

B.Sc. BIOCHEMISTRY

Course code	Course title	Course outcomes
Semester -1		
BC1141	Perspectives, Methodology and Biomolecules-I	CO1: Elicit the concepts of science CO2: Describe the evolution and scope of biochemistry as a science discipline. CO3: List out the different experimental approaches to study biochemical processes. CO4: Prepare solutions of different concentration and pH. .
Semester II		
BC 1221	Biomolecules-II and Bioinformatics	CO1 : Elaborate the composition of proteins and their function CO2 : Detail the importance of genetic information carrier molecules in life CO3 : Recognize the scope and application of Bioinformatics CO4 : Perform statistical investigations related to biochemical problems CO5 : Identify application of information technology in biology
Semester III		
BC1341	Cellular Biochemistry	CO1: List out cell organelles and describe their structure and function CO2: Elaborate the different types of transport systems across cell membrane

		<p>CO3: Explain types of cell division</p> <p>CO4: Outline the characteristics of cancer cells and mechanisms involved in cancer biology</p> <p>CO5 Detail on the mechanism of interaction between cell and its environment</p> <p>CO6 : Classify enzymes; describe types of enzyme inhibition and regulation</p>
Semester IV		
BC 1441	Techniques in Biochemistry	<p>CO1 : Explain the principle, working and application of different microscopic, photometric, chromatographic, electrophoretic, centrifugation and radioactive techniques</p> <p>CO2: Select most suitable technique for the isolation and purification of biomolecules based on different criteria</p>
BC 1442	Practical paper Qualitative Analysis of Biomolecules	<p>CO1 : Qualitatively analyse the type of biomolecule</p> <p>CO2 : Identify the subclass of each biomolecule by schematic analysis</p>
Semester V		
BC1541	Physiology & Immunology	<p>CO1: : Explain hemopoiesis and biochemical basis of blood group classification.</p> <p>CO2:: Elaborate on the transport of gases, acid base and water balance in the body.</p> <p>CO3Remember structure of muscle, neuron and bone.</p> <p>CO4Classify hormones and explain the functions of hormones.</p>

		CO5 Describe various aspects in basic immunology
BC 1542	Bioenergetics and Carbohydrate Metabolism	<p>CO1: Describe the bioenergetics of metabolic pathways.</p> <p>CO2: Elaborate the reactions and regulation involved in the metabolism of carbohydrates.</p> <p>CO3: List out the inborn errors of carbohydrate metabolism.</p> <p>CO4 : Enumerate the link between ETC and energy production in plant and animal cells.</p>
BC1543	Food Science	<p>CO1:Elaborate on the importance of human nutrition.</p> <p>CO2 :Describe the chemical composition of different types of food.</p> <p>CO3 :Explain the various food preservation techniques employed.</p> <p>CO4 :Identify the common adulterants in food.</p> <p>CO5 :Gain knowledge about the role of microorganisms in food and nutrition</p> <p>CO6 :Explain the importance of food safety and management systems.</p>
BC1544	Classical and Molecular Genetics	<p>CO1 :Give an account of Mendelian and non- Mendelian genetics.</p> <p>CO2 :Predict the type of inheritance of a trait/disease using pedigree analysis.</p> <p>CO3 :Explain the organization of chromatin and events during gene expression.</p>

		<p>CO4 :Illustrate the consequences of different types of mutations and DNA-repair systems</p> <p>CO5 : Depict the concepts of gene regulation in prokaryotic cells</p> <p>CO6 : Describe the methods involved in rDNA technology</p>
BC1545	Practical paper Quantitative Analysis of Biomolecules	CO1: to quantitatively analyze different biomolecules in a given test sample.
BC 1551.2	Lifestyle Diseases [Open Course]	<p>CO1 : Enumerate the different causes and risk factors of life style diseases like atherosclerosis, hypertension, stroke, diabetes, obesity, nephritis and liver diseases.</p> <p>CO2 : List out the methods to diagnose the diseases and gain a basic knowledge regarding interpretation of the test results.</p> <p>CO3 : Spell out the methods of prevention, treatment and management of the diseases.</p> <p>CO3 : Identify healthy and unhealthy life habits and adopt better life style</p>
Semester VI		

BC 1641	Clinical Biochemistry	<p>CO1 : List out the methods of clinical laboratory management and laboratory safety.</p> <p>CO2 : Describe the principle & procedure for studying clinical parameters used for diagnosis.</p> <p>CO3 : Detail the basic concepts of microbiology and pharmacology</p>
BC 1642	Metabolism-II	<p>CO1 : Describe the metabolism of lipids, nucleic acids, amino acids and heme.</p> <p>CO2 : Explain the role of enzymes involved under physiological and pathophysiological conditions.</p> <p>CO3 : List out the inborn errors of metabolism of above mentioned biomolecules.</p> <p>CO4 : Detail the processes involved in biological nitrogen fixation.</p> <p>CO5 : Enumerate the important detoxification processes in the body.</p>
BC1643	Practical paper -	<p>CO1 : Quantitatively analyze parameters of clinical significance in blood and urine.</p> <p>CO2 : Detect the presence of abnormal constituents in the urine sample.</p>
BC1644	Practical paper	<p>CO1 : Quantitatively estimate the specific biomolecule in any given food sample.</p> <p>CO2 : Detect the presence of adulterants in different food samples.</p>

BC 1661.1	Analytical Biochemistry [Elective]	CO1 : Perform phytochemical analysis. CO2 : Identify the importance and impact of pesticides in life CO3 : Detect food adulteration CO4 : Elaborate standards for respective category of water CO5 : Recognize the effect of toxic metals in foods CO6 : Analyze toxicants in biological samples

B. Sc Botany

Course Code	Course Title	Course outcome
Semester - I		
BO 1141	Angiosperm Anatomy, Reproductive Botany and Palynology	<p>CO1: Understand the complexities of cell wall organization, microscopic and submicroscopic structures</p> <p>CO2: Distinguishes various anatomical features of monocots and dicots with respect to permanent tissues and tissue system</p> <p>CO3: Identifies male and female gametophyte development in angiosperms</p> <p>CO4: Distinguishes monocot and dicot embryo and features of pollen grains</p>
Semester II		
BO 1221	Methodology and Perspectives in Plant Sciences	<p>CO1: Familiarizes the students with the fundamental characteristics of science</p> <p>CO2: Develops an idea about involvement of science in improvement of human life</p> <p>CO3: Develops skills to interpret scientific data using basic statistical methods</p> <p>CO4: Creates skills to prepare specimens for microscopic and anatomical studies</p> <p>CO5: Prepares buffers, measures pH, separates plant pigments and construction of absorption spectrum of sample</p>
BO 1222	Practical - I	<p>CO1: Anatomy of stem and roots of dicots and monocots</p> <p>CO2: Microscopic preparations of curd for bacterial identification</p> <p>CO3: Principle and working of different instruments</p>

Semester III		
BO 1341	Microbiology, Phycology, Mycology, Lichenology and Plant Pathology	CO1: Micropreparation can be prepared and thallus structures of lower groups identified CO2: Create awareness about various microbes, structure and economic importance CO3: Identification of plant diseases, etiology of pathogens and control measures CO4: Preparation of fungicides
Semester IV		
BO1441	Bryology, Pteridology, Gymnosperms and Paleobotany	CO1: Micropreparations of thallus can be conducted and understands the thallus structure of bryophytes, Pteridophytes and Gymnosperms CO2: Understands economic and ecological importance of lower groups CO3: Understands the fossilization and importance of paleobotany
BO 1442	Practical - II	CO1: Anatomical sectioning of lower forms CO2: Thallus structure identification CO3: Identification of different fossils
Semester V		
BO 1541	Angiosperm morphology, systematic botany, economic botany, ethnobotany and Pharmacognosy	CO1: Identify different types of inflorescence, flowers, fruits CO2: Familiarizes different types of plant classification CO3: Preparation of herbarium CO4: Understands the ethnobotanical and pharmacological significance of plants

BO 1542	Environmental studies, Disaster management, Phytogeography and Research methodology	<p>CO1: Develops awareness about the conservation and importance of natural resources</p> <p>CO2: Identifies different types of ecosystems</p> <p>CO3: Understands biodiversity and its conservation</p> <p>CO4: Awareness about the different types of disasters</p> <p>CO5: Identifies the importance of phytogeographical sites in India</p> <p>CO6: Students are trained about the various steps for the conduct of a research project</p>
BO 1543	Cell Biology, Genetics and Evolutionary biology	<p>CO1: Understands cell structure and cell organelles</p> <p>CO2: Identifies various stages of mitosis and meiosis</p> <p>CO3: Able to work out problems in genetics</p> <p>CO4: Understands evolutionary principles, theories and speciation</p>
BO 1551.1	Horticulture – Open course	<p>CO1: Familiarization in horticulture and methods of gardening</p> <p>CO2: Understanding of flower arrangement and cut flowers</p> <p>CO3: Understand in landscaping, fertilizers and plant protection</p>
Semester VI		

BO 1641	Plant physiology and Biochemistry	<p>CO1: Understands photosynthesis, respiration, plant growth regulators, nitrogen metabolism</p> <p>CO2: Understands the macromolecules and their role in cell metabolism</p>
BO 1642	Molecular biology, general informatics and bioinformatics	<p>CO1: Understands DNA and its types</p> <p>CO2: Understands molecular aspects of gene expression</p> <p>CO3: Awareness of features of computer and system software</p> <p>CO4: Recognizes the need for internet and cyber law</p> <p>CO5: Familiarizes phylogeny. Biological databases, sequence analysis and genomics</p>
BO 1643	Biotechnology, Nanobiotechnology, Horticulture and Plant breeding	<p>CO1: Preparation of culture solutions, sterilization, inoculation of explants, induction of callus and morphogenesis</p> <p>CO2: Familiarization of RAPD, RFLP and PCR</p> <p>CO3: Applications of tools and equipments of biotechnology</p> <p>CO4: Understanding of IPR</p> <p>CO5: Applications of nanomaterials</p> <p>CO6: Plant propagation through grafting, budding and layering</p> <p>CO7: Application for betterment in foodcrops</p>
BO 1644	Practical - III	<p>CO1: Identification of different families</p> <p>CO2: Economic importance of different crops and fruits</p> <p>CO3: Medicinal importance of plants</p>

		<p>CO4: Identification of hydrophytes, halophytes and xerophytes</p> <p>CO5: Steps to prevent disasters</p> <p>CO6: Phytogeographical sites in India</p> <p>CO7: Study of various stages of cell division</p> <p>CO8: Understand Genetics problems and solving</p>
BO 1645	Practical - IV	<p>CO1: Setting up of different physiology experiments</p> <p>CO2: Conduct of different types of biochemical tests</p> <p>CO3: Conduct of plant propagation techniques and emasculation</p>

B.Sc. CHEMISTRY

Course code	Course title	Course outcomes
Semester -I		
CH 1141	INORGANIC CHEMISTRY I	<p>CO1: Discuss the course of development of structure of atom.</p> <p>CO2: Apply rules for filling electrons in classifying elements into s,p,d and f blocks</p> <p>CO3: Define various scales of electro negativities and their applications</p> <p>CO4: Define Effective nuclear charge and Slater's rules</p> <p>CO5: Discuss about diagonal relationship and anomalous behaviour of hydrogen and other first element in each group.</p> <p>CO6: Correlate and predict general properties of s and p block elements based on their electronic configuration.</p> <p>CO7: Realize applications of s and p block elements in sustainable and renewable energy sources.</p> <p>CO8: Define various concepts of acids and bases.</p> <p>CO9: Understand reactions in non-aqueous solvents</p> <p>CO10: Realise various causes, effects and control measures of environmental pollution</p> <p>CO11: Review national movements for environmental protection.</p>
Semester -II		
CH 1221	CHEMISTRY –ITS ORIGIN, METHODOLOGY AND IMPACTS	<p>CO1: Appreciate the development of scientific theories through years with specific examples</p> <p>CO2: Develop curiosity and scientific attitude towards the application of chemistry in daily life</p> <p>CO3: Outline a procedure for experimentation</p>

		<p>CO4: Appraise the current development in Chemistry</p> <p>CO5: Identify the common ingredients of household synthetic products</p> <p>CO6: Discriminate and classify chemicals used as drugs, explosives.</p> <p>CO7: Get motivated in visiting chemical Industries</p> <p>CO8: Adopt safety measures in handling chemicals</p> <p>CO9: Draw titration curves and explain theory of volumetric titrations</p> <p>CO10: Select suitable indicators for acid base titration knowing the theories of acid base titration and indicators</p> <p>CO11: Develop computational skills</p> <p>CO12: Discuss separation techniques of filtration and chromatographic techniques</p>
CH 1221	COMPUTER LAB FOR FOUNDATION COURSE II	<p>CO1: Get acquainted with Computer Lab based instruction on the use of computer and internet in learning.</p> <p>CO2: Use of educational softwares, information mining from internet and using INFLIBNET/NICNET, NPTEL and VIRTUAL LABS OF MHRD.</p> <p>CO3: Learn Word processing and document preparation. Use of Spread sheets in Data handling and presentation</p> <p>CO4: Develop skill in chemical structure drawing and visualization of molecules using chemistry softwares</p>
Semester -III		
CH 1341	INORGANIC CHEMISTRY I	<p>CO1: Understand various theories of chemical bonding and their limitations.</p> <p>CO2: Predict stability of atoms and the nature of bonding between atoms.</p>

		<p>CO3: Discuss various applications of intermolecular interactions</p> <p>CO4: Understand chemistry of glass, silicates and silicones.</p> <p>CO5: Discuss chemistry of Boron compounds, oxy acids and oxides of Phosphorous</p> <p>CO6: Understand refractory carbides, nitrides, borides and silicides</p> <p>CO7: Describe various types of halogen compounds</p> <p>CO8: Understand chemistry of noble gas</p> <p>CO9: Understand inorganic polymers and their applications.</p> <p>CO10: Distinguish between types of nuclear reactions</p> <p>CO11: Describe measurement of radioactivity.</p> <p>CO12: Discuss applications of radioactivity in various fields.</p> <p>CO13: Understand introductory concepts of Nano chemistry</p> <p>CO14: Suggest methods of synthesizing nano materials</p> <p>CO15: Appreciate the variety of applications of nanomaterials.</p>
Semester -IV		
CH 1441	ORGANIC CHEMISTRY – I	<p>CO1: Recall the fundamentals of organic chemistry.</p> <p>CO2: Apply the electron displacement effects to compare acidity, basicity and stability of organic compounds/intermediates.</p> <p>CO3: Judge the reaction mechanism of substitution and elimination on the basis of the structure of alkyl halides.</p> <p>CO4: Summarise the chemistry of reaction intermediates.</p>

		<p>CO5: Discuss optical, geometrical and conformational isomerism of organic compounds.</p> <p>CO6: Use CIP rules to predict the configuration of organic compounds</p> <p>CO7: Differentiate photochemical and thermal reactions.</p> <p>CO8: Discuss theory of color and constitution and the method of synthesis of dyes</p> <p>CO9: Explain aromaticity, orientation effect and mechanism of aromatic electrophilic substitution.</p> <p>CO10: Demonstrate the method of determination of reaction mechanism.</p>
Semester I,II,III &IV		
CH1442	<p>LAB COURSE I</p> <p>INORGANIC QUALITATVE ANALYSIS</p>	<p>CO1: Obey Lab safety instructions, develop qualities of punctuality, regularity and scientific attitude, outlook and scientific temper (GOOD LAB PRACTICES)</p> <p>CO2: Develop skill in safe handling of chemicals, take precaution against accidents and follow safety measures</p> <p>CO3: Use glass wares ,electric oven, burners and weighing balance</p> <p>CO4: Develop skill in observation , prediction and interpretation of reactions</p> <p>CO5: Detect solubility, and classify compounds according to their solubility</p> <p>CO6: Apply the principle of common ion effect and solubility product in the identification and separation of ions</p> <p>CO7: Develop skill in preparing and purifying inorganic complex compounds</p> <p>CO8: Develop skill in preparing and purifying inorganic complex compounds</p>
Semester V		

CH 1541	PHYSICAL CHEMISTRY I	<p>CO1: Identify, compare and explain the properties and behaviour of ideal and real gases, knowing kinetic theory of gases and different types of molecular velocities and collision properties.</p> <p>CO2: Perform numerical problems of gases under a set of conditions</p> <p>CO3: Differentiate between amorphous and crystalline solids, understand anisotropy, symmetry and types of crystals, Xray diffraction methods of study of crystal structure, identify the imperfections in crystals understand the physical aspects of surface tension and viscosity of liquids and the basics of liquid crystals and their applications</p> <p>CO4: representation of lattice planes and calculation of interplanar spacing, draw the crystal structures of NaCl and CsCl</p> <p>CO5: Recalling the basic concepts of solutions, concentration terms, Raoult's law and colligative properties</p> <p>CO6: Determination of colligative properties and molecular mass of solute</p> <p>CO7: Understand the working principle Electro-Chemical cells</p> <p>CO8: Design and determine the potentials of electrochemical systems</p> <p>CO9: Assess the nature of electrolytes in terms of dissociation and ionic conductance of electrolytes in terms of mobility of ions</p> <p>CO10: Integrate the theory into practical applications of conductometric titrations</p>
CH 1542	INORGANIC CHEMISTRY III	<p>CO1: Discuss the electronic configuration and related properties of transition elements and inner transition elements</p> <p>CO2: Understand preparation of selected transition metal compounds, lanthanides and actinides</p>

		<p>CO3: Compare lanthanide and actinide contraction and their consequences.</p> <p>CO4: Name coordination complexes, organometallics, discuss their properties and bonding</p> <p>CO5: Understand stability of complexes and factors affecting stability</p> <p>CO6: Describe isomerism in coordination compounds</p> <p>CO7: Discuss spectrochemical series, CFSE and their consequences</p> <p>CO8: Correlate geometry, stability and Jahn Teller effect and its causes</p> <p>CO9: Discuss reaction mechanisms and applications of coordination compounds</p> <p>CO10: Name and classify organometallic compounds</p> <p>CO11: Discuss preparation and properties and bonding of carbonyls</p> <p>CO12: Identify the role of organometallic compounds in organic synthesis</p> <p>CO13: Discuss the role of inorganic ions in biological systems and biochemistry of hemoglobin, myoglobin, cytochromes, iron Sulphur proteins</p> <p>CO14: Discuss various bioinorganic processes like photosynthesis, working of sodium potassium pump, etc.</p>
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		CO15: Describe various aspects of metallurgy, and instrumental methods of analyses viz., spectrophotometric methods, thermal methods and tools available to measure nanomaterials
CH 1543	ORGANIC CHEMISTRY II	<p>CO1: Describe the preparation of hydroxy, carbonyl & amino compounds, carboxylic acids and organo Mg, Li & Zn compounds.</p> <p>CO2: Distinguish primary, secondary & tertiary alcohols and amines</p> <p>CO3: Write reaction steps in ascending & descending of alcohol and aliphatic acid series, interconversion of aldose and ketose, chain lengthening and shortening of aldoses</p> <p>CO4: Explain the structure of glucose, fructose, sucrose, starch and cellulose.</p> <p>CO5: Predict the outcome and mechanism of simple organic reactions, using a basic understanding of the reactivity of functional groups</p> <p>CO6: Illustrate the use of organic reagents in synthesis.</p> <p>CO7: Discuss fundamental principles of supramolecular and green chemistry</p>
CH 1544	LAB COURSE II INORGANIC VOLUMETRIC ANALYSIS	<p>CO1: Develop skill in selecting, primary and secondary standards</p> <p>CO2: Develop skill in weight calculation of primary standards weighing by electronic balance, making of solutions of definite strength (standard solutions)</p> <p>CO3: Use sophisticated glass wares, calibrate apparatus and develop skill in keen observation, prediction and interpretation of results</p> <p>CO4: Perform volumetric titrations under acidimetry, alkalimetry, permanganometry, dichrometry, iodimetry, iodometry, cerimetry, argentometry and c</p>

		<p>CO5: Compare the advantages and disadvantages of different volumetric techniques</p> <p>CO6: Practice Punctuality and regularity in doing experiments and submitting Lab records</p>
CH 1545	LAB COURSE III PHYSICAL CHEMISTRY EXPERIMENTS	<p>CO1: Develop Scientific outlook and approach in applying principles of physical chemistry in chemical systems/reactions</p> <p>CO2: Use computational methods for plotting graph</p> <p>CO3: Describe systematic procedures for physical experiments</p> <p>CO4: Acquire Instrumentation skill in using conductometer, potentiometer, refractometer, stalagmometer and Ostwald's viscometer.</p> <p>CO5: Compare theory with experimental findings</p> <p>CO6: Practice Punctuality and regularity in doing experiments and submitting Lab records</p>
CH 1551.2	OPEN COURSE FOR OTHER MAJORS FUNDAMENTALS OF CHEMISTRY AND ITS APPLICATION TO EVERYDAY LIFE	<p>CO1: Appreciate the evolution of Science and Chemistry and the early form of chemistry</p> <p>CO2: Understand the development of Chemistry as a discipline and the role of chemistry as a central science</p> <p>CO3: Discuss the fundamental properties of atom, structure of atom, classification of elements in to a periodic table</p> <p>CO4: Differentiate between simple molecules and giant molecules and the bonding nature</p> <p>CO5: Explain different types of bonding and predict stability</p> <p>CO6: Compare properties of graphite and diamond and their structural differences</p> <p>CO7: Identify household chemicals, their advantages and disadvantages</p>

		<p>CO8: Become aware of chemical hazards and the precautions in handling chemicals</p> <p>CO9: Beware of food adulterants</p> <p>CO10: Critically select chemical fertilizers, artificial sweeteners, beverages, and food preservatives</p>
Semester -VI		
CH 1641	PHYSICAL CHEMISTRY II	<p>CO1: Understand basic concepts of thermodynamics , spectroscopy and group theory</p> <p>CO2: Apply laws of thermodynamics in physical and chemical processes and real system</p> <p>CO3: Classify processes, properties and systems on a thermodynamic basis</p> <p>CO4: Discuss the second law of thermodynamics and Assess thermodynamic applications using the second law of thermodynamics.</p> <p>CO5: Discuss basic concepts of statistical thermodynamics</p> <p>CO6: Solve numerical problems based on thermodynamics and thermochemistry</p> <p>CO7: Understand the basics of spectroscopic techniques Rotational, Vibrational and Raman Spectroscopy</p> <p>CO8: Compare NMR and ESR spectroscopy and their applications</p> <p>CO9: Evaluate physical and chemical quantities using Non spectroscopic techniques.</p>

		<p>CO10: Identify the elements of symmetry and determine the point groups of simple molecules</p> <p>CO11: Differentiate diamagnetism and Paramagnetism, measurement of magnetic susceptibility</p> <p>CO12: Correlate dipole moment with geometry of molecules</p>
CH 1642	ORGANIC CHEMISTRY III	<p>CO1: Outline the chemistry of simple heterocyclic compounds</p> <p>CO2: Classify amino acids, proteins, nucleic acids, drugs, terpenes, vitamins, lipids and polymers.</p> <p>CO3: Classify amino acids, proteins, nucleic acids, drugs, terpenes, vitamins, lipids and polymers.</p> <p>CO4: Describe the isolation and structure of terpenes and alkaloids.</p> <p>CO5: Explain the mechanism and techniques of polymerization</p> <p>CO6: Discuss the principle of UV, IR, NMR and Mass spectroscopy.</p> <p>CO7: Interpret spectroscopic data to elucidate the structure of simple organic compounds.</p> <p>CO8: Use the simple organic reactions to elucidate the structure of quinoline, piperine and conine</p>
CH 1643	PHYSICAL CHEMISTRY II	<p>CO1: Recall the basic physical concepts in quantum mechanics, colloids, adsorption, Chemical Kinetics, catalysis, chemical and ionic equilibria, phase equilibria, binary liquid systems and photochemistry</p> <p>CO2: Understand the basic concepts involved in quantum mechanics, colloids, adsorption,</p>

		<p>Chemical Kinetics, catalysis, chemical and ionic equilibria, phase equilibria, binary liquid systems and photochemistry</p> <p>CO3: Derive and Interpret important theories and equations involved in physical chemistry</p> <p>CO4: Demonstrate the origin of quantum numbers by correlating the Cartesian and spherical polar coordinates of hydrogen atom.</p> <p>CO5: Identify and recognize the applications of various principles, equations and physical processes</p> <p>CO6: Perform calculations involving physical concepts and equations</p> <p>CO7: Analyze` graphical representations (phase diagrams, two and three components, vapor pressure – composition and boiling point – composition, temperature-composition) present in physical chemistry</p> <p>CO8: Understand terminology</p> <p>CO9: Understand the effects of external influence on various chemical processes</p> <p>CO10: Understand different laws and principles of physical chemistry</p>
CH 1644	LAB COURSE IV ORGANIC CHEMISTRY EXPERIMENTS	<p>CO1: Develop curiosity in systematically analyzing organic compounds</p> <p>CO2: Differentiate and identify organic compounds by their characteristic reactions towards standard reagents</p> <p>CO3: Confirm their findings by preparing solid derivatives, and thus understand reliability of experimental results</p> <p>CO4: Determine physical constants of organic compounds</p>

		<p>CO5: Separate organic compounds by TLC/paper/column chromatographic techniques</p> <p>CO6: Prepare soaps</p> <p>CO7: Apply the principles and techniques in organic chemistry, thereby developing skill in designing an experiment to synthesize and purify organic compounds</p> <p>CO8: Practice systematic scientific procedure and prepare adequate report of them</p> <p>CO9: Understand the chemistry behind organic reactions</p>
CH 1645	LAB COURSE- V GRAVIMETRIC EXPERIMENTS	<p>CO1: Understand precipitation techniques in quantitative context</p> <p>CO2: Appreciate the application of silica crucible and sintered crucible in gravimetry</p> <p>CO3: Practice technique of making, diluting solutions on quantitative basis</p> <p>CO4: Realize the factors affecting precipitation/crystallization</p> <p>CO5: Take precautionary measures in filtration, drying and incineration of precipitates</p> <p>CO6: Understand the principle of colorimetry to estimate Fe³⁺ and ammonia</p> <p>CO7: Practice Punctuality and regularity in doing experiments and submitting Lab records</p>
CH 1646	PROJECT COURSE	<p>CO1: Develop an aptitude for research in chemistry</p> <p>CO2: Practice research methodology and literature search</p> <p>CO3: Critically choose appropriate research topic and presentation</p>
CH1651.1	ELECTIVE COURSE SUPRAMOLECULAR, NANOPARTICLES AND GREEN CHEMISTRY	<p>CO1: Become aware of pollution caused by industries</p> <p>CO2: Become aware of pollution caused by industries</p>

		<p>CO3: Discuss about sustainable development and logical use of natural resources</p> <p>CO4: Motivated to more eco-friendly lifestyle</p> <p>CO5: Realizes the importance of microscale approaches and nano material research</p>
CH1661.3	<p>ELECTIVE COURSE</p> <p>INTRODUCTION TO PHARMACEUTICALS & COSMETICS</p>	<p>CO1: Understand the relevance of organic chemistry in chemical industry.</p> <p>CO2: Get knowledge to apply organic reactions in pharmaceutical production</p> <p>CO3: Explain the various catalytic processes in industry.</p> <p>CO4: Describe the preparation of important drugs</p> <p>CO5: Familiarize with the pharmaceutical formulation.</p> <p>CO6: Understand the formulation of various cosmetics.</p>

B.Com Finance and Tax

Course code	Course title	Course outcomes
Semester -1		
CO 1121	METHODOLOGY AND PERSPECTIVES OF BUSINESS EDUCATION	Course outcome: <ol style="list-style-type: none">1. Understand business and its role in society.2. Identify the significance of entrepreneurship and its heuristics3. Comprehend the business environment4. Initiate the students to undertake business activities5. Ensure a holistic, comprehensive and integrated perspective to business education
CO 1141	ENVIRONMENTAL STUDIES	Course outcome: <ol style="list-style-type: none">1. Enable the students to acquire basic ideas about environment and emerging issues about environmental problems.2. Aware about the need and importance of environmental protection
CO 1131	MANAGERIAL ECONOMICS	Course outcome: <ol style="list-style-type: none">1. Familiarize the students with the economic principles and theories underlying various business decisions.2. Equip the students to apply the economic theories in different business situations.3. Acquaint the students with the application of economics in the context of managerial

		decision making.
CO 1142	Functional Application of Management	<p>Course outcome:</p> <ol style="list-style-type: none"> 1. Familiarise the students with various aspects of organizational management. 2. Give an understanding on the functional application of management
Semester II		
CO 1221	INFORMATICS AND CYBER LAWS	<p>Course outcome:</p> <ol style="list-style-type: none"> 1. Review the basic concepts and fundamental knowledge in the field of informatics. 2. Aware about the nature of the emerging digital knowledge society and the impact of informatics on business decisions. 3. Awareness about the cyber world and cyber regulations. 4. Update and expand informatics skills and attitudes relevant to the emerging knowledge society and to equip the students to effectively utilise the digital knowledge resources for business studies
CO 1241	BUSINESS COMMUNICATION AND OFFICE MANAGEMENT	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Develop communication skills among students relevant to various business situations 2. Impart knowledge on the management of Modern Offices. 3. Explore the talents in business communication and enable the students to understand the appointment and role of a Company Secretary in business.

CO 1242	FINANCIAL ACCOUNTING	<p>Course Objectives</p> <ol style="list-style-type: none"> 1. Familiarize the students with Accounting Standards. 2. Equip the students to prepare the accounts of special business areas. 3. Impart knowledge and understanding of the principles and concepts of financial accounting and develop the skill required for the preparation of financial statements and accounts of various business areas.
CO 1231	BUSINESS REGULATORY FRAMEWORK Course outcome:	<p>Course outcome:</p> <ol style="list-style-type: none"> 1. Provide a brief idea about the framework of Indian business Laws 2. Enable the students to apply the provisions of business laws in business activities 3. Motivate the students to take up higher studies in business Laws
Semester III		
CO 1341	ENTREPRENEURSHIP DEVELOPMENT	<p>Course outcome:</p> <ol style="list-style-type: none"> 1. Familiarize the students with the latest programs of the government authorities in promoting small and medium industries. 2. Impart knowledge regarding how to start new ventures. 3. Equip the students to have a practical insight for becoming an entrepreneur.

CO 1342	COMPANY ADMINISTRATION	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Familiarize the students about the salient provisions of Indian Companies Act2013. <p>Acquaint the students about Management and Administration of Companies, Compliance requirements, investigation into the affairs of the company and Winding up procedure</p>
CO 1343	ADVANCED FINANCIAL ACCOUNTING	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Create awareness of accounts related to dissolution of partnership firms. 2. Acquaint students with the system of accounting for different branches and departments. 3. Enable students to prepare accounting of consignments and joint venture. 4. Equip the students with the preparation of accounts of various business areas.
CO 1331	INFORMATION TECHNOLOGY IN BUSINESS	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Review the basic concepts and functional knowledge in the field of IT. 2. Expose the students to computer application in the field of Business. 3. Expose the students to the innovations in information technology and its potential application in business.

CO 1361.1	FINANCIAL MANAGEMENT	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Familiarise the students with the conceptual framework of financial management. 2. Enable the students to understand the practical application of financial management. 3. Provide conceptual and analytical insights to make financial decisions skillfully.
Semester IV		
CO 1441	Capital Market	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Provide the students with a clear-cut idea about the functioning of Indian Capital Market 2. Provide an in-depth knowledge on Capital Market
CO 1442	BANKING THEORY AND PRACTICE	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Provide basic knowledge of the theory and practices of banking. 2. Familiarize the students with the changing scenario of Indian Banking 3. Expose the students to the changing scenario of Indian banking
CO 1443	- CORPORATE ACCOUNTING	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Enable the students to develop awareness about corporate accounting in conformity with the provisions of Companies Act, IAS and IFRS. 2. Enable the students to prepare and interpret financial statements of joint stock companies in different

		<p>situations.</p> <ol style="list-style-type: none"> 3. Expose the students to the accounting practices prevailing in the corporate.
CO 1431	BUSINESS STATISTICS	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Enable the students to gain understanding of statistical techniques as are applicable to business. 2. Enable the students to apply statistical techniques for quantification of data in business. 3. Develop the skill for applying appropriate statistical tools and techniques in different business situations.
CO 1431	BUSINESS STATISTICS	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Enable the students to gain understanding of statistical techniques as are applicable to business. 2. Enable the students to apply statistical techniques for quantification of data in business. 3. Develop the skill for applying appropriate statistical tools and techniques in different business situations.
1461.1	PROJECT FINANCE	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Provide knowledge on the concept of project finance. 2. Highlight the sources and application of finance. 3. Enable the students to learn the process and issues

		relating to preparation, appraisal, review and monitoring of projects.
	Semester V	
CO – 1541	FUNDAMENTALS OF INCOME TAX	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Familiarize the students about the fundamental concepts of Income Tax 2. Enable the students to acquire the skills required to compute Gross Total Income with more emphasis on income from salary and income from house property. 3. Impart the basic knowledge and understanding of the concepts and practices of Income Tax Law in India.
CO 1542	COST ACCOUNTING	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Familiarize the students with cost concepts. 2. To make the students learn cost accounting as a separate system of accounting 3. Impart knowledge of cost accounting system and acquaint the students with the measures of cost control.
CO 1543	ACCOUNTING FOR SPECIALISED INSTITUTIONS	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Familiarise the students with the accounting practices prevailing in various specialised institutions. 2. Acquaint the students with the preparation of final accounts of the specialized 3. Develop the skill for the

		preparation of final accounts of specialised institutions and enable the students to acquire professional competence in accounting.
CO 1551.3	CAPITAL MARKET OPERATIONS	Course Outcome: <ol style="list-style-type: none"> 1. Create an interest among students towards stock market investment 2. Familiarize the students with capital market operations
CO 1561.1	Financial Markets and Services	C o u r s e O u t c o m e: <ol style="list-style-type: none"> 1. Provide a general awareness about the financial markets and services 2. Familiarize the students with the structure and functioning of the financialmarkets and financial service sector in India
	Semester VI	
CO 1641	AUDITING	Course Outcome: <ol style="list-style-type: none"> 1. Understand the principles and practice of auditing 2. Familiarise the students with the principles and procedure of

		<p>auditing.</p> <p>3. Enable the students to understand the duties and responsibilities of auditors.</p>
CO 1643	MANAGEMENT ACCOUNTING	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Develop professional competence and skill in applying accounting information for decision making. 2. Equip the students to interpret financial statements with specific tools of management accounting. 3. Enable the students to have a thorough knowledge on the management accounting techniques in business decision making.
CO 1661.6	MARKETING MANAGEMENT	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Provide knowledge of the concepts, principles, tools and techniques of marketing. 2. Help the students to understand marketing concepts and its applications 3. Make the students aware of modern methods and techniques of marketing.
CO 1661.1	INCOME TAX LAW AND ACCOUNTS	<p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Equip the students with the practical skill and knowledge of Income Tax Law and Accounts. 2. Enable the students to understand the provisions of

		<p>Income Tax for computing Total Income and Tax Liability of various persons.</p> <p>3. Familiarize the students with the procedure of income tax assessment.</p>

PG DEPARTMENT OF ECONOMICS
BA ECONOMICS COURSE OUTCOME

SEMESTER 1

Course Code	Course Name	Course outcome
EC1141	INTRODUCTORY MICROECONOMICS	CO1: To develop a conceptual foundation and analytical methods used in microeconomics. CO2: Students can understand the basic methodology of analyzing individual economic behavior. CO3: It also helps the students to evaluate different market structures and welfare economics.
EC 1131	FOUNDATIONS OF ECONOMIC THEORY	CO1: To provide a basic understanding of economic concepts and theories. CO2: Understand the concept of utility and consumer behavior. CO3: It also gives an idea about different market structures.

SEMESTER 2

Course Code	Course Name	Course outcome
EC 1241	INTERMEDIATE MICROECONOMICS	CO1: To give the students a basic understanding of the principles of microeconomics CO2: Apply economic principles to evaluate real-world problems and to provide solutions. CO3: It also gives an idea about game theory and behavioral economics.
EC 1231	MONEY AND BANKING	CO1: To Provide a basic understanding of the nature and significance of money CO2: Understand the role of the central bank and banking system in India. CO3: Analyse the role and significance of digital banking and e-commerce.

SEMESTER 3

Course Code	Course Name	Course outcome
EC1321	INFORMATICS FOR APPLIED ECONOMETRICS	CO1: Familiarise the students with a plethora of online resources that will help students improve their teaching-learning experience. CO2: The students will also be able to utilize these web resources to enhance their careers and academics. CO3: The course also provides an exposition of econometric concepts and techniques. CO4: Enable the students to conduct and criticize empirical studies in economics and related fields. models using computer software
EC 1341	INTRODUCTORY MACROECONOMICS	CO1: Enable the students to get an idea about the basic concepts used in Macroeconomics. CO2: To enable the students to understand the theoretical framework and the workings of an economy as a whole. CO3: Students get an in-depth introduction to classical & Keynesian economics.
EC 1131	INTRODUCTION TO INTERNATIONAL TRADE AND PUBLIC ECONOMICS	CO1: Students get an idea about the significance of public finance in the context of the increasing role of Government. CO2: It also provides the basic theoretical framework of budgetary mechanisms in India and State activities. CO3: Enable the students to understand various aspects of International Trade.

SEMESTER 4

Course Code	Course Name	Course outcome
EC1441	MATHEMATICAL METHODS FOR ECONOMICS	CO1: To provide the students an insight into the importance of mathematical methods in Economics CO2: Familiarize them with the basic mathematical techniques used in economic analysis. CO3: To understand economic concepts with the aid of mathematical tools and enable them to quantify the variables.

EC 1442	INTERMEDIATE MACROECONOMICS	CO1: To introduce students to the micro-foundations of macroeconomics CO2: It gives students an idea about inflation, unemployment, and economic growth. CO3: It also discusses the fiscal and monetary policies in an open economy
EC 1431	INDIAN ECONOMY SINCE INDEPENDENCE	CO1: To provide a basic understanding of the Indian economy CO2: Familiarise the students with the various concepts of National Income. CO3: It also creates awareness about the significance of agriculture, industry, and service sector in the Economy

SEMESTER 5

Course Code	Course Name	Course Outcome
EC 1541	METHODOLOGY AND PERSPECTIVES OF SOCIAL SCIENCE	CO1: Familiarizes the students with the broad contours of Social Sciences, specifically Economics and its methodologies. CO2: It creates enthusiasm among students, incorporating various concepts and issues in economics. CO3: It also discusses the various aspects of social science research methodology, tools, and analysis procedures
EC 1542	STATISTICAL METHODS FOR ECONOMICS	CO1: Familiarize the students with statistical tools and techniques CO2: Enable them to apply these tools in Economics theories and policy analysis. CO3: Provide a strong foundation in exploratory data analysis, probability theory, statistical inferences, etc.
EC 1543	READINGS IN POLITICAL ECONOMY	CO1: Introduces different perspectives of political economy. CO2: Understand the contributions of different economists in political economy. CO3: Critique the issues of the political economy of India.
EC 1544	ECONOMIC GROWTH AND DEVELOPMENT	CO1: Proves the basic concepts of Economic Growth and Development and enables them to

		<p>acquire multi-dimensional aspects of developmental issues</p> <p>CO2: Inculcates knowledge about the theoretical framework of Growth and Development under different Schools of economic thought.</p> <p>CO3: To raise awareness about Political institutions, the role of the state in Economic Development, and problems that affect state Governance</p>
EC 1545	INTERNATIONAL ECONOMICS	<p>CO1: To give the students basic concepts and theories of international trade</p> <p>CO2: Enable students to have a basic understanding of the emerging trends, issues, and policies in the field of the international economic system.</p> <p>CO3: Understand the consequences of global interdependence.</p>
EC 1551.2	HUMAN RESOURCE MANAGEMENT	<p>CO1: Provide the basis for life enrichment and career orientation.</p> <p>CO2: Provide the basis for understanding the significance of human resources in the growth of our economy and society</p> <p>CO3: It helps the students to learn the ways to integrate HRM strategies in organizations</p>

SEMESTER 6

Course Code	Course Name	Course Outcome
EC 1641	INDIAN ECONOMY	<p>CO1: Provide an understanding of the growth process in the Indian economy.</p> <p>CO2: Analyse the sectoral composition and performance of the economy by focusing on agriculture, industry, and service sectors.</p> <p>CO3: It also examines the external sector and economic reforms in India.</p>
EC 1642	BANKING AND FINANCE	<p>CO1: Familiarize the students with the basic concepts of Banking and Finance.</p> <p>CO2: To develop a comprehensive knowledge of the role of banks in the operation of an economy.</p> <p>CO3: Enables them to know the operation of the Indian Financial System and activities in the financial markets.</p>

EC 1643	PUBLIC ECONOMICS	<p>CO1: Introducing the subject matter and scope of public economics, the role of government, types of market failures, and the concept of public good.</p> <p>CO2: Providing a general understanding of the basic fiscal policy instruments</p> <p>CO3: Generating awareness of public economics in India, with a special focus on budgetary system and fiscal federalism</p>
EC 1644	ENVIRONMENT ECONOMICS AND DISASTER MANAGEMENT	<p>CO1: To create environmental awareness among students.</p> <p>CO2: Familiarises the students about the interlinkages between environment, ecology, and economy.</p> <p>CO3: Provide exposure to disaster management.</p>
EC 1661.1	KERALA ECONOMY	<p>CO1: To understand the structural changes, sector-wise contribution, and features of Kerala's Economy since the formation of the state.</p> <p>CO2: Enable the students to have a basic understanding of the emerging trends and issues of Kerala's Economy.</p> <p>CO3: To understand the problems of the local economy.</p>
EC1645	PROJECT WORK	<p>CO1: Equip the student to identify an issue or topic and conduct the study systematically and scientifically.</p> <p>CO2: Students will get the opportunity to apply various tools they have learned and present the report in a structured manner.</p> <p>CO3: Develops research aptitude and skills among students.</p>

B.A. English

Course code	Course title	Course outcomes
Semester - 1		
EN1141	Introduction to Literary Studies I	<p>CO 1: Introduce varied literary representations.</p> <p>CO 2: Familiarize students with the nature and characteristics of literature.</p> <p>CO 3: Discuss the nature and characteristics of literature</p> <p>CO 4: Introduce two key genres of literature, poetry and drama.</p> <p>CO 5: Possess a foundational understanding of poetry and drama.</p>
EN 1131	Popular Literature and Culture	<p>CO 1: Encourage the student to think critically about popular literature.</p> <p>CO 2: Understand the categories of the —popular and the —canonicall</p> <p>CO 3: Identify the conventions, formulas, themes and styles of popular genres such as detective fiction, the science fiction and fantasy, and children’s literature.</p> <p>CO 4: An assessment of the literary and cultural value of popular texts</p> <p>CO 5: Sensitize students to the ways in which popular fiction reflects and engages with questions of gender, identity, ethics and education.</p>
Semester 2		
EN 1241	Introduction to Literary Studies II	<p>CO 1: Cherish a taste for the literary among students</p> <p>CO 2: Comprehend the nature and characteristics of different genres of literature.</p> <p>CO 3: Detailed awareness of the two key genres of literature- fiction and non-fiction.</p> <p>CO 4: Imbibe the representational possibilities of the respective genres.</p> <p>CO 5: Instill a creative and critical aptitude</p>
EN 1231	Art and Literary Aesthetics	<p>CO 1: The student will be able to engage with literature in a broader, educated perspective.</p> <p>CO 2: The student will be able to think with greater originality and independence about the complex interrelationship between different art forms.</p>

		<p>CO 3: The student will be trained to engage sensitively and intelligently in new readings of literature.</p> <p>CO 4: The course develops an understanding of the co-relation between literature, film, music and painting and encourages ways of reading and seeing which deliver insights into literary texts.</p> <p>CO 5: Initiate students to implement the multidisciplinary scope of art and literary studies.</p>
Semester 3		
EN 1341	British Literature I	<p>CO 1: Comprehend the origins of English literature</p> <p>CO 2: Understand the specific features of the particular periods</p> <p>CO 3: Understand themes, structure and style adopted by early British writers</p> <p>CO 4: Gain knowledge of growth and development of British Literature in relation to the historical developments</p> <p>CO 5: Understand how writers use language and creativity to capture human experience through different literary forms</p>
EN 1321	Evolution of the English Language	<p>CO 1: Knowledge of the paradigm shifts in the development of English.</p> <p>CO 2: Well aware of the historical paradigm shifts in the history of English Language</p> <p>CO 3: Imbibe the plural socio cultural factors that went in to the shaping of the English Language.</p> <p>CO 4: Place English language in a global context.</p> <p>CO 5: Recognize the politics of many ‘_Englishes’.</p>
EN 1331	Narratives of Resistance	<p>CO 1: Be able to identify themes of resistance in different forms and genres of literature.</p> <p>CO 2: Have a sense of the various kinds of injustice related to race, ethnicity, gender etc. prevalent in society.</p> <p>CO 3: Develop an idea of literature as a form of resistance to all forms of totalitarian authority.</p> <p>CO 4: Understand the inter connection between various genres in manifesting resistance</p> <p>CO 5: How resistance is an undeniable presence in the everyday narratives of literary and other artistic expressions.</p>
Semester 4		
EN 1441	British Literature II	<p>CO 1: Sensitize students to the changing trends in English literature in the 18th and 19th centuries and connect it with the sociocultural and political</p>

		<p>developments.</p> <p>CO 2: Develop the critical thinking necessary to discern literary merit</p> <p>CO 3: Be able to recognize paradigm shifts in literature</p> <p>CO 4: Be able to identify techniques, themes and concerns</p> <p>CO 5: Connect literature to the historical developments that shaped the English history</p>
EN 1442	Literature of the 20 th Century	<p>CO 1: Understand social, political, aesthetic and cultural transformations of early twentieth century in relation to literary texts with their specific formal features.</p> <p>CO 2: Know the stylistic features of Modernism and its various literary and aesthetic movements</p> <p>CO 3: Critically engage the ideas that characterise the period, especially the crisis of modernity</p> <p>CO 4: Understand contemporary responses to the historical incidents that mark the period</p> <p>CO 5: Understand and use critical strategies that emerged in the early twentieth century.</p>
EN1431	Philosophy for Literature	<p>CO 1: Have a diachronic understanding of the evolution of philosophy from the time of Greek masters to 20th century</p> <p>CO 2: Have an awareness of the major schools of thought in western philosophy.</p> <p>CO 3: Have a healthy epistemological foundation at undergraduate level that ensures scholarship at advanced levels of learning.</p> <p>CO 4: Talk about some of the key figures in Philosophy.</p> <p>CO 5: Analyze and appreciate texts critically, from different philosophical perspectives</p>
Semester 5		
EN 1541	Literature of Late 20th Century and 21st Century	<p>CO 1: Identify the various socio-cultural changes that evolved in the late modernist period</p> <p>CO 2: Relate to the diverse currents of postmodern literature and its reflections in the contemporary ethos</p> <p>CO 3: Assimilate the inherent multiplicities and fluidity of societal perspectives</p> <p>CO 4: Develop an innate sympathy for the tragedies of Holocaust and an awareness regarding</p>

		<p>the environmental impasses threatening the modern world</p> <p>CO 5: Empathise with the marginalised and comprehend their predicament status of natural</p>
EN 1542	Postcolonial Literatures	<p>CO 1: Ability to critique colonial history</p> <p>CO 2: Awareness of the socio-political contexts of colonialism and postcolonialism</p> <p>CO 3: Understanding of the effects of colonialism in various nations</p> <p>CO 4: Knowledge of the key terms in post-colonial thought</p> <p>CO 5: Study of the race and gender dynamics in postcolonial literature</p>
EN 1543	20th Century Malayalam Literature in Translation	<p>CO 1: Generate knowledge about the varied milieu of the development and growth of Malayalam literature and be sensitive to its socio cultural and political implications.</p> <p>CO 2: Get a basic knowledge of the literary and the non-literary works produced in Malayalam</p> <p>CO 3: Discern the vibrancy of Malayalam literature</p> <p>CO 4: Sense the distinctness of the socio-cultural arena in which Malayalam literature is produced</p> <p>CO 5: Know the value of literature produced in regional languages and key role of translation in the growth of language and literature.</p>
EN 1544	Linguistics and Structure of the English Language	<p>CO 1: Understand the phonological and grammatical structure of English Language</p> <p>CO 2: Be able to analyse actual speech in terms of the principle of linguistics</p> <p>CO 3: Improve the accent and pronunciation of the language</p> <p>CO 4: Introduce the students to internationally accepted forms of speech and writing in English.</p> <p>CO 5: Explore the ancient linguistic tradition of India</p>
EN 1545	Criticism and Theory	<p>CO 1: Analyze and appreciate texts critically, from different perspectives.</p> <p>CO 2: Appreciate Indian Aesthetics and find linkages between Western thought and Indian critical tradition.</p> <p>CO 3: Show an appreciation of the relevance and value of multidisciplinary theoretical models in literary study.</p> <p>CO 4: Demonstrate an understanding of important theoretical methodologies and develop an aptitude for critical analysis of literary works.</p>

		CO 5: Gain a critical and pluralistic understanding and perspective of life
EN 1551.3	Film Appreciation	CO 1: Decipher the meaning of a movie CO 2: Watch, understand and analyze films from a critical perspective CO 3: Connect movies to its multidisciplinary scope of appreciation and learning. CO 4: Equip them to write critically about film. CO 5: Equip them to be resourceful to find a career in areas related to film
Semester 6		
EN 1641	Gender Studies	CO 1: Recognize the patriarchal bias in the formation of history and knowledge. CO 2: Analyse the ways in which gender, race, ethnicity class, caste and sexuality construct the social, cultural and biological experience of both men and women in all societies. CO 3: Recognize and use the major theoretical frames of analysis in gender studies CO 4: CO 5: Interrogate the social constructions of gender and the limiting of the same in to the male-female binary in its intersections with culture, power, sexualities and nationalities CO 5: Examine gender issues in relation to the sustainable goals of development
EN 1642	Indian Writing in English	CO 1: Make students aware of different aspects of colonization like cultural colonization. CO 2: Trace the historical and literary genesis and development of Indian Writing in English CO 3: Acquaint them with the major movements in Indian Writing in English across varied period and genres CO 4: Address the plurality of literary and socio-cultural representations within Indian life as well as letters. CO 5: Enhance the literary and linguistic competence of students by making them aware of how language works through literature written in the subcontinent.
EN 1643	Film Studies	CO 1: Recognize the language of films and use it creatively. CO 2: Analyze films from both technical and non-technical perspectives

		<p>CO 3: Engage questions of social justice and gender justice by critiquing representations of culture.</p> <p>CO 4: Use film as a medium of communication</p> <p>CO 5: Derive an interest in various careers related to film</p>
EN1644	World Classics	<p>CO 1: Understand the study of Classics as a means of discovery and enquiry into the formations of great literary works and how the rich imagery of these classical works continues beyond the twentieth century.</p> <p>CO 2: Recognize the diversity of cultures and the commonalities of human experience reflected in the literature of the world.</p> <p>CO 3: Imbibe a fair knowledge in the various Classical works from different parts of the world, at different time periods, across cultures.</p> <p>CO 4: Examine oneself and one's culture through multiple frames of reference, including the perception of others from around the world.</p> <p>CO 5: Develop and aesthetic sense to appreciate and understand the various literary works with a strong foundation in the World Classics.</p>
GG 1661.5	20th Century Regional Literatures in English Translation	<p>CO 1: Think creatively and critically within and beyond the singularity of regional literature</p> <p>CO 2: Overcome language barrier in the appreciation of literature</p> <p>CO 3: Equip to identify the uniqueness as well as the shared history of the regional literatures</p> <p>CO 4: Engage in translating regional texts into English</p> <p>CO 5: Be able to evaluate their own competences in translation and will be capable of selecting specialized translation courses for higher studies and also as profession.</p>

B.Sc. Geography

Course code	Course title	Course outcomes
Semester -1		
GG 1141	Fundamentals of Geomorphology	<p>CO1: Understand origin and evolution of Universe/Solar System</p> <p>CO2: Critically analyse Continental Drift and Plate Tectonics CO3: Identify major earthquake and volcanic zones of the Earth</p> <p>CO4: Appreciate and evaluate various endogenic processes CO5: Critical understanding of exogenic processes and soil Formation</p>
GG 1142	Practical Paper : Physical Geography	<p>CO1: Understand Latitudes and Longitudes</p> <p>CO2: Identifies the various erosional and depositional landform features</p> <p>CO3: Analyses and interprets weather station models</p> <p>CO4: Illustrates the relief of the ocean floor and ocean currents CO5: Explore the uses advantages of online maps daily life</p>
Semester II		
GG 1221	Climatology & oceanography	<p>CO1 : Understand the global atmospheric circulation</p> <p>CO2 : Critically examine the distribution of pressure systems and winds</p> <p>CO3 : Identify different forms of condensation,precipitation and tropical weather systems</p> <p>CO4 : Appreciate the bottom topography of oceans</p>

		CO5 : Critically analyse the environmental issues associated with Oceans
GG 1142	Practical Paper : Physical Geography	CO1: Understand Latitudes and Longitudes CO2: Identifies the various erosional and depositional landform features CO3: Analyses and interprets weather station models CO4: Illustrates the relief of the ocean floor and ocean currents CO5: Explore the uses advantages of online maps daily life
Semester III		
GG 1341	Cartography	CO1: Appreciates the historical evolution of maps CO2: Acquires skills in enlargement and reduction of maps CO3: Understanding the principles of Map Design CO4: Evaluates the maps prepared for various users/purposes CO5: Familiarizes the latest technologies used in Cartography
GG 1342	Practical paper cartographic techniques	CO1 : Understanding the concept of scales CO2 : Acquiring skills in using magnetic compass CO3 : Differentiate between Projected and Geographic coordinate Systems CO4 : Acquire skills in geometrical construction of map projections .
Semester IV		
GG 1441	Human geography	CO1 : Critical understanding of the nature and scope of Human Geography through a thorough appreciation of the various approaches, and contributions made by renowned

		<p>Geographers</p> <p>CO2: Familiarize with basic concepts and models of spatial interaction and thereby analyse the factors controlling spatial interaction and how it modifies the earth's surface</p> <p>CO3: Evaluate how culture and its components diffuse, modify and restructure the earth's surface</p> <p>CO4: Holistic understanding of the major languages and religions CO5: Enhance the understanding of human settlements through a critical appraisal of its types, patterns, functions and problems</p>
GG 1342	Practical paper cartographic techniques	<p>CO1 : Understanding the concept of scales</p> <p>CO2 : Acquiring skills in using magnetic compass</p> <p>CO3 : Differentiate between Projected and Geographic coordinate Systems</p> <p>CO4 : Acquire skills in geometrical construction of map projections</p>
	Semester V	
GG 1541	Physical geography of india	<p>CO1: Understanding the physical characteristics of India</p> <p>CO2: Acquiring knowledge regarding the drainage systems Of India</p> <p>CO3: Examines the concept of Monsoon and its causes</p> <p>CO4: Understanding the importance and status of natural resources in India</p> <p>CO5: Acquiring comprehensive knowledge about the environmental issues</p>
GG 1542	Economic and social geography of india	<p>CO1: Understanding the history of economic development in India CO2: Developing a cognitive understanding of the distribution of resource potentials in the country</p> <p>CO3: Developing skills in mapping the spatial distribution of</p>

		<p>various resources</p> <p>CO4: Critically analyses the demographic profile of India</p>
GG 1543	Fundamentals of remote sensing and GIS	<p>CO1 : Understand the principles of Remote Sensing system</p> <p>CO2 : Apply GIS and remote sensing data in various areas of Geographical and Environmental Studies</p> <p>CO3 : Interpret satellite images and aerial photos with the help of elements of visual image interpretation</p> <p>CO4 : Conduct Field surveys using GPS system</p> <p>CO5 : Integrate data from various sources for GIS analysis</p>
GG 1544	Practical II techniques of data collection	<p>CO1 : Shall become aware of various primary data collection techniques</p> <p>CO2 : Will have acquired the skill of collecting data and organising them using various methods</p> <p>CO3 : Will be able to prepare an effective questionnaire</p> <p>CO4 : Will enhance the skill to find directions and make rough estimate of distances during field survey</p> <p>CO5 : Will develop the skill to use GPS for finding location and altitude of places.</p>
GG 1545	Practical – III Map reading and spatial information techniques	<p>CO1: Will acquire skills in representing relief using contours</p> <p>CO2: Identify Grid references,conventional signs and symbols used in topographical maps</p>

		<p>CO3 : Interpret physical and cultural features represented in topographical maps</p> <p>CO4 : Comprehend techniques of estimating slope from maps</p> <p>CO5: Will acquire knowledge on Georeferencing and Digitizing</p>
GG 1551.1	Geography of tourism	<p>CO1: Analyses various types of tourism and their geo-backup</p> <p>CO2: Examine the elements of tourism and its significance in the growth and development of tourism</p> <p>CO3: Evaluate the significance of tourism in the cultural, social and economic milieu of geographic spaces</p> <p>CO4: Recognize the role of various travel agencies in tourism</p> <p>CO5: Understand the spatial dimensions of tourism attractions at state and local level</p>
	Semester V	
GG 1641	Geography of Kerala	<p>CO1: An in-depth knowledge on evolution and physical settings</p> <p>CO2: Appreciate Agricultural development of Kerala</p> <p>CO3: Evaluate Mineral and Power Resources of Kerala</p> <p>CO4: Analyse Industrial Development of the state</p> <p>CO5: Understanding Population composition and transportation networks of Kerala</p>

GG 1642	World regional and economic geography	<p>CO1: Understand the concept of a Region and classify methods of delineation of regions</p> <p>CO2: Identify major Natural Regions and differentiate their physical and economic Characteristics</p> <p>CO3: Classify Natural Resources and understands the concept of Sustainable Development</p> <p>CO4: Analyze the role of MNC's and TNC's in globalizing world trade</p>
GG 1643	Practical paper IV- representation and interpretation of geographic data	<p>CO1: Ability to represent socio-economic data through graphs and diagrams</p> <p>CO2: Acquire skills to represent climatic data</p> <p>CO3 : Develop skills to analyse and interpret Weather maps</p> <p>CO4: Acquire basic awareness on Computers and MS Office applications</p>
GG 1644	Practical paper V foundation to surveying and levelling	<p>CO1: Understand various land surveying techniques</p> <p>CO2: Sketch a field plan during ground-based survey</p> <p>CO3: Carry out survey based on principles and procedures</p> <p>CO4: Estimate the area and relative height of field objects</p> <p>CO5: Assess the pros and cons of various surveying techniques</p> <p>CO6: Prepare tour report with critical analysis on field experience</p>
GG 1661.1	Environmental geography & disaster management	<p>CO1: Gains knowledge about concept, scope of Environmental Geography and components of environment</p> <p>CO2: Develop an idea about human- environment relationships</p> <p>CO3: Acquiring knowledge on environmental programme and policies</p>

		<p>CO4: Understanding the definition, classification of Hazards and disasters</p> <p>CO5: Acquires an idea about Disaster management cycle</p>
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B.A. HINDI

Course Code	Course Title	Course Outcomes
SEMESTER -I		
HN 1111.1	Common Course (BA/Bs.c)-Hindi Katha Sahitya	<ol style="list-style-type: none">1. Recollect the main works of the representative fiction writers.2. Understand the craft of the fiction writers.3. Analyses and evaluate the works of the fiction writers they studied.4. Understand how the resource language is used as a medium in creative writing.
HN1111.2	- Hindi Vyavasayik Lekhan	<ol style="list-style-type: none">1. Appreciates prose writing in Hindi.2. Critically evaluates the contribution of prescribed writers of prose to Hindi Literature.3. Differentiates various types of letters based on their styles and components.4. Writes personal, official and business letters in Hindi.
HN 1131	Complementary Course1- Samakaleen Sahityik Vimarsh	<ol style="list-style-type: none">1.To students understand the latest trends in literature critically evaluate different discourses in modern Hindi literature
HN 1132	Complementary Course2- Pracheen Tatha Madhyakaleen Bharatiya Sanskriti	<ol style="list-style-type: none">1.Students understand Ancient and medieval culture of India.2.Evaluate contribution of various dynasties to the cultural heritage of India
HN1141	CORE COURSE 1- Hindi Kathetar Gadya Sahitya	<ol style="list-style-type: none">1.Understands the different forms of prose other than fiction.2.Critically evaluates and appreciates the different prose forms.3.Enriches the aesthetic sense of students
Semester -II		

HN1211.1	Common Course(BA/Bs.c)- Hindi Nibandh Aur anya Gadya Vidhayem	<ol style="list-style-type: none"> 1. Recollect the main works of the prescribed writers. 2. Understand the forms of various Prose writing in Hindi. 3. Analyse and evaluate the prose forms prescribed with respect of the craft and the relevance
HN 1231	COMPLEMENTARY III- Kathakar Premchand	<ol style="list-style-type: none"> 1. The students attain comprehensive knowledge of Premchand as fiction writer. 2. Appreciates & critically evaluates prescribed short stories and novel of Premchand. 3. Evaluates the contribution made by Premchand in the field of Hindi fiction writing.
HN1232	COMPLEMENTARY IV - Paristhithik Paat Aur Hindi Sahitya	<ol style="list-style-type: none"> 1. The students get a comprehensive knowledge of how environmental issues are depicted in literature. 2. Critically evaluates short stories & poems in the light of the environmental issue discussed in them. <p>Students are motivated to interfere in the environmental; issues around them</p>
AaHN 1241	CORE COURSE II- Hindi Sahitya ka Ithihas(Ritikal tak)	<ol style="list-style-type: none"> 1. The students gain comprehensive knowledge of the classification of Hindi literature from the beginning to 1800 AD. 2. Critically evaluate the contributions of poet to Hindi literature during the various periods.
SEMESTER III		
HN1311.1	Common Course (BA/B.SC)– Hindi Natak	<ol style="list-style-type: none"> 1. Critically appreciates play 2. Understands difference

	vyakaran tatha Anuvad	<p>between spoken Hindi and written Hindi.</p> <ol style="list-style-type: none"> 3. Writes grammatically correct sentences in Hindi. 4. Defines different parts of speech and identifies them in a given sentence. 5. Translates simple passages from English to Hindi.
HN 1331	Complementary Course V- Tulanatmak Adhyayan	<ol style="list-style-type: none"> 1. Understand the basic techniques of comparison of Hindi and Malayalam fiction and poetry. 2. Compares fiction and poem of Hindi & English.
HN 1332	Complementary Course VI- Rajbhasha Prabandhan	<ol style="list-style-type: none"> 1. Attains comprehensive knowledge of official language Hindi. 2. Does noting & drafting in Hindi. 3. Understands official language Hindi management. 4. Opens a career option that of translator/Hindi officer in Central Govt. Officers/PSUS/Banks.
HN 1321	Foundation Course- Soochana Praudyogiki aur Aadhunik Patrakarita	<ol style="list-style-type: none"> 1. Understands possibilities of computing in Hindi. 2. Updates and expands Basic informatics skills. 3. Understands modern trends in Journalism.
HN 1341	Core Course III- Hindi Sahitya ka Itihas.	<ol style="list-style-type: none"> 1. To give the students a detailed account of the trends in Hindi Literature since 1800. 2. To familiarize the students with the Socio, economic, political situation since 1800 and its influence on Hindi Literature. 3. To give comprehensive knowledge

		about the contribution of main litterateurs of the modern period.
SEMESTER IV		
HN 11.1	Common Course(BA/B.SC)- Hindi Kavitha Evam Ekanki	<ol style="list-style-type: none"> 1. To understand development of Hindi poetry through selected poems. 2. To develop the faculty of appreciation of Hindi poems. 3. To familiarize the students with the development of one act plays in Hindi Learn to appreciate Hindi one act plays.
HN1431	Complementary Course VII- Bharatiya Sahitya	<ol style="list-style-type: none"> 1. To familiarize the students with the concept of one Indian Literature 2. To familiarize the students with renowned Indian writers through their representative works.
HN 1432	Complementary Course VII- Patkatha Lekhanva Vigyapan	<ol style="list-style-type: none"> 1. To know the technique and process of script Writing. 2. To understand the form and procedure of Advertisement. 3. To understand the importance of advertisement.
HN1441	Core Course IV- Hindi Natak aur Rangmanch	<ol style="list-style-type: none"> 1. To understand the development of plays in Hindi Literature. 2. To understand the development of theatre in Hindi. 3. To understand the distinct features of Hindi play through two representative plays. 4. To understand the trends in Hindi plays upto 1980 through a representative play. 5. To understand the changes in Hindi play since 1980 through a representative play.

HN1442	Core Course V- Vishesh Lekhak Agney	<ol style="list-style-type: none"> 1.Appreciates Agney as a poet & fiction writer. 2.Critically evaluates the contribution of ancient & modern poets to the development of Hindi poetry. 3.Elucidates key lines of poetry with reference to context. 4.Appreciates and evaluates one act play with respect to craft and subject.
SEMESTER -V		
HN 1541	Core Course VI- Pracheen evam Madhya Kaleen Hindi Kavya	<ol style="list-style-type: none"> 1.Appreciates ancient & medieval poetry. 2.Critically evaluates the poetry of representative ancient & medieval poets. 3.Critically evaluates the contribution of these poets to Hindi literature. 4.Elucidates key lines of the poems of ancient & medieval poets.
HN 1542	Core Course VII- Adhunik Hindi Kavya	<ol style="list-style-type: none"> 1. Understands and evaluates development of modern Hindi poetry. 2. Appreciates modern poetry. 3. Critically evaluates prescribed poets and their poems with respect to theme, style& craft.
HN 1543	Core Course VIII - Aadhunik Hindi Katha Sahitya	<ol style="list-style-type: none"> 1. Appreciates modern Hindi fiction. 2.Critically evaluates modern Hindi fiction upto 1980 3. Inspires creativity in students. 4.Understands and evaluates development of fiction in Hindi (upto 1980)
HN 15544	Core Course IX- Hindi Vyakaran	<ol style="list-style-type: none"> 1.Enumerates on Varna and its classification 2.Enumerates 4 Vikari sabd

		<p>3. Does Pada Vyakhya.</p> <p>4. Writes grammatically correct sentences.</p>
HN 1545	Core Course X- Bhasha Vigyan Va Bhasha Ka Itihas	<p>1.Understands basic theories of linguistics & history of Hindi languages.</p> <p>2.Enumerates Dwanivigyan, Roopvigyan,Vakya vigan& Arth vigan.</p> <p>3.Classifies world languages.</p> <p>4.Classifies Indo European languages.</p> <p>5.Enumerates Hindi language and its dialects.</p>
HN 1551	Open Course – Hindi Cinema	<p>6.Understands Lipi</p> <p>1. Understand development of world cinema & Hindi Cinema</p> <p>2. Critically evaluate Hindi cinema</p>

SEMESTER VI		
HN 1641	Core Course XI- Samakaleen Hindi Katha Sahitya	<p>1.Kindles creativity in students.</p> <p>2.Students critically evaluate contemporary fiction.</p> <p>3.Appreciates contemporary fiction.</p>

HN 1642	Core Course XII- Bharatiya evam Paschatya Kvyasasthr	Course Outcome: 1) understands various Indian and western literary theories. 2) Identifies prescribed chands and Alankars 3) understands the power of words. 4) Applies the knowledge gained in their creative writing.
HN 1643	Core Course XIII Anuvad: Sidhant tatha Prayog	Course outcome: (1) understands theories of Translation and limitations of Translation (2) Translates simple passages from English to Hindi and Vice Versa (3) opens career option that of Translator.
HN1644	Core Course XIV Hindi Vyangya Sahitya	Course outcome: (1) understands and evaluates satirical literature (2) understands use of satire as a tool while discussing socio-economic-political issues in literature
HN 1661	Elective Course -Jan Sanchar aur Hindi	Course outcome: (1) understands history of

	Cinema	world cinema (2) understands development of Hindi cinema (3) understands mass communication and cinema as medium of mass communication (4) critically evaluates film
HN 1645	Dissertation	Outcome: (1) Develops skill of enumeration (2) Develops critical evaluation

B.A. HISTORY

Course code	Course title	Course outcomes
Semester -1		
HY 1141	Discipline of History and Social Sciences: Methodology and Perspectives	CO1: To understand the myriad disciplines of Social Sciences with particular reference to History and its methodology CO2: To understand the autonomy of the discipline of history and the pluri- multi character of the discipline CO3: To apply different theories in understanding past CO 4: To analyze and evaluate the historical process in relation to power relations of the society CO 5: To Evaluate the methodology and objectivity of the discipline of history CO 6: To create critical history introspecting power relations.
HY 1131.1 (Complementary for Economics)	History of National Movement in India Part I	CO1: To understand the theoretical perceptions of colonialism to imperialism CO 2: To evaluate the socio-cultural roots of colonialism CO 3: To analyze the ideological and historical backdrop of the social reform movements and its reactions to the process of making of a nation CO 4: To account a theoretical insight of the national movement
HY 1131.2 (Complementary for Political Science)	History of Modern World Part I	CO 1: To understand the theoretical and ideological background of revolution and its impact CO 2: To understand the political, socio-economic, changes of the 19th century world CO 3: To analyze the process of economic revolutions CO 4: To evaluate the new trends and ideas
Semester II		
HY1241	Global History: Socio-Cultural Formations in the Early Period	CO1 : To understand the theoretical and ideological background evolution of the world and human origin

		<p>CO2 : To understand the social evolutions of the early world</p> <p>CO 3 : To analyze the process cultural formations of the early world</p> <p>CO 4 To evaluate the genesis and growth of state and society early world</p>
<p>HY 1231.3 (Complementary for Economics)</p>	<p>History of National Movement in India Part II</p>	<p>CO1: To understand the theoretical perceptions of nation and nationalism</p> <p>CO 2: To evaluate the economic impacts of the British Raj</p> <p>CO3: To analyze the ideological underpinnings behind the construction of nation in India on the milieu of theoretical insights</p> <p>CO 4: To account a historiographical insight on Gandhian ideology</p>
<p>HY 1231.4 (Complementary for Political Science)</p>	<p>History of Modern World Part II</p>	<p>CO 1: To understand stages of colonialism and colonial expansions</p> <p>CO 2: To understand the political outcome of world war I</p> <p>CO 3: To analyze the process of socialist revolution in Russia</p> <p>CO 4: To critically evaluate the socialist policies after the revolution</p>
Semester III		
<p>HY 1321</p>	<p>Reconstructing the Past</p>	<p>CO 1 To learn the theory and practice of historical research as practiced by professionals</p> <p>CO 2: To understand the method of writing history.</p> <p>CO 3: To analyse the various tools pertaining to the writing of history</p> <p>CO 4: To construct original historical</p>

		arguments based on primary source material research
HY1341	Understanding State and Society in Early India	CO 1 : Locate major pre-historic settlements and evolution of early farming communities CO 2 : Examine the evolution of Varna and Jati based social structure in Early India. CO 3 : Critique the social base of heterodox religions of 6th Century BC and its influence in power relations. CO 4 : Appraise the cultural achievements of the Guptas CO 5: Differentiate Tamil literary traditions and locate Tinai's across time and region. .
HY 1331.5 (Complementary for Economics)	History of National Movement in India Part III	CO1 : To understand the historical roots of national movement CO2 : To evaluate the various social class role in the national movement CO 3 :. To analyze the theoretical perceptions on national movement CO 4 : To account the making process of nation in India
HY 1331.6 (Complementary for Political science)	History of Modern World Part III	CO1 : To understand the theoretical and ideological background of dictatorships CO 2 : To understand the process of World War II CO 3 :. To analyze the post war developments in the world CO 4 : To critically evaluate the role of India in the post war world
Semester IV		
HY1441	State and Society in Pre-Colonial India	CO1 : To get an overview of the political, cultural, social and economic life in Medieval India CO 2: To focus on the regional cultures during the period.

		<p>CO 3: To appraise the linkage effect of the Medieval Period in subsequent centuries</p> <p>CO 4: Interpret the social cultural and administrative features during the Medieval Period</p> <p>CO 5: Develop practical skills helpful in the study and understanding of historical events</p>
HY1442	Social Formations in Early South India	<p>CO1 : Understand the socio, economic and cultural condition of the pre modern South India</p> <p>CO 2 : To identify the sources for the history of South India</p> <p>CO 3 : Discuss the contribution of Pallavas and Cholas to South Indian art and architecture.</p> <p>CO 4 : To examine features of social formation in early South India</p> <p>CO 5: To appraise the transformation from Argo-pastoral to agrarian social formation by exploring areas like economy, society and historical process of state formation</p>
HY 1431.7 (Complementary for Economics)	Contemporary India	<p>CO 1 : To understand the process of national integration</p> <p>CO 2 : To understand making process of the constitution</p> <p>CO 3 : To analyze the political and economic changes in the post-independent India</p> <p>CO 4 : To account the problems and issues in post independent India</p>
HY 1431.8 (Complementary for Political Science)	Contemporary World	<p>CO 1 : To understand the theoretical and ideological concepts of neo colonialism</p> <p>CO 2 : To understand the growth and role of third worlds</p> <p>CO 3 : To analyze the process and functions of post-world war organizations</p> <p>CO 4 : To critically evaluate and debate on the contemporary issues of the world</p>
	Semester V	

HY 1541	Core Major Trends in Historical Thoughts and Writings - Part I	<p>CO 1: To understand the myriad forms of representing past and differentiating history from the other forms of representation of past.</p> <p>CO 2: To analyse the genesis and development of historical thought and writing in different times and spaces or societies.</p> <p>CO3: To analyse the philosophical foundations of the discipline of history and its changing nature in accordance with time and space.</p> <p>CO 4: To evaluate the types of historical literature.</p> <p>CO 5: To create scientific and analytical history.</p>
HY 1542	Capitalism and Colonialism: Forms of Resistance in India	<p>CO 1: To understand the theoretical and ideological background of colonialism and capitalism</p> <p>CO 2: To understand the socio-economic and cultural impingement of colonial intervention</p> <p>CO 3: To analyze the process of colonizing India against the backdrop of theoretical insights</p> <p>CO 4: To evaluate the genesis and growth of critical intervention of the colonial subjects towards the British Raj</p>
HY 1543	Pre-Modern Kerala	<p>CO 1 To understand the historical and cultural evolution through the sources of Kerala history</p> <p>CO 2 : To understand geographical feature and unique ness of Kerala</p> <p>CO 3 : To evaluate the concept of cultural symbiosis and its impact on material culture and society of Kerala</p> <p>CO 4 : To understand and evaluate the significance of the social reform movements in Kerala</p>
HY 1544	Making of a Nation in India	CO1 : To understand the theoretical perceptions of nation and nationalism

		<p>CO 2 : To evaluate the making process of the nation in India</p> <p>CO 3 : To analyze the ideological underpinnings behind the construction of nation in India on the backdrop of theoretical insight</p> <p>CO 4 : To account a sound knowledge about changes that took place among the historians regarding the notion of national movement in India</p>
HY1545	Transition to Modern World	<p>CO 1: To understand the theoretical and ideological background of transformation towards the modern world</p> <p>CO 2: To understand the socio-economic, cultural and political intrusions of the process of modern world</p> <p>CO 3 : To analyze the process and global impacts of revolutions</p> <p>CO 4 : To evaluate the genesis and growth of new nationalism and its aftermath</p>
	Historical Method: Mechanics of Project Writing	<p>CO 1: To understand the method of writing history</p> <p>CO 2: To understand the various tools pertaining to the writing of history and its application in history writing</p> <p>CO 3: To understand the new theories and concepts in historical methodology and its application in analysing and interpreting the past</p>
HY 1551.2 (Open Course)	Principles and Methods of Archeology	<p>CO1: Explain the evolution and growth of Archaeology in India</p> <p>CO 2: Define Archaeology and its relation with other disciplines</p> <p>CO 3: Examine the techniques of Exploration and Excavation.</p>

		<p>CO 4: Discuss different dating methods in Archaeology</p> <p>CO 5: Distinguish the nature, development and value of Archaeology as a discipline.</p>
	Semester VI	
HY 1641	Major Trends in Historical Thought and Writing -PartII	<p>CO 1: To understand the myriad developments in the historical thought and writing in the Modern West and Modern India</p> <p>CO 2: To analyse the colonial roots of Indian Historiography and evaluate the multiple Indian responses to it.</p> <p>CO 3: To evaluate the critical responses from the subaltern and Women's history approaches.</p> <p>CO 4: To evaluate the Total History approach and post-modern turn in historical thinking and writing.</p> <p>CO 5: To create critical history.</p>
HY 1642	Modern Kerala	<p>CO 1: To analyse the changing nature of Socio, political and economic structure of Kerala against the backdrop of Colonial Modernity.</p> <p>CO 2: To evaluate the process of socio-cultural symbiosis and the negotiations and contestations of myriad social categories</p> <p>CO 3: To evaluate the process of democratization of Kerala society and polity</p> <p>CO 4: To critically understand the Kerala Model Experience</p>
HY 1643	Contemporary India	<p>CO 1: To understand the process of national integration</p> <p>CO 2: To understand making process of the constitution</p>

		<p>CO 3 : To analyze the political and economic changes in the post-independent India</p> <p>CO 4: To account the internal contradictions in the post- independent India</p>
HY 1644	Twentieth Century World	<p>CO 1 : To understand the theoretical and ideological background of socialist revolutions and its impact on the twentieth century world</p> <p>CO 2: To understand the political, socio-economic, cultural outcomes of two world wars</p> <p>CO 3: To analyze the process of authoritarian and totalitarian concepts</p> <p>CO 4: To critically evaluate the exertion of world peace organization</p> <p>CO 5: To understand the theoretical and ideological background of global politics and the world wars</p>
HY 1661.4 (Elective)	Introduction to Museology: Methods and Conservation Practice	<p>CO1: To identify theoretical and practical knowledge of the collection, and preservation of museum objects</p> <p>CO 2: To differentiate types of preservation techniques</p> <p>CO 3: To demonstrate the aspects of artefacts collection and techniques of Display</p> <p>CO 4: Able to select museum collections and implement the knowledge of museum designing</p>

B. A MALAYALAM

SEMESTER I		
Course Code	Course Title	Course Outcomes
ML 1141	Novel Literature in Malayalam	1.Analyze Malayalam novels' literary and cultural significance 2. Interpret social and historical contexts influencing Malayalam novel writing
ML 1111.1	Malayala kavitha	1.Demonstrate critical thinking and writing skills in Malayalam poetry. 2. Appreciate diverse Malayalam poem traditions.
ML 1131.1	Kerala Culture Study	1.Students will gain a deeper understanding of kerala culture, traditions, historic events which enhance critical thinking on oriental life.
SEMESTER II		
Course Code	Course Title	Course Outcomes
ML 1241	Drama Literature	1 Understand the historical and cultural context of Kerala's drama 2 Identify key elements of Malayalam drama and theatre
ML 1211.1	Prose Literature	1.Demonstrate knowledge and critical evaluation of prose literature in Malayalam 2 understand Kerala's cultural heritage and its representation in prose.
ML 1231.1	Kerala Culture study	1.Students will gain a deeper understanding of Kerala's unique traditions, cultural heritage, and literary significance.
SEMESTER III		
Course Code	Course Title	Course Outcomes
ML 1321	Information technology and	1. Enhance the ability to build a strong foundation in Informatics in connection with Malayalam literature.

	Malayalam literature	
ML 1331.1	Environmental study	<ol style="list-style-type: none"> 1. Analyze the intersection of Environmentalism and literature 2. Understand philosophical perspectives on human-nature relationships.
ML 1341	literature philosophy :Eastern &Western.	<ol style="list-style-type: none"> 1. Identify critical themes and motifs in literature philosophy 2. Interpret literary works through philosophical lenses.
ML 1311.1	Language Sense and Creativity	1.Demonstrate critical thinking on aesthetics , ethics, and social responsibility in literature
SEMESTER IV		
ML 1441	Modern Malayalam Poetry	<ol style="list-style-type: none"> 1.Analyze the relationship between visual art and literature 2. Understand how art influences literary themes and vice versa
ML 1441	Modern malayalam poetry	1.Demonstrate critical &aesthetic thinking on the intersection of art and literature based on poetry
ML 1442	Literature criticism.	1.Students will gain a deeper understanding of comparative study on social art and literature, enhancing their creative and critical thinking skills
ML 1431	Subaltern studies &feminist literature	1.Attains deep know how in gender issues of society and paves the way of right understanding of feminine perspective.
SEMESTER V		
ML 1542	Short Story Study	<ol style="list-style-type: none"> 1.Analyze short story structures, themes, and narrative techniques. 2.Interpret character development, plot, and symbolism
ML 1543	Translation: Theory & Practice	<ol style="list-style-type: none"> 1.Understand translation theories and principles. 2. Apply translation skills to literary texts.

ML 1544	Biography, Autobiography & Travaloge	<ol style="list-style-type: none"> 1. Analyze life writings and travel narratives. 2. Identify themes, motifs, and literary devices.
ML 1545	History of Malayalam Language	<ol style="list-style-type: none"> 1.Trace the evolution of Malayalam language. 2.Understand its literary, cultural, and social contexts
ML 1551.2	Gender Justice Literature & Differently Abled Studies	<ol style="list-style-type: none"> 1.Analyze literary representations of gender and disability.
ML 1551.4	Popular Literature Studies	<ol style="list-style-type: none"> 1.Examine popular literary genres and their cultural significance. 2.Analyze themes, motifs, and narrative techniques in popular literature
SEMESTER VI		
ML 1641	History of Malayalam Literature:-part 2	<ol style="list-style-type: none"> 1.Understand the evolution of Malayalam literature from ancient to modern times. 2.Analyze key literary movements, authors, and works
ML 1643	Pre-Modern Malayalam Poetry	<ol style="list-style-type: none"> 1.Study the development of Malayalam poetry before the modern era. 2.Analyze poetic forms, themes, and literary devices.
ML 1644	Folklore Study	<ol style="list-style-type: none"> 1.Explore Malayalam folklore and its cultural significance. 2.Analyze folktales, myths, and legends, and their literary representations.
ML 1651	Oriental Aesthetics	<ol style="list-style-type: none"> 1.Understand the principles of Eastern aesthetics and literary theory. 2.Analyze the application of Oriental aesthetics in Malayalam literature.

Course Outcomes (CO) for First Degree Programme in Mathematics (Core)

Course Code	Course Name	Course Outcomes	
Semester 1			
MM 1141	Methods of Mathematics	CO1	Define, maxima, minima, critical points and points of inflection.
		CO2	Apply the concept of differentiation in real life situation.
		CO3	Explain logic and various proof techniques.
		CO4	Illustrate decomposition of an integer into prime factors
Semester 2			
MM 1241	Foundations of Mathematics	CO1	Describe the integration of a function and learn its physical interpretation through various examples
		CO2	Demonstrate various applications of integration.
		CO3	Compute tangent lines to polar curves, arc length and area.
		CO4	Sketch conic sections such as parabola, ellipse and Hyperbola.
		CO5	Distinguish the cylindrical and spherical coordinate systems.
Semester 3			
MM 1341	Number Theory and Multivariable Calculus	CO1	Explain the concept of congruence
		CO2	Analyse linear system of congruence equations
		CO3	Define the concept of limit, continuity, derivative of vectorvalued functions
		CO4	Illustrate various applications of multivariable calculus.

Semester 4			
MM 1441	Theory of Matrices and Multivariable Calculus	CO1	Define the concepts of Matrix operations their algebraic properties, System of linear operations and their Matrix representation, Gauss - Jordan Elimination
		CO2	Describe the concepts of Multiple integrals.
		CO3	Apply double and triple integrals to solve real life problems.
		CO4	Describe the concepts potential functions, line integrals and surface integrals.
Semester 5			
MM 1541	Real Analysis -I	CO1	Understand the fundamental properties of Real Numbers that corroborate the formal development of Real Analysis.
		CO2	Demonstrate and understand the theory of real sequences and series.
		CO3	Ability to check the convergence or divergence of different sequences and series.
		CO4	Understand and perform simple proofs.
		CO5	Understand the concepts related to limit of functions.
MM 1542	Complex Analysis -I	CO1	Understand the algebraic operations of complex numbers, complex functions.
		CO2	Understand the limits, continuity and differentiability of complex functions.
		CO3	Analyze analytic functions and other elementary functions.
		CO4	Apply contour integration, Cauchy's theorem and Cauchy's integral formula.
MM 1543	Abstract Algebra - Group Theory	CO1	Apply algebraic ways of thinking.
		CO2	Examine abstractly about algebraic structures.
		CO3	Analyse a given structure in detail.

		CO4	Compare structures
MM 1544	Differential Equations	CO1	Solve linear-first order ordinary differential equations.
		CO2	Solve homogeneous and non-homogeneous linear differential equations with constant coefficients.
MM 1545	Linear Algebra	CO1	Understand elementary concepts in vectorspace, subspace, linear transformation, eigenvalues and eigenvectors.
		CO2	Find the bases and dimension of a vector space.
		CO3	Diagonalize various types of matrices.
MM 1551.3	Basic Mathematics (Open Course)	CO1	Getting acquainted with various number systems and learning the basic operations on these numbers.
		CO2	Learning to perform basic tasks related to ratio and proportions.
		CO3	Getting exposed to basic statistical tools.
		CO4	To be able to mathematically formulate real life problems and thus solve them.
-	Typesetting Scientific Documents with LATEX (Lab)	CO1	Know the basics of typesetting an article for a scientific publication
		CO2	Typeset mathematical expressions in a LATEX document
		CO3	Understand the basics of making a slide-show presentation using Beamer.
Semester 6			
MM 1641	Real Analysis -II	CO1	Understand the concepts of continuity, differentiability and integrability, more rigorously than what we done in the previous calculus course
		CO2	Understand the fundamental properties of continuous functions on intervals.
		CO3	Understand the basic theory of derivatives.
		CO4	Get an exposure to the theory behind the integration basic theory of derivatives

MM 1642	Complex Analysis -II	CO1	Understand Sequence, Series and Power Series Representation of Complex Function
		CO2	Understand Singular Points, Zeros and Residue of Complex Functions
		CO3	Apply Taylor's Series, Laurent Series and Residue Theorem
		CO4	Understand Conformal Mapping, Linear Fractional Transformation and Cross-ratio.
MM 1643	Abstract Algebra-Ring Theory	CO1	Upon Completion of this Course, students will be able to construct sub structures
		CO2	Understand and prove fundamental results and solve algebraic problems using appropriate techniques
		CO3	Demonstrate insight into abstract algebra with focus on algebraic theories.
		CO4	Develop new structures based on given structures.
MM 1644	Integral Equations	CO1	Categorise and solve different integral equations using various techniques.
		CO2	Enable to apply Laplace Transforms to various industry related and applied problems.
		CO3	Analyse the properties of certain functions using Fourier series
MM 1645	Programming with Python	CO1	Aquainted with writing and executing programmes in Python.
		CO2	Able to use Python for basic math computing and visualizing data.
MM 1661.1	Graph Theory (Elective Course)	CO1	To define and understand the fundamental concepts of graph theory
		CO2	To apply the concepts and theorems that are treated in the course for problem-solving and proofs
		CO3	To write combinatorial proofs, including those using basic graph theory proof techniques such as minimal counter examples, double counting, and Mathematical induction.
Course Outcome(CO) for Complementary Course in Mathematics for First Degree Programme in Chemistry			

Semester 1			
Course Code	Course Name		Course outcomes
MM 1131.2	Differential Calculus and sequences and series	CO1	Learn various techniques of Differentiation
		CO2	Learn applications of Differentiation
		CO3	Learn to find maxima and minima of functions of two variables
		CO4	Introduce sequences, their limits, convergence and some related theorems.
Semester 2			
MM 1231.2	Integral calculus and vector differentiation	CO1	Learn various techniques of integration
		CO2	Understand applications of integration
		CO3	Evaluate double and triple integrals
		CO4	Find dot and cross products, directional derivatives and gradient of vector valued functions
Semester 3			
MM 1331.2	Linear Algebra, Probability Theory & Numerical Solutions	CO1	Learn basic Linear Algebra
		CO2	Understand probability and standard distributions
		CO3	Learn to solve algebraic and transcendental equations by numerical methods.
Semester 4			
MM 1431.2	Differential Equations, Vector Calculus, and Abstract Algebra	CO1	Learn to solve ordinary differential equations.
		CO2	Learn vector integration – line, surface and volume integrals.
		CO3	Introduce Groups, Rings and Fields
Course Outcome (CO) for Complementary Course in Mathematics for First Degree Programme in Physics			

Semester 1			
MM 1131.1	Calculus and sequences and series	CO1	Learn various techniques of Differentiation
		CO2	Learn various techniques of Integration
		CO3	Learn to find maxima and minima of functions of two variables
		CO4	Introduce sequences, their limits, convergence and some related theorems.
Semester 2			
MM 1231.1	Applications of calculus and vector differentiation	CO1	Learn applications of derivatives
		CO2	Learn applications of integration
		CO3	Learn to find maxima and minima of functions of two variables
		CO4	Introduce sequences, their limits, convergence and some related theorems
Semester 3			
MM 1331.1	Linear Algebra, Special Functions and Calculus	CO1	Find solution of Linear equations and eigen values
		CO2	Learn to solve ordinary differential equations
		CO3	Understand vector fields and vector integration
		CO4	Familiar with special functions.
Semester 4			
MM 1431.1	Fourier Series, Complex Analysis and Probability Theory	CO1	Learn Fourier series and Fourier Transforms
		CO2	Introduce calculus of Complex functions
		CO3	Understand probability and standard distributions

B.Sc. Physics

Course code	Course title	Course outcomes
Semester I		
PY1141	Basic Mechanics and Properties of Matter	<p>CO1: Correlate the knowledge gathered to the immediate experimental curriculum.</p> <p>CO2: Distinguish the dynamics of rigid bodies of different shapes.</p> <p>CO3: Explain the implications of conservation laws.</p> <p>CO4: Interpret the flavor of classical fields from oscillations and waves.</p> <p>CO5: Handle the known problems in elasticity, surface tension and viscosity in a more mathematically rigorous way.</p>
Semester II		
PY 1241	Heat and Thermodynamics	<p>CO1: Compare thermal conductivity of various types of conductors and explain the radiation of heat.</p> <p>CO2: Differentiate between various thermodynamic processes.</p> <p>CO3: Judge the efficiency of engines by comparing the performance of various vehicles.</p> <p>CO4: Distinguish entropy and available energy in various thermodynamic processes.</p> <p>CO5: Differentiate between various phase transitions.</p>
Semester III		
PY1341.3	Electronic & Electrical Instrumentation and Circuit Design	<p>CO1: Distinguish between the passive and active electrical components.</p>

		<p>CO2: Identify electronic components.</p> <p>CO3: Recognize electrical and electronic circuits.</p> <p>CO4: Design and construct simple electrical and electronic circuits.</p>
Semester IV		
PY 1441	Electrodynamics	<p>CO1: Identify the principles of electrostatics and apply it to the solutions of problems relating to electric field and electric potential, boundary conditions and electric energy density.</p> <p>CO2: Identify the principles of magnetostatics and apply it to the solutions of problems relating to magnetic field and magnetic potential, boundary conditions and magnetic energy density.</p> <p>CO3: Recognize the concepts related to Faraday 's law, induced emf and Maxwell's equations.</p> <p>CO4: Compare the properties of electromagnetic waves in vacuum, and matter.</p> <p>CO5: Analyse the growth and decay of transient currents in different electrical circuits.</p> <p>CO6: Compare the properties of different ac circuits.</p>
PY1442	Basic Physics Lab	<p>CO1: Familiarize with the precautions and steps of systematic recording of an experiment.</p> <p>CO2: Understand multiple experimental techniques for determining physical quantities.</p> <p>CO3: Develop skill in setting up of apparatus for accurate measurement of physical quantities.</p> <p>CO4: Apply and illustrate the concepts of mechanics, heat and acoustic experiments.</p>

PY 1442.1	Industry Based Lab : Electronic & Electrical instrumentation and circuit design	CO1: Design and construct variable dc power supply. CO 2: Design and construct electrical circuits. CO 3: Understand different transistor configurations and their Characteristics. CO 4: Understand the working of clamper circuits.
Semester V		
PY1541	Classical, Statistical and Relativistic Mechanics	CO1: Recognize the mechanics of a single and a system of particles under different force fields. CO2: Solve different mechanical problems in classical mechanics using Lagrangian formalism. CO3: Generalize Hamiltonian mechanics to solve various problems in classical mechanics. CO4: Able to define phase space, microstate, macrostate and ensemble. CO5: Learn to distinguish different statistical distributions and judge which distribution applies to a given system. CO6: Distinguish inertial and non- inertial frames of references. CO7: Understand the concept of Galilean and Lorentz Transformations and their applications.
PY1542	Classical and Modern Optics	CO1: Explain the different basic phenomena of light such as Interference, Diffraction, Dispersion and Polarization. CO2: Differentiate between the two types of diffraction, viz., Fresnel and Fraunhofer diffraction. CO3: Apply diffraction theory in Rayleigh's criterion for resolution and in finding resolving power of diffraction grating.

		<p>CO4: Distinguish between normal and anomalous types of dispersion and to derive region-specific dispersion formulae from the general dispersion relation.</p> <p>CO5: Understand the different methods for the production of plane polarized light and also the different rules governing polarization.</p> <p>CO6: Have a good knowledge about the different types of polarizations, its theory and the production/analysis methods.</p> <p>CO7: Apply the concept of polarization in studying Nicol prism, quarter wave and half wave plates.</p> <p>CO8: Explain the basic constituents of a laser, different types and working.</p> <p>CO9: Obtain an idea about non-linear optical processes especially the different harmonic generations.</p> <p>CO10: Gain knowledge about the principle and different types of optical fibers.</p> <p>CO11: Understand the applications of optical fibers in different fields of science.</p> <p>CO12: Have knowledge on the principles of holography, its production and different types.</p>
PY1543	Semiconductor Devices and Circuits	<p>CO1: Recognize the network theorems.</p> <p>CO2: Describe diode characteristics.</p> <p>CO3: Design power supply circuits by applying junction diodes.</p> <p>CO4: Design single stage transistor amplifiers, oscillators and operational amplifiers.</p> <p>CO5: Understand the concept of modulation.</p>

		CO6: Explain the working of special devices, FET, MOSFET, UJT.
PY1544	Atomic and Molecular Physics	CO1: Recognize different atomic models, their significances, properties, merits and demerits. CO2: Distinguish between atomic and molecular spectra and their relevant uses. CO3: Understand the features of X- ray spectra. . CO4: Recognize different spectroscopic techniques.
PY 1551.2	Open Course: Astronomy and Astrophysics	CO1: Differentiate between astronomy and astrophysics and understand the different branches, scientific methods and scope of astronomy. CO2: Understand earlier astronomical works and the different laws involved in astronomy. CO3: Understand planets and solar system objects and apply the laws of physics to describe their structure and characteristics. CO4: Understand the evolution and properties of stars and galaxies and apply the different laws of physics to describe the structure and evolution of stars, galaxies and the universe.
Semester VI		
PY 1641	Solid State Physics	CO1: Able to distinguish types of crystals according to their structure. CO2: Able to illustrate the concepts of unit cell and lattice of crystals. CO3: Able to discuss diffraction of X rays by crystals and to demonstrate its experimental techniques. CO4: Able to describe and evaluate mechanical, electrical and magnetic properties of metals.

		<p>CO5: Learn to discuss and evaluate dielectric properties of materials.</p> <p>CO6: Able to discuss types of magnetic properties of materials.</p> <p>CO7: Learn to explain different physical characteristics of superconductors.</p> <p>CO8: Able to illustrate theoretical formulation of superconductors.</p>
PY 1642	Nuclear and Particle Physics	<p>CO1: Identify nuclear constituents and general properties of nuclei.</p> <p>CO2: Describe nuclear forces, phenomena of radioactivity & radiation Hazards.</p> <p>CO3: Distinguish different nuclear models.</p> <p>CO4: Understand different types of nuclear reactions, fission & fusion energies and applications.</p> <p>CO5: Recognize different particle detectors and accelerators.</p> <p>CO6: Classify elementary particles and relate their properties.</p>
PY1643	Quantum Mechanics	<p>CO1: Recognize the limitations of Classical Physics to explain certain physical phenomena.</p> <p>CO 2: Identify the quantum mechanical concepts applicable to Physical systems.</p> <p>CO3: Apply the concepts of Quantum Mechanics to solve problems.</p> <p>CO4: Derive Equations of motion of Physical systems using quantum concepts.</p>
PY1644	Digital Circuits and Computational Physics	<p>CO1: Explain different number systems and their mathematical operations.</p> <p>CO2: Differentiate different logic gates.</p>

		<p>CO3: Summarize digital circuits and their functions.</p> <p>CO4: Develop and compile programs in Python.</p> <p>CO5: Apply numerical methods to solve physical problems.</p>
PY 1661.2	Elective Course: Space Science and Research Methodology	<p>CO1: Understand the structure of universe.</p> <p>CO2: Knowledge about evolution of stars.</p> <p>CO3: Gain knowledge about Earth's atmosphere.</p> <p>CO4: Understand research methodology, ethics in research, report writing and plagiarism.</p>
PY1645	Advanced Physics Lab I	<p>CO1: Understand how to use a spectrometer.</p> <p>CO2: Obtain a practical understanding of the refraction of light by a prism.</p> <p>CO3: Use basic laws to study the spectral and optical properties of the given prism and grating.</p> <p>CO4: Understand the working of different electrical circuits and use it to determine different physical quantities.</p>
PY1646	Advanced Physics Lab II	<p>CO1: Understand the working of PN junction diodes, Zener diodes and their applications.</p> <p>CO2: Understand the working of transistors and their applications.</p> <p>CO3: Understand the working of operational amplifiers and their circuits.</p> <p>CO4: Understand computational programming using Python and apply it to find the solution to different physical problems.</p>

DEPARTMENT OF POLITICAL SCIENCE

COURSE OUTCOME

COURSE CODE	COURSE TITLE	COURSE OUTCOMES
SEMESTER 1 PS 1141	: PERSPECTIVES OF SOCIAL AND POLITICAL SCIENCES	<ol style="list-style-type: none"> 1.Understand the nature and relevance of social and political sciences 2.Basic knowledge in the application of scientific method in social sciences and its limitations 3.Enable the students in placing political science in the wider domains of social sciences and their interrelations 4.familiarise Students with emerging terrains of political science and its critical evaluation
COMPLEMENTARY COURSE 1	INTRODUCTION TO	<ol style="list-style-type: none"> 1.Understand the meaning nature and scope of Political science and its relation with other social science subjects 2.Analyse and compare various approaches to study political science 3.Critically evaluate different ideologies in Political Science and its applicability. 4.Understand the structure and functions of state system and various institutions within it
SEMESTER 2. PS 1241	INTRODUCTION TO POLITICAL THEORY	<ol style="list-style-type: none"> 1.Understand the nature and relevance of Political theory 2.Basic knowledge about various approaches to the study of Political theory 3.Enable the students in the application of various theories and concepts of Political Theory 4.Critically evaluate the different perspectives of key concepts of political theory
COMPLEMENTARY COURSE 2	INDIAN GOVERNMENT AND POLITICS	<ol style="list-style-type: none"> 1.Identify the prominent features of the Indian Constitution. 2.Awareness about one's own rights and duties as well as a sense of respect and protection

DEPARTMENT OF POLITICAL SCIENCE

COURSE OUTCOME

		<p>of other's rights.</p> <p>3.Familiarize the composition and functions of various organs of Government</p> <p>4.Critically evaluate Indian political system and the democratic processes.</p>
<p>SEMESTER3. PS 1321</p>	<p>CYBER POLITICS</p>	<p>1.Understand and describe the basic concepts and ideas related cyber politics</p> <p>2.familiarise the features of various social media platforms and the emergence of internet based public sphere.</p> <p>3.capability to explain the dynamics and processes associated with cyber politics both nationally and globally</p> <p>4.Acquired knowledge in the field of cyber politics by engaging the critical issues affecting the rights and freedoms of the citizens in the country.</p>
<p>SEMESTER 3 PS1341</p>	<p>INDIAN CONSTITUTION</p>	<p>1. Understand the major features and the essence of Indian constitution</p> <p>2. create awareness about one's own rights and duties as well as a sense of respect and protection of others rights</p> <p>3. familiarise the students about the composition and functions of various Institutions of Union and federal Governments.</p> <p>4. critically evaluate Indian judicial system and recent developments</p>
<p>Complementary course</p>	<p>Dynamics of Indian Politics</p>	<p>1.Understand and evaluate various types of federalism.</p> <p>2.Understand about the types of Party System, political Parties and Its Dynamics</p> <p>3.Understand and evaluate emerging trends in Indian</p>

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COURSE OUTCOME

		<p>Democracy.</p> <p>4.Critically analyse the major factors which pose threat to Indian Democracy and political System.</p>
Semester 4	Dynamics of Indian Politics	<p>1.Understand the peculiar features of Indian federal system and nature of Centre-state relations</p> <p>2.Critically examine the tendency of regionalism and secessionism in India</p> <p>3.Understand and evaluate emerging trends in Indian Democracy</p> <p>4.Critically analyse the major factors which pose threat to Indian Democracy and political System.</p>
	Introduction to Comparative Politics	<p>1.Understand the basic concepts and changing nature of comparative politics</p> <p>2.Compare and analyse the basic features of constitutional development in major countries</p> <p>3.Familiarise the students about the Federal and Unitary systems of major Political systems and evaluate the changing dimensions</p> <p>4.Acquire ability to compare and analyse the political structures in different political systems in a comparative perspective.</p>
Complementary course	International politics	<p>1. Understand the nature and the scope of International Relations.</p> <p>2. Acquire basic ideas about basic concepts and theories of International Relations</p> <p>3. Equip the students to evaluate nature of International organizations and its impact on global politics.</p> <p>4. Critically examine the nature</p>

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COURSE OUTCOME

		of major issues in global politics.
Semester 5	Public administration	<ol style="list-style-type: none"> 1. Converse with meaning and nature of Public Administration and familiar with different approaches in public administration 2. Understand critically various principles of organisations and the role of Chief Executive and independent Regulatory Commissions 3. Comprehend the significance of Bureaucracy in Public Administration and familiarize the recruitment process and training 4. Understand the features of Financial Administration in India, focusing on the budgetary process and the role of the CAG 5. Understand the emerging trends in Public Administration in India.
	Ancient and medieval Political thought	<ol style="list-style-type: none"> 1. Acquire understanding on the ancient Greek ideas on state and society 2. Understand and analyses the Roman Political ideas and compare it with Greek ideas 3. Understand ancient Indian wisdom and compare it with other ideas 4. Analyse and evaluate the Medieval political ideas critically
	International Relations	<ol style="list-style-type: none"> 1. Understand the nature and the Scope of International Relations 2. Impart basic knowledge about basic concepts and theories of International Relations. 3. Enable the students to evaluate foreign policy decisions and its implications on Diplomatic relations 4. Critically evaluate the various

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COURSE OUTCOME

		issues of global politics
	Research methodology	<ol style="list-style-type: none"> 1.Introduce the nature and modalities of research in social science in general and political science in particular 2.Understand the major steps involved in arriving at a research topic and developing it further. 3.Expose students to the practicalities of research in Political Science, particularly in regard to data collection. 4.Facilitate students to critically analyse the collected data and create a scientific report of their own.
	Human rights in India	<ol style="list-style-type: none"> 1.familiarise with Human Rights in the international context to aware about their global significance barring state borders and other limitations. 2.Understand the role and functions of international human rights mechanisms in the changing international order 3.understand the institutional arrangements in India at various levels to protect Human Rights. 4.develop a critical understanding of the issues faced by socially excluded groups like Dalits, Women, Children, Differently Abled, Transgender at the national level
OPEN COURSE	HUMAN RIGHTS IN INDIA	<ol style="list-style-type: none"> 1.familiarise with Human Rights in the international context to aware about their global significance barring state borders and other limitations 2.understanding about the constitutional provisions and statutory institutions dealing with Human Rights. 3.critical assessment of the human rights issues faced by

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COURSE OUTCOME

		<p>vulnerable sessions in the state of Kerala</p> <p>4.critical understanding about the new dimensions of human rights in general.</p>
Semester 6	Modern Political thought	<p>1.Understand and evaluate social contract theories.</p> <p>2.Analyse the influence of utilitarianism and Idealism</p> <p>3.Evaluate contemporary Social realities by using Socialist theoretical tools.</p> <p>4.Analyse the concept of governmentality</p> <p>5.Critically Evaluate the theories of Gandhi and Ambedkar</p>
	State and society in Kerala	<p>1.Understand the major social and political trajectories that moulded the modern state of Kerala</p> <p>2.Understand the present political structure of Kerala and evaluate the deep-rooted societal identities of Kerala and relate its relevance.</p> <p>3.Analyse the aspects of political economy of Kerala</p> <p>4.Demonstrate the understanding of the Contemporary discourses in Kerala's society.</p>
	Decentralisation and participatory democracy	<p>1.acquire knowledge on the concept of decentralisation and to be able to understand its theoretical perspectives</p> <p>2.understand the concept of participatory democracy and to internalise its values</p> <p>3.evaluate the emergence of decentralisation in India and to analyse the features of 73rd and 74th Constitutional Amendment Act</p> <p>4.familiarise and practice the contrivances of participatory</p>

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COURSE OUTCOME

		democracy
	New social movements	<ol style="list-style-type: none"> 1.Understand the notion of New Social Movements using major approaches and theories. 2.Explore the gender-based New Social Movements with examples from the Western and Non- Western World. 3.Evaluate the trajectory and impact of major New Social Movements in India. 4.Analyse the nature of New Social Movements in Kerala and the underlying reasons for its emergence.
	Project/Dissertation	<ol style="list-style-type: none"> 1.Understand the Preliminary part of the making of Dissertation 2.Draw an Introduction to your own topic 3.Plan your Chapters and Analyse the content 4.Produce a Research Report with Conclusion 5.Generate a List of Selected Bibliography
ELECTIVE	MEDIA AND POLITICS	<ol style="list-style-type: none"> 1.understand the crucial role of media and political communication in a democracy 2.Acquire the ability to analyse the nature of Indian media in the background of globalisation and developmental problems. 3.understand changes in media such as new media, Political Reporting in India, consent manufacturing g etc. 4.attain practical knowledge and training in media related activities

BA SANSKRIT GENERAL

COURSE CODE	COURSE TITLE	COURSE OUTCOME
	SEMESTER I	
SK 1141	HISTORY OF SANSKRIT LITERATURE	CO1. To understand the different stages in the history of Sanskrit Literature. CO2. To understand the different forms of literary works in Sanskrit. CO3. To develop an aptitude towards literature. CO4. To promote creativity, imagination and innovation. CO5. To compare Sanskrit Literature with the other literary works of the world.
SK 1131	POETRY & PROSE	CO1. To promote creativity, imagination and innovation. CO2. To inculcate the human values. CO3. To improve the elementary skills in learning Sanskrit. CO4. To make the students to understand simple literary material. CO5. To give necessary grammatical inputs.
SK 1132	FUNCTIONAL SANSKRIT	CO1. To know the various noun forms in Sanskrit.

		CO2. To create awareness of verbal forms in Sanskrit. CO3. To create the skills of communication and writing in Sanskrit.
	SEMESTER II	
SK 1241	OUTLINES OF INDIAN CULTURE	CO1. To understand the South Indian Culture. CO2. To inculcate moral values through the study of ancient educational institutions. CO3. To create awareness of the reform movements in Kerala. CO4. To understand the contributions of various Kingdoms to art and literature.
SK 1231	ANCIENT INDIAN VISION ON ETHICS	CO1. To understand the Indian Vision on ethics. CO2. To inculcate moral values through the study. CO3. To inculcate integrity in action, morality in practical life etc.
SK 1232	LYRIC & PROSODY	CO1: To understand the nature of Sandesha Kavyas. CO2: To familiarise Kalidasa's approach to nature and literature. CO3: To know the metres and their peculiarities. CO4: To practise various metres.

SEMESTER III		
SK 1322	SANSKRIT AND COMPUTER	<p>CO1.To understand the basic concepts in informatics.</p> <p>CO2.To impart functional knowledge and skills in using computers.</p> <p>CO3.To understand the language technology especially related to Sanskrit for computer processing.</p> <p>CO4.To review the digital knowledge resources in Sanskrit and Indology.</p>
SK 1341	SANSKRIT GRAMMAR - I	<p>CO1. To use the language freely without grammatical mistakes.</p> <p>CO2. To know the practical knowledge of splitting in the Sanskrit language.</p> <p>CO3. To understand the technical terms in Sanskrit Grammar.</p> <p>CO4. To promote analytical knowledge of Karakas in Sanskrit.</p> <p>CO5. To know the formation of norms in Sanskrit.</p>
SK 1331	SANSKRIT POETICS	<p>CO1. To understand Indian literary theories in general.</p> <p>CO2. To understand the importance of Guna theory of Dandin.</p> <p>CO3. To understand the Dhvani theory with reference to Kavyaprakasa.</p>

		CO4. To evaluate the poetic excellence of Kavyas in the light of Guna and Dhvani theories.
SK 1332	KAVYA AND ALANKARA	CO1.To get a general awareness of the poetic excellence of Kavyas. CO2.To understand the appreciation of literature using the best specimens provided. CO3.To understand simple literary materials. CO4.To understand the figures of speech. CO5.To differentiate each Alankaras from other Alankaras.
	SEMESTER IV	
SK 1441	Research Methodology in Sanskrit	CO1:To understand the procedure of research. CO2:To get an awareness of preparing articles CO3:To understand transliteration
SK 1442	DRAMA AND DRAMATURGY - I	CO1.To understand the origin and development of Sanskrit drama. CO2. Appreciate Sanskrit drama using the best techniques provided. CO3.To know and to practise drama techniques.

<p>SK 1431</p>	<p>CHAMPU AND STOTRAKAVYA</p>	<p>CO1.To understand ancient Indian culture and tradition. CO2. To articulate the idea of keeping morality in life. CO3. To formulate and to develop good personality in social life. CO4. To understand Sanskrit champu style. CO5. To enjoy Sanskrit stories.</p>
<p>SK 1432</p>	<p>DHARMASTRAS IN SANSKRIT</p>	<p>CO1:To know the important schools of Dharmasatra. CO2:To acquaint with Indian views on social and individual life. CO3:To comprehend the ideas of family life. CO3:To inculcate integrity in action, morality, practical life and altruistic activities.</p>
<p style="text-align: center;">SEMESTER V</p>		
<p>SK 1541</p>	<p>CONTRIBUTION OF KERALA TO SANSKRIT LITERATURE</p>	<p>CO1:To aware of Sanskrit poetic traditions of Kerala. CO2:To understand and appreciate the poetic beauty of Sanskrit Mahakavyas from Kerala. CO3:To familiarize the students with the Sanskrit Mahakavyas from Kerala.</p>

SK 1542	MAHAKAVYAS	CO1:To understand Sanskrit poetry. CO2:To aware of the Mahakavyas in Sanskrit. CO3:To develop esthetic experience. CO4:To aware of poetic beauty in Sanskrit Mahakavyas.
SK 1543	TECHNICAL LITERATURE IN SANSKRIT	CO1:To know the technical literature in Sanskrit. CO2:To know different disciplines and their relation with Sanskrit. CO3:To apply the acquired knowledge in the day to day life
SK 1544	ELEMENTS OF INDIAN PHILOSOPHY -I	CO1:To understand the fundamentals of Indian Philosophy. CO2:To enable the students for logical thinking.
SK 1545	DRAMA AND DRAMATURGY - II	CO1:To understand the origin and development of Sanskrit drama especially Bhasa's plays. CO2:To appreciate Sanskrit dramas using the best techniques provided. CO3:To know and to practise drama techniques.
SK 1551	INDIAN LITERARY CRITICISM	CO1:To understand the literary thoughts in Sanskrit. CO2:To practise literary analysis and literary

		criticism using the best specimens. CO3:To think about the essence of poetry. CO4:To understand literary works of famous poets.
	SEMESTER VI	
SK 1641	ELEMENTS OF INDIAN PHILOSOPHY II	CO1:To understand the fundamentals of Indian Philosophy. CO2:To aware of the concept and definition of yoga. CO3:To achieve the relevance of yoga in modern science.
SK 1642	LINGUISTICS	CO1:To know the origin and development of languages. CO2:To compare the language families with special reference to Indo-Aryan family. CO3:To understand the changes of meaning due to semantic change.
SK 1643	VEDIC LITERATURE	CO1:To understand the Vedas and Vedic hymns. CO2:To aware the nature of Upanishads. CO3:To understand the philosophy of Upanishads.
SK 1644	SANSKRIT GRAMMAR- II	CO1:To use language freely without any mistake. CO2:To formulate the different forms of the root 'Bhu'.

		CO3:To know the language by compounding the words.
SK 1661	TRANSLATION - THEORY AND PRACTICE	CO1:To understand the influence of translation on literature. CO2:To practise translations. CO3:To understand the translation of Malayalam works into Sanskrit.
	ADDITIONAL LANGUAGE	
	SEMESTER I	
SK1111.1	Epics and Stotrakavyas	CO1. Understand the Epic and Stotrakavya literature. CO2: Understand the narrative methodology of epics CO3:Understandto develop good personality and philosophical thinking. CO4:Analyse the relevance of Kerala Sanskrit Poets
	SEMESTER II	
SK1211.1	Prose and Grammar	CO1:Understand the features of Prose literature in Sanskrit.

		<p>CO2: Understand the simple prose style of Sanskrit literature.</p> <p>CO3: Understand the simplest form of language as verses and to understand the meaning.</p> <p>CO4: Stimulate the students humanistic outlook on life and maintain an emotional harmony in their lives</p>
	SEMESTER III	
SK1311.1	Nataka and Alankara	<p>CO1: Understand the classical literature in Sanskrit</p> <p>CO2: Familiarize the system of Sanskrit dramatic tradition</p> <p>3. Understand the main features of Bhasa works</p> <p>CO3: Understand the significance of Alankara in poetry</p>
	SEMESTER IV	
SK1411.1	Mahakavya and Vrita	<p>CO1: Understand the Classical literature in Sanskrit</p> <p>CO2: Understand the main features of Kalidasa works</p> <p>CO3: Understand the significance of Vrttas in poetry</p>

		<p>CO4:Understand the lakshna and usages of the Vrttas</p> <p>CO5:Understand the determination of Guru and Laghu</p>
	<p>SANSKRIT COMPLEMENTARY FOR MALAYALAM</p>	
	<p>SEMESTER I</p>	
Sk.1131.2	Poetry and Grammer	<p>CO1:Understand the basic principles of Sanskrit Grammar</p> <p>CO2:Make awareness about the simple style of kavya literature</p> <p>CO3:Recognized the literary merits of Sri Sukumara Kavi</p> <p>CO4:Understand the noun forms in all genders</p> <p>CO5:Understand the forms of root Bhu and Vandh</p>
	<p>SEMESTER II</p>	
Sk.1231.2	Fables,Nataka& Subhashita	<p>CO1:Make awareness about the dramatic literature and style of Bhasa.</p>

		<p>CO2:Make awareness about the Prose style in Sanskrit Literature</p> <p>CO3:To improve student's vocabulary for better reading and writing</p> <p>CO4:To understand the ideas of ancient Indian stories for the betterment of life</p>
	SEMESTER III	
Sk.1331.2	Poetry & <u>Poetics</u>	<p>CO1:Understand the famous poets Mahakavi Kalidasa and Acarya Dandi</p> <p>CO2:Make awareness about the Poetic style in Sanskrit Literature</p> <p>CO3:To familiarize different types of Kavyas and its definitions</p> <p>CO4:Understand the Sanskrit Poetics</p>
	SEMESTER IV	
Sk.1431.2	Prose and Drama	<p>CO1:Understand the famous poets Mahakavi Kalidasa and Acarya Dandi</p> <p>CO2:Make awareness about the Poetic style in Sanskrit Literature</p>

		<p>CO3:To familiarize different types of Kavyas and its definitions CO4:Understand the Sanskrit Poetics</p>
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P.G. AND RESEARCH DEPARTMENT OF ZOOLOGY

COURSE OUTCOMES

B.Sc. Zoology

Course Code	Course Title	Course outcomes
Semester - I		
ZO 1141	Animal Diversity I	CO 1. Students get an in-depth knowledge of the diversity in form, structure and habits of invertebrates. CO 2. Students understand basics of systematics and the hierarchy of different categories. CO 3. Get an overview of economically important invertebrate fauna.
ZO 1131	Animal Diversity I	CO 1. Get a concrete idea of the evolution, hierarchy and classification of invertebrate phyla CO 2. Understanding the basics of systematics by learning the diagnostic and general characters of various groups CO 3. Get an overview of typical examples in each phyla CO 4. Understand and study the economic importance of invertebrates with the special reference to insect pests
Semester - II		
ZO 1241	Animal Diversity II	CO 1. Learn the general characteristics and classification of different classes of vertebrates. CO 2. Understand the vertebrate evolutionary tree. CO 3. Understand general aspects of applied interest.
ZO 1231	Animal Diversity II	CO 1. Learn the evolution, hierarchy and classification of different classes of chordates CO 2. Get an overview of the morphology and physiology of typical examples. CO 3. Study the adaptations and economic importance of specific vertebrates
Semester III		
ZO. 1341	Experimental Zoology, Instrumentation Biostatistics and Bioinformatics	CO 1. Learn the fundamental characteristics of science as a human enterprise CO 2. Understand how science works CO 3. Apply scientific methods independently

ZO 1331	Functional Zoology	<p>CO 1. Study the structure and function of each system in the human body.</p> <p>CO 2. Study the etiology of common physiological disorders, syndromes and diseases</p>
Semester IV		
ZO 1441	Ecology, Habitat Destruction & Disaster Management	<p>CO 1. Students get basic knowledge on ecosystem, food chain, food web and energy flow.</p> <p>CO 2. Students acquire general awareness on pollution and their impacts.</p> <p>CO 3. Imparts basic knowledge on ecosystems and their functioning.</p> <p>CO 4. Students learn about various types of anthropogenic pressures on ecosystem, related degradation and management measures.</p> <p>CO 5. Students get awareness of toxicants, their impacts on human health and environment and remedial measures.</p> <p>CO 6. Create awareness about disasters, prevention and mitigation measures.</p>
ZO 1431	Applied Zoology	<p>CO 1. Learn the basic principles involved in the culture and breeding of common edible and ornamental fishes of Kerala and the art of aquarium keeping.</p> <p>CO 2. Get a basic understanding of human genomics and reproductive biology including stem cell research and prenatal diagnostic techniques</p>
ZO 1442	Practical I - Instrumentation, Animal Diversity I and Animal Diversity II	<p>CO 1. Students learn anatomy through simple dissections and mountings on permitted species.</p> <p>CO 2. Students get familiarized with various organ systems by examining approved animals.</p> <p>CO 3. Emphasize the adage that 'seeing is believing' by observing typical examples and economically important specimens.</p> <p>CO 4. Students learn the working principle of different scientific instruments.</p> <p>CO 5. Students become familiar with economically important species.</p> <p>CO 6. Strengthen what students studied in theory by giving them an opportunity to have first-hand experience in lab</p>

		as well as outside.
ZO 1432	Practical I -Animal Diversity I &II, Functional Zoology and Applied Zoology	<p>CO 1. Familiarize students with conventional organ system in common, easily available animals. ·</p> <p>CO 2. Emphasize the adage that ‘seeing is believing’ typical examples and economically important specimen (preserved) to be studied. ·</p> <p>CO 3. Study and carry out routine clinical analysis of blood and urine</p>
Semester - V		
ZO 1541	Cell and Molecular Biology	<p>CO 1. Students acquire sufficient knowledge on the fundamental structure, function and biochemistry of the cell.</p> <p>CO 2. They understand the principles of molecular biology and gene manipulation.</p> <p>CO 3. Students learn ultra-structure of prokaryotic and eukaryotic cells.</p> <p>CO 4. Students understand the fundamental differences between prokaryotic and eukaryotic cells.</p> <p>CO 5. Students learn the structure, replication and modification of the genetic material of eukaryotes.</p> <p>CO 6. Students understand the mechanism of gene expression and gene regulation.</p> <p>CO 7. Gets an awareness of bacterial recombination.</p> <p>CO 8. Students acquire scientific knowledge on cancer and ageing.</p>
ZO. 1542	Genetics and Biotechnology	<p>CO 1. Structure of gene is to be learned.</p> <p>CO 2. Students get educated on the underlying genetic mechanism operating in human and state of the art of bio-techniques</p> <p>CO 3. Students develop a proper understanding on the relation between heredity and variation.</p> <p>CO 4. Learn the mechanism of crossing over and inheritance patterns in human.</p> <p>CO 5. Students become aware of different genetic syndromes and the possible ways to reduce its occurrence.</p> <p>CO 6. Students understand the principles and techniques involved in DNA technology and get an overview of</p>

		modern techniques like PCR, Hybridoma technology, gene therapy and human cloning
ZO 1543	Immunology and Microbiology	<p>CO 1. Students understand the scope and importance of clinical immunology.</p> <p>CO 2. Students understand the principles and mechanisms of immunology.</p> <p>CO 3. Learn the malfunctioning and disorders of the immune system</p> <p>CO 4. Students acquire knowledge on immunodeficiency diseases.</p> <p>CO 5. Transplantation and mechanism of Graft retention and rejection are learned.</p> <p>CO 6. Students get a brief history of microbiology.</p> <p>CO 7. Students develop a broad understanding of the positive as well as negative aspects of microbes.</p> <p>CO 8. Economic importance (applied aspects) of microbes in industry can be studied.</p>
ZO 1551.2	Human Health and Sex Education (Open Course)	<p>CO 1. Make the student understand the importance of good health.</p> <p>CO 2. Educate the student on clean sexual habits thereby warding off sexually transmitted diseases</p>
Semester - VI		
ZO 1641	Physiology and Biological chemistry	<p>CO 1. Students develop a clear understanding of the correlation and coordination between the structure and function of different organs and organ systems of the body.</p> <p>CO 2. Proper studies on the physiology help students understand the physiology of different organ systems of the body.</p> <p>CO 3. Students learn the correlation between diseases and the abnormal structure or improper functions of organs.</p> <p>CO 4. Students understand the possible causes of abnormal physiology and the resultant diseases.</p> <p>CO 5. Students understand the structure and functions of bio-molecules and their role in metabolism.</p> <p>CO 6. This course opens new areas of research to students.</p>
ZO 1642	Developmental Biology and	<p>CO 1. Students get a brief idea about the history of developmental biology.</p>

	Experimental Embryology	<p>CO 2. Provide the students a bird's eye view of sophisticated embryological techniques</p> <p>CO 3. Study the various stages involved in the development of organisms.</p> <p>CO 4. Study the initial developmental procedures involved in Amphioxus, Frog and chick</p> <p>CO 5. Procure information on state- of- the art experimental procedures in embryology.</p> <p>CO 6. Different control mechanisms of development including gene action are studied.</p>
ZO 1643	Ethology, Evolution and Zoogeography	<p>CO 1. Learn the physiological basis of behaviour</p> <p>CO 2. Study the different types of communication system among animals</p> <p>CO 3. Get a concept of organic evolution</p> <p>CO 4. Get knowledge on the animal distribution in biosphere</p>
ZO 1644	Practical II - Cell Biology, Genetics, Bioinformatics, Biotechnology, Immunology and Microbiology	<p>CO 1. Prepare and observe chromosomal arrangements during cell division</p> <p>CO 2. Study chromosomal aberrations in man</p> <p>CO 3. Gain of broad knowledge of conventional biotechnological procedures</p> <p>CO 4. Perform routine blood analysis.</p> <p>CO 5. Learn clinical procedures for blood & urine analysis</p> <p>CO 6. Make the student skilful in simple biochemical laboratory procedures.</p>
ZO 1645	Practical III - Physiology and Biological Chemistry, Molecular Biology and Biostatistics	<p>CO 1. Learn clinical procedures for blood and urine analysis</p> <p>CO 2. Make the student skillful in simple biochemical laboratory procedures.</p>
ZO 1646	Developmental Biology , Ecology, Ethology, Evolution and Zoogeography	<p>CO 1. Learn the various stages involved in the development of organisms.</p> <p>CO 2. Acquire skills in analyzing environmental quality parameters</p> <p>CO 3. Learn the strategies in pest management</p> <p>CO 4. Identify the major contributors in the field of environmental movements</p>

ZO 1651.1	Economic Zoology - Vermiculture and Apiculture (Elective Subject)	CO 1. Students learn the basic procedure and methodology of vermiculture CO 2. Learn the scope and methodology of apiculture.
ZO 1647	Zoology Project and Field study	CO 1. Inculcate proficiency to identify appropriate research topic and presentation