

Department of Chemistry

Programme Outcomes: B. Sc. Chemistry Department of Chemistry After successful completion of three year degree program in Chemistry a student should be able to;

PO-1. Demonstrate, solve and an understanding of major concepts in all disciplines of chemistry.

PO-2. Solve the problem and also think methodically, independently and draw a logical conclusion.

PO-3. Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of chemical reactions

. PO-4. Create an awareness of the impact of chemistry on the environment, society, and development outside the scientific community.

PO-5. Find out the green route for chemical reaction for sustainable development.

PO-6. To inculcate the scientific temperament in the students and outside the scientific community.

PO-7. Use modern techniques, various equipments and Chemical softwares.

Programme Specific Outcomes PSO-1. Gain the knowledge of Chemistry through theory and practical experiments.

PSO-2. To explain nomenclature, stereochemistry, structures, reactivity, and mechanism of the chemical reactions.

PSO-3. Identify chemical formulae and solve numerical problems.

PSO-4. To understand the basic principles of Organic, Inorganic, Physical and Analytical Chemistry and its applications through Various laboratory experiments.

PSO-5. Use modern chemical tools, Models, Chem-draw, Charts and Equipments.

PSO-6. Understand good laboratory practices and safety.

PSO-7. Develop research oriented skills.

PSO-8. Aware and handle the sophisticated instruments/equipments

List of course outcomes (Chemistry)

Course Code	Title	Outcomes	Credit
CHEM101 TH	Atomic Structure, Bonding , General organic Chemistry and Aliphatic Hydrocarbon	To impart theoretical understanding and basic concepts of organic Chemistry. Name of functional group and different class organic compound	4
CHEM101PR	Atomic Structure, Bonding , General organic Chemistry and Aliphatic Hydrocarbon	Basic practical skills in volumetric and organic analysis	2
CHEM102 TH	States of Matter , Chemical Kinetics and functional Organic chemistry	Basic principal of physical chemistry and complete knowledge of periodic tables, atomic structure inorganic chemistry	4
CHEM102PR	States of Matter , Chemical Kinetics and functional Organic chemistry	Understanding of concepts of purification like distillation, crystallization, determination of melting point and boiling point	2
CHEM201TH	Solution phase equilibrium conductance electro chemistry and organic chemistry	Understanding concepts of Solutions Phase Equilibrium and critical solutions Knowledge of different aspects of electrochemistry Preparation and properties of organic compound Detail study of carbohydrates	4
CHEM201 PR	Solution phase equilibrium conductance electro chemistry and organic chemistry	Determination of distribution coefficient of different solutions Conductance determination Preparation of organic compounds	2
CHEM202TH	Main Group elements and chemical energetic	Detail study of s&p block elements and properties of noble gases Different aspects of chemical and ionic equilibrium	4
CHEM202PR	Main Group elements and chemical energetic	Analysis of inorganic mixture and determination of heat capacity and PH measurement	2
CHEM203SEC	Analytical Chemistry	To learn the analysis of water and soil sample Food adulteration by lab method	4
CHEM204SEC	Fuel chemistry and Chemistry of	knowledge of petro chemicals, perfume and cosmetics	4

	Cosmetics & perfumes	Knowledge of different types of chromatographic technique Knowledge of composition preparation and structure of essential oils	
CHEM301TH	Polynuclear Hydrocarbons, Dyes, UV,IR and NMR spectroscopy	Preparation and properties of poly aromatic hydrocarbons, dyes and their application in pharmaceuticals and agricultural products Detail study of UV,IR and NMR with application in structure identification and characterization	4
CHEM301PR	Polynuclear Hydrocarbons, Dyes, UV,IR and NMR spectroscopy	Preparations of organic compounds	2
CHEM305 TH	Polymer Chemistry	Detail knowledge of polymer Principals of polymerization Synthesis and applications Properties (Mechanical and Physical) Knowledge of conducting polymers	4
CHEM305PR	Polymer Chemistry	Preparation of polymers by different methods Measurement of physical properties of polymers	2
CHEM307SEC	CHEMICAL TECHNOLOGY & Society & Business skills in chemistry	Principles of chemistry as applied in chemical industry such as biotechnology ,cement factories, fertilizers factories Students gets information regarding the scaling up of chemical reactions to industry level. Familiarity of apparatus used in industry. Knowledge of IPR business management.	4
CHEM 308 SEC	Pesticide & Pharmaceutical chemistry	Students to know about different pesticides their application, preparation and side effects. Knowledge of Green pesticides their synthesis and how they are able to reduce the environmental pollution. Synthesis of different categories of drugs , their application and their side effects.	4

