Department of Chemistry

S.No.	Course Code	Course Title	Course Outcomes (CO)
1.	BS106	Paper I	On completion of this course, the students will be able to: CO1: Students will learn the basic knowledge of s.p groups of Periodic table CO2: Students will understand the general principles of Inorganic qualitative analysis CO3: Pupil will understand the Structural Theory in Organic Chemistry CO4: Pupil will understand Hydrocarbons reactivity and properties CO5: Student will be able to explore the Atomic structure and elementary quantum mechanics CO6: Student will be able to Gaseous and liquid state CO7: Students will learn Chemical Bonding, Molecular orbital theory CO8: Students will learn Evaluation of analytical data
2.	BS206	Paper-II	On completion of this course, the students will be able to: CO1: Students will explore the properties of p-block Elements, Interhalogens, Chemistry of Zero group elements, Chemistry of d-block elements CO2: Students will explore the physical and chemical properties of Aromatic Hydrocarbons CO3: Students will learn Dilute Solutions & Colligative Properties CO4: Students will explore the properties of Solutions CO5: Students will explore the properties of Solid-state Chemistry CO6: Students will learn the Theory of Quantitative Analysis
3.	BS 306	Paper – III	At the end of the course the students will be able to CO1: Students will learn the Theory of Quantitative Analysis Chemistry of f-block elements CO2: Students will learn the Theory of Quantitative Analysis Coordination Compounds chemistry

			CO3: Students will explore the properties of Metal carbonyls and Organometallic Chemistry CO4: Students will explore the physical and chemical properties of Carboxylic acids and derivatives and applications CO5: Student will learn interrelation of heat and work with chemical reactions or with physical changes of state in Thermodynamics CO6: Student will understand the Bioinorganic Chemistry
4.	BS 301	SEC –Safety rules in Chemistry laboratory and lab reagents	To improve the skills of students in the application of theory and practical knowledge. To fill the gap between theory and practical. To train the students in understanding laboratory safety rules and to improve the skills in preparation of laboratory reagents CO1: general rules for working safely in a chemical laboratory Recognize the Hazards CO2: Assess the Risks of the Hazards CO3: Minimize the Risks of the Hazards CO4: Preparation of Lab Reagents
5.	BS 301	SEC- Remedial methods for pollution, drinking water and soil fertility	On the completion of this course, the students will be able to; CO1: Acquire skills to help the individuals to identify and solve problems related to pollution CO2: Apply simple and useful methods of purification of water CO3: Educate people about adverse effects of cell phone radiation CO4: Identify the suitable soil for the growth of different crops
6.	BS 406	Paper – IV –	On the completion of this course, the students will be able to; CO1: Simple inorganic molecules and coordination complexes CO2: Carboxylic acids and derivatives, Synthesis based on Carbanions CO3: Electrochemistry & EMF CO4: Synthetic Strategies CO5: Asymmetric synthesis

7.	BS 401	SEC-3: Materials and their Applications	After completion of the course, the students will be able to; CO1: Identify different types materials and their applications CO2: Acquire the knowledge of different types of alloys and their applications CO3: Identify different types of glass and ceramics CO4: Know the Chemicals required for cement preparation and the process of preparation CO5: Identify different types of polymers and their applications
8.	BS 401	SEC-4: Chemistry of Cosmetics and Food Processing	On completion of this course, the students will be able to: CO1: Identify the chemicals involved in cosmetic preparation, food processing and preservation CO2: Acquire the knowledge of preparation of certain cosmetics CO3: Understand the food processing procedure and apply in their daily life CO4: Identify adulterants and educate the people around them CO5: Run their own small-scale Industry
9.	BS 502	GE1 – Pharmaceuticals	After completion of the course, the students will be able to; CO1: Student learns history of pharmacy, development of pharmacy profession and industry in India. CO2: Understands various routes of drug administration, concept of dosage forms, unit operations involved in preparation of these dosage forms. CO3: Describes alternative system of medicines CO4: Explain the factors which influence the design of pharmaceutical dosage forms. CO5: Summarize the factors influencing formulation of various dosage form like solution
10.		GE2 Materials and their Applications	After completion of the course, the students will be able to; CO1: Identify different types materials and their applications CO2: Acquire the knowledge of different types of alloys and their applications

			CO3: Identify different types of glass and ceramics CO4: Know the Chemicals required for cement preparation and the process of preparation CO5: Identify different types of polymers and their applications
11.	BS505	DSC:	After the completion of this course, the learner will be able to: CO1: Understand the theories of bonding, stabilities and applications coordination compounds CO2: Understand the structures of Boranes and Carboranes CO3: Gain knowledge of different types of spectroscopy and enable to analyse and interpret different spectral data CO4: Understanding reactions and reaction mechanism of nitrogen containing functional groups. CO5: Acquire the knowledge of reaction rates, rate laws, and applications of chemical kinetics in studying enzyme catalysis
12.	BS508A	DSE1A: Instrumental methods of Analysis	On completion of this course, the students will be able to: CO1: Gain the knowledge of principle and methods of solvent extractions CO2: Understand the classification of methods of chromatographic techniques, nature of adsorbents and solvent systems CO3: identify the usage of different spectroscopic methods to find the purity of compounds prepared CO4: Analyse the given compounds CO5: Acquires the knowledge of electro analytical methods
13.	BS508B	DSE1B: Industrial Chemistry and Catalysis	After completion of the course, the students will be able to; CO1: understand the Kinetics of heterogeneous catalysis CO2: Identify the different types synthetic and natural dyes and their applications CO3: Identifies different Metallurgical procedures CO4: Understand phase transfer catalysis and enzyme catalysis CO5: Explain Michaelis- Menten mechanism

14.	BS605	DSC:	On completion of this course, the students will be able to; CO1: To know the concepts of inorganic reaction mechanisms CO2: Know about biological significance of essential elements and toxicity of heavy metals CO3: To gain the knowledge of HSAB concept and stability of complexes CO4: To understand the principle of NMR spectroscopy and interpretation of spectrum CO5: Acquire the knowledge of mass spectrometry for the analysis of given sample CO6: Understand different types of carbohydrates and amino acids structures
15.	BS608A	DSE2A: Medicinal Chemistry	On the completion of the course the students will be able to CO1: acquire the basics of medicinal chemistry, biophysical properties CO2: To know the mechanism of action of drugs and ADME properties of drugs CO3: To gain the knowledge of molecular messengers, health promoting drugs and deficiency disorders CO4: Understands the Biophysical and chemical properties of enzymes, hormones, vitamins CO5: understand the Drug metabolism
16.	BS608B	DSE2B: Agricultural and Fuel Chemistry	On completion of this course the students will be able to: CO1: Know different types of Pesticides and their structures CO2: Identifies potential pesticidal plants of India and the role of Neem in plant protection CO3: Understand soil fertility and the need of fertilizers CO4: Understand the importance and need of Organic farming CO5: Acquire the knowledge of refining process of crude oil and fuel derived from Biomass