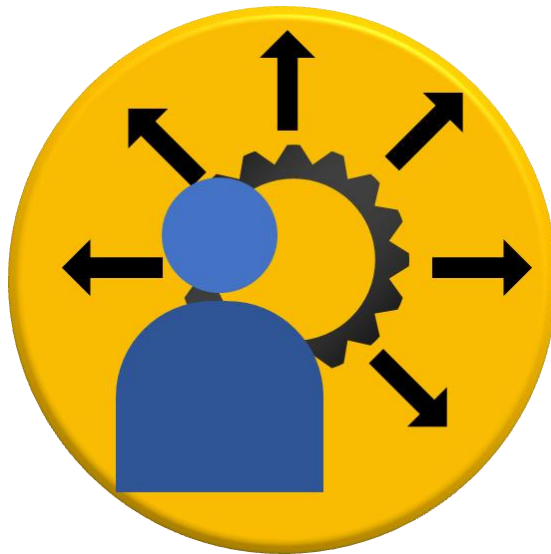


GOVERNMENT DEGREE COLLEGE SHADNAGAR

Ranga Reddy – Dist



Program Outcomes & Course Outcome

Department of Chemistry

S.NO	COURSECODE/ COURSE TITLE	CHEMISTRY COURSE OUTCOME
1	SEMESTER I PAPER – I COURSE CODE BS106	<p>On completion of this course, the students will be able to:</p> <p>S1-CO1: Students will learn the basic knowledge of s,p groups of Periodic table and able to differentiate between polar and non polar covalent bonding. Identify each atom in a polar bond as having a partial negative charge or a partial positive charge. Compare the relative polarity of two or more polar bonds.</p> <p>S1-CO2: Recall the structures, the properties, applications, and the chemical reactivity of the s & p block elements. Differentiate the different allotropes of the s & p block elements. Derive the structure of compounds of the s & p block elements.</p> <p>S1-CO3: Students will learn the basic knowledge of bond polarization acidity & basicity & stability of reactive intermediate of different hydrocarbons can be determined.</p> <p>S1-CO4: Understand physical & chemical reaction of aliphatic hydrocarbon and aromatic hydrocarbon and the aromaticity of aromatic compounds can predict by Huckel's rule.</p> <p>S1-CO5: From this portion students can acquire background knowledge about the Synthesis and chemical reactivity of alkanes, Mechanism of free-radical halogenation of alkanes, alkene and alkyne.</p> <p>S1-CO6: Students will understand the terminology Black body radiation, heat capacities of solids, Rayleigh Jeans's law, Planck's radiation law, photoelectric effect, Limitations of classical mechanics, Compton Effect, de Broglie's hypothesis.</p> <p>S1-CO7: Students will acquire Knowledge about van der Waal's equation and critical state. Derivation of relationship</p>

		<p>between critical constants and van der Waal's constants.</p> <p>S1-CO8: Understands how to determine viscosity using Ostwald viscometer and acquire knowledge about Azetrope mixtures.</p> <p>S1-CO9: By considering principles of solubility product & common ion effect cation can be discriminated by anions in a salt mixture.</p> <p>S1-CO10: From this portion students can acquire thorough background knowledge about the qualitative analysis of special elements.</p> <p>S1-CO11: Classify stereoisomer's based on symmetry criteria and energy criteria. S1CO10: Interpret E/ Z Configuration.</p> <p>S1 CO12: Predict the Conformations of simple organic molecules.</p> <p>S1 CO13: Learn about determination of Bragg's equation in various crystal structures & by qualitative analysis one can determine the weight of chemical substance.</p>
2	<p>SEMESTER II-PAPER - 2</p> <p>COURSE CODE: BS206</p>	<p>On completion of this course, the students will be able to:</p> <p>S2-CO1: To understand the physical and chemical properties of oxides Oxy- acids of p elements.</p> <p>S2-CO2: Defines Structure, bonding and reactivity of Xenon – Oxides, Halides and Oxy-halides and Acquire knowledge about clatherate compounds.</p> <p>S2-CO3: Explore the methods of preparation and properties of halogen compound and one can express the stereochemistry of SN1 &SN2 reactions.</p> <p>S2-CO4: Explore the methods of preparation and properties of alcohols, ethers and carbonyl compounds and current applications.</p> <p>S2-CO5: From this portion students can acquire thorough knowledge about the synthesis of carbonyl compounds and their reactivity.</p> <p>S2-CO6: Acquire knowledge on Hittof's method, Kholrausch</p>

		<p>law, Arrhenius theory, Ostwald dilution law, DebyeHuckle Onsager equation and predicts its applications. Accomplish the Nernst Equation, EMF of a cell, Single electrode potential, Standard hydrogen electrode, and electrochemical series.</p> <p>S2-CO7: Understand the basic principle of titrations and indicators used for different types of titrations</p> <p>S2-CO8: Classify stereoisomer's based on symmetry criteria and energy criteria. Interpret Rand S configuration, D/L Nomenclature.</p> <p>S2-CO9: From this portion students can acquire knowledge about the EMF and Colligative properties of solution.</p>
3	<p>SEMESTER III PAPER – III</p> <p>COURSE CODE: BS306</p>	<p>On completion of this course, the students will be able to:</p> <p>S3 CO1: From this portion students can acquire knowledge on properties of f-block elements and non-aqueous solvents</p> <p>S3CO2: Learn about the postulates and limitations of Werners theory, Sidwick's and VBT theory. Acquire knowledge on the IUPAC Nomenclature and solve the EAN of coordination compounds.</p> <p>S3CO3: Learn to Categorise the Organometallic compounds of Li Mg Al and Metal carbonyls. Discuss its applications.</p> <p>S3CO4: Understand the preparation methods and its synthetic applications in industry of carboxylic acids and carbanions.</p> <p>S3CO5: .Have an idea on all named reactions and mechanisms of carboxylic acids and nitro hydro compounds and focus on its industrial applications.</p> <p>S3CO6: Have an extensive knowledge on Thermodynamics with reference to different Thermodynamic functions, processes, work of expansion and laws of Thermodynamics</p> <p>S3CO7: Understand the applications of Thermodynamics in basic sciences for deriving equations, in engineering science for calculating efficiency of machine and evaluation of spontaneity of process. Learn to derive the equation of</p>

		<p>spontaneity, Gibb's equation and Maxwell's relations.</p> <p>S3CO8: Students learn about the mathematical data, accuracy, precision & error can be explained.</p> <p>S3CO9: Design the Phase equilibria of one component and two component system, ,compound with congruent and incongruent melting point.</p>
4	<p>SEMESTER IV PAPER – IV</p> <p>COURSE CODE: BS406</p>	<p>On completion of this course, the students will be able to:</p> <p>S4CO1: Understand the theories of coordination compounds and stability of metal complexes.</p> <p>S4CO2: Know about the Biological significance of essential elements and toxicity of heavy metals</p> <p>S4CO3: Compare the property and reactivity of different class of amines and design the synthesis pathway of different organic compounds using amines</p> <p>S4CO4: Classify heterocyclic compounds and compare their aromatic character amd reactivity</p> <p>S4CO5: Develop concept on reaction kinetics with special reference to factors influencing the rate and evaluate the merits of different theories of reaction rate.</p> <p>S4CO6: Learn to analyze the consequences of light absorpion with reference to various photo physical processes and photochemical reactions with normal and abnormal quantum yield.</p> <p>S4CO7: Students will learn the Theory of Quantitative Analysis.</p>
5	<p>SEMESTER V PAPER – V</p> <p>COURSE CODE: BS506</p> <p>DISCIPLINE SPECIFIC ELECTIVE-A</p> <p>SPECTROSCOPY &</p>	<p>On completion of this course, the students will be able to:</p> <p>S5CO1: Know about electromagnetic radiation and understand the interaction of electromagnetic radiation with molecules - various types of molecular spectra</p> <p>S5CO2: identify the usage of different spectroscopic methods to find the structures, molecular formula, proton nature, Functional group Identification, Unsaturated system,</p>

	CHROMATOGRAPHY	<p>Molecular Weight, Determination of Bond Length.</p> <p>S5CO3:To understand the principle of NMR spectroscopy and interpretation of spectrum CO5: Acquire the knowledge of mass spectrometry for the analysis of given sample</p> <p>S5CO4: Gain the knowledge of principle and methods of solvent extractions</p> <p>S5CO5: Understand the classification of methods of chromatographic techniques, nature of adsorbents and solvent systems</p> <p>S5CO6: Analyse the given compounds.</p>
6	<p>SEMESTER VI PAPER -VI</p> <p>COURSE CODE: BS606</p>	<p>On completion of this course, the students will be able to:</p> <p>S6CO1: Students will learn about the concepts of inorganic reaction mechanisms</p> <p>S6CO2: Understand the structures of Boranes and Carboranes</p> <p>S6CO3: Students Classify stereoisomer's based on symmetry criteria and energy criteria.</p> <p>S6CO4: Understand the pericyclic reactions</p> <p>S6CO5: Understand the Importance of polymers</p> <p>S6CO6: Know about the types of Electroanalytical methods.</p> <p>S6CO7: Analyze the principles, types of electrodes used and applications of Potentiometry, Voltametry and Conductometry.</p>
7	<p>SEMESTER VI PAPER -VI</p> <p>COURSE CODE: BS606</p> <p>DISCIPLINE SPECIFIC ELECTIVE-A</p> <p>MEDICINAL</p>	<p>On completion of this course, the students will be able to:</p> <p>S6 CO1: Recalling Infective and hereditary diseases.</p> <p>S6CO2: Know about the terminology in medicinal chemistry and Nomenclature of Drugs.</p> <p>S6CO3: Understand ADME of Drugs.</p> <p>S6CO4: Acquire the knowledge of mechanism of action of drugs and factors effecting action of Enzyme and Receptors.</p>

	CHEMISTRY	<p>S6CO5: Evaluate the Synthesis and therapeutic activity of Drugs related to Chemotherapeutics, acting on metabolic disorders and acting on nervous system.</p> <p>S6CO6: Analyzing the function of molecular messengers and health promoting drugs</p>
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Department of Mathematics

Program Outcomes and Programme Specific Outcomes

Sl. NO	Program	Program Outcomes	Program Specific Outcomes
1	B.Sc (M.P.C and M.PCs)	<ul style="list-style-type: none"> • Acquired the knowledge with facts and figures related to various subjects in pure sciences such as Physics, Chemistry, Mathematics, ComputerScience etc. • Understood the basic concepts, fundamental principles, and the scientific theories related to various scientific phenomena and their relevancies in the day-to-day life. • Analyzed the given scientific data critically and systematically and the ability to draw the objective conclusions. 	<ul style="list-style-type: none"> • Understand the theoretical concepts of physical and chemical properties of materials and the role of mathematics in dealing with them in a quantitative way. • Mathematical, numerical techniques required to model them. • Understand the concepts of vector spaces, group theory, probability, distributions, sampling techniques, algorithm design, data base design and web design

Department of Mathematics: Course Outcomes

Sl. No	Semester	Course	Credits	Course Outcomes
1	I	Differential Calculus.	5	<ul style="list-style-type: none"> ➤ To know how to calculate first order and second order partial derivatives of several variable functions. ➤ To know how to apply Euler's Theorems on Homogeneous functions, Total Differentials. ➤ To know how to apply Taylor's Theorem for several variable functions. ➤ To find solutions for Maxima and Minima of

				<p>function of several variable functions.</p> <ul style="list-style-type: none"> ➤ To know the definition of Curvature, to know the calculation of Radius of Curvature, Center of Curvature, Chord of Curvature and properties of Evolutes, Involves. ➤ To find solutions of lengths of curves, volume obtained by revolving about either axis or any line and Surface area.
2	II	Differential Equations	5	<ul style="list-style-type: none"> ➤ To know how to solve a first order and first degree differential equations by variable separable method, homogenous method, non - homogenous method and Exact Differential Equations. ➤ Able to find solutions to Change of Variable, Total Differential Equations. ➤ To find solutions to first order but not first degree differential equations solvable by p - Equations, solvable by X - Equations, solvable by Y - Equations and Clairaut's Equations. ➤ To know how to solve a Higher Order Differential Equations. ➤ To find solutions to Homogenous Linear Differenal Equations with Constant Coefficient which is in the form of $P(D)y = Q(x)$ where $Q(x) = e^{ax}, \sin bx, \cos bx, x^k, e^{ax} V$ and $x V$. ➤ Able to find solutions of Linear Differenal Equations with Undetermined Coefficients and Cauchy - Euler Equations. ➤ To find solutions to Variation of Parameters.
3	III	Real Analysis	5	<ul style="list-style-type: none"> ➤ To know about definitions of Sequence, limit of a Sequence, Convergence, Divergence properties and theorems. To know the definition of Monotonic Sequence, Bolzano's - Weirstrass theorem and the definition of Cauchy Sequence, theorems on it. ➤ To know the definition of Infinite Series, Convergence, Divergence of Infinite series

				<p>and various test like Root test, Ratio test, Comparison test. To know the definition of Absolute Convergence and various properties.</p> <ul style="list-style-type: none"> ➤ To know the definition of Continuity, properties of continuous functions on a closed interval and definition of uniform continuity, theorems. ➤ To know the definition of Derivative, Mean Value theorems, L'Hospital rule, Taylor's Theorem, Problems and Properties. ➤ To know the definition of Riemann Sums, Riemann Integral, theorems and properties.
4	IV	Abstract Algebra	5	<ul style="list-style-type: none"> ➤ To know about Definition and Elementary properties of Groups, Finite Groups and Composition Tables. Subgroups definitions and Theorems on it. ➤ To know about Cosets Definition, Theorems and it's applications. Definition of Normal Subgroups, theorems. Quotient Group definition, theorems and it's properties. ➤ To know about Homomorphism and Isomorphism on Groups, various theorems and properties. ➤ To know about Permutations, Cyclic Permutation, Even and Odd Permutations. Cayley's Theorems. ➤ To know about Cyclic Groups definition and theorems. ➤ To know about Ring, Integral Domains and Fields, Characteristic of a ring definition, theorems and properties. ➤ To know about Subring, Ideals, Quotient Ring definition, theorems and properties. ➤ To know about Homomorphism of Ring, Maximal Ideals and Prime Ideals definition and theorems.
5	V	Linear Algebra	5	<ul style="list-style-type: none"> ➤ To know the definition of Vector Space, Subspace, Null Space, Column Space. Theorems and Problems on it.

				<ul style="list-style-type: none"> ➤ To know the definition of Linear Transformations, Linearly Independent Sets; Bases, Coordinate Systems, The Dimension of a Vector Space. Theorems and Problems on it. ➤ To know how to calculate Rank of the Matrix, Change of Basis. ➤ To find Eigen values, Eigenvectors, Characteristic Equation of given Matrix. ➤ To know Definition of Diagonalization of a Matrix, Problems on it. To know the properties of Linear Transformations, Complex Eigen values. ➤ To know the definition of Inner Product, Length of a Vector, and Orthogonality, Orthogonal Sets – Orthogonal Projections. ➤ To know how to apply The Gram – Schmidt Process.
6	VI	Integral Transforms	5	<ul style="list-style-type: none"> ➤ To know the definition of Laplace Transform, L.T on elementary functions, shifting theorems, change of scale property, theorems on various conditions and problems ➤ To know the definition of Inverse Laplace Transform, theorems and properties. ➤ To know the Convolution theorem, Heaviside's theorem and various type problems. ➤ To know how to apply Laplace Transform to find solutions of various types differential equations. ➤ To know the definition of Fourier Transform and to know how to apply Fourier Transform to calculate solutions of various types functions.

Department of Physics

Programme Specific Outcomes and Course Outcomes of Physics

PROGRAMME SPECIFIC OUTCOMES

PROGRAMME	SUBJECT	PROGRAMME SPECIFIC OUTCOMES
B.Sc. MPC & MPCS	PHYSICS	<ol style="list-style-type: none">1. Students will demonstrate proficiency in mathematical concepts needed for proper understanding of Physics.2. Students will acquire knowledge of Classical Mechanics, Electromagnetism, Modern Physics, Optics, Thermodynamics and Basic Electronics and to be able to apply this knowledge to analyze a variety of physical phenomena.3. Students will demonstrate their laboratory skills, enabling them to take measurements in physics lab and analyze the measurements to draw valid conclusions.4. Students will be capable of oral and written scientific communication and will prove that they can think critically and work independently.5. Developing their scientific intuition, ability and techniques to tackle problems either theoretical or experimental in nature.

COURSE OUTCOMES OF PHYSICS

S.NO	SEMESTER	COURSE	CREDITS	COURSE OUTCOMES
1.	I	MECHANICS AND OSCILLATIONS	5	<ol style="list-style-type: none">1. Students will attain a common level in basic mechanics and oscillations and laid a secure foundation in mathematics for their future courses.2. To analyze vector algebra to solve mathematical problems related with different areas of physics.3. Able to solve the equations of motion for any mechanical system like variable mass system, rigid bodies.4. Understand the application of central force to the stability of circular orbits, Kepler's Laws of planetary motion.5. Develop understanding of Special theory of relativity and its applications to various inertial non- inertial frames.6. Apply the laws of simple harmonic motion of various oscillating systems like Simple harmonic oscillator, Damped harmonic oscillator and Forced oscillator.7. Laboratory CO: Develop their experimental and data analysis skills through a wide range of experiments in the practical laboratories.

S.NO	SEMESTER	COURSE	CREDITS	COURSE OUTCOMES
2.	II	THERMAL PHYSICS	5	<ol style="list-style-type: none"> 1. To understand the fundamental ideas and methods applicable to all systems in thermo dynamical equilibrium. 2. Understand the Thermodynamic Potentials and Maxwell Relations and apply them to thermo dynamical problems. 3. To acquire knowledge of Low Temperature Physics and its applications in different methods of liquefaction of Hydrogen and Helium, Refrigeration. 4. Understanding different Ensembles, concept of phase space, classical and quantum statistics, Maxwell-Boltzmann velocity distribution law, Bose- Einstein statistics and Fermi-Dirac statistics. 5. To study quantum theory of black body radiations and various laws, Wien's law, Rayleigh-Jeans law, Planck's law. Methods of measurement of radiation using Pyrometers and Pyroheliometers. 6. Laboratory CO: The ability to formulate, conduct, analyze and interprets experiments related to thermal physics.

S.NO	SEMESTER	COURSE	CREDITS	COURSE OUTCOMES
3.	III	ELECTROMAGNETIC THEORY	5	<ol style="list-style-type: none"> 1. To acquire knowledge all areas of Electromagnetism including Electrostatics, Magneto statics, Electromagnetic Induction and Electromagnetic waves. 2. Able to apply Gauss's law to different electric surfaces and relation between Electric field intensity and Electric Potential. 3. Students get an idea about how to apply Biot-Savart law and Ampere's circuital law to different electromagnetic fields. 4. To study Faraday's laws of electromagnetic Induction, difference between Self Induction and Mutual Induction. 5. Analyze Maxwell's Equations in Integral and differential form and basic plane wave phenomenon such as Reflection, Transmission and Absorption characteristics at interfaces in different medias. 6. Able to apply Network Theorems to a wide range

				<p>of electric circuits.</p> <p>7. Acquire knowledge of growth and decay of currents in LR, CR circuits and LCR series and parallel resonant circuits, AC and DC motors.</p> <p>8. Laboratory CO: Students get confidence in working with different electric circuits and Verify Network Theorems like Thevenin's , Norton's, Superposition, Maximum power transfer Theorems.</p>
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S.NO	SEMESTER	COURSE	CREDITS	COURSE OUTCOMES
4.	IV	WAVES AND OPTICS	5	<ol style="list-style-type: none"> 1. To understand transverse wave propagation along stretched strings and it's wave equation, Study of longitudinal wave propagation in Bars under different boundary condition. 2. Study of Interference by Division of wave front and Division of amplitude, application of principles of interference to light reflected by thin films and wedge shaped films. 3. Application of the principles of Fraunhofer Diffraction to waves that pass through a single, double slit and diffraction grating- Fresnel Diffraction through zone plates. 4. To study different methods of polarization by reflection, refraction,

				<p>double refraction and selective absorption using Polarizer and Analyzer.</p> <p>5. Laboratory CO: Understanding different optical phenomena like Reflection, Refraction, Interference, Diffraction and Polarization by performing experiments.</p>
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S.NO	SEMESTER	COURSE	CREDITS	COURSE OUTCOMES
5.	V	MODERN PHYSICS	5	<ol style="list-style-type: none"> 1. To understand Atomic and Molecular Spectroscopy and to briefly discuss about Emission and Absorption spectrum, selection and intensity rules, L-S and J-J Coupling Schemes, Zeeman, Stark, Paschen -Back effects. 2. Understanding Inadequacy of classical physics which lead to Quantum mechanics, which covers topics like Dual nature of matter, matter waves, Uncertainty principle, Schrodinger Time independent and Time dependent wave equations. 3. To study Nuclear physics and to briefly understand disintegration law, nuclear structure, nuclear models, Alpha and Beta Decay and particle Detectors. 4. To understand basic crystal structures (SC, BCC, FCC, CsCl, NaCl, Diamond and Zinc Blend)crystallography, X-Ray Diffraction and Bonding in crystals

				<p>5. Laboratory CO: Students get hand on experience of performing experiments of modern physics like Measurement of Planck constant, verification of inverse square law, Energy gap of semiconductor, Photo-cell, G-M Counter.</p>
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S.NO	SEMESTER	COURSE	CREDITS	COURSE OUTCOMES
6.	VI	ELECTRONICS	5	<ol style="list-style-type: none"> 1. Students acquire knowledge of band theory of solids, difference of intrinsic and extrinsic semiconductors , N-type , P-type semiconductors, P-N Junction diode, Zener diode, half-wave and full wave and bridge rectifier. 2. Get an idea of bipolar junction transistor(CB,CE, CC configuration), RC coupled amplifier, concepts of Feedback and Oscillators. 3. Study of construction and characteristics of special devices like Photo diode, Shockley diode, Solar cell, Opto couplers, FET, UJT, SCR. 4. Understanding the basics of Digital Electronics, Inter

				<p>conversion of Binary, Decimal and Hexadecimal number systems. Realization of Logic Gates using discrete components.</p> <p>5. Laboratory CO: Students get practical experience of simple electronic circuits, Diodes, Logic Gates, verification of Demorgan Laws</p>
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Department of Botany

Course Outcome Programme and Specific Outcome

Program Outcome:

- ✓ They understand the nature and role of micro organisms like bacteria and viruses their uses directly and indirectly.
- ✓ They understand the role of plants in the functioning of a healthy global ecosystem.
- ✓ They gain scientific knowledge in life science and fundamental metabolism of plants.
- ✓ They will be able to identify the taxonomic position plants in their surrounding environment, and also understand the ecological adaptations of the plants.
- ✓ They will be able to apply reasoning informed by the text knowledge to assess plant diversity, its importance for society and environmental issues and the consequent responsibilities relevant to the biodiversity conservation practice.

Botany Course Outcome:

S. No.	Semester	Course	Credits	Course Outcomes
1.	I	Microbial Diversity of Lower Plants	5	<ul style="list-style-type: none">➤ Understand the morphology and staining techniques of bacteria➤ Gain the knowledge about plant diseases caused by bacteria and viruses.➤ Understand the morphological diversity of the lower plants which include algae, fungi, lichens Bryophyta and Pteridophyta.➤ It also imparts knowledge about biofertilizers, Stellar evolution, Heterospory and seed habit.
2.	II	Gymnosperms, Taxonomy of Angiosperms and Ecology	5	<ul style="list-style-type: none">➤ Understand the general characters of Gymnosperms and gain knowledge about the morphological and anatomical features of Pinus and Gnetum.➤ Understand the Geological time scale and Paleobotany.➤ Understand the Principles of plant classification➤ Knowledge about Bentham & Hooker and

				<p>Engler & Prantlsystems of plant classifications.</p> <ul style="list-style-type: none"> ➤ Understand ICN, Schenzen code and Herbarium techniques. ➤ Learn about the characters of biologically important families of angiosperms. ➤ Know the floral variations in angiospermic families, their phylogeny and evolution. ➤ This course provides the skills needed to recognise and characterize several plants. ➤ The students are made to understand different types of plant classifications and principles involved in nomenclature. ➤ They are also made to understand the role of anatomy, embryology, cytology in solving taxonomic and phylogenetic problems. ➤ Understand the concept of Ecosystem & its components, Plant adaptations and plant successions.
3.	III	Plant Anatomy and Embryology	5	<ul style="list-style-type: none"> ➤ Know various types of plant tissues, Internal structure of dicot and monocot stem. ➤ Understand the normal and anomalous secondary growth found in specific stems and root. ➤ Gain knowledge about the wood structure in some plants like teak, rosewood, neem etc. ➤ Know the structure and morphology of anther, microsporogenesis. ➤ Understand the development of male gametophyte and female gametophyte. ➤ Know the different mechanisms of pollination and fertilization in flowering plants. ➤ Know the structure appendages and dispersal mechanisms in seeds ➤ Understand the development and types of endosperm and embryo. ➤ Gain knowledge about Polyembryony and Apomixis. ➤ These studies have been designed to impart an insight into the internal structures and also the embryological features of the highly

				evolved plants i.e. the angiosperms.
4.	IV	Cell Biology, Genetics and Plant Physiology	5	<ul style="list-style-type: none"> ➤ Gain knowledge about plant cell envelopes, cell organelles, nucleus, chromosomes-structure and types of DNA & RNA ➤ Understand the mechanism of cell division-mitosis and meiosis. ➤ Gain knowledge about Mendel's laws of inheritance, Incomplete dominance and co-dominance. ➤ Understand the concepts Linkage and crossing over, Variation in number and structure of Gene mutations. ➤ Understand the growth and developmental processes in plants. ➤ Know about Photosynthesis and Respiration in plants. ➤ Understand the process of translocation of solutes in plants ➤ Know the nitrogen metabolism and its importance. ➤ Gain knowledge about plant-water relations, mineral nutrition, transpiration, enzymes. ➤ Understand the role of phytohormones.
5.	V	Biodiversity and Conservation	5	<ul style="list-style-type: none"> ➤ Know about the Plant diversity and its scope-Genetic diversity, species and agro diversity ➤ Gain knowledge about values and uses of biodiversity. ➤ Understand the loss of biodiversity, Gain knowledge about organizations associated with biodiversity, biodiversity legislation and conservation. ➤ Learns the need to conserve biodiversity and Principles of conservation. ➤ Understand the role of plants in relation to human welfare. ➤ Learn about the alcoholic beverages through ages, important fruit crops and their commercial importance.
6.	VI	Plant Molecular	5	<ul style="list-style-type: none"> ➤ Learn the structural levels of Nucleic acids, structure types of DNA, mitochondrial and

		Biology		<p>chloroplast DNA.</p> <ul style="list-style-type: none">➤ Structure of RNA and its types.➤ Learn about Nucleosome, chromatin structure.➤ Gain knowledge about molecular events in replication of DNA,➤ Understand the overview of central dogma of life and genetic code.➤ Understand the mechanism of transcription, split gene concept of introns and exons.➤ Learn about eukaryotic mRNA processing.➤ Understand the molecular events of Translation in prokaryotes leading to protein synthesis.➤ Learn about transcriptional regulation in prokaryotes.
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Department of Zoology

Programme Outcome of Zoology

Students will be able to demonstrate **in-depth knowledge and understanding** about the fundamental **Concepts, Principles and Processes** in the field of Zoology and its subfields (animal diversity, ecology, comparative anatomy and developmental biology of vertebrates, physiology and biochemistry, genetics and evolutionary biology, animal biotechnology, applied zoology, aquatic biology, immunology, reproductive biology and insects, vectors and diseases etc.,).

1. Demonstrate **procedural knowledge** that creates different types of **Professionals** in Zoology and allied fields (apiculture, aquarium fish keeping, medical diagnostics and sericulture etc.,).
2. Exhibit the **Skills** related to specialization areas (Entomology, Environmental Biology etc.,) in Zoology, its subfields and interdisciplinary subfields like Chemistry, Physics and Mathematics.
3. **Appreciate the complexity of life processes**, their molecular, cellular and physiological processes, their genetics, evolution, behaviour and their interrelationships with the environment.
4. **Design and conduct experiments** to test a hypothesis.
5. **Understand and interpret data** to reach a conclusion.
6. **Accept the Legal restrictions and Ethical considerations** placed for animal welfare.
7. Demonstrate **subject-related and transferable skills** (communication, problem-solving etc.,) that are relevant to Zoology-related job trades and employment opportunities.

Programme Specific Outcomes (PSOs) (Intellectual and Practical Skills):

The students will be able to:

1. Understand how animals are identified, assigned scientific names and classified.
2. Use appropriate information with a critical understanding.

3. Learn basic laboratory and analytical skills.
4. Use effective methods for modifying animal behaviour.
5. Participate in animal management programmes in an effective manner.
6. Work safely and effectively in the field, in laboratories and in animal facilities.
7. Demonstrate competence in handling and statistical analysis of data gained from experiments.
8. Learn communication and IT skills, including the collation, graphical representation of data, citing and referencing work appropriately, communicating using a range of formats.

Course Outcomes (COs):

The student will attain subject knowledge in terms of individual course as well as holistically:

1. By pursuing **Core Courses**, students will be able to demonstrate Core Competency (in-depth subject knowledge), Critical thinking, Analytical reasoning, Research skills and Team work.
2. By opting **Discipline Specific Elective Courses**, students will be able to acquire Additional academic knowledge about applied aspects of the programme in both academia and industry, Problem-solving, Additional analytical skills and Additional Research skills.
3. By choosing **Generic Elective Courses**, students will be able to get exposure beyond discipline along with integration among various interdisciplinary courses.
4. By studying **Ability Enhancement Compulsory Courses**, students will be able to apply Psychological skills in addition to Additional academic knowledge, Problem-solving.
5. By learning **Skill Enhancement Courses**, students will be equipped with Digital literacy, sensitized about Moral and ethical awareness, apart from Additional knowledge enhancement, Analytical reasoning etc.
6. Students graduated with this type of curriculum would be able to **disseminate subject knowledge** along with necessary **skills** to suffice their capabilities for **Academia, Entrepreneurship and Industry**.

Course Outcomes of B.Sc (BZC - Zoology)

Programme Code: 445

Semester – I

Z1: Animal Diversity – Invertebrates (Course Code: 116)

- CO 1: Gain knowledge about the general characters and classification of Major Phyla (Protozoa, Porifera, Cnidaria, Platyhelminthes, Nemathelminthes, Annelida, Arthropoda, Mollusca and Echinodermata).
- CO 2: Understand in detail the specific characters of a representative of each phylum i.e. Type study of Elphidium, Sycon, Obelia, Schistosoma, Dracunculus, Hirudinaria granulosa, Palaemon, Pila, Asterias.
- CO 3: Appreciate the unique features of each phylum viz., Locomotion and Reproduction in Protozoa, Canal system in sponges and Spicules, Polymorphism in Siphonophora, Corals and coral reef formation, Parasitic adaptations in Helminthes, Crustacean larvae, Insect metamorphosis, Torsion and detorsion in gastropods, Water vascular system in star fish.
- CO 4: Understand and apply the knowledge of various diseases (Viz., Amoebiasis, Giardiasis, Leishmaniasis, Malaria, Filariasis, Dracunculiasis, Schistosomiasis, Fasciolosis etc.) for prevention, diagnosis and treatment purposes.
- CO 5: Acquire knowledge about economically important animal by products such as Corals and coral reef formation, pearl formation etc.
- CO 6: Understand the Evolutionary significance of Coelome, Coelomoducts and Metamerism, Echinoderm larvae and their significance etc.
- CO 7: Understand various invertebrates through practical study of museum slides, specimens, models.
- CO 8: Students will be able to prepare an “Animal album” and observe virtual dissections through computer aided techniques.

Semester – II

Z2: Animal Diversity – Vertebrates (Course Code: 216)

- CO 1: Gain knowledge about the general characters and classification of Phylum Chordata and various Vertebrate groups such as Hemichordata, Urochordata, Cephalochordata, Cyclostomata, Pisces, Amphibia, Reptilia, Aves, Mammalia.

- CO 2: Understand in detail the specific characters of a representative of each subphyla/class i.e. Type study of *Balanoglossus*, *Petromyzon*, *Myxine*, *Scoliodon*, *Rana tigrina*, *Calotes*, *Columba livia*, and *Oryctolagus cuniculus*.
- CO 3: Appreciate the salient and unique features of each Vertebrate group viz., Urochordata, Cephalochordata, Types of Scales and Fins in fishes; Parental care in amphibians, Neoteny and paedogenesis; Poisonous and Nonpoisonous snakes, Migration and Flight adaptations in Birds, Dentition and Aquatic adaptations in Mammals.
- CO4: Understand the Evolutionary significance of Retrogressive metamorphosis in Urochordata, Temporal fossae in reptiles.
- CO 7: Understand various vertebrates through practical study of museum slides, specimens, models.
- CO 8: Students will be able to prepare an "Animal album" and observe virtual dissections through computer aided techniques.

DEPARTMENT OF POLITICAL SCIENCE

COURSE OUTCOME/PROGRAMME OUTCOME/ PROGRAMME SPECIFIC OUTCOME:

I. COURSE OUTCOME:

1. POLITICAL THEORY

CO 1- Analyzing what is Politics and explaining the approaches to the Study of Political Science – Normative, Behavioral, Post Behavioral, Feminist.

CO 2- Assessing the theories of State (Origin, Nature, Functions): Contract, Idealist, Liberal and Neo-Liberal Theories.

CO 3- Explaining the Concept of State Sovereignty: Monistic and Pluralistic Theories. Analyzing the changing concept of Sovereignty in the context of Globalization.

CO 4- Classification of David Held's Democratic Theories.

CO 5- Understanding basic concepts of Liberty, Equality, Rights, Law and Justice.

CO 6- Assessing empirical Political Theory: System's Analysis, Structural Functionalism.

CO 7- Explaining Dialectical Materialism and Historical Materialism with special reference to relationship between base and superstructure.

CO 8- Analyzing the theory of class and class struggle.

CO 9- Describing the Marxist Approach to politics.

CO 10- Analysing Marx's concept of Freedom and Democracy: Nature, Features and Critique.

CO 11- Discussing Marx's Theory of State with special reference to Relative Autonomy of the State.

CO 12- Explaining Marxian theory of Revolution.

CO 13- Evaluating the major debates in Marxism: Lenin- Rosa Luxembourgn debate on Political party.

Contact Hours: 5.25 hrs a week

Tutorial: 9 hrs annually

2. COMPARATIVE GOVERNMENT AND POLITICS

Contact Hours: 5.25 hrs a week

Tutorial: 9 hrs annually

CO 1- Tracing the evolution of Comparative Politics as a discipline and drawing a distinction between Comparative Politics and Comparative Government.

CO 2- Investigating the nature and scope of Comparative Politics.

CO 3- Analyzing the approaches and models of comparison: systems analysis; structural functionalism; and institutional approach.

CO 4- Critically analyzing the features of a liberal democratic and socialist political system with focus on UK, USA and the People's Republic of China.

CO 5- Discussing the features of a federal system with special reference to USA and Russia.

CO 6- Conducting an intensive comparative study of the Executive (UK, USA, France and Russia); Legislature (UK, USA and the PRC); the Judiciary (UK, USA and PRC).

CO 7- Critically looking at the rights of the citizens of UK, USA and PRC from a comparative perspective

3. GOVERNMENT AND POLITICS IN INDIA

CO 1- Introducing the Indian Constitution with a focus on the role of the Constituent Assembly and examining the essence of the the Preamble.

CO 2- Examining the Fundamental Rights and Duties of Indian citizens with a study of the significance and status of Directive Principles.

CO 3- Assessing the nature of Indian Federalism with focus on Union-State Relations.

CO 4- Critically analyzing the important institutions of the Indian Union: the Executive: President; Prime Minister, Council of Ministers; Governor, Chief Minister and Council of Ministers; The legislature: Rajya Sabha, Lok Sabha, Speaker, Committee

System, State Legislature, The Judiciary: Supreme Court and the High Courts:

composition and functions- Judicial Activism

CO 5- Looking at the Constitutional Amendment Procedure with focus on the main recommendations of the Constitutional Review Commission (Venkatchalliah Commission)

CO 6- Critically evaluating the Indian Party system – its development and looking at the ideology of dominant national parties

CO 7- Evaluating the role of various forces on Indian politics: religion; language; caste; tribe; regionalism; business; working class and peasants

CO 8- Evaluating the Electoral Process in India with focus on the Election Commission: Composition, Functions and Role

CO 9- Investigating the New Social Movements since the 1970s: environmental movements, women's movement and human rights movement

Contact Hours: 5.25 hrs a week

Tutorial: 9 hrs annually

4. INTERNATIONAL RELATIONS

CO 1- Explaining scope and subject matter of International Relations as an autonomous academic discipline.

CO 2- Approaches and methods to study the discipline through Political realism, Pluralism and World system's Model.

CO 3- Examining the issues of Underdevelopment, Terrorism, Regionalism and Integration that characterizes the Post second world war order.

CO 4- Studying the role of Diplomacy, Propaganda and Military capabilities in the making of foreign policy.

CO 5- Explaining certain basic concepts like Globalization in contemporary world order.

CO 6- Describing the Cold War phases and understanding the post Cold War era.

CO 7- Discussing the developments in European Ethno-nationalism since 1990's. Tracing the growth of European Union

CO 8- Examining Indian Foreign Policy: Basic Principles, Evolution and Bilateral Relations.

CO 9- Evaluating the working of UN and its organs; Peace keeping Function and Human Rights.

CO 10-Analysing the Foreign Policy of USA and China.

CO 11-Studying the developments in third world countries in post world war II era like NAM: Relevance, ASEAN, SAFTA and SAARC, OPEC, OAU, West Asia-Palestine problem after Cold War

Contact Hours: 5.25 hrs a week

Tutorial: 9 hrs annually

5. WESTERN POLITICAL THOUGHT

CO 1- Providing an insight into the dominant features of Ancient Western Political Thought: Ancient Greek political thought with focus on Aristotle and Plato; Roman Political Thought: its contributions with special emphasis on the emergence of Roman law.

CO 2- Examining the features of Medieval Political Thought.

CO 3- Evaluating the Renaissance; political thought of Reformation; and Machiavelli.

CO 4- Critically examining Bodin's contributions to the theory of Sovereignty; Hobbes as the founder of the science of materialist politics; Locke as the founder of Liberalism with focus on his views on natural rights, property and consent; and Rousseau's views on Freedom and Democracy; Bentham's Utilitarianism; and John Stuart Mill's views on liberty and representative government.

CO 5- Taking an insight into the following: Hegel's views on Civil Society and State;
Utopian and Scientific socialism: basic characteristics.

CO 6- Examining the varieties of non-Marxist socialism: Fabianism, Syndicalism, Guild Socialism, German Revisionism.

Contact Hours: 3.75 hrs. A week

Tutorial: 12 hrs. Annually

6. INDIAN POLITICAL THOUGHT AND MOVEMENT

CO 1- Tracing the evolution of Indian political thought from ancient India to modern India.**CO 2-** Analysing the nationalist thought of Raja Rammohun Roy.

CO 3- Assessing the nationalist thought of Bankim, Vivekananda and Tagore.

CO 4- Discussing the nationalism of Gandhi, M. N. Roy, Narendra Deva and Syed Ahmed Khan.

CO 5- Explaining the formation of the Congress in 1885.

CO 6- Tracing the Bengal Partition and the Swadeshi movement.

CO 7- Analysing the Gandhian Movements such as the Khilafat, Non Cooperation, Civil Disobedience movements.

CO 8- Assessing the alternatives to the Indian National Congress- the Forward Bloc, Congress Socialist Party, Communist Parti of India.

CO 9- Describing the movements against caste and untouchability, Ambedkar's views on Social Justice and the depressed classes.

CO 10- Analysing the Working Class and Peasant movements under colonial rule

CO 11- Discussing the roots of communalism- Savarkar and Hindu Nationalism and Jinnah and the two nation theory

CO 12- Estimating the contribution of the August 1942 movement, the INA and the naval uprising.

Contact Hours: 3.75 hrs. a week

Tutorial: 12 hrs. annually

7. POLITICAL SOCIOLOGY

CO 1- Studying the concepts of Power, Authority and Legitimacy in the context o society.

CO 2- Examining social stratification through the index of class, caste and elite.

CO 3- Evaluating the impact of Religion on society.

CO 4- Relating Gender and Politics

CO 5- Creating awareness among students about Nationalism and State building processes in Western Europe and third world

CO 6- Establishing State –society interrelationship.

CO 7- Classifying the different types of Political systems.

CO 8- Discussing the approaches to the study of Political Culture. Evaluating the different agents of Political Socialization and their interrelationships.

CO 9- Evaluating the concept and types of Political Participation.

CO 10- Discussing the relation between Military and Politics with reference to conditions and types of intervention

CO 11- Studying groups in politics: political parties and pressure groups.

CO 12- Assessing the approaches to Political Communication; Electoral Behaviour

CO 13- Evaluating the concept of Political Development and Social Change- Role of Tradition and Modernity.

Contact time: 3.75 hrs. A week

Tutorial: 12 hrs. Annually

8. PUBLIC ADMINISTRATION

CO 1- Explaining the nature, scope and evolution of Public Administration; Private and Public Administration; Principles of Socialist Management.

CO 2- Discussing making of Public Policy Making and methods of Implementation

CO 3- Analysing the major Concepts in Public Administration.

CO 4- Tracing the Challenges in the discipline of Public Administration like New Public Administration (NPA); Comparative Public Administration (CPA) and Development Administration.

CO 5- Discussing the Ecological approach to Pub. Adm.

CO 6- Analysing the Administrative Processes: decision making; communication and control; leadership; co-ordination.

CO 7- Discussing Weberian and Marxian theories of bureaucracy.

CO 8- Studying the Organisation of the Union Government and State Government.

CO 9- Examining the Institutions of Local Self Government in India

CO 10- Assessing the relationship between the Citizen and Administration: Lokpal and Lokayukt.

CO 11- Understanding the concept of District Administration in India.

CO 12- Examining the Institutions of Financial Administration in India.**CO 13-** Analysing the Civil Service in India.

CO 14- Explaining the Planning and Planned Administration in India. Continuity and Change in Indian Administration.

Contact time: 3.75 hrs. a week

Tutorial: 12 hrs. annually

9. POLITICAL THEORY (General)

CO 1- Explaining nature and scope of Political Science. Discussing different Approaches: (a) Normative approach (b) Behavioural Approach (c) Marxist Approach.

CO 2- Analysing the concept of Sovereignty of the State. Discussing Monistic Theory, Pluralistic Theory, Doctrine of Popular Sovereignty.

CO 3- Evaluating the theories of the State: Contract theory, Idealist theory, Liberal and

Neo-liberal theory, Marxist theory and Gandhian theory.

CO 4- Discussing the nature of International Relations. Analysing the Liberal Approach and Realist Approach of International Relations.

CO 5- Accessing the different theories and concepts of Marxism, like Dialectical Materialism and Historical Materialism, concept of Class and Class Struggle, Revolution and Lenin's theory of Imperialism

CO 6- Explaining Schools of Jurisprudence, Theories of Law and sources of Law

CO 7- Methods of Representation, Political Parties and Pressure Group.

CO 8- Accessing the concepts of Rights , liberties and their relationship.

CO 9- Explaining the theories of Nationalism, Internationalism and fascism.

Contact hours: 2.25 hrs a week

10. COMPARTIVE POLITICS AND GOVERNMENT (General)

CO 1- Examining diverse political systems: Liberal-democratic, Authoritarian, Socialist forms of political systems.

CO 2- Exploring the Constitution of UK: salient features; the executive – the Crown, Prime Minister and cabinet; the legislature: House of Lords, House Commons, speaker and Committees; Party System in UK.

CO 3- Exploring the US Constitution: salient features; the executive: President; Legislature: Senate. House of Representative; Speaker; Judiciary: the composition and role of the Supreme Court; Bill of Rights; Party System.

CO 4- Making a comparative analysis of the following institutions of UK and USA: Legislature, Executive and party systems.

CO 5- Exploring the Chinese Constitution: salient features in the light of the General Principles; the Executive; Legislature; Judiciary; and the role of the Communist Party.

Contact Hours: 2.25 hrs. a week

11. GOVERNMENT AND POLITICS IN INDIA

CO 1- Outlining the basic values and philosophy of Indian Constitution as expressed in the Preamble.

CO 2- Studying Fundamental rights , duties and Directive Principles of State Policy.

CO 3- Examining Indian federalism through Centre-state relations.

CO 4- Evaluating the structures of government at the National level.

CO 5- Evaluating the structures of government at the State level.

CO 6- Examining the role of Political parties in Indian Democracy.

CO 7- Studying the Election Commission and electoral process in India.

CO 8- Assessing Judicial Activism in India with particular reference to Supreme Court.

CO 9- Studying the process of interaction between society and politics in contemporary India- Caste, tribe and religion.

CO 10- Creating awareness about social movements and empowerment related to women

Contact hours: 2.25 hrs. a week

12. CONTEMPORARY POLITICAL AND ADMINISTRATIVE ISSUES IN INDIA

CO 1- Explaining the determinants and features of Indian Foreign Policy.

CO 2- Evaluating the role of UN and assessing its relevance in future.

CO 3- Analysing the various dimensions of the working of the Indian Administrative system- PMO, Cabinet Secretariat, UPSC (Recruitment and Training of civil servants)

CO 4- Understanding the concept of Human Rights. Assessing the availability of Human Rights in the Constitution of India. Studying the State Human Rights Commission.

CO 5- Examining the dynamics of Globalization.

CO 6- Understanding the working of Urban and Rural Self Government in India with

special reference to West Bengal

CO 7- Explaining the Processes and Procedures of Union and State Legislatures.

Contact hours: 4.5 hrs a week

PROGRAMME OUTCOME

PO1-Political Science and Society: understanding the inter relationship between policy decisions and its effects on society. This is achieved through a comprehensive teaching of the practice of public administration in India.

PO2-Critical thinking: the ability to analyse and predict socio political phenomena based on the study of existing socio economic determinants and past experiences. This goal is achieved by training students in the different methods and tools of investigation such as empirical research methods, survey research and data analysis of subject responses. Some of the research projects carried out by the students are ***Water***

Supply and Sanitation Provisioning in Schools in Kolkata; The Role of The Media in The 16th Lok Sabha Elections; Women's Empowerment and Local Self- Government: Kolkata Municipal

Corporation Case Study.

PO3 - Effective citizenship: the course curriculum inculcates among students a basic understanding of the rights and duties of citizenship and thereby to act as responsible citizens through the observation of important days such as Independence Day, Republic Day and also spreading awareness in society through street plays based on specific socio political issues such as domestic violence, disillusioned youth of the materialistic world etc.

PO4 - Communication: Establishment of linkages between academics and civil society at large so as to successfully address socio political problems. The fortnightly wall journal is a means for keeping the entire student population up to date with political occurrences both global and domestic. Debates, seminars and panel discussions are also regularly organized on relevant themes and participation is sought

from experienced resource persons. Some of the events in this regard have been an interactive session on

the Presidential Election In America with members of the American Senate, Senator Wayne Harper, a Utah State Senator (Republican Party) and Mrs. Aruna Miller, a Maryland House Delegate (Democratic Party) and Mr. Greg Pardo, Assistant Public Affairs Officer, US Consulate Kolkata; a panel discussion and

debate on ***Role of the Media in Politics in 21st Century India*****PO5- Individual and team work:** Function effectively as an individual and as a member/leader in different social settings. This aim is achieved through team research and presentations, especially inter college student seminars which have addressed themes such as ***Diverse Paradigms of Indian Democracy:***

Crises and Challenges and *The Indian Parliament: A critical Retrospect* and also by participating in the Youth Parliament competition organised by the Department of Parliamentary Affairs, Government of West Bengal.

Department of Political Science

PROGRAMME SPECIFIC OUTCOME:

PSO 1 - Understanding the nature and developments in national and international politics

PSO2 - Analysing the Indian constitutional provisions, major legislations and reforms.

PSO3- Critical evaluation of social, economic and political variables for a proper understanding of the plurality of Indian society

PSO3 -Building overall consciousness regarding national political history, international relations and present Indian and Western political thinkers.

PSO4 - Encouraging a comprehensive, comparative understanding of specific world constitutions such

as UK, USA, China, Russia, Switzerland and France.

PSO5 - Developing knowledge of administrative studies with special reference to Indian administrative structures and practices.

PSO6 - Examining India's foreign relations with her neighbours and great powers.

PSO7 -Use of case study method for analysing the working of important international and regional organization like UN, EU, ASEAN etc.

DEPARTMENT of HISTORY

COURSE OUTCOME

S.no	Semester	Course	Credits	Outcomes
1	I	History of India from earliest times to 700CE	5	<p>Students will be able to understand the way of life of early humans, and concepts like varna, sati, republic and monarch States etc...</p> <p>Understand and accept the fact behind the geographical and cultural variations of the country.</p> <p>Recognise the value of cultural and spiritual richness and inheritance of the country.</p>
2	II	History of India (from 700CE to 1526CE)	5	<p>Understand the socio, religious, economic and cultural aspects of mediaeval period.</p> <p>Able to understand the political, administrative structures of rajputs, chalukyas, cholas etc...</p> <p>Assess the importance of secularism and mixed culture of medieval period.</p>
3	II	History of India (1526-1857)	5	<p>Able to know the administrative and religious policies of Mughals.</p> <p>Recognize the regional integrity of local powers like Marathas, rajputs, Mysore etc..</p> <p>Know the changes in the socio economic political system of India due to the colonial rule.</p>
4	IV	History of India (1858-1964)	5	<p>Understand the structural development of judiciary, executive, legislative departments, press, educational institutions etc..</p> <p>They will get inspiration from first generation freedom fighters by learning their ideas, goals, discipline and their role in freedom fight.</p> <p>Recognise the value of peace, non violence,</p>

				secularism of freedom movement.
5	V	History of Modern world(1453-1964CE)	5	<p>Students able to demonstrate the knowledge of chronological sequence of events and their significance.</p> <p>They will develop of their analytical, research, interpretive skills by different interpretations, opinions of the historians.</p> <p>Students will be able to understand the concepts like Renaissance, reformation, geographical discoveries, National States etc..</p> <p>Students will be able to understand the consequences of World wars.</p>
6	VI	History and Culture of Telangana from earliest times to 2014CE	5	<p>Students will be know the geographical features and cultural business of Telangana territory.</p> <p>Students will be understand the socio, economic, political and cultural aspects of satavana, Kakatiya, Qutub Shahi etc..</p> <p>Students will be recognise the backwardness, cultural variation of Telangana compare with Andhra Pradesh.</p>

BA Programme Outcomes:

Social sciences assist the learner to adapt a sensitive mindset while dealing with the complexities of socio economic political issues.

Structural, analytical, evaluative skills are developed by different interpretations, concepts, sources, methods and techniques used in social sciences

Social sciences provides socio economic political and cultural knowledge and values which are suit to global trends

Specific outcomes:

Social science learner recognise the ways to socio, economic, political and cultural issues which are effect their daily life

Understands the diversity of groups, communities, religions and their interests

Enables the learner to interpret the socio, economic, political and religious issues with scientifically and logically

By studying historical, political, economical aspects of the country the social sciences learner recognises his role in nation building

Department of Commerce

B. Com	
Programme Outcome	This program could provide well trained professionals for the Industries,
	Banking Sectors, Insurance Companies, Financing companies,
	Transport Agencies, Warehousing etc.,to meet the well trained
	manpower requirements. The graduates will get hands on experience in
	various aspects acquiring skills for Marketing Manager, Selling
	Manager, Over all Administration abilities of the Company.
Programme Specific Outcome	The students should possess the knowledge, skills and attitudes during
	the end of the B.com degree course. By virtue of the training they can
	become an Manager, Accountant , Management Accountant, cost
	Accountant, Bank Manager, Auditor, Company Secretary, Teacher,
	Professor, Stock Agents, Government jobs etc.,
Course	Outcomes
Business	On successful completion of this subject the students acquires the
organisation and	knowledge about the various types of business organizations,
Office	office
Management.	management and related.

Principles Of	To enable the students to learn principles and concepts of
Accountancy	Accountancy.
Financial	On successful completion of this course the student are enabled with
accounting	the
	Knowledge in the practical applications of accounting.
Accounting	Accounting, and allied aspects of accounting. After the successful
	completion of the course the student should have a through
	knowledge
	on the accounting practice prevailing in partnership firms and
	other
	allied aspects.

Principles of Marketing	On successful completion of this course the students should have the practical knowledge and he tactics in the marketing.
Bussiness Law	On successful completion of this course, the student should be well versed in basic provisions regarding legal frame work governing the business world.
Management Accounting	This course aims to develop an understanding of the conceptual framework of Management Accounting. After the successful completion of the course the student acquires the knowledge in the Management Accounting Techniques in business decision making.
Cost Accounting	To keep the students conversant with the ever – enlarging frontiers of Cost Accounting knowledge.
Banking Law theory and Practice	To enlighten the students’ knowledge on Banking Regulation Acts. After the successful completion of the course the student should have a through knowledge on Indian Banking System and Acts pertaining to it.
Corporate Accounting	This course aims to enlighten the students on the accounting procedures followed by the Companies. To enable the students to be aware on the Corporate Accounting in conformity with the provision of the Companies Act.

Income-Tax	This course aims to provide an in-depth knowledge on the provisions of Income Tax. To familiarize the students with recent amendments in Income-tax.
Principles of Auditing	On successful completion of this course, the student should be well versed in the fundamental concepts of Auditing.
Entrepreneurial Development	On successful completion of this course, the student should be well versed in Concept relating to entrepreneur, Knowledge in the finance institution, project report incentives and subsidies.

Department of Computer Application

Course outcome

Programme Outcome	Students will establish themselves as effective professionals by solving	
	real problems through the use of computer science knowledge and with	
	attention to team work, effective communication, critical thinking and	
	problem solving skills. Students will develop professional skills that	
	prepare them for immediate employment and for life-long learning in	
	advanced areas of computer science and related fields.	
Programme Specific	The ability to understand, analyze and develop computer programs in	
Outcome	the areas related to algorithms, system software, multimedia, web	
	design, application program, database , graphics and networking for	
	efficient design of computer-based systems of varying complexity.	
Course Outcomes		
Courses		Outcomes
Computing		On successful completion of this subject the students have the
Fundamentals and	C	programming ability in C Language
Programming		

Digital	Fundamentals		On successful completion of this subject the students should have
and Architecture			Knowledge on Digital circuits, Microprocessor architecture, and
			Interfacing of various components.
C++ Programming			To inculcate knowledge on Object-oriented programming concepts
			using C++.
System	Software	and	Enable the student to get sufficient knowledge on various system
Operating System			resources
Java Programming			To inculcate knowledge on Java Programming concepts

Department of English

General English for UG courses

PROGRAMME OUTCOMES

- ✓ To improve basic skills of Listening, Speaking, Reading and Writing.
- ✓ To Improve behavioral skills through language.
- ✓ To develop effective Communicative skills
- ✓ To improve their personal, professional and intellectual abilities through reading various aspects of literature.
- ✓ To improve verbal and non-verbal communication through the exposure to literature and language.
- ✓ To emphasize the process of learning and equipping modern usage of language by getting exposed to creative writings.
- ✓ To perfect variety of expressions by way of exposure to variety of English across the World.
- ✓ To improve vocabulary effectively .
- ✓ To acquire writing skills
- ✓ To enhance employable skills by way of developing their linguistic skills in communication.

PROGRAMME SPECIFIC OUTCOMES

- ✓ To enjoy different forms of literature such as Drama, Poetry, Novel, Story and One Act plays.
- ✓ To appreciate the beauty of literature and language.
- ✓ To study and perfect 'Pronunciation i.e. Sound system of English'.
- ✓ To acquire various skills of communication both written and spoken.
- ✓ To strengthen vocabulary of English (the use of Synonyms, Homonyms, Homophones, One-Word substitutes and figure of speeches).
- ✓ To gain commendable knowledge of English Grammar.
- ✓ To develop knowledge of conversion of Sentences situational.
- ✓ To improve the various techniques of presentation in English both in Writing and in Speaking according to the demand and necessarily.

General English for UG courses

COURSE OUTCOMES

- ✓ Students can possess good communication skills at the end of the course.
- ✓ Students are able to communicate the views and ideas frankly.
- ✓ Students could be ready to face all kinds of language tests.
- ✓ Students could get good command over English Grammar.
- ✓ Students could gain employable skills.
- ✓ Students are able to gain comprehension skills.
- ✓ Students could gain skills of creative writings.

- ✓ Students could develop flair for reading literature.
- ✓ Students are able to acquire required skills of English language

DEPARTMENT OF ECONOMICS
COURSE OUTCOMES

S.No	Semester	Course	Credits	Course Outcomes
1	I	MICRO ECONOMICS	5	<ol style="list-style-type: none"> 1. Students can be explain basic concepts of micro economics and its importance 2. Students can explains consumes behavior in real life 3. Students will be able to understand demand and supply in real market 4. Students can able to estimate the supply and demand in Agriculture markets 5. Students can be explains different costs in Agriculture sectors and Industrial sectors
2	II	MACRO ECONOMICS	5	<ol style="list-style-type: none"> 1. Students can explain and Examine the concepts, calculation methods of national income to real life situations. 2. Students will get ability to apply macro economic theories like Kynes Employment Theory to real life situations. 3. Students can be able to estimate investments in all Sectors 4. Students can Compare and contrast the different types of unemployment theories 5. Students will be able to write an essays on types and reasons of inflation and stages of business cycles

3	III	STATISTICS FOR ECONOMICS	5	<ol style="list-style-type: none"> 1. Students can use statistical tools for economic analysis 2. Students will be able to use statistical tools for research purposes 3. Students can identify and solve the statistical problems in real life 4. Students can calculate measures of central tendencies, range and correlation 5. Students can collect data, analyze and present.
4	IV	PUBLIC ECONOMICS	5	<ol style="list-style-type: none"> 1. Students can describe the importance of public finance in our country 2. Students can explain different sources of revenue of State and Central government 3. Students can illustrate public expenditure and reasons for increase in public expenditure on welfare schemes 4. Students will be able to identify public debt and approaches to public debt and measures to reduce public debt 5. Students will be able to examine the tax system and differentiate taxes in State and Central Government
5	V	PUBLIC ECONOMICS	5	<ol style="list-style-type: none"> 1. Student will be able to examine the public goods and private goods 2. Students can examine the principle of maximum social advantage 3. Students will be able to differentiate the tax system before VAT and after VAT 4. Students will be able to explain the fiscal policy of the government

				<p>5. Students will be able to analyze different types of budgets and importance of budget of state and central government</p>
6	VI	DEVELOPMENT ECONOMICS	5	<ol style="list-style-type: none"> 1. Students can Analyze different growth theories and PQLI, HDI their importance 2. Students can Differentiate between balanced and unbalanced growth, population effects 3. Students can Apply Human Resources and their importance in real life situations 4. Students can Explain development countries and factors of under development countries 5. Students can Compare Big push Theory, Gunnar Mirdal Development Theories

