Level	Course code	Title	Course Objective	Outcome End of this paper the student will be able to understand the
Sem I	101	General chemistry	Foundation of basic introduction of organic, inorganic and Physical chemistry	Basic principles of organic, inorganic and Physical chemistry Part I
	102	Chemistry Practicals	Inorganic Qualitative analysis, Acid-base titrations	Inorganic Qualitative analysis, Acid-base titrations experimentaly
Sem II	103	General chemistry	Includes basic introduction of organic, inorganic and Physical chemistry	basic principles of organic, inorganic and Physical chemistry Part II
	103	Chemistry Practicals	organic spotting, Redox, complexometry and Iodometry titrations	fundamental of organic spotting, Redox, complexometry and Iodometry titrations experimentaly
Sem III	201	Organic chemistry	Includes information about Carbohydrates, Amino acids, Protein, poly peptide, SE reactions, Polynuclear hydrocarbons, Heterocycles, Beta dicarbonyl compounds and Acid-base properties of organic compounds	basics of bioorganic molecules, SE reactions, Polynuclear hydrocarbons, Heterocycles, Beta dicarbonyl compounds and Acid-base properties of organic compounds
	202	Physical chemistry	Includes information of Thermodynemics, Electrochemistry, Phase rule, Adsorption, Catalysis, Polymer Chemistry, Colloids	Basics of Thermodynemics, Electrochemistry, Phase rule, Adsorption, Catalysis, Polymer Chemistry and Colloids
	203	Chemistry Practicals	Inorganic qualitative analysis of mixture and Physical experiments including Kinetic and instrument study e.g. Conductometer, Refractometer and Viscometer	Inorganic qualitative analysis of mixture and Physical experiments including Kinetic and various instrumental study to measure physical parameter
Sem IV	204	Inorganic Chemistry	Wave mechanics, Co-ordination compounds, Chemical bonding, Non-aqueous solvents, Physicochemical properties	basics of Quantum chemistry Non-aqueous solvents, Physicochemical properties

	205	Analytical chemistry	Includes information and basic principles of Gravimetry, Acid-base, Redox, complexometry, precipitation Titrations	Theoritcal aspects of Gravimetry, Acid-base, Redox, complexometry, precipitation Titrations
	Elective	Industrial Chemistry	Introduction to Fuel Cells, Fertilizers, water analysis, Explosives and pesticides	Introduction, synthesis of some industrial products and water analysis
	206	Chemistry Practicals	organic spotting and Analytical experiments including Gravimetric and Volumetric Analysis	End of this paper the student will be able to understand concepts organic analysis and quantitative inorganic analysis
Sem V	301	Organic chemistry	Stereo Chemistry (I) Stereo selectivity and stereo specificity, Inorganic reagents, some rearrangements and name reactions, SN reactions, alkaloids, and disaccharides	Concepts of stereochemistry, some rearrangements and name reactions, SN reactions, some complex bio molecule such as alkaloids and Disaccharides, which can be useful for higher studies and research
	302	Inorganic chemistry	Molecular symmetry, Chemical bonding, Co-ordination chemistry, Kinetics and reaction rates of substitution, Inorganic polymers and Mossbauer Spectroscopy	Concepts of structural chemistry such as Symmetry, Chemical bonding, Co-ordination chemistry, Kinetics and reaction rates of substitution, Inorganic polymers and Mossbauer Spectroscopy in detail, which can be useful for higher studies and research
	303	Physical Chemistry	Thermodynamics, Electrochemistry, Chemical Kinetics, polymer chemistry, Nuclear Chemistry and Molecular spectra	Concepts of Thermodynamics, Electrochemistry, Chemical Kinetics, polymer chemistry, Nuclear Chemistry and Molecular spectra in detail, which can be useful for higher studies and research
	304	Analytical chemistry	Ultraviolet Spectroscopy, Infrared spectroscopy, Raman Spectra, NMR spectroscopy, visible and atomic spectroscopy	principles and applications of various spectroscopy such as UV-visible, IR, NMR and atomic spectroscopy, which can be useful for higher studies and research
	305	Soil analysis	Elective subject as soil analysis includes introduction about soil Analysis of Primary, secondary and Micro and macro Nutrients and their analysis	Principles, working and applications to determine the various parameters of soil, which can be helpful to know the quality of soil, which can be useful for higher studies and research
	306	Chemistry	Experiments involving	Basics of Organic Preparations, TLC,

		Practicals	Organic Preparations, TLC, Inorganic Quantitative Analysis, Analysis of Alloy, Kinetic and instrumental Titrations	and Inorganic Quantitative Analysis of complexed mixtures, Analysis of Alloy, Kinetic and instrumental titrations in detail, which can be useful for higher studies and research
	307	Organic chemistry	Advanced organic chemistry including the study Stereo Chemistry (II), Terpenods, alkaloids, dyes, pesticides, explosives, vitamins and drugs in detail	Advanced organic chemistry including the study Stereo Chemistry (II), biomolecules such as Terpenods, alkaloids, vitamins and drugs and some industrial products such as dyes, pesticides and explosives, in detail, which can be useful for higher studies and research
	308	Inorganic chemistry	Advanced Inorganic chemistry in detail including Term symbol, Electronic spectra of metal complexes, Quantum chemistry, Chemical bonding and Metal carbonyls and Organometallic compounds	Advanced Inorganic chemistry in detail including Term symbol, Electronic spectra of metal complexes, Quantum chemistry, Chemical bonding and Metal carbonyls and Organometallic compounds, which can be useful for higher studies and research
	309	Physical chemistry	Advanced Physical chemistry in detail including Thermodynamics, Electro chemistry, Phase Rule, Osmosis, Photochemistry and Metal corrosion	Advanced Physical chemistry including Thermodynamics, Electro chemistry, Phase Rule, Osmosis, Photochemistry and Metal corrosion in detail, which can be useful for higher studies and research
	310	Analytical chemistry	Advanced analytical chemistry in detail including Errors and treatment of Analytical data, Chromatographic methods, Solvent Extraction Separation, Electro analytical Techniques such as Polarography and Potentiometry, Acid-base, Redox and Complexometry Titrations	Advanced analytical chemistry including Errors and treatment of Analytical data, Chromatographic methods, Solvent Extraction Separation, Electro analytical Techniques such as Polarography and Potentiometry, Acid-base, Redox and Complexometry Titrations in detail, which can be useful for higher studies and research, which can be useful for higher studies and research
	311	Nano structures	Elective subject as Nano	Elective subject as Nano science

		and Nanochemistry	science includes introduction, synthesis, Nano structured materials, identification and applications	includes introduction, synthesis, Nano structured materials, identification and applications which can be useful for higher studies and research
	312	Chemistry Practicals	Experiments including Organic separation and Identification, Inorganic Gravimetric & Volumetric Analysis, Alloy Analysis, Kinetic and instruments study	Experiments including Organic separation and Identification, Inorganic Gravimetric & Volumetric Analysis, Alloy Analysis, Kinetic and instruments study in detail