COs, POs and PSOs

Faculty of Science

Program Name	Year	Sem	Course Name	Course Outcome (Cos) At the end of course, students are able to….	Program Specific Outcome (PSOs)	Program Outcome (POs) At the end of program students are able to….
Bachelor of Science B.Sc	First	I	Chemistry	1. To understand the basic concept of periodic properties and ionic bonding. 2. To acquire the knowledge of s- block and p-block elements. 3. To learn the concept of electronic displacements, reactive intermediates and aliphatic hydrocarbons. 4. To acquire the knowledge of aromatic hydrocarbons including nomenclature, aromaticity and electrophilic aromatic hydrocarbons. 5. To understand the basic concept of Thermodynamics. 6. To learn the concept of gaseous state and phase rule.	1. To understand the basic concept of Organic, Inorganic Physical and Analytical Chemistry. 2. To elucidate Chemical Reaction and their Mechanism. 3. To understand the stereochemistry by using Ball sticks model and various chemical 4. To identify chemical formula and solve numerical based on various concepts.	1. To familiarize with concepts, facts and figures related to various branches of sciences such as Physics, Chemistry, Botany, Zoology, Computer sciences. 2. To create an awareness of the impact of Science on the environment, society and development outside the scientific community. 3. To develop various skills in planning,

						performing and handling modern techniques, equipment, laboratory experiments and various softwares. 4. To develop scientific attitude in students which is major objective that make them open minded, critical observation, deep thinking and curiosity? 5. To conduct basic minor projects, camps, scientific research to provide inputs for societal benefits.
		II	Chemistry	1. To understand the concept of polarization, covalent bonding, acids and bases. 2. To acquire the knowledge of periodic tables		

				including P-block elements, Nobel gases and non-aqueous solvents. 3. To learn synthesis, preparation, reactions of the alkyl halides, aryl halides and alcohols. 4. To acquire the knowledge of in details phenols, ethers and epoxides. 5. To learn the physical properties and molecular structure. i.e. polar, magnetic movement. 6. To understand the concept of chemical kinetics.		
		III	Chemistry	1. To understand the concept covalent bonding, metallic bonding and VSEPR theory. 2. To acquire the knowledge of quantitative inorganic analysis like the volumetric and gravimetric analysis. 3. To acquire the knowledge of aldehydes, ketones and carboxylic acids. 4. To learn the concept of isomerism including optical, geometrical and conformational isomerism. 5. To acquire the knowledge		

				of thermodynamics, equilibrium and phase equilibrium. 6. To learn the concept of liquid state and electrochemistry.		
		IV	Chemistry	1. To understand the chemistry elements in transition series and extraction of elements. 2. To acquire the knowledge of inner transition elements and a general principle of metallurgy. 3. To learn the knowledge of polynuclear hydrocarbons, reactive methylene compounds and carbohydrates. 4. To acquire the knowledge of aromatic nitro compounds, amino compounds, diazonium salts, amino acid and protein. 5. To analyze the colligative properties of dilute solutions. 6. To learn the conceptof crystalline state.		
		V	Chemistry	1. To understand the concept of co-ordination compounds, applications of chelates in analytical chemistry. 2. To acquire the knowledge		

				of crystal field theory, electronic spectra of transition metal complexes. 3. To learn the importance of heterocyclic compounds and organometallic compounds. 4. To acquire the knowledge of synthesis and application of dyes, drugs, pesticides. 5. To understand the concept of photochemistry, chemiluminescence and bioluminescence. 6. To learn the concept of molecular spectroscopy and importance of the Raman effect.		
		VI	Chemistry	1. To understand the concept of kinetic aspects of metal complexes, industrial application of spectrophotometry, calorimetry, paper chromatography, Paper chromatography. 2. To acquire the knowledge of organometallic chemistry, application of inorganic polymers, the biological role of essential and trace		

				elements in biological processes. 3. To apply the concept of electronic spectroscopy, IR spectroscopy to various organic structures. 4. To apply the concept of NMR, Mass spectroscopy to various organic structures. 5. To acquire the knowledge of elementary quantum mechanics, application of schrodinger wave equation to a particle. 6. To learn the concept of electrochemistry, Nuclear chemistry, application of radioisotopes in industry, agriculture, medicines, bio-sciences.		
		I	Botany	1. To understand the basic concept of plant diversity. 2. To acquire the knowledge of systematic, morphology and structure of algae. 3. To understand the biodiversity and economics importance of fungi. 4. To differentiate various bryophyte. 5. To understand the concept of vascular plant.	1. To acquire the knowledge of Botany. 2. To create awareness about cultivation and conservation of Biodiversity. 3. To get knowledge about recent techniques in plant tissue culture,genetic Engineering and Biotechnology. 4. To start Mushroom cultivation, production of nutritious algae and production of bio fertilizers.	

				6. To identify and analyze the application of microbes cryptograms.		
		II	Botany	1. To understand phylogeny from bryophytes to gymnosperms. 2. To classify the gymnosperms. 3. To recognize the major of group angiosperms. 4. To acquire the knowledge of complete flowers. 5. To demonstrate the utilization of plants. 6. To know the importance of pharmacognosy and phytochemistry with respect to medicinal plant.		
		III	Botany	1. To get introduce the concept and importance of biodiversity. 2. To identify and compare the system of classification. 3. To describe and illustrate systematic studies and economic importance of angiosperms family. 4. To acquire the knowledge of plant cell, tissues and their functions. 5. To identify and compare the structural difference between monocots and		

				dicots. 6. To know the structure and development of monocots and dicots embryo.		
		IV	Botany	1. To explain the structure of cell components. 2. To describe the structure and functions of cell organelles. 3. To acquire the knowledge of chromosomes. 4. To describe the interaction of gene. 5. To illustrate linkage, crossing over and gene mutations. 6. To explain the theory for mechanism of action of enzymes.		
		V	Botany	1. To understand the plants and plants cell in relations to water. 2. To acquire the knowledge about process of photosynthesis and respiration in higher plants. 3. To learn about the nitrogen metabolism. 4. To understand the plant movement. 5. To understand the concept of ecology and environment.		

				6. To acquire plant communities and ecological adaptation of plant.		
		VI	Botany	1. To understand the biochemical of nucleic acid their role in living system, experimental evidence to prove DNA as genetic material. 2. To know the concept of gene structure and expression. 3. To acquire knowledge about the regulation of gene expiration. 4. To develop knowledge about tolls and techniques of recombinant DNA, cloning vector and gene library. 5. To understand the basic aspects of plant tissue culture technique. 6. To acquire the knowledge of application of biotechnology in agriculture, industry and conservations.	
		I	Zoology	1. To understand the fascinating world of invertebrates including evolution, hierarchy and classification of invertebrate phyla. 2. To acquire the knowledge	1. To understand Physiological changes,various genetic abnormalities,mutations in our body and impact of environment on our bodies. 2. To introduce the new developments in Zoological science and its applications in various branches like fisheries, aquaculture,apiculture,sericulture,agriculture,bioinform	

				of canal system in sponges and students will be able to understand the functions of spicules and gemmules. 3. To analyze external as well as internal characters, various internal systems like digestive excretory reproductive systems of helminths. 4. To study the various systems in leech and cockroach. 5. To provide an intensive and in-depth knowledge to the students of phylum echinodermata with help of animal asterias and phylum Mollusca by using pilaglobose. 6. To familiarize the students with the affinities of hemichordate with non-Chordata and Chordata.	atics etc. 3. To analyze the role of various biomolecules in living system. 4. To examine,observe,compare and contrast characteristics of animals belonging to different Phyla which differentiate them from other form of life.	
		II	Zoology	1. To develop a deeper understanding of basic unit of life i. e. cell and it's organization. 2. To familiarize students with various cell organelles, its structures and functions at cellular level.		

				3. To understand the importance of nucleus and chromosomes. 4. To understand the process of cell division (in both somatic and germ cell) gametogenesis and fertilization. 5. To expose the concepts and process in developmental biology like cleavage, blastulation, gastrulation with the help of animals like amphioxus, frog, chick etc. 6. To acquire the knowledge of parthenogenesis, regeneration and placentation in mammals.		
		III	Zoology	1. To understand the basic concepts about chordates. 2. To learn the various systems like digestive systems, respiratory system and reproductive systems. 3. To analyze the systemic position and external morphology of Caloteseversicolar. 4. To classify various classes of phylum chordate i.e. Pisces, reptiles, aves and		

				mammals. 5. To awareness for palaeontology i. e. fossils and its significance. 6. To learn the process of evolution.		
		IV	Zoology	1. To understand the basic principles of mendelian inheritance. 2. To learn the mechanism of crossing over an inheritance pattern in man. 3. To learn the concepts of linkage concept of sex determination and sex-linked inheritance. 4. To understand the various genetical disorders. 5. To acquire knowledge regarding of biotic and abiotic factor. 6. To learn various ecological concepts such as ecosystem, food web, food chain pyramides and ecotypes.		
		V	Zoology	1. To familiarize the students with physiological activities (respiratory, circulatory, problems and remedial. 2. To understand the structure, composition and functions of muscles. 3. To acquire broad and		

				deep understanding of nerve physiology and chemical co-ordination in our body. 4. To develop deeper knowledge of homeostasis and conservative regulation as well as reproductive physiology. 5. To examine beneficial insects, harmful insects and ist economic importance in agricultural zoology. 6. To describe freshwater, marine fisheries, monoculture, polyculture, techniques in induced breeding as well as scope, importance and present status of aquaculture in India.		
		VI	Zoology	1. To provide intensive and in-depth knowledge of basic unit of life at molecular level i. e. DNA, RNA, and it's types and functions. 2. To demonstrate the process/ mechanism of DNA replication, concept of genes and it's brief study. 3. To analyze the process of transcription, translation		

				and gene regulation. 4. To understand the concept of mutation, different/various types of mutations and it's significance. 5. To introduce the new developments and techniques in molecular biology and it's implications in human welfare. 6. To distinguish innate immunity and acquired immunity, it's importance and to acquire the knowledge of ELIZA technique.		
		I	Physics	1. To gain the basic knowledge about gravity of earth and to visualize planetary motion in universe. 2. To understand mechanical properties of rigid body and its application in daily life. 3. To learn the fundamentals of harmonic oscillator model including damped and forced oscillator. 4. To acquire the knowledge of simple harmonic motion same frequency by using phenomenon of interference and	1. To understand, adapted, create a learning environment and realize to students for core basicfundamental knowledge of major topics of physics. 2. To illustrate the competence in communication skills to students for communicating physicsphenomenon, laws, basic principles, statement, theorem and application oriented problemsolving numerical. 3. 3To apply the Knowledge of ways and methods to design and conduct an experimentdemonstrating various perspectives of conceptual physics for students. 4. To realize an impacts of physics and science on overall development of the society andapplies the conceptual understanding of the physics to general real world situations for student.	

				superposition through geometrical construction using Lissagous figures. 5. To learn the various mechanical parameters and phenomenon of elasticity and to solve the numerical. 6. To gain daily routine application through fluid dynamics by using various phenomenon Bernoulli's poiseulles.		
		II	Physics	1. To gain the basic knowledge about gravity of earth and to visualize planetary motion in universe. 2. To understand mechanical properties of rigid body and its application in daily life. 3. To learn the fundamentals of harmonic oscillator model including damped and forced oscillator. 4. To acquire the knowledge of simple harmonic motion same frequency by using phenomenon of interference and superposition through geometrical construction using Lissagous figures. 5. To learn the various mechanical parameters		

				and phenomenon of elasticity and to solve the numerical. 6. To gain daily routine application through fluid dynamics by using various phenomenon Bernoulli's poiseulles.		
		III	Physics	1. To solve the mathematical methods Physicists often used including differential calculus, operators and integral calculus. 2. To learn Maxwell equations and wave equations satisfied by electric and magnetic field. 3. To understand the electrical conductivity in semiconductor materials and its electrical behavior. 4. To acquire the knowledge of semiconductor device which is act as a back - bone of electronic device. 5. To understand the concept any motion of an object can achieve the speed of light then possible event such as length is relative, time is relative, mass is relative.		

				6. To learn basic fundamental of atmosphere and its natural phenomenon and event.		
		IV	Physics	1. To understand the basic fundamental of optics and superposition of two waves. 2. To learn the concept of bending of light. 3. To understand the vertical constraint on electromagnetic wave of radiation. 4. To acquire the information of single color wavelength monochromatic wave of Light. 5. To learn the communication through fiber optics. 6. To the understand the freely available source of energy.		
		V	Physics	1. To understand the basic fundamental of optics and superposition of two waves 2. To learn the concept of bending of light. 3. To understand the vertical constraint on electromagnetic wave of radiation. 4. To acquire the		

				information of single color wavelength monochromatic wave of Light. 5. To learn the communication through fiber optics. 6. To the understand the freely available source of energy.		
		VI	Physics	1. To understand microstates and macro states of matter and to get the idea about Maxwell Boltzmann statics. 2. To familiar about statically distribution and have a basic ideas about Bose Einstein and Fermi Dirac distribution and their application. 3. To understand the crystal structure and clear understanding about X-ray diffraction and defects in crystal. 4. To understand the Electrical properties of material and band structure 5. To study the Magnetic properties of material. 6. To acquire the knowledge of superconductivity and nanotechnology and its application in modern		

				world.		
		I	Computer Science	1. To understand fundamental information in introduction to computer with the help of neat well diagram. 2. To understand the principal functions of operating systems, file handling, file attributes with net andlabeled diagram. 3. To apply the knowledge of data communications refers to transmission of digital data between two ormore computers through computer network. 4. To illustrate the concept of aspect of C programming with the help of neat and well labeling diagram. 5. To understand the constant and variables in C programming. 6. To understand the concept of processing input and output Course.	1. To understand standard techniques for solving the problem on computer including programing techniques and techniques for the representation of information. 2. To understand how information technology affects society, business and the individual, both from technical and from an ethical and legal point of view. 3. To demonstrate the understanding of basic principles and working of hardware and software aspects of computer system. 4. To design and develop computer programs in the areas related to algorithm, networking, cloud computing, web designing and data analytics of varying complexity.	
		II	Computer Science	1. To understand the concept of data structure. 2. To apply the knowledge linked list & its implementation. 3. To apply the knowledge		

				of basics trees, traversing and techniques. 4. To understand the aspects of various functions and arrays. 5. To illustrate the concept of various string handling and pointers. 6. To understand the concept of structure and processing input and output.		
		III	Computer Science	1. To understand the various the data structure and design. 2. To apply the knowledge of introduction to queues and linked list. 3. To apply the knowledge of basics trees, sorting and searching interact with data structure. 4. To understand the aspects of object oriented programming in C++ 5. To illustrate the concept of various functions in C++. 6. To apply the knowledge of operator overloading and Inheritance in C++.		
		IV	Computer Science	1. To understand the fundamental of DBMS. 2. To apply the knowledge of introduction to relational model.		

				3. To apply the knowledge of basics introduction to SQL. 4. To understand the basics of various functions. 5. To illustrate the concept of PL/SQL, Cursor & Triggers. 6. To apply the knowledge of transaction & securities of database.		
		V	Computer Science	1. To understand the various .Net framework. 2. To apply the concept of even driven programming. 3. To apply the knowledge of basics decisions and loops refers to decision making standard and executethe series of statements. 4. To understand the aspects of java programming fundamental 5. To illustrate the concept of classes and inheritances in Java programming. 6. To apply the knowledge of Java is a true object oriented language.		
		VI	Computer Science	1. To understand the exception handling and multithreading. 2. To apply the concept of		

				applet in advanced java. 3. To apply the knowledge of event handling and AWT. 4. To understand the aspects of windows applications: forms. 5. To illustrate the concept of object oriented programming: classes and objects. 6. To apply the knowledge of data access with ADO.net.		