatures.
	C04	Have an idea about how to tracks and trace using police dogs, foot prints identification and gain the knowledge in analyzing biological sunstances - blood, semen, saliva, urine and hair- DNA finger printing for tissue identification in dismembered bodies.
	C05	Get the awareness on Aids- causes and prevention and also have an exposure on handling fire explodes.