

DEPARTMENT OF PHYSICS

B. Sc PHYSICS PROGRAMME

Program Specific Objectives of B.Sc Physics

PSO1. Students will demonstrate proficiency in mathematics and the mathematical concepts needed for a proper understanding of physics.

PSO2. Students will demonstrate knowledge of selected topics from classical mechanics, quantum mechanics, quantum mechanics, electromagnetism, quantum mechanics, and thermal physics, and be able to apply this knowledge to analyze a broad range of physical phenomena.

PSO3. Students will show that they have learned laboratory skills, enabling them to take measurements in a physics laboratory and analyze the measurements to draw valid conclusions.

PSO4. Students will be capable of oral and written scientific communication, and will prove that they can think critically and work independently.

COURSE OUT COMES

CORE COURSES UNDER B. Sc PHYSICS

Course Code	Course Title	Hours/Wk	Credits
PH1 B01	Methodology of Science and Physics	2	2
CO1 Distinguish between what is science and what is pseudo science and also learns about different types of knowledge. CO2 Learn about the methods and tools of Science CO3 Understand the methodology of Physics and revolutionary developments in Physics CO4 Gains knowledge on different mathematical methods used in Physics.			
PH2 B02	Properties of Matter, Waves and Acoustics	2	2
CO1 To study the basics of elastic properties of matter CO2 To understand the oscillatory motion and different types of oscillators CO3 To learn the fundamentals of wave motion and acoustics.			
PH3 B03	Mechanics	3	3
CO1 To master the concepts of inertial and non-inertial <i>reference frames</i> including constraint relations CO2 To understand and appreciate the need for <i>conservation of energy</i> . CO3 To differentiate between linear and angular momentum CO4 To understand different conservation laws and Lagrangian formalism CO5 To study special theory of relativity.			
PH4 B04	Electrodynamics-I	3	3
CO1: Study the basics of electrostatics including Gauss's Laws, its applications, electric potential, boundary conditions, electrostatic work and energy, capacitors etc. CO2: Learn the special techniques for calculating potential including Laplace's equations, method of images etc.			

<p>CO3: Study the electric fields in matter which includes polarization, bound charges, boundary conditions, dielectrics etc.</p> <p>CO4: Understand the fundamentals of magnetostatics involving Lorentz force law, Biot Savart Law, Ampere's law, its applications, boundary conditions, vector potential etc.</p> <p>CO5: Magnetostatic field in matter involving dia, para and ferromagnetism, bound currents, boundary conditions, magnetic susceptibility and permeability etc.</p>			
PH4 B05	Physics Practical 1	2	5
<p>CO1: To develop skill in experiments related to different branches of physics like properties of matter, optics, electricity and magnetism.</p>			
PH 5 B06	Electrodynamics-II	3	3
<p>CO1 To familiarize with, the fundamental theory and basic methods of Electrodynamics and to understand Maxwell's equation.</p> <p>CO2 To learn the basics of electromagnetic waves and its propagation through a linear medium.</p> <p>CO3 To study the transience due to inductor and capacitor for different circuits</p> <p>CO4 To study the behavior of circuits under sinusoidal conditions</p> <p>CO5 To solve electronic networks using different network theorems.</p>			
PH 5 B07	Quantum Mechanics	3	3
<p>CO1 Describe particle properties of waves</p> <p>CO2 Describe wave properties of particles</p> <p>CO3 Describe structure of atom based on de Broglie wave concept.</p> <p>CO4 Understands the basics of wave mechanics and apply this in solving the quantum mechanical problems .</p> <p>CO5 Describe the quantum mechanical model of atom.</p>			
PH 5 B08	Physical Optics and Modern Optics	3	3
<p>CO1: To understand Fermat's principle and its applications, and the matrix methods in ray optics.</p> <p>CO2: To understand the interference of light by division of wavefront and amplitude using different experimental setups.</p> <p>CO3: To understand the diffraction of light at various geometrical edges using different light wavefronts.</p> <p>CO4: To understand the polarization of light, its production, analysis and application.</p> <p>CO5: To understand the principle, production and application of holography.</p> <p>CO6: To understand the working principle of optical fiber and its applications.</p>			
PH 5 B09	Electronics	4	4
<p>CO1: Introduces rectification process of electrical signal, voltage multiplier circuits and detailed understanding of zener voltage stabilization.</p> <p>CO2: Basic ideas of various transistor configurations and their power gain.</p> <p>CO3: Detailed working of CE amplifier, loadline analysis, DC and AC equivalent circuit analysis.</p> <p>CO4: Idea about multistage amplification and various methods of achieving it.</p> <p>CO5: To understand the concept of feed back in electronics and working of various oscillators</p>			

CO6 Basics of communication method of modulation and demodulation CO7 Introduction of special devices like LED, opamp, UJT, MOSFET, logic gates, adder circuits, filpflops, etc .			
PH6 B10	Thermal and Statistical Physics	4	4
CO1 To understand the basic ideas of various thermodynamic processes occurring in universe CO2: To understand the basic ideas on statistical distributions and their applications.			
PH6 B11	Solid State Physics, Spectroscopy and Laser	4	4
CO1 To get understanding of various crystal structures. CO2 To understand X-ray diffraction methods. CO3 To understand the principles of superconductivity and its applications. CO4 To get the basic ideas of molecular spectroscopy especially Raman spectroscopy and microwave spectroscopy. CO5 To understand Lasers and its working.			
PH6 B12	Nuclear Physics, Particle Physics & Astrophysics	4	4
CO1 Describe structure and properties of nuclei CO2 Understand different types of nuclear transformation processes. CO3 Learns the working principle of different types of particle detectors and counters CO4 Understand the nature origin and geomagnetic effects of cosmic rays CO5 Classify elementary particles and describe their properties. CO6 Understand the working principle of different types of particle accelerators.			
PH6 B13	Material science and Thin films	3	3
CO1 To learn classification of materials, bonds in materials and crystalline nature of materials CO2 To study basic ideas on imperfections and diffusion in solids CO3 To understand properties of ceramics and polymers CO4 To learn about different material analysis techniques.			
PH6 B14	Physics Practical II	4	5
CO1 To develop skill in experiments related to different branches of physics like optics, heat and thermodynamics, electricity and magnetism			
PH6 B15	Physics Practical III	4	5
CO1 To develop skill in experiments related to different branches of physics like optics, heat and thermodynamics, electricity and magnetism			
CO1 To develop skill in electronics experiments and python programming.			
PH6 B16	Project & Tour Report	2	3

CO1 To develop the scientific aptitude among the students and to learn about the procedure adopted in scientific method of investigation.

COMPLIMENTARY COURSES UNDER B. Sc PHYSICS

Course Code	Course Title	Hours/Wk	Credits
PH1 C01	Properties of Matter and Thermodynamics	2	2
CO1 Understand the Elastic properties of materials CO2 Understand the basic ideas of liquid properties like surface tension and viscosity CO2 To study the concepts of heat and the exchange of heat energy. To get an idea about the various laws governing Thermodynamics.			
PH2 C02	Mechanics, Relativity, Waves and Oscillations	2	2
CO1 To get the concepts of inertial and non-inertial <i>reference frames</i> CO2 To understand and appreciate the need for <i>conservation laws</i> . CO3 To study special theory of relativity CO4: To get the elementary ideas about oscillations and Waves CO4: To get introduced to the concepts of Quantum mechanics.			
PH3 C03	Optics, Laser, Electronics and Communication	3	2
CO1 Basic ideas on interference, diffraction, polarization and lasers CO2. To understand the working of various electronic circuits like Rectifiers, Amplifiers, Oscillators and logic gates CO3; TO understand principles of communication.			
PH4 CO4	Electricity, Magnetism and Nuclear Physics	3	2
CO1 To understand fundamentals of electrostatics electricity and magnetism CO2 To learn about properties of the nuclei and the associated nuclear reactions CO3 To study about different types of accelerators and detectors CO3 To have basic understanding of cosmic rays and elementary particles			
PH5 C05	Complimentary Physics Practical	2	4
CO1 To develop skill in experiments related to different branches of physics like properties of matter, optics, electricity and magnetism.			

OPEN COURSE UNDER B. Sc PHYSICS

Course Code	Course Title	Hours/Wk	Credits
PH5 D01 (1)	Non Conventional Energy Resources	2	2
CO1: Learn different solar radiation measuring instruments, solar energy collector, applications of solar energy like solar cooker, furnace, distillation, solar cell etc.			

- CO2: Study the basic principle of wind energy conversion devices, horizontal and vertical axis wind machines and their applications
- CO3: Understand the geothermal resources, their advantages, disadvantages and applications, method of obtaining energy from biomass.
- CO4: Investigate about Ocean Thermal Electric Conversion, Tidal energy, Wave Energy, Chemical energy including batteries.

M. Sc. PHYSICS PROGRAMME

Program Specific Objectives of M. Sc Physics

- PSO1. Students will be able to demonstrate their understanding of the foundations in physics (classical mechanics, computational physics, electrodynamics, mathematical physics, statistical physics, quantum mechanics etc.) by demonstrating competence through appropriate homework, assignments and examinations.
- PSO2. Students will be able to competently solve appropriate problems in physics courses using increasingly important computational and mathematical tools, such as Python.
- PSO3. Students will be able to demonstrate competency in experimental design and scientific data collection and analysis.
- PSO4. Students will be able to demonstrate competency in their understanding of scientific information, both orally and in writing.

COURSE OUTCOMES

M. SC PHYSICS PROGRAMME

Course Code	Course Title	Hours/Wk	Credits
PHY1 C01	Classical Mechanics	4	4
CO1: Study the development of Lagrangian and Hamiltonian Formulation and to solve problems using these formulations CO2: Understand the classical background of quantum mechanics involving the evolution of Schrodinger's equation from Hamilton - Jacobi equation. CO3: Investigate the Kinematics and Dynamics of Rigid Bodies CO4: Describe in detail the general theory of Small Oscillations and to solve equations of motion involving small oscillations CO5: Find the solutions of the various Nonlinear Equations, study the logistic map and evolution of Chaos in non linear systems.			
PHY1 C02	Mathematical Physics I	4	4
C01: To lead the students from the realm of elementary ideas of vectors to concepts of rotation of coordinate systems, curvilinear coordinate and vector integration. C02: To understand the higher concepts of matrices and get the physical significance of matrix transformations C03: To get an introduction to tensor analysis C04: To solve partial differential equation those are essential to the study of Physics and related fields. C05: To get problem solving skills using special functions.			

PHY1 C03	Electrodynamics and Plasma Physics	4	4
<p>CO1: To understand the concept of electromagnetic potentials, boundary conditions and wave nature based n Maxwell's' equations and to study them under time harmonicity.</p> <p>CO2: To study the propagation of plane electromagnetic waves in various media and which are simple and continuous and also contiguous.</p> <p>CO3: To understand the propagation of electromagnetic waves along various transmission line geometries and wave guides.</p> <p>CO4: To understand the relativistic nature of electric and magnetic fields and the relativistic notation of electrodynamics.</p> <p>CO5: To understand the basics of plasma, their behavior under electric and magnetic fields and their flow.</p>			
PHY1 C04	Electronics	4	4
<p>CO1: To understand the working of FET and its various applications.</p> <p>CO2 : To introduce the principle of microwave devices like tunnel diode and the concept of negative resistance.</p> <p>CO3 : Introduction of photonic devises like LED, photo detector, solar cell, etc.</p> <p>CO4: Basics of operational amplifiers, its various modes of operation, its working parameters, frequency response, etc.</p> <p>CO5: Applications of opamp as filters, multivibrators, in anolog computations, etc</p> <p>CO5: Understanding the advantages of K map analysis. Working of filpflops and Counters, magnetic memory, etc</p> <p>CO6 To give an idea of general organization of microprocessors.</p>			
PHY2 C05	Quantum Mechanics - I	4	4
<p>CO1: To understand the underlying concepts of Quantum mechanics-Hilbert space, operators, eigen values and eigen functions, observables, bra and ket notations, etc</p> <p>CO2: Introduce the concepts of quantum dynamics- Schrodinger picture and Heisenbeg picture-application in Hydrogen atom, SHO, etc.</p> <p>CO3: To appreciate the theory of angular momentum, Pauli's spin matrices, Clebsh-Gorden coefficients, etc</p> <p>CO4: To understand the various conservation laws and symmetries in Quantum mechanics.</p> <p>CO5: To introduce the concept of scattering: born approximation method and partial wave analysis method. Analysis of collision of identical particles.</p>			
PHY2 C05	Mathematical Physics -II	4	4
<p>CO1:To solve the physical problems using complex analysis and contour integration</p> <p>CO2:To understand group theory and to use continuous groups to the study of elementary particles.</p> <p>CO3:To solve problems using integral transforms and Green's function.</p> <p>CO4:To get the concept of variation calculus and to solve problems in physics using Lagrangian multipliers and Rayleigh Ritz technique.</p>			
PHY2 C05	Statistical Mechanics	4	4

<p>CO1: Understand the Statistical Basis of Thermodynamics including the explanation of classical ideal gas, gibb's paradox, its correction, Liouville's theorem etc..</p> <p>CO2: Describe in detail Micro canonical, Canonical and Grand Canonical Ensembles and study various systems like classical ideal gas, harmonic oscillator</p> <p>CO3: Formulation of Quantum Statistics from the understanding of density matrix and other operators.</p> <p>CO4: Investigate the behaviour of Ideal Bose Systems including black body radiation, field of sound waves etc.</p> <p>CO5: Study in detail Ideal Fermi Systems including Pauli's paramagnetism, Landau diamagnetism, specific heat of electron in a gas etc.</p>			
PHY2 C05	Computational Physics	4	4
<p>CO1: To understand the variables, datatypes and operators in Python programming language and to introduce the usage of functions, modules and I/O operations on files.</p> <p>CO2: To learn to use numpy module of Python to do array and matrix operations.</p> <p>CO3: To learn to use the matplotlib module of Python to visualize the data in different ways.</p> <p>CO4: To get an idea of various numerical methods for interpolation, Monte Carlo integration, boundary value problems and Fourier transform.</p> <p>CO5: To enable the application of various numerical methods to solve various problem in Physics and to visualize the results using Python programming language.</p>			
PHY1 P01 PHY2 P02	General Physics Practical I and II	4	3
To develop skill in experiments related to different branches of physics like properties of matter, optics, heat and thermodynamics, electricity and magnetism and lasers.			
PHY1 P01 PHY2 P02	General Physics Practical I and II	4	3
To develop skill in electronic experiments.			
PHY3 C09	Quantum Mechanics II	4	4
<p>CO1 Approximation technique has to be used to solve problems where an exact solution for schrodinger equation is impractical. Course helps to get a basic idea of various approximation techniques as WKB approximation and time independent perturbation technique</p> <p>CO2 to get a basic idea of the approximation method namely variational method and its application.</p> <p>CO3 To understand the basic ideas of time dependent perturbation theory</p> <p>CO4 To study the drawbacks of KG equations and hence to derive the Dirac equations</p> <p>CO5 Understand the basic principles of canonical field quantization and to apply the principles of second quantization to study the system of Bosons and fermions.</p>			
PHY3 C10	Nuclear and Particle Physics	4	4
CO1 Nuclear physics is the field of physics that studies atomic nuclei and their constituents and interactions.			

<p>CO2 Each of the models is based on a reasonable analogy that correlates a large amount of information and enables predictions of the properties of nuclei.</p> <p>CO3 To <i>study</i> the behavior of <i>gamma and beta</i> rays passing through matter.</p> <p>CO4 To describe the <i>fission</i> reactions employed in nuclear power plants. The study of fission and fusion is growing with new efforts towards the development of advance technologies.</p> <p>CO5 <i>Particle physics</i> is the branch of physics that <i>studies</i> the nature of the particles that constitute matter and radiation.</p>			
PHY3 C11	Solid State Physics	4	4
<p>CO1 : To obtain basic ideas on crystal symmetry, different types of bonds as well as characterization tools for internal structure of solids.</p> <p>CO2: This section deals with vibrations of lattices ,ideas of specific heat capacity and thermal conductivity.</p> <p>CO3: Distinction between conductors, Insulators and semiconductors, concept of Holes and effective mass</p> <p>CO4: This section details the electric and magnetic properties of solids which is helpful in application of solids in day to day life</p> <p>CO5: Superconducting properties of solids are being discussed in this section which is useful for the fabrication of memory elements in computers.</p>			
PHY3 E07	Experimental Physics	4	4
<p>CO1: TO understand the basic ideas on production of vacuum, measurement of vacuum, different types of vacuum accessories</p> <p>CO2 To learn about thin film deposition techniques, thickness measurement techniques and applications of thin films in optics</p> <p>CO3 To study about the production of low temperature, maintenance of low temperatures and measurement of low temperatures</p> <p>CO4 To understand different types of dc and ac accelerators</p> <p>CO5 To develop basic ideas on different types of material analysis techniques.</p>			
PHY4 C12	Spectroscopy	4	4
<p>CO1 To understand basic ideas of atomic spectroscopy and the influence of electric and magnetic fields on atomic spectra.</p> <p>CO2 To study in detail about rotational spectra, infrared spectra, electronic spectra and raman spectra.</p> <p>CO3 To learn about various phenomena of spin resonance spectroscopy like NMR, ESR, Mossbauer effect etc.</p>			
PHY4 E13	Lasers and Fiber Optics	4	4
<p>CO1: Detailed Ideas about laser theory and optical resonators which will be useful for fabrication of laser cavity and laser production</p> <p>CO2: TO learn about the types of lasers which have been developed till now and practical applications such as spatial frequency filtering .This method is being widely used in news paper industry, finger print recognition by forensic department .</p>			

<p>CO3: This section details about the principle of fibre optics which is now being the fastest communication technology. This section focus on modal analysis of a waveguide, different types of fibres etc.</p> <p>CO4: The losses present in the fibres are the main interest of this section. This guides to choose optimum quality fibres with low loss for serving the purpose of fibre Communication</p> <p>CO5: Measurements on fibre parameters are being discussed in this section. The parameters are to optimized for fabrication of good quality fibres.</p>			
PHY4 E19	Physics of Semiconductors	4	4
<p>CO1 To understand the band structural aspects and to study the various transitions occurring in semiconductor materials.</p> <p>CO2 To study the statistical thermodynamics of carriers in a semiconductor materials</p> <p>CO3 To study the applications of basic semiconductor materials as schottky diode, tunnel diode etc</p> <p>CO4 To understand the basic principles and working of various photovoltaic devices as solar cells, LED and Semiconductor laser</p> <p>CO5 To acquire knowledge of various low dimensional structures, their fabrication and application.</p>			
PHY 3 PO5 PHY 4 PO6	Modern Physics Practical	4	3
CO1 To develop skill in experiments related to different branches of physics like optics, modern physics, spectroscopy and electronics.			
PHY4 P07	Computational Physics Practical	4	3
CO1 To develop skill in Python Programming.			
PHY4Pr PHY4 Pr1	Project	4	4
CO1 To develop the scientific and research aptitude among the students and to learn about the procedure adopted in scientific method of investigation.			

DEPARTMENT OF CHEMISTRY

<u>B.Sc CORE COURSE CHEMISTRY</u>					
Sl. No.	Course Code		Course Title	Course Structure	
				Hrs/ Wk/ Course	Credits/ Course
1	CHE1B01 Course I:	Core	Theoretical and Inorganic Chemistry-I	2 hrs per week	2 credit
	<ul style="list-style-type: none"> • Students will be skilled in problem solving, critical thinking and analytical reasoning as applied to scientific problems. • Students will be able to explore new areas of research in both chemistry and allied fields of science and technology. • Students will appreciate the central role of chemistry in our society and use this as a basis for ethical behavior in issues facing chemists including an understanding of safe handling of chemicals, environmental issues and key issues facing our society in energy, health and medicine. • the concept of an allowed energy state and how this concept is related to the quantum theory and line spectra • the relationships among the following concepts: the wave properties of electrons, Heisenberg's uncertainty principle, orbitals, electron density, and probability • Know the electromagnetic regions used in nondestructive testing. • explain how nuclear reactions can be used to produce energy • explain the fundamental concepts involved in nuclear weapons based solely on fission • to estimate the age of carbon containing materials through carbon dating 				
2	CHE2B02 Course II:	Core	Theoretical and Inorganic Chemistry-II	2 hrs per week	2 credit
	<ul style="list-style-type: none"> • analyse the significance of quantum numbers. • apply the principles of Quantum Mechanics to simple systems. • understand the different approximation methods used in Quantum Mechanics. • locate an element on the periodic table and describe the arrangement of periodic table and the number of valence electrons for elements. • describe what ionization energy, electron affinity, electro negativity is describe what chemical reactivity is, how it varies within the groups and periods, and explain why it varies the way it does. • describe what chemical reactivity is, how it varies within the groups and periods, and explain why it varies the way it does. • apply the VSEPR model to determine the molecular geometry. 				

			<ul style="list-style-type: none"> understand the common themes running through ionic, covalent and metallic descriptions of chemical bonding and how chemical substances can be classified accordingly
3	CHE3B03 Course III:	Core Physical Chemistry-I	3 hrs per week 3 credit
			<ul style="list-style-type: none"> Make calculations of heat requirements of thermal power plants and IC Engines. Calculate the efficiencies and relate them to what occurs in an actual power plant. Determine what changes of state will result in improving the performance. learn the Maxwell – Boltzmann, Fermi – Dirac and Bohr’s Einstein statistics comparison and applications to know about the Partition functions. To be able to discuss changes of state in terms of the energy of molecules explain how Maxwell’s speed distribution is used to find the average speed, the rms speed, and the most probable speed. understand and be able to qualitatively describe the Determination of surface area of adsorbent using Freundlich, Langmuir - B.E.T isotherm. determine if a system is at equilibrium and if not which direction the reaction will shift to achieve equilibrium. know the difference between Kp and Kc and be able to convert between the two. quantitatively evaluate the structure, formulations and stability of colloidal systems.
4	CHE4B04 Course IV:	Core Organic Chemistry-I	3 hrs per week 3 credit
			<ul style="list-style-type: none"> understand the basic concepts of organic chemistry. understand the rules of IUPAC nomenclature and apply it to different class of organic compounds explain nucleophilic and electrophilic groups and their properties understand the preparation and properties of alkenes and alkynes learn the mechanism of substitution and elimination reactions understand the stability and conformational analysis of alicyclic compounds expertise the students to represent stereochemistry of the compound Recognize and distinguish between aromatic and antiaromatic compounds by their structures. Know the properties of aromatic and antiaromatic compounds, and the chemical consequences of aromaticity. Recognize and be able to write the mechanism of electrophilic aromatic substitution Be able to outline the completed electrophilic aromatic substitution reactions of the following types: halogenation, nitration, sulfonation, and Friedel-Crafts acylation & alkylation
	CHE4B05(P)	Core Course V : Inorganic Chemistry Practical-I	2 hrs per week 4 credit

Related to I and II Year			
<p>Students will be able to</p> <ul style="list-style-type: none"> • know the importance of Quantitative analysis. • study the different types of Volumetric analysis. • understand the principle of making up of solutions. • learn the importance of primary and secondary standard • have an idea about the role of indicator at different pH range in the acidimetry and alkalimetry. • enhance their skill to determine the strength of the solution and the amount present in the given solution. • understand the principle of External Indicator. • get an idea about Neutralisation titrations • Redox titrations. • learn Iodimetric titrations. • understand the principles of Complexometric titrations. • develop skills by doing these titrations 			
CHE5B06 Course VI:	Core	Inorganic Chemistry-III	3 hrs per week 3 credit
<ul style="list-style-type: none"> • explain the fundamentals of analytical chemistry and steps of a characteristic analysis, • interpreted the sources of random errors and effects of random errors on analytical results. • define the different gravimetric methods, titrimetric analysis methods, aqueous solution chemistry • apply the equilibrium calculations to complex systems. • explains the atomic, physical and chemical properties of s and p block elements and lists their uses • explains the preparation, properties and uses of industrially and commercially important compounds • To make electronic products more sustainable and environment-friendly. • To provide a useful and flexible, cost-effective framework for worldwide e-waste management focusing on environmental protection by using appropriate methodologies, such as; recycling, refurbishing and reusing and by other appropriate means. • suggests and adopts strategies for control of environmental pollution. • Students will be able to explain why chemistry is an integral activity for addressing social, economic, and environmental problems. 			
CHE5B07 Course VII:	Core	Organic Chemistry-II	4 hrs per week 3 credit

	<ul style="list-style-type: none"> learn the mechanism of substitution and elimination reactions learn the preparation, properties of alcohols and ethers & differentiate primary, secondary and tertiary alcohols. do the estimation of the number of methoxy groups in a natural product - Zeisel's method. prepare and study the applications of Oxirane, Dioxane, Chlorex and Divinyl ether. study the structure and reactivity of carbonyl group & learn the mechanism of nucleophilic substitution reaction study the strength of acids and the effect of substituents on acidity learn the preparation, properties of some mono- di- aliphatic carboxylic acids. acquire knowledge about amines get an idea about active methylene compounds and their importance in synthetic organic chemistry. 		
CHE5B08 Course VIII:	Core Physical Chemistry-II	4 hrs per week	3 credit
	<ul style="list-style-type: none"> identify the reaction order for a chemical change and understand the concept of pseudo-first order kinetics and when they apply. apply integrated rate equations to solve for the concentration of chemical species during a reaction of different orders. applications in spectroscopy. know basic information on molecular methods (IR, Raman, UV-VIS, NMR, EPR). Understand the atomic, molecular structure and application of spectroscopic techniques. study the basic concepts of photochemistry. explain the importance of electronically excited molecules. gain knowledge about adsorption isotherms. Analyze the conditions associated with ideal and non-ideal vapour-liquid systems at equilibrium through the construction and interpretation of phase diagrams for ideal and non-ideal binary mixtures. Solve single- and multistage separation processes involving non-ideal chemical mixtures using numerical methods and simulations, and recommend appropriate operating condition. identify the symmetry elements and classify the molecules into point group 		
CHE6B09 Course IX:	Core Inorganic Chemistry-IV	3 hrs per week	3 credit
	<ul style="list-style-type: none"> Understand the principles of various Metallurgical processes. to gain indepth knowledge in the general characteristics of Fe, Co, Ni and Pt learn the chemistry of Lanthanides and Actinides Get an in-depth knowledge in inorganic materials. Know about organometallic chemistry write the IUPAC nomenclature of co-ordination compounds. 		

		<ul style="list-style-type: none"> • Know the applications of co-ordination compounds. • calculate the 'spin-only' magnetic moment of simple co-ordination compounds. • understand the role of metals in biological system. 		
CHE6B10 Course X:	Core	Organic Chemistry-III	3 hrs per week	3 credit
		<ul style="list-style-type: none"> • know about the interactions of electromagnetic radiation and matter and their applications in spectroscopy. • know basic information on molecular methods (IR, Raman, UV-VIS, NMR, EPR). • Understand the atomic , molecular structure and application of spectroscopic techniques. • Recognize and draw particular carbohydrate structures • Know general structural elements of cyclic monosaccharides and disaccharides, and their implications for structure/function • Predict the products of condensation reactions and hydrolysis • understand the chemistry of terpenoids, its classification and isoprene rule. • understand the structure elucidation of some important terpenoid. • learn about the classification and biological role of Amino acids and Proteins, Nucleic acids. • Understand the theories of enzymes and kinetics of enzyme action 		
CHE6B11 Course XI:	Core	Physical Chemistry III	3 hrs per week	3 credit
		<ul style="list-style-type: none"> • understand the corrosion process of various materials • understand electrochemical corrosion process • define central parts of electrochemical cells and electrochemical equipment such as anode, cathode, membrane, diaphragm, liquid junction, reference electrode, and potentiostat • understand about electrode potentials & electrochemical cells and differentiate between electrolytic and electrochemical cells; • calculate the solubility of sparingly soluble saltS. • apply phase rule and, draw phase diagrams for one, and two component systems • describe specific crystal structures by applying basic crystallographic concepts • analyse the characteristics and theories in semiconductor materials in terms of crystal structures, charge carriers and energy bands. • understand a broad, fundamental basis of liquid crystals and its applications. 		
		<p>Students will be able to</p> <ul style="list-style-type: none"> • understand the principles of gravimetric analysis. • learn about precipitation techniques. • know about conditions for precipitation. 		

CHE6B12 Course XII:	Core	Advanced and Applied Chemistry	3 hrs per week	3 credit
<ul style="list-style-type: none"> to learn about the fundamental uniqueness of the chemical and physical properties of nanomaterials and their potential impact in science, engineering, medicine, and the environment Familiarization with the main topics of current interest in the field of supramolecular chemistry Introduction to the scientific method. Topics include general experiment and study design, effective communication, and literature search skills Be able to describe the most commonly-used methods in molecular modeling and computational chemistry, such as Hartree-Fock and density-functional theory. Explain the general reaction course for ring-opening, coordination, suspension and emulsion polymerization Suggest and motivate choices of a polymerization technique considering the monomer structure and describe properties of the manufactured product learn the preparation and uses of chemicals used in everyday life. understand the nature of chemicals present in cosmetics, perfumes, soaps, detergents and other chemicals like phenoyl, ink, cleaning powder, shampoo, candles, lipstick, nail polish, boot polish & face powder. Study the manufacturing process of various fibres and their influence in modern life. acquire knowledge about the silicate industry. Paper and textile industries. explain the various agrochemicals used in agriculture. know more about and explosives, and paints and varnishes used in our daily life. 				
CHE6B13(E2) Course XIII:	Core	Polymer Chemistry	3 hrs per week	3 credit
<ul style="list-style-type: none"> understand the basics of polymer science. gain insight about the importance of polymer characterization, polymer processing and polymer testing Explain the general reaction course and reaction mechanism for step growth polymerization, chain polymerization including radical-, ion-, and copolymerization describe and compare the principals of bulk, solution and interface polymerization calculate the degree of polymerization, average molecular weight, average functionality, gel point, kinetic chain length, copolymerization composition etc. suggest measures to control the molecular weight and the rate of polymerization suggest characterization methods to identify polymer composition, polymer architecture, molecular weight 				
CHE6B14(P) Course XIV:	Core	Physical Chemistry Practical	5 hours per week	4 credit

	<ul style="list-style-type: none"> determine the viscosity of the solutions carry out conductometric titrations and potentiometric titration experiments determine the refractive index of the solution determine the phase equilibria determine the colligative properties and transition temperature study the kinetics of the reaction. 		
CHE6B15(P) Core Course XV:	Organic Chemistry Practical	5 hours per week	4 credit
	<ul style="list-style-type: none"> learn the systematic Qualitative Analysis of organic compounds determine the melting and boiling point . learn various recrystallization method learn various organic preparation of industrially important compounds 		
CHE6B17(P) Core Course XVII:	Inorganic chemistry practical-II+industrial visit	5 hours per week	4 credit
	<ul style="list-style-type: none"> learn the systematic Qualitative Analysis. understand the tests for various acid radicals and basic radicals learn various inorganic preparation of industrially important compounds to learn the identification of compounds using chromatographic techniques Industry visits provide opportunity for active/interactive learning experiences in-class as well outside the classroom environment. Students become more aware of industry practices and regulations during industry visits. 		
CHE6B17(P) Core Course XVII:	Inorganic Chemistry Practical-III	5 hours per week	4 credit
	<ul style="list-style-type: none"> Understand the principle, method and applications of gravimetric analysis Understand the principle, method and applications of colorimetric analysis 		
CHE6B18(Pr) Core Course XVIII:	Project Work		2 credit
	<ul style="list-style-type: none"> to develop research mind and critical thinking to develop relevant practical skills for the workplace to boost technical and problem-solving abilities, drawing on knowledge gained elsewhere on course. 		

	<ul style="list-style-type: none"> understand the nature of chemicals present in cosmetics, perfumes, detergents and other chemicals like phenyle, ink, cleaning powder, shampoo, candles, lipstick, nail polish, boot polish & face powder. to give information regarding what is the difference between the various types of soaps, their mode of action, why the disparity in their prices and why soaps are preferred over detergents. to enlighten about the pros and cons of using processed food stuff. to study the applications of conducting polymers to learn about the applications of nanotechnology 			
	B.Sc COMPLEMENTARY COURSE			
CHE1C01 Complementary Course I:	General Chemistry	2 hours per week	2 credit	
	<ul style="list-style-type: none"> Know about the various instrumental analytical techniques the concept of an allowed energy state and how this concept is related to the quantum theory and line spectra the relationships among the following concepts: the wave properties of electrons, Heisenberg's uncertainty principle, orbitals, electron density, and probability explain how nuclear reactions can be used to produce energy explain the fundamental concepts involved in nuclear weapons based solely on fission to estimate the age of carbon containing materials through carbon dating apply the VSEPR model to determine the molecular geometry. understand the common themes running through ionic, covalent and metallic descriptions of chemical bonding and how chemical substances can be classified accordingly understand the role of metals in biological system. 			
CHE2C02 Complementary Course II:	Physical Chemistry	2 hours per week	2 credit	
	<ul style="list-style-type: none"> to understand the corrosion process of various materials to understand electrochemical corrosion process to define central parts of electrochemical cells and electrochemical equipment such as anode, cathode, membrane, diaphragm, liquid junction, reference electrode. to identify the reaction order for a chemical change and understand the concept of pseudo-first order kinetics and when they apply. 			

	<ul style="list-style-type: none"> to apply integrated rate equations to solve for the concentration of chemical species during a reaction of different orders. to understand the general characteristics of different states of matter. to impart knowledge to the students about the intermolecular forces in gases and liquids, the structure of solids, defects in solids. 		
CHE3C03 Complementary Course III:	Organic Chemistry	2 hours per week	2 credit
	<ul style="list-style-type: none"> to understand the basic concepts of organic chemistry. to understand the rules of IUPAC nomenclature and apply it to different class of organic compounds to explain nucleophilic and electrophilic groups and their properties to understand the preparation and properties of alkenes and alkynes to learn the mechanism of substitution and elimination reactions to understand the stability and conformational analysis of alicyclic compounds to expertise the students to represent stereochemistry of the compound to recognize and distinguish between aromatic and antiaromatic compounds by their structures. to know the properties of aromatic and antiaromatic compounds, and the chemical consequences of aromaticity. to recognize and be able to write the mechanism of electrophilic aromatic substitution will be able to outline the completed electrophilic aromatic substitution reactions of the following types: halogenation, nitration, sulfonation, and Friedel-Crafts acylation & alkylation To impart the students thorough idea in in the chemistry of carbohydrates, heterocyclic compounds, amino acids, proteins and nucleic acids. <ul style="list-style-type: none"> To study the fundamentals of terpenoids, alkaloids, vitamins, lipids and steroids. 		
CHE4C04 Complementary Course IV:	Physical and Applied Chemistry	2 hours per week	2 credit
	<ul style="list-style-type: none"> to learn the different theories of reaction rates and factors affecting reaction rates to have an idea about the different types of catalysis and their mechanisms to know the general properties of colloids and macromolecules to explain how Maxwell's speed distribution is used to find the average speed, the rms speed, and the most probable speed. To get a deep insight into the various spectroscopic methods used for the characterisation of organic compounds. to nable the students to elucidate the structure of compounds by analysing the spectral data to give insight into the processes involved in the production of soaps, detergents, cosmetics 		

	<ul style="list-style-type: none"> to give information regarding what is the difference between the various types of soaps, their mode of action, why the disparity in their prices and why soaps are preferred over detergents. to enlighten about the pros and cons of using processed food stuff. to understand the basics of polymer science, synthetic polymers, and biodegradable polymers. to suggest and adopt strategies for control of environmental pollution. to students will be able to explain why chemistry is an integral activity for addressing social, economic, and environmental problems. 		
CHE4C05(P)	Complementary Course V: Practicals	2 hours per week	4 credit
	<ul style="list-style-type: none"> to know the importance of Quantitative analysis. to study the different types of Volumetric analysis based on neutralization and redox titration to understand the principle of weighing and making up of solutions. to detect the presence of cations in any salt mixture. to determine the physical constants to understand the principle, method and applications of gravimetric analysis to prepare some inorganic compounds 		
M.Sc Chemistry			
CH1C01	Basic Concepts in quantum chemistry and group theory	3 hours per week	3 credit
	<ul style="list-style-type: none"> to pinpoint the historical aspects of development of quantum mechanics to understand and explain the differences between classical and quantum mechanics to understand the idea of wave function to understand the uncertainty relations to solve Schrödinger equation for simple potentials to spot, identify and relate the eigenvalue problems for energy, momentum, angular momentum and central potentials explain the idea of spin 		
CH1C02	Elementary inorganic chemistry	3 hours per week	3 credit
	<ul style="list-style-type: none"> to understand, concepts and the properties of the main group elements. to recognize the different non valence forces and their influence on the physical & chemical properties to learn structural arrangements and its stability based upon physical parameters. to demonstrate an understanding of the basic principles of periodicity to understand the basic principles of acid – base chemistry and non – aqueous solvents 		

	<ul style="list-style-type: none"> to demonstrate an understanding of VSEPR theory 			
CH1CO3	Structure and reactivity of organic compounds	3 hours per week	3 credit	
	<ul style="list-style-type: none"> to understand the reactive species involved in the reactions. to study the methods of determining reaction rate product analysis. to learn the concept of stereochemistry and its importance. to identify the stereochemical notations. to understand the concept of aromaticity of benzenoid and non benzenoid compounds. to acquire knowledge about the mechanism of nucleophilic, electrophilic and elimination reactions. to study the methods for the synthesis of optically active compounds and asymmetric synthesis. 			
CH1CO4	Thermodynamics, kinetics and catalysis	3 hours per week	3 credit	
	<ul style="list-style-type: none"> to identify thermodynamic property of any system to apply it for various systems will acquire the knowledge of phase equilibria for various systems to get knowledge about various electrochemical phenomena to calculate the value of the activation energy for a chemical reaction given values for the rate constant at several different temperatures. to use the Collision Model of Chemical Kinetics to describe how changes in concentration or temperature affect rates of chemical reactions. to describe how a catalyst increases the rate of a chemical reaction. to explain theories and thermodynamic concepts to analyse practical/real systems and apply thermodynamic laws appropriately to demonstrate adequate understanding of the subject to seek the solution to unfamiliar problems and reflect on the outcomes of experimental/practical work 			
CH1P01 and CH2P04 related to I and II year	Inorganic chemistry practical 1 and II	4 hours per week	4 credit	
	<ul style="list-style-type: none"> to distill water and other solvents to Identify various ions present in water and mixture of salt to estimate the ions present in the sample by different techniques to identify various ions present in alloys to estimate the amount of ions by complexometric and gravimetric methods to prepare and characterize various complexes and analyse the samples thoroughly 			

CH1P02 and CH2P05 related to I and II year	Organic chemistry practical 1 and II	4 hours per week	4 credit
<ul style="list-style-type: none"> independently perform two or more step organic synthesis. identify the synthesized compounds by TLC and purify it by column chromatography. extract, identify and characterize the compounds isolated from natural product 			
CH1P03 and CH2P06 related to I and II year	Physical chemistry practical 1 and II	4 hours per week	4 credit
<ul style="list-style-type: none"> determine the EMF of any cell determine the rate constant measure the adsorption capacity of various materials draw the phase diagram for 2 and 3 component systems and analyze it determine the optical rotation of chiral molecules determine the molecular weight of the polymer by viscometry draw chemical structures using chemsketch and chemdraw draw graphs using excel and origin software prepare the final dissertation report using MS word by themselves 			
CH2C05	Applications of quantum mechanics and group theory	3 hours per week	3 credit
<ul style="list-style-type: none"> to generate a representation and to reduce it to its irreducible components to use symmetry adapted linear combinations to use symmetry arguments to understand bonding and geometry of molecules to apply symmetry methods to a wide range of spectroscopic techniques to predict infrared and Raman spectra of molecules to learn the difference between classical and quantum world to see how operator algebra can be used to solve simple eigenvalue problems to understand what is meant by the orbital concept to predict the role of rotational and spin angular momenta in chemistry to use approximate methods in solving molecular problems to master molecular orbital theory in diatomic and polyatomic molecules 			
CH2C06	Coordination chemistry	3 hours per week	3 credit

	<ul style="list-style-type: none"> • demonstrate an understanding of nomenclature and isomerism • illustrate an understanding of the principles of theories of metal-ligand bond. • demonstrate an understanding of spectra of coordination compounds. • analyze the spectra of transition metal ions. • analyze Tanabe – Sugano diagrams. • interpret the stability of complexes. • understand the substitution reactions in transition metal complexes. • demonstrate an understanding of chemistry of ‘d’ and ‘f’ block elements. • analyze and compare the transition metals and lanthanides • to learn redox and photochemical reactions of complexes 		
CH2C07	Reaction mechanism in organic chemistry	3 hours per week	3 credit
	<ul style="list-style-type: none"> • to learn the basic mechanism of oxidation in organic compounds and to acquire knowledge about the reagents which causes oxidation in various compounds. • learn about the two types of reduction reactions like complete reduction and selective reduction and the reagents which causes reduction in various organic compounds. • to attain a thorough knowledge about electronic spectroscopy, Mossbauer spectroscopy, EPR spectroscopy. • to determine the structures of inorganic and organometallic compounds using NMR Spectra. • to understand the mechanism of reactions given by carbon-oxygen double bond bond. • to know the photochemistry of carbonyl compounds, olefins and Pericyclic reactions. • to gain knowledge about the synthesis and structure of various natural products. • learn the Photochemical excitation and Jablonski diagram. 		
CH2C08	Electrochemistry, solid state chemistry and statistical thermodynamics	3 hours per week	3 credit
	<ul style="list-style-type: none"> • to understand about statistical thermodynamics • to attain a thorough knowledge about advanced chemical kinetics, surface analytical techniques • to measure surface properties of materials and the advanced principles of various electrochemical techniques. • Utilize models of the atom to predict bonding and behavior of atoms. • Sketch the seven crystal systems and fourteen Bravais lattices. • Specify atomic planes, directions, and families of planes and directions within a given crystal structure using Miller indices. • Correlate X-ray diffraction information with crystal structure. • Compare and contrast the scattering of X-rays, neutrons and electrons within a crystal, and understand when one should use each of these to obtain structural information about a material. • Utilize band theory to describe the operation of modern semiconductor devices. • Use thermodynamics to explain the presence of point defects in crystalline solids. 		

	<ul style="list-style-type: none"> Describe point, line, planar, and bulk imperfections in crystalline solids, and explain how these imperfections interact 		
CH3C09	Molecular spectroscopy	3 hours per week	3 credit
	<ul style="list-style-type: none"> to learn the principle and applications of ultraviolet spectroscopy. to calculate the absorption maxima of dienes, polyenes and enones using Woodward Fieser Rule to understand the infra-red spectroscopy in organic structure determination. to know about the nuclear magnetic resonance spectroscopy, proton chemical shift, spin-spin coupling, coupling constants and applications to organic structures. to acquire ideas about ^{13}C resonance spectroscopy, HOMOCOR, HETCOR, NOESY, DEPT and INADEQUATE techniques to learn Mass spectrometry, ORD and CD and their applications 		
CH3C10	Organometallic and Bioinorganic chemistry	3 hours per week	3 credit
	<ul style="list-style-type: none"> to improve the level of understanding of the chemistry of organometallic compounds, metal carbonyls and metal cluster and metallocenes. to study the applications of homogenous and heterogenous catalysis. to know the importance of metals in biological systems to impart the knowledge on the chemistry of biomolecules to understand, concepts concepts of Bioinorganic Chemistry, Function and transport of alkali and alkaline earth metals, metalloporphyrins / metalloenzymes 		
CH3C11	Reagents and transformations in organic chemistry	3 hours per week	3 credit
	<ul style="list-style-type: none"> to learn about oxidation and reduction reaction in detail to understand the role of organic reagents in synthesis to Understand the basics of polymer science. to impart knowledge on theoretical background about polymer composites to heterocyclic chemistry which includes various methods for ring synthesis and application of those methods for the preparation of specific groups of heterocyclic systems. to gain knowledge with particular properties, reactions, and applications of the most important as well as less common heterocycles. 		
CH3E01	Synthetic organic chemistry	3 hours per week	3 credit

	<ul style="list-style-type: none"> • The students will acquire knowledge on disconnection approach as well as role of modern synthetic reagents in organic transformations. • To study the concepts and fundamentals of Retro synthetic Analysis • To give a thorough introduction to the study of linear free-energy relationships (LFER) and their application to organic reactions • get an idea about the synthetic use of reagents in organic synthesis. • To study various aspects of organometallic reagents 		
CH4C12	Instrumental methods of analysis	4 hours per week	4 credit
	<ul style="list-style-type: none"> • To acquire intense knowledge about the basic principles, instrumentation and applications of spectroscopy, optical microscopy, and electron microscopy • To gain the in-depth knowledge of concepts in electrochemistry and to learn about the surface morphology (particle shape and size) characterization of materials using various advanced instrumentation techniques. • To learn how to interpret the data of molecules by using thermal and chromatographic techniques 		
CH4C13	Advanced topics in chemistry	4 hours per week	4 credit
	<ul style="list-style-type: none"> • to get detailed knowledge about the concept, characterization and various applications of Nanomaterials. • to know about green chemistry initiative and assess the potential impact of chemical reactions to environment and human health • to get some ideas about heterogeneous catalysts and biocatalysts. • to understand the theory, concepts and terminology of computational chemistry with an emphasis on electronic structure calculations using the molecular-orbital model. • to learn to describe the most commonly-used methods in molecular modeling and computational chemistry, such as Hartree-Fock and density-functional theory. to construct complex materials and molecular machinery. • to acquire an advanced level of knowledge in supramolecular chemistry. • to understand the importance of chemistry in medicinal chemistry field • to learn environmental aspects of non-conventional energy resources in Comparison with various conventional energy systems, their prospects and limitations. • to learn the need of the use of solar energy wind energy and the various components used in energy generation and know the classifications, fuel cells, wave power, tidal power and geothermal principles and application 		
CH4E05	Industrial catalysis	4 hours per week	4 credit

	<ul style="list-style-type: none"> to understand catalysis in industrial processes both catalyst preparation and their use in industrial application. to learn about different theories of the catalytic reaction. to acquire the heterogeneous catalyst, different modes of synthesis will be described both conventional and unconventional methods to understand the role of catalyst in industrial processes such as Fischer Tropsch, oxidation reactions, hydrocracking process . 			
CH4Pr01	Research Project		3 hours per week	4 credit
	<ul style="list-style-type: none"> to learn the procedure of literature survey of the concerned topic to derive a plan for executing the work in the stipulated time with maximum efficiency and success. to give intensive exposure to industry as a first time experience. • Understanding different sectors of an industry and the functionalities of each sector. to make the student learn the difference between conventional department laboratory and its nature of work and R & D laboratory of research institute or industry. to learn, adapt, and practice the extensive bench work in a research laboratory or industry. to prepare a dissertation report with complete follow up of research methodology. 			
CH3P07,CH4P10	INORGANIC PRACTICAL III and IV	CHEMISTRY	4 hours per week	4 credit
	<ul style="list-style-type: none"> independently perform two or more step organic synthesis. identify the synthesized compounds by TLC and purify it by column chromatography. extract, identify and characterize the compounds isolated from natural products. 			
CH3P08,CH4P11	ORGANIC PRACTICAL III and IV	CHEMISTRY	4 hours per week	4 credit
	<ul style="list-style-type: none"> to identify various ions present in alloys to estimate the amount of ions by complexometric and gravimetric methods to prepare and characterize various complexes and analyse the samples thoroughly to quantitatively separate suitable binary mixtures of ions in solution by volumetric colorimetric or gravimetric methods, only one of the components to be estimated. 			
CH3P09,CH4P12	PHYSICAL PRACTICAL III and IV	CHEMISTRY	4 hours per week	4 credit
	<ul style="list-style-type: none"> to design and perform experiments to determine the rate, order, and activation energy of chemical reactions by varying concentrations and/or temperature to measure equilibrium concentrations and equilibrium constants for acid-base, 			

solubility, and complexation reactions given initial concentrations of reactant .

- to study the preparation of buffer solutions at a required pH, given a choice of solutions of acid/conjugate base pairs
- to determine the molar mass of an unknown nonelectrolyte and an unknown electrolyte from a freezing point depression experiment .

DEPARTMENT OF ZOOLOGY

Key Indicator - 2.6 Student Performance and Learning Outcomes (40)

2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered

Programme Specific Outcome: (B.Sc. Zoology)

The Under Graduate Programme in Zoology will benefit students from a wide range of teaching and learning methods that suit the content and aims of each course unit. These range from lectures, tutorials and practicals to field study and research projects.

- To identify the major groups of organisms with an emphasis on animals and be able to classify them within a phylogenetic framework based on their contrasting characteristics.
- To use the evidence of comparative biology to explain the theory of evolution which is the only scientific explanation for how the descent with modification has shaped animal morphology, physiology, life history, and behavior? It will also render a knowhow on the mechanisms of evolution at the molecular, micro and macro levels, and the role of evolution as the central unifying concept in biology.
- To explicate the ecological interconnectedness of life by tracing energy and nutrient flows through the environment. This will enable one to relate the physical environment to the structure of populations, communities, and ecosystems. This will in turn help in developing a reverence for environment and to strive towards its sustainable utilization and conservation.
- To explain how organisms function at the level of the gene, genome, cell, tissue, organ and organ-system. Drawing upon this knowledge, they will be able to give specific egs. of the physiological adaptations, development, reproduction and behavior of different forms of life.
- To acquaint students with the interactions between the different types of DNA, RNA and protein biosynthesis as well as high end uses of genetic engineering tools and techniques for the manipulation of genome. This will lead not only to the understanding of genetic mechanisms related to different hereditary diseases but also will avail an understanding of plethora of opportunities to overcome these diseases.
- To explain immune effector mechanisms to gain an insight into the contribution of organs & cells to develop an immune response leading to immunological disorders.
- To get aware of different microorganisms by understanding their structural morphology and bioactivity (pathogens, bio-control agents and microbes of industrial importance) for improving standards of human life.
- To provide an overview on importance of bioinformatics by acquainting the students with various databases and repositories like NCBI, EMBL etc, data extraction techniques and analysis of the data using various analytical tools.
- To apply the scientific method to questions in biology by formulating testable hypotheses, gathering data that address these hypotheses, and analyzing those data to assess the degree to which their scientific work supports their hypotheses.
- Student participatory projects were included in the curriculum, where, they conceive the idea of research leading to new findings by, conducting research with relevant experimental designs and methodology. Recording, analysis and evaluation of data and presenting scientific reports with clear, concise language using oral, written and visual modes to science-literate and general audiences.
- Field studies form an integral part of teaching and will avail a five day field tour, to zoologically, ecologically important sites and research institutes of repute with in India. During

the trip the students will get an opportunity to study organisms in their own natural habitats as well as a first hand exposure to various research techniques using different instruments.

Course Outcomes

Core Courses under BSc Zoology

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Course	Wk/ Credits/ Course
1	ZO1B01T & ZO2B02T	Animal Diversity: Nonchordata – I & II	1Theory 1 Tutorial	2
Course Outcome <ul style="list-style-type: none"> • Understanding principles and concepts of classification • Acquainting with five kingdom classification and Zoological nomenclature • Availing a know-how on animal diversity with detailed understanding of various type specimens classified under different taxonomic categories (Kingdom Protista and Kingdom Animalia (Phylum Porifera to Phylum Hemichordata and Minor Phyla) • Getting aware of different organs, organ systems and organism as a whole and its adaptive modifications and refinement through evolution 				
2	ZO3B03T & ZO4B04T	Animal Diversity: Chordata – I & II	1Theory 1 Tutorial	2
Course Outcome <ul style="list-style-type: none"> • Gaining ability to understand biodiversity with respect to chordates and to describe unique characters of Urochordates, Cephalochordates, Pisces and Tetrapods. • Acquiring a knowhow on morphology, integumentary, digestive, respiratory, circulatory, excretory, nervous and reproductive systems of various chordates. • Drawing upon this knowledge they will be able to understand functioning of an organism as a whole as well as the evolutionary refinement of different organ systems during evolution to its climax i.e., human beings 				
3	ZO5B06T	Environmental Biology, Wild life Conservation and Toxicology	2Theory 1 Tutorial	3
Course Outcome <ul style="list-style-type: none"> • Gaining information regarding various nonliving and living components of an ecosystem, their interactions and Ecological Energetics where, sun is the energy source • Acquainting with various ecological tools in order to understand biodiversity and also to understand the functional role of a living entity as an ecological unit • Understanding various aspects of Biodiversity, issues related to Wild Life management and strategies to conserve nature so as to make individuals realize their duties to ease the threats faced by nature • Getting aware of various harmful produces from both living as well as manmade and their toxicological effects on man himself and on nature 				
4	ZO5B07T	Ethology, Evolution and Zoogeography	2Theory 1 Tutorial	3
Course Outcome <ul style="list-style-type: none"> • Ability to describe and explain the main concepts in ethology related to positive and negative behavior patterns, acquired behavior including learning and exploratory skills and animal-human interactions 				

		<ul style="list-style-type: none"> Knowledge on how to integrate central ideas underpinning evolutionary patterns and processes from the molecular to the macro scale. Acquaints with the patterns of animal biodiversity over space and through time 		
5	ZO5B08T	Cell Biology and Genetics	2Theory 1 Tutorial	3
	<p>Course Outcome</p> <ul style="list-style-type: none"> Familiarity with components and functioning of magnifying systems and aids and procedures in preparing slides. Comprehend and describe the features of prokaryote and Eukaryote cells, the composition and spatial organization of the cell. The structure and features of major organelle systems, plasma membrane, protein production and cancer tumorigenesis. The transmission of genetic material in cell division by mitosis or meiosis, the control of these processes and how cell division fits within the cell cycle. Comprehend and describe chromatin structure, gene regulation, and the ways of gene function and the genetic regulation of cell specialization. The phenomenon and implications of Chromosome karyogamy, variation in chromosome number. The analysis of genetic variation in inheritance and transmission genetics including epistasis. Sex determination, sex linkage, and human pedigree analysis. 			
6	ZO5B09T	General Methodology in Science, Bio Statistics and Informatics	2Theory 1 Tutorial	3
	<p>Course Outcome</p> <ul style="list-style-type: none"> Apply the processes and methods of scientific inquiry, including the search and retrieval of scientific information To formulation of scientific hypotheses, the design and conduct of experiments, and the analysis and interpretation of data. To access the primary literature, identify relevant works for a particular topic, and evaluate the scientific content of these works. Read, process and communicate ideas from the scientific literature. Use the fundamental informatics tools and knowledge of mathematics and the physical sciences needed for studying and understanding biological phenomena. To present scientific hypotheses and data both orally and in writing in the formats those are used by practicing scientists. 			
7	ZO6B010T	Biochemistry	1Theory 1 Tutorial	2
	<p>Course Outcome</p> <ul style="list-style-type: none"> To understand basic concepts of pH, Buffer, stabilizing forces etc. and to know structure & function of building blocks (proteins, amino acids, nucleic acids, lipids, and carbohydrates). To describe fundamental concepts concerning metabolic pathways and bioenergetics and know the concept of enzymes & enzyme action To explain the principle and applications of the techniques of colorimetry, spectrophotometry, electroanalytical methods of clinical significance, and other separation techniques as Chromatography, Electrophoresis etc 			
8	ZO6B011T	Physiology and Endocrinology	2Theory 1 Tutorial	3

	<p>Course Outcome</p> <ul style="list-style-type: none"> Provides information on functioning of organisms at the level of the cell, tissue, organ and organ-system so that the students will be able to get acquainted with the physiological adaptations, development, reproduction and behavior of different forms of life. Understanding hormones and the roles of the endocrine system in maintaining homeostasis, integrating growth and development, responding to environmental insults and promoting successful reproduction. 			
9	ZO6B012T	Molecular Biology and Bioinformatics	2Theory 1 Tutorial	3
	<p>Course Outcome</p> <ul style="list-style-type: none"> Explain the principles and laws of inheritance at the cell, individual and population levels. Discuss the molecular mechanisms by which DNA controls development, growth or morphological characteristics of organisms. Explain the emergence of mutations and their influence on the survival of individuals and species and also the principles of cloning and genetic manipulation. Undergraduate experience bioinformatics as a bridge from molecular and structural biology to computer science, statistics, and information theory where biological information (or meaning) is extracted from biological data stored in databases and used for problem solving and modeling of biological systems . 			
10	ZO6B013T	Reproductive Biology, Developmental Biology and Teratology	2Theory 1 Tutorial	3
	<p>Course Outcome</p> <ul style="list-style-type: none"> Understanding the processes underlying development, cellular differentiation and reproduction in complex eukaryotes. Acquainting the student with a clear knowledge of the reproductive physiology, pathophysiology of the menstrual cycle, fertilization, implantation, ovum growth, development, differentiation and associated abnormalities. Information on menopause and its management will be available. A know how on quantitative techniques, when applicable, including modern approaches to fetal surveillance and in vitro fertilization as well as prenatal diagnosis is also given. Disorders of fetal development including the principles of teratology and the mechanism of normal and abnormal parturition and its consequences is reviewed with emphasis on the technology currently available for its detection. 			
11	ZO6B014T	Biotechnology, Microbiology and Immunology	2Theory 1 Tutorial	3
	<p>Course Outcome</p> <ul style="list-style-type: none"> Obtaining a theoretical know-how of various of biotechnological processes and tools like, fermentation, antibiotic production, cell culture, cell fusion, bio-processing, bio-remediation, genetic engineering etc that aims for a better mankind Getting aware of different microorganisms by understanding their structural morphology and their bioactivity (pathogens, bio-control agents and microbes of industrial importance) for improving standards of human life 			

	<ul style="list-style-type: none"> • Availing information on various components of immune system (non specific as well as specific), its functioning, and disorders induced by pathogens and self induced syndromes 			
12	ZO0615T	Human Genetics	2Theory 1 Tutorial	3
<p>Course Outcome</p> <ul style="list-style-type: none"> • To describe the structure of chromosomes, Learn the technique of karyotyping and pedigree analysis to understand the chromosomal basis of inheritance • To get aware of the role of population ancestry and genetic and environmental factors in multifactorial conditions such as congenital anomalies, cancer, diabetes and psychiatric illness • To describe clinical features of common chromosomal disorders and to learn the genetic services like Pre-natal diagnosis, amniocentesis, chorionic villi sampling, foetoscopy, ultrasound sonography, succal test, prenatal sexing. • To understand the scope of gene therapy and its ethical aspects. 				
13	ZO0616P	Practical related to Semester I to IV	4 Practical of 2 hrs	4
<p>Course Outcome</p> <ul style="list-style-type: none"> • Practical understanding of origin of life, evolution and diversification of life, spatial and geological distribution of life and factors limiting life in this planet etc. • Hands on training on magnifying systems, its usage in understanding cells and cell components their function etc. • Practical knowhow on genes and gene regulation, inheritance patterns of genome linked characters etc. • Acquiring practical knowledge on general methodology opted in science experiments, biostatistics and general informatics to analyze raw data and the ways to convey breakthroughs to the scientific community. 				
14	ZO0617P	Practical related to Semester V and VI	4 Practical of 2 hrs	4
<p>Course Outcome</p> <ul style="list-style-type: none"> • Practical know how on biochemistry, physiology and endocrinology through various qualitative and quantitative tests. • Practical understanding on reproductive and developmental biology through various demos on chick development, induced ovulation and insect life cycle. • Practical knowledge related to basic Biotechnology, Microbiology, Immunology, Molecular Biology and Bioinformatics that will enable students with an understanding on microbes, artificial media, blood cells and their immunological importance, electrophoresis, PCR, ELISA and BLAST techniques etc. 				
15	ZO0618Pr	Project Work		2
<p>Course Outcome</p> <ul style="list-style-type: none"> • Student participatory projects were included in the curriculum, where, they conceive the idea of research leading to new findings by, conducting research with relevant experimental designs and methodology. Recording, analysis and evaluation of data and presenting scientific reports with clear, concise language using oral, written and visual modes to science-literate and general audiences. 				

16	ZO0619 F	Field Study		1
<p>Course Outcome</p> <ul style="list-style-type: none"> Field studies form an integral part of teaching and will avail a five day field tour, to zoologically, ecologically important sites and research institutes of repute with in India. During the trip the students will get an opportunity to study organisms in their own natural habitats as well as a first hand exposure to various research techniques using different instruments. 				

Course Outcomes...

Complimentary Courses under BSc Zoology

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	ZO1C01	Animal Diversity & Wild Life	1Theory 1 Tutorial	2
<p>Course Outcome</p> <ul style="list-style-type: none"> Understanding principles and concepts of classification Acquainting with five kingdom classification and Zoological nomenclature Availing a know-how on animal diversity with detailed understanding of various type specimens classified under different taxonomic categories (Kingdom Protista and Kingdom Animalia (Phylum Porifera to Phylum Hemichordata and Minor Phyla) Getting aware of different organs, organ systems and organism as a whole and its adaptive modifications and refinement through evolution Understanding various aspects of Biodiversity, issues related to Wild Life management and strategies to conserve nature so as to make individuals realize their duties to ease the threats faced by nature 				
2	ZO2C02	Economic Zoology	1Theory 1 Tutorial	2
<p>Course Outcome</p> <ul style="list-style-type: none"> Getting acquainted with various human parasites, their modes of infection including vectors transmission to maintain a healthy way of life Availing information on various insect pests, their damage potential and control measures etc to acquire knowledge on unhealthy practices in pest management and to resort on viable self sustained agri-based life for a healthy future Obtaining a theoretical know-how on Pisci culture, Prawn culture, Mussel farming and Pearl culture for a better, possible livelihood 				
3	ZO3C03	Physiology, Toxicology and Ethology	2Theory 1 Tutorial	2
<p>Course Outcome</p> <ul style="list-style-type: none"> Getting aware of various harmful produces from both living as well as manmade and their toxicological effects on man himself and on nature Ability to describe and explain the main concepts in ethology related to positive and negative behavior patterns, acquired behavior including learning and exploratory Provides information on functioning of organisms at the level of the cell, tissue, organ and organ-system. 				
4	ZO4C04	Genetics and Immunology	2Theory 1 Tutorial	2

	<p>Course Outcome</p> <ul style="list-style-type: none"> • Comprehend and describe chromatin structure, gene regulation, and the ways of gene function and the genetic regulation of cell specialization and sex determination. • Knowhow on basic techniques of genetic manipulations and cancer tumorigenesis • Availing information on various components of immune system (non specific as well as specific), its functioning, and disorders induced by pathogens 		
5	ZO4C05(P)	Practical related to Semester I, II, III & IV	1 Practical of 2 hrs 4
	<p>Course Outcome</p> <ul style="list-style-type: none"> • Practical understanding of diversity of life and importance of organisms in an Economical perspective • Practical know how on biochemistry and physiology through various qualitative and quantitative tests. • Practical knowhow on inheritance patterns of genome linked characters 		

Course Outcomes...

Open Course under BSc Zoology

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	ZO5D01	Reproductive Health and Sex Education	1Theory 1 Tutorial	2
	<p>Course Outcome</p> <p>In order to impart flexibility in the Curriculum, a paper of Multidisciplinary nature has been introduced. Educational institutions were considered an important vehicles for promoting Sexual Health as all children will grow and develop physically, emotionally and socially as it relates to their sexual development.</p> <ul style="list-style-type: none"> • Understands the importance of sex education, stages in sexual growth and discusses on the social, ethical and legal issues in the field of reproductive medicine • Acquaints with the genetic mechanism behind development of sex and twin development, sex chromosomal anomalies and disorders • Makes aware of the reproductive rights, sexual abuses and various ethical aspects of sex and introduces various birth control measures (Natural and Artificial) for a future family planning • Understands pubertal changes experienced by them and prepares to address sexually hygienic issues • Gains knowledge on the scientific basis of infertility and various aspects of infertility management techniques through Assisted Reproductive Technology and Prenatal Diagnosis 			

DEPARTMENT OF ECONOMICS

Programme Specific Outcome: BA ECONOMICS

Aims and Objectives

Key Indicator - 2.6 Student Performance and Learning Outcomes (40)
2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered

Keeping pace with the rapid changes that are taking place in economic and political spheres across the globe, the subject of Economics is undergoing swift changes, which warrants constant updating of the curriculum. The principal aims and objectives of BA Programme in economics are:

- Imparting knowledge of fundamental concepts and theoretical propositions
- An understanding of the methodology by which economic ideas are framed, tested and modified.
- To provide the students an opportunity to take up a career in economics and related areas.
- An understanding of the economic issues of national and international importance and realize the dynamics behind them.
- To develop the capacity to analyze the socio-political and economic issues in the language of an economist.
- To provide an opportunity to understand how the economic policies of the government and governmental institutions affect the common people.
- To provide an opportunity to venture into research in economics and there by contribute to the creation of knowledge.
- An understanding of the institutions – social, political and economic, that influence economic issues.

Course Outcomes

Core Courses under Economics

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Course	Wk/ Credits/ Course
1	ECO1 B01	Micro economics – I	6	5
		Course Outcome		
		<ul style="list-style-type: none"> • To understand the behavior of individual economic agents – Consumer, 		
2	SO.1.CO.1	Principles of Sociology	3	2
		Course Outcome		
		<ul style="list-style-type: none"> • To provide a brief understanding about Sociology • To enable the students to familiarize with the basic concepts in Sociology 		
3	ECO3 B03	Quantitative Methods for Economic Analysis - I	5	4
		Course Outcome		
		<ul style="list-style-type: none"> • It is intended to provide students an introduction to quantities methods and tools that are used in the study of economics at undergraduate level. 		

		<ul style="list-style-type: none"> To develop skill in statistical techniques that are required for a meaningful study of applied economics and for carrying out empirical research. 		
4	ECO2B02	Microeconomics – II	6	5
	Course Outcome			
	<ul style="list-style-type: none"> It is designed to introduce fundamental market concepts and structures. The objective of the course is to apply the principles Micro economic analysis to the decision making of firms and market. 			
5	SO.2 C02	Sociology Of Indian Society	3	2
	Course Outcome			
	<ul style="list-style-type: none"> To provide a sociological perspective for understanding the Indian Society To understand about the various institutions in Indian Society 			
6	ECO4 B05	Quantitative Methods for Economic Analysis - II	5	4
	<ul style="list-style-type: none"> To develop skills in mathematical and statistical techniques that are required for a meaningful study of both theoretical and applied economics. 			
7	ECO3 B04	Modern Banking and Insurance	4	4
	Course Outcome			
	<ul style="list-style-type: none"> To understand the latest development is the field of banking and financial system. To familiarise the students with the changing scenario of Indian banking 			
8	SO.3 CO.3	Social Psychology	3	2
	Course Outcome			
	<ul style="list-style-type: none"> To provide an understanding of basic concepts in social psychology To provide basic understanding on social behavior To provide basic understanding on personality and its relation with social system 			
9	ECO4 B06	Computer Application for Economic Analysis	4	4
	Course Outcome			
	<ul style="list-style-type: none"> To provide students with skills that are useful for using computer related technologies in academics and career. 			
10	SO.4 CO.4	Sociology Of Education	3	2
	Course Outcome			
	<ul style="list-style-type: none"> To acquaint with the concept of Educational Sociology and relationship Between education and society To develop understanding about the role of family, society, religion, culture and their relationship with education To contextualize the study of education within the discipline of Sociology 			
11	ECO5 B07	Macroeconomics – I	4	4
	Course Outcome			

		<ul style="list-style-type: none"> To provide students with the basic ideas in classical and Keynesian macroeconomics. 		
12	ECO5 B08	India's Economic Development: National and Regional	4	4
	<p>Course Outcome</p> <ul style="list-style-type: none"> To be sensitised about the issues, appreciate and learn to critically assess the role of the government in various economic spheres. 			
13	ECO5 B09	Economics of Capital Market	4	4
	<p>Course Outcome</p> <ul style="list-style-type: none"> To give an exposure to the students of economics to the changing world of financial markets and to give them an opportunity to familiarize with the basic concepts related to capital market 			
14	ECO5 B10	International Economics	4	4
	<p>Course Outcome</p> <ul style="list-style-type: none"> To acquire skill that will help them to take rational decisions in issues related to international economics. 			
15	ECO6 B11	Macroeconomics – II	4	4
	<p>Course Outcome</p> <ul style="list-style-type: none"> To familiarise the students in the application of principles of macroeconomic analysis to the day-to-day decision-making in the aggregate economy 			
16	ECO6 B12	Mathematical Economics	4	4
	<p>Course Outcome</p> <ul style="list-style-type: none"> To understand the most fundamental aspects of mathematical economics and econometrics. 			
17	ECO6 B13	Public Finance	4	4
	<p>Course Outcome</p> <ul style="list-style-type: none"> To understand the application of the techniques, methods and principles of Economics to decision making in public finance. 			
18	ECO6 B14	Development Economics	4	4
	<p>Course Outcome</p> <ul style="list-style-type: none"> To develop an interrelated to approach to resource use, the relationship between man and man and man and nature. 			
19	ECO6 E03	Economics of Business and Finance	2	2
	<p>Course Outcome</p> <ul style="list-style-type: none"> To understand the global dimensions in the study of business and finance. 			

Open Course

15	ECO5 D02	International Trade and Finance	3	2
To acquire skill that will help them to take rational decisions in issues related to international economics.				

2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered

MA ECONOMICS

Programme Specific Outcome:

Keeping pace with the rapid changes that are taking place in economic and political spheres across the globe, the subject of Economics is undergoing swift changes, which warrants constant updating of the curriculum. The principal aims and objectives of MA Programme in Economics are:

- Imparting knowledge of fundamental concepts and theoretical propositions
- An understanding of the methodology by which economic ideas are framed, tested and modified.
- To provide the students an opportunity to take up a career in economics and related areas.
- An understanding of the economic issues of national and international importance and realize the dynamics behind them.
- To develop the capacity to analyze the socio-political and economic issues in the language of an economist.
- To provide an opportunity to understand how the economic policies of the government and governmental institutions affect the common people.
- To provide an opportunity to venture into research in economics and there by contribute to the creation of knowledge.
- An understanding of the institutions – social, political and economic, that influence economic issues.

Course Outcomes

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
Ist Sem	ECO1C01	Microeconomics: Theory and Applications I	7	4
	Course Outcome			
	• To understand the behavior of individual economic agents – Consumer,			
	ECO1C02	Macroeconomics: Theories and Policies I	6	4
	• To familiarize the students in the application of principles of macroeconomic analysis to the day-to-day decision-making in the aggregate economy			
	ECO1C03	Indian Economy: Problems and Policies	6	4
• To be sensitized about the issues, appreciate and learn to critically assess the role of the government in various economic spheres				
ECO1C04	Quantitative Methods for Economic Analysis-I	6	4	

		<ul style="list-style-type: none"> It is intended to provide students an introduction to quantities methods and tools that are used in economic analysis To develop skill in statistical techniques that are required for a meaningful study of applied economics and for carrying out empirical research. 		
	ECO2C05	Microeconomics: Theory and Applications II	6	4
		<ul style="list-style-type: none"> It is designed to introduce fundamental market concepts and structures. The objective of the course is to apply the principles Micro economic analysis to the decision making of firms and market. 		
	ECO2C06	Macroeconomics: Theories and Policies II	6	4
		<ul style="list-style-type: none"> To provide students with the basic ideas in classical and Keynesian macroeconomics 		
IIrd Sem	ECO2C07	Public Finance: Theory and Practice	7	4
		<ul style="list-style-type: none"> To understand the application of the techniques, methods and principles of Economics to decision making in public finance. 		
	ECO2C08	Quantitative Methods for Economic Analysis-II	6	4
IIIrd Sem		<ul style="list-style-type: none"> To develop skills in mathematical and statistical techniques that are required for a meaningful study of both theoretical and applied economics. 		
	ECO3C09	International Trade	6	4
		<ul style="list-style-type: none"> To acquire skill that will help them to take rational decisions in issues related to international economics 		
	ECO3C10	Growth and Development	6	4
		<ul style="list-style-type: none"> To develop an interrelated to approach to resource use, the relationship between man and man and man and nature. 		
	ECO3C11	Banking: Theory and Practice	6	4
		<ul style="list-style-type: none"> To understand the latest development is the field of banking and financial system. To familiarise the students with the changing scenario of Indian banking 		
	ECO3C12	Basic Econometrics	7	4
		<ul style="list-style-type: none"> To understand the various tools used in data analysis To understand the various errors encounter during data analysis 		
IV th sem	ECO4C13	International Finance	6	4
		<ul style="list-style-type: none"> To understand the various financial movements. To know about the monetary system and its working mechanism. 		
	ECO4C14	Financial Markets	6	4
		<ul style="list-style-type: none"> To know about the various markets, its functions and instruments To understand the monetary system of a country 		
	ECO4C17	Business Economics	6	4

	<ul style="list-style-type: none"> • To understand the growth concept and risk associated with the management. • To know about the various pricing strategies. 			
ECO4C27	<table border="1"> <tr> <td>Research Methodology and Computer Applications</td> <td>6</td> <td>4</td> </tr> </table>	Research Methodology and Computer Applications	6	4
Research Methodology and Computer Applications	6	4		
	<ul style="list-style-type: none"> • To know about the various research methods and tools used in economics. 			

DEPARTMENT OF HISTORY

Key Indicator - 2.6 Student Performance and Learning Outcomes

2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered

- The Under Graduate Programme in History primarily aims at introducing the fundamentals of historical knowledge in a wider range so as to equip the students with better understanding of society and historical processes. It also aims at exposing the spirit of research, analysis, criticism, innovation and invention among the students.

Course Outcomes

Core Courses under BA HISTORY

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Course	Wk/ Credits/ Course
1	HIS1B01	THE TRENDS IN HISTORIOGRAPHY	6HRS	4
Course Outcome				
<ul style="list-style-type: none"> to enable the students to understand history of the discipline of history. to locate works on history in the background of the varying trends in writing the same and to critically evaluate them in the light of the new theories and concepts 				
2	HIS2B02	HISTORY OF THE EARLY WORLD	6HRS	4
Course Outcome				
<ul style="list-style-type: none"> aim of the course is to enable the students to have basic understanding regarding ancient civilisations. The conventional pattern of treating each geographical area of civilisation as separate studies has done away with 				
3	HIS3B03	INFORMATICS AND HISTORY	4HRS	4
Course Outcome				
<ul style="list-style-type: none"> To equip the students to effectively utilize the digital knowledge resources To update basic informatics skills and attitudes relevant to the emerging knowledge 				
4	HIS4B04	HISTORY OF EARLY INDIA	5HRS	4
Course Outcome				
<ul style="list-style-type: none"> The study of early India aims at helping students to understand and to be proud of our countries glorious past. It enables the students to preserve our cultural heritage for the benefit of posterity. It helps them to make out the contributions of our ancestors in art, architecture, science, literature .religion, philosophy etc. 				
5	HIS5B05	HISTORY OF THE MEDIEVAL WORLD	5HRS	4
Course Outcome				
<ul style="list-style-type: none"> To understand the aspects of medieval state and society. Help the students in comparing the transition of medieval world to modern state. 				

6	HIS5B06	METHODOLOGY OF HISTORICAL WRITING	5HRS	4
Course Outcome				
<ul style="list-style-type: none"> • . to enable the students to understand history of the discipline of history. • to locate works on history in the background of the varying trends in writing the same and to critically evaluate them in the light of the new theories and concepts 				
7	HIS5B07	KERALA SOCIETY AND CULTURE: ANCIENT AND MEDIEVAL	5HRS	4
Course Outcome				
<ul style="list-style-type: none"> • to enable the students to understand the major aspects of the evolution of kerala history and culture in the light of new researches and findings 				
8	HIS5B08	HISTORY OF MEDIEVAL INDIA	5HRS	4
Course Outcome				
<ul style="list-style-type: none"> • To familiarize the students on the aspects and culture of medieval period in India 				
9	HIS5B09	HISTORY OF MODERN INDIA	5HRS	4
Course Outcome				
<ul style="list-style-type: none"> • To enable the students to understand the major aspects of colonialism and nationalism and the ideas on the realities of the nation that emerged through centuries of western domination and struggles against them. 				
10	HIS5B10	HISTORY OF MODERN WORLD	5HRS	4
Course Outcome				
<ul style="list-style-type: none"> • To understand the aspects of medieval state and society. • Help the students in comparing the transition of medieval world to modern state. 				
11	HIS6B11	HISTORY OF MODERN KERALA	5HRS	4
Course Outcome				
<ul style="list-style-type: none"> • to enable the students to understand the issues in modern kerala so as to be responsive to the same 				
12	HIS6B12	HISTORY OF CONTEMPORARY INDIA	5HRS	4
Course Outcome				
<ul style="list-style-type: none"> • To make the students aware of the issues of post independent era and conditions in contemporary India 				
13	HIS6B13	HISTORY OF CONTEMPORARY KERALA	5HRS	4
Course Outcome				
<ul style="list-style-type: none"> • . To enable the students to understand the issues in modern kerala so as to be responsive to the same 				
14	HIS6B14	GENDER STUDIES	5HRS	4
Course Outcome				
<ul style="list-style-type: none"> • To introduce studies on women in the light of new concepts and researches 				

15	HIS6B15	COURSE WORK-DISSERTATION	2HRS in 5 th & 6 th semester	4
Course Outcome				
<ul style="list-style-type: none"> • Student participatory projects were included in the curriculum, where, they conceive the idea of research leading to new findings by, conducting research methodology. 				
16				
Course Outcome				
<ul style="list-style-type: none"> • Study tour form an integral part of teaching and will avail a three day study tour, to historically and culturally important sites with in India. During the trip the students will get an opportunity to study and understand the historical monuments. 				
17	HIS6E01	PRINCIPLES AND METHODS OF ARCHAEOLOGY	3HRS	2CREDITS
Course Outcome				
<ul style="list-style-type: none"> • To enable the students to understand the basic principles and methods of archaeology, an important source of writing history and means for understanding and preserving heritage. 				

Complimentary Courses under BA HISTORY

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	ICP1CO1	INDIAN CONSTITUTION AND POLITICS	3HRS/WK	2
	ICP2CO2		„	„
	ICP3CO3		„	„
	ICP4CO4		„	„
Course Outcome				
<ul style="list-style-type: none"> • To make the students aware of the fundamental law of the land • To make the students patriotic • To make the students responsible citizens • To aware the students the three tier structure of local self govt. as the basic principle of democracy • To understand the challenges of Indian democracy 				
2	HIS1CO1	MODERN INDIAN HISTORY	3HRS/WK	2 credits
	HIS2CO1		„	„
	HIS3CO1		„	„
	HIS4CO1		„	„
Course Outcome				
<ul style="list-style-type: none"> • To enable the student to understand introduction of new administrative devices during the period of colonialism • To enable the students to analyze the Indian national movement and Gandhian phase • To understand them on the selected problems of contemporary India. 				

Open Course under BA HISTORY

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	HIS5D01	HISTORICAL TOURISM	2HRS/WK	2

Course Outcome

In order to impart flexibility in the Curriculum, a paper of Multidisciplinary nature has been introduced.

- To inculcate the need for travel and site seeing among the students so as to widen their understanding of cultural past and heritage.

DEPARTMENT OF COMPUTER SCIENCE

PROGRAM SPECIFIC OUTCOME

BSc COMPUTER SCIENCE

- *Communication:* Students will be able to communicate in written and oral forms in such a way as to demonstrate their ability to present information clearly, logically, and critically.
- *Mathematics and Theory:* Students will be able to apply mathematical and computing theoretical concepts in solution of common computing applications, such as computing the order of an algorithm.
- *Programming:* Students will be able to complete successfully be able to program small-to-mid-size programs on their own. Sufficient programming skills will require use of good practice, e.g., good variable names, good use of computational units, appropriate commenting strategies.
- *Systems Design and Engineering:* Students will be able to use appropriately system design notations and apply system design engineering process in order to design, plan, and implement software systems
- *Depth of Knowledge:* In a self-selected area of depth in Computing, students will demonstrate a depth of knowledge appropriate to graduate study and/or lifelong learning in that area. Students should be able to read for understanding materials in that area beyond those assigned in coursework.
- *Preparation for Career and/or Graduate Study:* Students will be prepared for a career in an information technology oriented business or industry, or for graduate study in computer science or other scientific or technical fields.

COURSE OUTCOME

Core Courses under BSc Computer science

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BCS1B01	Computer Fundamentals and HTML	1 theory 2 lab	3
<i>Outcomes</i> <ul style="list-style-type: none">• To equip the students with fundamentals of Computer• To learn the basics of Computer organization• To equip the students to write algorithm and draw flow chart for solving simple problems• To learn the basics of Internet and webpage design				

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
2	MATC01	Complementary Mathematics I	4 theory	3

Outcomes

- *Critical thinking:* The ability to identify, reflect upon, evaluate, integrate, and apply different types of information and knowledge to form independent judgments. Analytical and logical thinking and the habit of drawing conclusions based on quantitative information.
- *Problem solving:* The ability to assess and interpret complex situations, choose among several potentially appropriate mathematical methods of solution, persist in the face of difficulty, and present full and cogent solutions that include appropriate justification for their reasoning.
- *Effective communication:* The ability to communicate and interact effectively with different audiences, developing their ability to collaborate intellectually and creatively in diverse contexts, and to appreciate ambiguity and nuance, while emphasizing the importance of clarity and precision in communication and reasoning and will be prepared to use mathematics in their future endeavors.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
3	C01	Optional Complementary I	4 theory	3

Outcomes

- *Logic and Critical Thinking:* Graduates will have a facility with abstract reasoning, including the ability to abstract from concrete situations and make ideas precise by formulating them mathematically or statistically; will be able to analyze, test, and interpret technical arguments, and form independent judgments. This includes their own arguments and those of others, in both academic and non-academic contexts.
- *Problem solving:* Graduates will be able to use their mathematical and statistical training to help guide possible lines of inquiry; solve complex problems by identifying feasible divisions into simpler sub-problems; identify suitable existing methods of analysis, if any, and assess their strengths and weaknesses in the context of the problem being considered; construct abstract models using appropriate mathematical and statistical tools; use computers and software as exploratory, visualization, modeling and computational tools; engage their creativity in the quest for novel or elegant solutions;
- *Communication:* Graduates will be able to work effectively in a multi-disciplinary environment; accept comments and feedback, and learn from them; explain fundamental mathematical or statistical concepts to non-experts; justify choices made during problem solving and interpretation of results; present the

results and assessment of a problem solving strategy; and clearly communicate logical arguments both orally and in writing to a range of audiences.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
4	BCS2B01	Problem solving using c	1 Theory 2 lab	3

Outcomes

- Identify the parts of the computer system. Adequately explain functioning of computer components and explain the process of problem solving using computer.
- Design an algorithmic solution for a given problem.
- Write a maintainable C program for a given algorithm and trace the given C program manually
- Write C program for simple applications of real life using structures and files.
- Explain role of Operating system in computer system and applications of computer networks.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
5	BCS2B03	Programming Laboratory I: Lab Exam of 1 st and 2 nd Sem. HTML and Programming in C		2

Outcomes

- To make the students learn web designing
- To make the students learn programming environments.
- To practice procedural programming concepts.
- To make the students equipped to solve mathematical or scientific problems using C

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
7	C02	Optional Complementary II	4 theory	3

Outcomes

- *Logic and Critical Thinking*: Graduates will have a facility with abstract reasoning, including the ability to abstract from concrete situations and make ideas precise by formulating them mathematically or statistically; will be able to analyze, test, and interpret technical arguments, and form independent judgments. This includes their own arguments and those of others, in both academic and non-academic contexts.

- *Problem solving:* Graduates will be able to use their mathematical and statistical training to help guide possible lines of inquiry; solve complex problems by identifying feasible divisions into simpler sub-problems; identify suitable existing methods of analysis, if any, and assess their strengths and weaknesses in the context of the problem being considered; construct abstract models using appropriate mathematical and statistical tools; use computers and software as exploratory, visualization, modeling and computational tools; engage their creativity in the quest for novel or elegant solutions;
- *Communication:* Graduates will be able to work effectively in a multi-disciplinary environment; accept comments and feedback, and learn from them; explain fundamental mathematical or statistical concepts to non-experts; justify choices made during problem solving and interpretation of results; present the results and assessment of a problem solving strategy; and clearly communicate logical arguments both orally and in writing to a range of audiences.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
8	A11	Basic Numerical Skills	4 theory	4

Outcomes

- Engage with more abstract mathematical concepts and develop important new kinds of thinking and understand the application of mathematics, its impact on our society past and present, and its potential for the future
- Develop essential numeracy skills which will allow me to participate fully in society and establish firm foundations for further specialist learning
- Understand that successful independent living requires financial awareness, effective money management, using schedules and other related skills
- Interpret numerical information appropriately and use it to draw conclusions, assess risk, and make reasoned evaluations and informed decisions
- Apply skills and understanding creatively and logically to solve problems, within a variety of contexts and appreciate how the imaginative and effective use of technologies can enhance the development of skills and concepts.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
9	A12	General Informatics	4 theory	4

Outcomes

- *Basics skill:* Student will able to update and expand basic informatics skills.
- *Depth knowledge:* Equip the students to effectively utilize the digital knowledge resources for their studies.

- *Graduate Study:* Will be useful to students doing commerce and management courses of other Universities.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
10	BCS3BO2	Data structure using C	1 theory 2 lab	2

Outcomes

- Student will be able to choose appropriate data structure as applied to specified problem definition.
- Student will be able to handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures.
- Students will be able to apply concepts learned in various domains like DBMS, compiler construction etc.
- Students will be able to use linear and non-linear data structures like stacks, queues, linked list etc.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
11	MATC03	Complementary Mathematics	4 theory	3

Outcomes

- *Critical thinking:* The ability to identify, reflect upon, evaluate, integrate, and apply different types of information and knowledge to form independent judgments. Analytical and logical thinking and the habit of drawing conclusions based on quantitative information.
- *Problem solving:* The ability to assess and interpret complex situations, choose among several potentially appropriate mathematical methods of solution, persist in the face of difficulty, and present full and cogent solutions that include appropriate justification for their reasoning.
- *Effective communication:* The ability to communicate and interact effectively with different audiences, developing their ability to collaborate intellectually and creatively in diverse contexts, and to appreciate ambiguity and nuance, while emphasizing the importance of clarity and precision in communication and reasoning and will be prepared to use mathematics in their future endeavors.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
12	C03	Optional Complementary II	4 theory	3

Outcomes

- *Logic and Critical Thinking:* Graduates will have a facility with abstract reasoning, including the ability to abstract from concrete situations and make ideas precise by formulating them mathematically or statistically; will be able to analyze, test, and interpret technical arguments, and form independent judgments. This includes their own arguments and those of others, in both academic and non-academic contexts.
- *Problem solving:* Graduates will be able to use their mathematical and statistical training to help guide possible lines of inquiry; solve complex problems by identifying feasible divisions into simpler sub-problems; identify suitable existing methods of analysis, if any, and assess their strengths and weaknesses in the context of the problem being considered; construct abstract models using appropriate mathematical and statistical tools; use computers and software as exploratory, visualization, modeling and computational tools; engage their creativity in the quest for novel or elegant solutions;
- *Communication:* Graduates will be able to work effectively in a multi-disciplinary environment; accept comments and feedback, and learn from them; explain fundamental mathematical or statistical concepts to non-experts; justify choices made during problem solving and interpretation of results; present the results and assessment of a problem solving strategy; and clearly communicate logical arguments both orally and in writing to a range of audiences.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
13	A13	Entrepreneurship	4 theory	4

Outcomes

- *Knowledge:* Have developed advanced knowledge on how to assess business opportunities and an in-depth understanding of what typically characterize successes and failures and have developed advanced knowledge about key processes necessary to bring new products and services to market and key challenges facing the entrepreneur at different stages of the entrepreneurial voyage:
- *Skills:* Are able to assess the commercial viability of new technologies, business opportunities and existing companies and are able to plan, organize, and execute a project or new venture with the goal of bringing new products and service to the market:
- *General competences:* Have improved your interpersonal and collaborative skills and can effectively combine your understanding of technology and entrepreneurship in a cross-disciplinary fashion to identify and develop attractive opportunities within your field of experience.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
14	A14	Basics of Audio and Video Media	4 theory	4
<p><u>Outcomes</u></p> <ul style="list-style-type: none"> • Evaluate and critique broadcast and production practices both holistically and in terms of their component parts, namely: audio, video, scripting, production and editing. • Write effectively for broadcast media and client-based production, with an emphasis on clarity, story structure and brevity. • Demonstrate competency in shooting and editing video in the field and studio, using professional-level equipment and non-linear editing systems. • Demonstrate proficiency in recording and editing for audio productions. • Produce sophisticated deliverables for clients in a variety of areas, namely: corporate/industrial, informational/educational and commercial/promotional. Synthesize business, marketing and advertising contexts and concerns with the technical aspects of producing media. 				
Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
15	BCS4B05	Database Management System and RDBMS	3 theory 4 lab	4
<p><u>Outcomes</u></p> <ul style="list-style-type: none"> • Understand, appreciate and effectively explain the underlying concepts of database technologies and design and implement a database schema for a given problem-domain. Normalize a database • Populate and query a database using SQL DML/DDL commands. Declare and enforce integrity constraints on a database using a state-of-the-art RDBMS • Programming PL/SQL including stored procedures, stored functions, cursors, packages. Design and build a GUI application using a 4GL • Have a broad understanding of database concepts and database management system software and have a high-level understanding of major DBMS components and their function • Be able to model an application's data requirements using conceptual modeling tools like ER diagrams and design database schemas based on the conceptual model. Be able to write SQL commands to create tables and indexes, insert/update/delete data, and query data in a relational DBMS and be able to program a data-intensive application using DBMS APIs. 				

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
16	BCS4B06	Programming Laboratory II: Lab Exam of 3 rd and 4 th Sem. Data Structures and RDBMS		2
<p><u>Outcomes</u></p> <ul style="list-style-type: none"> To make the students equipped to solve mathematical or scientific problems using C To learn how to implement various data structures. To provide opportunity to students to use data structures to solve real life problems. 				

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
6	MATC02	Complementary Mathematics	4 theory	3
<p><u>Outcomes</u></p> <ul style="list-style-type: none"> <i>Critical thinking:</i> The ability to identify, reflect upon, evaluate, integrate, and apply different types of information and knowledge to form independent judgments. Analytical and logical thinking and the habit of drawing conclusions based on quantitative information. <i>Problem solving:</i> The ability to assess and interpret complex situations, choose among several potentially appropriate mathematical methods of solution, persist in the face of difficulty, and present full and cogent solutions that include appropriate justification for their reasoning. <i>Effective communication:</i> The ability to communicate and interact effectively with different audiences, developing their ability to collaborate intellectually and creatively in diverse contexts, and to appreciate ambiguity and nuance, while emphasizing the importance of clarity and precision in communication and reasoning and will be prepared to use mathematics in their future endeavors. 				

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
17	MATC04	Complementary Mathematics	4 theory	3
<p><u>Outcomes</u></p> <ul style="list-style-type: none"> <i>Critical thinking:</i> The ability to identify, reflect upon, evaluate, integrate, and apply different types of information and knowledge to form independent judgments. Analytical and logical thinking and the habit of drawing conclusions based on quantitative information. 				

- *Problem solving*: The ability to assess and interpret complex situations, choose among several potentially appropriate mathematical methods of solution, persist in the face of difficulty, and present full and cogent solutions that include appropriate justification for their reasoning.
- *Effective communication*: The ability to communicate and interact effectively with different audiences, developing their ability to collaborate intellectually and creatively in diverse contexts, and to appreciate ambiguity and nuance, while emphasizing the importance of clarity and precision in communication and reasoning and will be prepared to use mathematics in their future endeavors.

STATISTICS

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
18	C04	Optional Complementary II	4 theory	3

Outcomes

- *Logic and Critical Thinking*: Graduates will have a facility with abstract reasoning, including the ability to abstract from concrete situations and make ideas precise by formulating them mathematically or statistically; will be able to analyze, test, and interpret technical arguments, and form independent judgments. This includes their own arguments and those of others, in both academic and non-academic contexts.
- *Problem solving*: Graduates will be able to use their mathematical and statistical training to help guide possible lines of inquiry; solve complex problems by identifying feasible divisions into simpler sub-problems; identify suitable existing methods of analysis, if any, and assess their strengths and weaknesses in the context of the problem being considered; construct abstract models using appropriate mathematical and statistical tools; use computers and software as exploratory, visualization, modeling and computational tools; engage their creativity in the quest for novel or elegant solutions;
- *Communication*: Graduates will be able to work effectively in a multi-disciplinary environment; accept comments and feedback, and learn from them; explain fundamental mathematical or statistical concepts to non-experts; justify choices made during problem solving and interpretation of results; present the results and assessment of a problem solving strategy; and clearly communicate logical arguments both orally and in writing to a range of audiences.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
19	BCS5B07	Computer Organization and Architecture	5 theory	4

Outcomes

- Ability to understand basic structure of computer.
- Ability to perform computer arithmetic operations and understand control unit operations.
- Ability to design memory organization that uses banks for different word size operations and understand the concept of cache mapping techniques.
- Ability to understand the concept of I/O organization and ability to conceptualize instruction level parallelism.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
20	BCS5B08	Java Programming	3 theory 3 lab	4

Outcomes

- Create Java programs that solve simple business problems.
- Validate user input.
- Construct a Java class based on a UML class diagram.
- Perform a test plan to validate a Java program and document a Java program.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
21	BCS5B09	Web Programming Using PHP	3 theory 3 lab	4

Outcomes

- Demonstrate programming concepts and describe the function of JavaScript
- Apply JavaScript best practices and use the DOM / Interactivity with elements
- Examine frameworks (e.g. JQuery) and demonstrate the basics of PHP programming
- Experiment with database design. Define and discuss content management systems and create basic Action Script coding

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
22	BCS5B10	Principles of Software Engineering	4 theory	4

Outcomes

- Analyze and resolve information technology problems through the application of systematic approaches and diagnostic tools. Support the implementation and administration of computer systems.
- Support the implementation and administration of networking solutions. Install, configure, troubleshoot, maintain, and upgrade components of computer systems.
- Install, configure, troubleshoot, maintain, and upgrade components of networks. Use a variety of scripting tools and languages to automate routine tasks.

- Follow, monitor, and document data storage procedures designed to ensure the integrity of information. Apply knowledge of security issues to the implementation of information technology solutions.
- Provide efficient and effective technical support to clients in a manner that promotes safe computing practices and reduces the risk of the issue recurring. Conform to workplace expectations found in information technology (IT) environments.
- Contribute to the successful completion of the project applying the project management principles in use.

Open course: COMPUTER OPEN OFFICE AUTOMATION

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
23	BCS5D01	Introduction to Computers and Office Automation	2 theory	2

Outcomes

- Impart an understanding of the basics of our discipline.
 - Apply fundamental principles and methods of Computer Science to a wide range of applications
 - Apply mathematical and scientific reasoning to a variety of computational problems and design, correctly implement and document solutions to significant computational problems
- Develop proficiency in the practice of computing.
 - Formulate solutions to computing problems and analyze and compare alternative solutions to computing problems
 - Design and implement software systems that meet specified design and performance requirements
 - Apply advanced algorithmic and mathematical concepts to the design and analysis of software and apply sound principles to the synthesis and analysis of computer systems

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
24	BCS6B11	Android Programming	4 theory 1 lab	4

Outcomes

- The course will be focused on iOS application development and android application development. Frameworks like phone gap will be described.
- The students will be introduced to mobile programming. Introduction to mobile programming gives answer to where to start, how to implement and what are the requirements.

Sl.	Course	Course Title	Course Structure
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No.	Code		Hrs/ Wk/ Course	Credits/ Course
25	BCS5B12	Operating Systems	4 theory 1 lab	4

Outcomes

- Demonstrate understanding of the concepts, structure and design of operating Systems.
- Demonstrate understanding of operating system design and its impact on application system design and performance.
- Demonstrate competence in recognizing and using operating system features.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
26	BCS5B13	Computer Networks	5 theory	4

Outcomes

- Describe and analyze the hardware, software, components of a network and the interrelations. Explain networking protocols and their hierarchical relationship hardware and software. Compare protocol models and select appropriate protocols for a particular design.
- Manage multiple operating systems, systems software, network services and security. Evaluate and compare systems software and emerging technologies. Develop solutions for networking and security problems, balancing business concerns, technical issues and security.
- Explain concepts and theories of networking and apply them to various situations, classifying networks, analyzing performance and implementing new technologies.
- Identify infrastructure components and the roles they serve, and design infrastructure including devices, topologies, protocols, systems software, management and security. Analyze performance of enterprise network systems.
- Effectively communicate technical information verbally, in writing, and in presentations. Use appropriate resources to stay abreast of the latest industry tools and techniques analyzing the impact on existing systems and applying to future situations.
- Explain the concepts of confidentiality, availability and integrity in Information Assurance, including physical, software, devices, policies and people. Analyze these factors in an existing system and design implementations. Cite and comply with relevant industry and organizational codes of conduct and ethics.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course

27	BCSB14	Programming Laboratory III: Lab Exam of 5 th Sem. Java and PHP Programming		2
<p>Outcomes</p> <ul style="list-style-type: none"> To practice Java programming. To practice client side and server side scripting. To practice PHP Programming. To practice developing dynamic websites. To practice how to interact with databases through PHP. 				
Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
28	BCS6B15	Programming Laboratory IV: Android and Linux shell Programming	4 lab	2
<p>Outcomes</p> <ul style="list-style-type: none"> To practice Android programming. To practice user interface applications. To develop mobile application. To practice shell programming 				
Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
29	BCS6B16D	Computer Graphics	4 theory	3
<p>Outcomes</p> <ul style="list-style-type: none"> Students will be able to compare and contrast the techniques of raster graphics and vector graphics and will be able to create images using OpenGL ES and OpenGL in Processing. Students will be able to use the facilities provided by OpenGL to express basic affine transformations such as scaling, rotation, and translation and will be able to implement simple procedures that perform transformation and clipping operations on a simple 2-dimensional image. Students will be able to discuss the 3-dimensional coordinate system and the changes required to extend 2D transformation operations to handle transformations in 3D. Students will be able to explain the difference between event-driven programming and command-line programming. Will document code to a given standard and students will orally present a project to a group of peers. 				
Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
30	BCS5B17	Project Work	2 lab	3

Outcomes

To provide practical knowledge on software development process

DEPARTMENT OF COMPUTER APPLICATIONS

Key Indicator - 2.6 Student Performance and Learning Outcomes (40)

2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered

Programme Specific Outcome: (BCA)

The basic objective of the program is to open a channel of admission for computing courses for students, who have done the 10+2 and are interested in taking computing/IT as a career. After acquiring the Bachelor's Degree (BCA) at University of Calicut, there is further educational opportunity to go for an MCA or other Master's Programme like MSc(CS), MSc(IT), MBA, etc., at this university or at any other University/Institute. Also after completing the BCA Programme, a student should be able to get entry level job in the field of Information Technology or ITES or they can take up self-employment in Indian & global software market. The specific objectives of the program include:

1. To attract young minds to the potentially rich & employable field of computer applications.
2. To be a foundation graduate program which will act as a feeder course for higher studies in the area of Computer Science/Applications.
3. To develop skills in software development so as to enable the BCA graduates to take up self-employment in Indian & global software market.
4. To train & equip the students to meet the requirements of the Software industry in the country and outside.

Course Outcomes

Core Courses under BCA

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BCA1B01	Computer Fundamentals & HTML	2 Theory	3
			2 Lab	
Course Outcome				
<ul style="list-style-type: none">• To equip the students with fundamentals of Computer• To learn the basics of Computer organization• To equip the students to write algorithm and draw flow chart for solving simple problems• To learn the basics of Internet and webpage design				
2	BCA2B02	Problem Solving using C	2 Theory	3
			2 Lab	
Course Outcome				
<ul style="list-style-type: none">• To equip the students with fundamental principles of Problem Solving aspects.• To learn the concept of programming• To study C language				

		<ul style="list-style-type: none"> To equip the students to write programs for solving simple computing problems 		
3	BCA2B03	Programming Laboratory I: Lab Exam of 1st& 2nd Sem. HTML & Programming in C	0 Theory 0 Lab	2
Course Outcome				
<ul style="list-style-type: none"> To make the students learn programming environments. To practice procedural programming concepts. To make the students equipped to solve mathematical or scientific problems using C To learn how to implement various data structures. To provide opportunity to students to use data structures to solve real life problems. 				
4	BCA3B04	Data Structures Using C	3 Theory 4 Lab	4
Course Outcome				
<ul style="list-style-type: none"> To introduce the concept of data structures To make the students aware of various data structures To equip the students implement fundamental data structures 				
5	BCA4B05	Database Management System and RDBMS	3 Theory 4 Lab	4
Course Outcome				
<ul style="list-style-type: none"> To learn the basic principles of database and database design To learn the basics of RDBMS To learn the concepts of database manipulation SQL To study PL/SQL language 				
6	BCA4B06	Programming Laboratory II: Lab Exam of 3rd& 4th Sem. Data Structures & RDBMS	0 Theory 0 Lab	2
Course Outcome				
<ul style="list-style-type: none"> To make the students equipped to solve mathematical or scientific problems using C To learn how to implement various data structures. To provide opportunity to students to use data structures to solve real life problems. 				
7	BCA5B07	Java Programming	3 Theory 3 Lab	4
Course Outcome				
<ul style="list-style-type: none"> To review on concept of OOP. To learn Java Programming Environments. To practice programming in Java. To learn GUI Application development in JAVA. 				
8	BCA5B08	Computer Organization And Architecture	5 Theory 0 Lab	4
Course Outcome				
<ul style="list-style-type: none"> To learn logic gates, combinational circuits and sequential circuits To learn basics of computer organization and architecture 				
9	BCA5B09	Web Programming Using PHP	3 Theory 3 Lab	4
Course Outcome				

		<ul style="list-style-type: none"> To learn client side and server side scripting. To learn PHP Programming. To practice to develop dynamic websites. To learn how to interact with databases through internet. 		
10	BCA5B10	Principles of Software Engineering	4 Theory 0 Lab	4
		Course Outcome <ul style="list-style-type: none"> To learn engineering practices in Software Development. To learn various software development methodologies and practices. To learn and study various evaluation methods in software Development. 		
11	BCA6B11	Android programming	4 Theory 1 Lab	4
		Course Outcome <ul style="list-style-type: none"> To have a review on concept of Android programming. To learn Android Programming Environments. To practice programming in Android. To learn GUI Application development in Android platform with XML 		
12	BCA6B12	Operating Systems	4 Theory 1 Lab	4
		Course Outcome <ul style="list-style-type: none"> To learn objectives & functions of Operating Systems. To understand processes and its life cycle. To learn and understand various Memory and Scheduling Algorithms. To have an overall idea about the latest developments in Operating Systems 		
13	BCA6B13	Computer Networks	5 Theory 0 Lab	4
		Course Outcome <ul style="list-style-type: none"> To learn about transmissions in Computer Networks. To learn various Protocols used in Communication. To have a general idea on Network Administration. 		
14	BCA6B14	Programming laboratory III- Java and Web Programming	0 Theory 0 Lab	2
		Course Outcome <ul style="list-style-type: none"> To practice Java programming. To practice client side and server side scripting. To practice PHP Programming. To practice developing dynamic websites. To practice how to interact with databases through PHP. 		
15	BCA6B15	Programming Laboratory IV: Lab Exam of Android & Linux shell Programming	0 Theory 4 Lab	2
		Course Outcome		

		<ul style="list-style-type: none"> To practice Android programming. To practice user interface applications. To develop mobile application. To practice shell programming 		
16	BCA6B16	Project and Viva Voce	0 Theory 2 Lab	3
Course Outcome				
<ul style="list-style-type: none"> To provide practical knowledge on software development process 				
17	BCA6B17c	Elective : Software testing & Quality Assurance	4 Theory 0 Lab	3
Course Outcome				
<ul style="list-style-type: none"> To get a general introduction and basic skills on software testing and quality assurance techniques and tools. 				

Course Outcomes...

Complimentary Courses under BCA

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BCA1C01	Mathematical Foundation of Computer Applications	4 Theory 0 Lab	3
Course Outcome				
<ul style="list-style-type: none"> To learn the basic principles of linear algebra and vectors. To learn the basic principles of differential and integral Calculus To learn the mathematical modeling using ordinary and partial differential equations 				
2	BCA1C02	Discrete Mathematics	4 Theory 0 Lab	3
Course Outcome				
<ul style="list-style-type: none"> To learn the mathematical logic & Boolean Algebra. 				
3	BCA2C03	Financial & Management Accounting	4 Theory 0 Lab	3
Course Outcome				
<ul style="list-style-type: none"> To get a general introduction on accounting and its general application. To get a general understanding on various tools for financial statement analysis. To get a general understanding on accounting procedures up to the preparation of various financial statements. To get a general understanding of the important tools for managerial decision making. 				
4	BCA2C04	Operations Research	4 Theory 0 Lab	3
Course Outcome				
<ul style="list-style-type: none"> To get a general introduction in solving linear programming problems. 				

		<ul style="list-style-type: none"> To get a general understanding of network analysis technique. To get a general understanding of different mathematical models. 		
5	BCA3C05	Computer Oriented Numerical & Statistical Methods	5 Theory 0 Lab	3
Course Outcome <ul style="list-style-type: none"> To learn the floating point arithmetic To learn how to solve linear equations To learn the numerical differentiation and integration To learn basics of statistics, probability theory 				
6	BCA3C06	Theory Of Computation	5 Theory 0 Lab	3
Course Outcome <ul style="list-style-type: none"> To get a general introduction to Theory of computer science To get a general understanding on different languages, grammar, automata 				
7	BCA4C07	E-Commerce	5 Theory 0 Lab	3
Course Outcome <ul style="list-style-type: none"> To get a general introduction Electronic Commerce framework . To get a general understanding on various electronic payment system. To get a general understanding on Internal information systems. To get a general understanding on the new age of Information. 				
8	BCA4C08	Computer Graphics	5 Theory 0 Lab	3
Course Outcome <ul style="list-style-type: none"> To learn basics of Computer Graphics 				

Course Outcomes...

Open Course under BCA

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BCS5D02	Introduction to Web Designing	2Theory 0 Lab	2
<ul style="list-style-type: none"> To get a general introduction to Internet To achieve basic Web designing skills 				

DEPARTMENT OF ENGLISH

Programme Specific Outcome: BA and MA English

- The Common course English courses of BA programme aims at improving the language skills and communication skills of students
- Since literature is an engagement with contemporary society and culture, the Common Course and Core Courses also aim at helping the students understand the present world and its complex issues. The programme helps the students gain an awareness of global social issues like globalization, racism, marginalization of minority groups, Gender issues etc.
- The UG and PG programmes are also designed to help the students see the intersections of literature and media, and realize ways through which literature becomes a means of interrogating societies. The Core Courses aim at riding the study of humanities in the context of global changes.
- The PG programme is designed to encourage analytical thinking and logical reasoning.
- PG Core courses devoted to philosophy offer the students an interesting blend of literature, philosophy and history.
- The BA and MA English programmes aim at offering the basics of humanities, encouraging students to think of day-to-day matters from fresh perspectives.
- To make the students aware of different literatures and cultures across the world.
- To make the students competent and responsible citizens.
- To enable them to progress to higher education and research.
- To promote soft skills and enable them to meet the demands of the current job scenario.

Sl.No.	Course code	Title of the Course	Course Structure	
			Hours	Credits/Course
1	A01	COMMUNICATION SKILLS IN ENGLISH	72(4hours perweek)	3
	Course outcome a.To impart advanced training in standard pronunciation, word stress and intonation b. To train students in the correct use of English in a formal way c. To improve the learners' vocabulary by familiarizing them with the ways of word formation d. To develop communication skills by providing theoretical knowledge of the mechanism of effective communication. e. To speak English with an unaffected accent using stress and intonation f. To use acceptable English in academic writing g. To use English language in a more meaningful way with an enriched word power h. To communicate in a professional way using various communication strategies			
2	A 02	CRITICAL REASONING, WRITING & PRESENTATION	90 (5hours per week)	3
	a.To help students improve their thinking in a systematic way by familiarizing them with the major basic mental operations and skills through the names associated with them b. To impart effective reading skills by giving extensive practice in reading comprehension exercises			

	<p>c. To prepare students to master the art of condensation, and compose an effective letter and a successful résumé</p> <p>d. To impart effective training in the logical mechanism of writing an essay</p> <p>e. To acquaint the learners with the mechanics of Power Point Presentations</p> <p>f. To think in a logical way by identifying the fallacies in arguments and to appreciate the value of looking at an issue from various points of view without possible biases</p> <p>g. To read and comprehend the major points discussed in various types of written texts</p> <p>h.. To make notes, write précis, letter and résumé</p> <p>i. To write an essay in a systematic manner</p> <p>j. To make academic presentations precisely, logically and effectively</p>			
3	A-03	READING LITERATURE IN ENGLISH	72(4 hours per week)	4
	<p>a) To acquaint the students with different genres of Literature</p> <p>b) To make students read and enjoy literature and to critically analyse the different forms.</p> <p>c. Should be aware of the characteristics of literature as a literary genre.</p> <p>d. Should be able to pinpoint the linguistic qualities.</p> <p>e. To unravel the many meanings of the text</p> <p>f . Should develop acumen to read, appreciate and discuss literature and its ramifications at various levels.</p>			
4	A04	READINGS ON INDIAN CONSTITUTION, SECULAR STATE & SUSTAINABLE ENVIRONMENT	90 5 hrs/ week)	4
	<p>a. To inculcate secular, democratic and environmental values in the student</p> <p>b. To give students a general understanding of India's constitution and secular Tradition</p> <p>c. To enable students to understand the plural traditions of India</p> <p>d. To strengthen the value of and spirit of comradeship</p> <p>e. To inculcate environmental awareness among students</p>			
5	A05	LITERATURE AND CONTEMPORARY ISSUES	90 (5 hrs/ week)	4
	<p>a.To encourage a detailed discussion on the impacts of the Globalization so that it leads to a realization that it is not the only developmental model</p> <p>b. To convey ideas and information concerning human rights and nurture the values and attitudes that lead to the support of those rights</p> <p>c. To neutralize gender bias by encouraging a reversal of traditional attitudes and role expectations</p> <p>d. To realize that there are alternatives to the neo-liberal ideology</p> <p>e. To respect, promote and defend the rights of all people.</p> <p>f.. To promote gender equality</p>			
6	A 06	HISTORY AND PHILOSOPHY OF SCIENCE	90 (5 hrs/ week)	4

	<ul style="list-style-type: none"> a. To give students a basic understanding of the evolution of science and scientific method, and to instill in them a scientific temperament. b. To realize that science is a human Endeavour, a search for the secrets of the universe through a methodology, which is based on facts and proven results only, without recourse to any supernatural power or influence. c. To trace the evolution of this process, and to distinguish it from other methods of 'seeking the truth'. d. To understand and appreciate the contributions of various people and civilizations to this pursuit, and also to discern the kind of e. socio-political environment which encourages scientific enquiry and which stifles it. f. To develop familiarity with the current challenges facing science and scientific temper. 			
	Core papers:			
1	EN1B1-	READING POETRY	108(6hours per week)	4
	<ul style="list-style-type: none"> a. The aim of the course is to enhance the level of critical thinking of the students to such a degree that the students could critically interact with poems from different contexts: social, political, economic, historical and national as subjects conscious of their own socio-historic specificity b. To introduce the students to the basic elements of poetry, including the stylistic and rhetorical devices employed in poetry, and to various genres of poetry. <ul style="list-style-type: none"> a) To train students in various perspective readings in poetry like gender, race, caste, ethnicity, religion, region, environment and nation etc. b) To enable the students to identify the specificities of various modes of prose writing and to equip them to write prose in as many different modes as possible c) To develop the critical thinking ability of the student to respond to various modes of prose writings in relation to their socio-historic and cultural contexts 			
	CO2 CORE COURSE EN2B1 READING PROSE			
2	EN2B1	READING PROSE	108(6hours per week)	4
	The aim of the course is to enhance the level of critical thinking of the students to such a degree that the students could critically interact with prose writings from different contexts - social, political, economic, historical and national as subjects conscious of their own socio-historic specificity.			
3	EN3B1	READING DRAMA	72(4hours per week)	4
	<ul style="list-style-type: none"> a) To develop in students a taste for reading drama with a theoretical basis, and to enter imaginatively into other worlds, to consider issues and to explore relationships from the points of view of different people b) To develop a critical understanding of drama and various kinds of theatre and a range of dramatic skills and techniques. c) To familiarize students with the cultural diversity of the world d) To provide students with a meaningful context for acquiring new language and developing better communication skills 			

		<ul style="list-style-type: none"> e) To foster a strong sense of involvement which motivates and encourages students to learn through active participation f) To facilitate exploration of attitudes, values and behaviour and creation of roles and g) relationships so that the student gains an understanding of themselves and others through dramatic, imaginative experience h) To develop confidence and self-esteem in their relationships with others and sensitivity towards others 		
4	EN3B2	READING FICTION	90(5hours per week)	4
		<ul style="list-style-type: none"> a. To inspire a love of fiction in students, to open up their minds, to stimulate the sympathetic/empathic imagination by allowing them to see the world through other's eyes as well to foster intercultural dialogue b. To develop a critical understanding of fiction. c. To familiarize students with the cultural diversity of the world and to extend various perspective readings d. To provide students with a meaningful context for acquiring and memorizing new language and developing oral skills e. To cultivate a sense of involvement which motivates and encourages students to learn through active participation 		
5	EN4B1	MODERN ENGLISH LITERATURE	90(5hours per week)	4
		<ul style="list-style-type: none"> a. To introduce the student to the general characteristics of the literature and culture of the period and to promote in him/her an interest in and knowledge of the literary productions of the age b) To understand the political, religious, social and cultural trends of the Modernist and the Postmodernist periods. c) To understand how the literature of the period relates to the important trends of the period. d) To develop an ability to read, understand and respond to a wide variety of texts of the period. e) To appreciate the ways in which authors achieve their effects and to develop skills necessary for literary study. f) To develop the ability to construct and convey meaning in speech and writing matching style to audience and purpose. 		
6	EN4B2	METHODOLOGY OF HUMANITIES	72(4hours per week)	4
		<ul style="list-style-type: none"> a. The course is intended to introduce the student to the methodological issues that are specific to the disciplines referred to as the humanities and to inspire in the student a critical perspective with which to approach the disciplines under the humanities b) To know the distinction between the methodologies of natural, social and human sciences c. To understand the questions concerning the relation between language and subjectivity as well as those pertaining to structure and agency in language 		

	d. Aware the theories of textuality and reading both western and Indian			
7	EN5B1	INDIAN WRITING IN ENGLISH	90(5hours per week)	4
	<p>a. To inspire students to approach and appreciate Indian literature in English, to explore its uniqueness and its place among the literatures in English.</p> <p>b.To motivate students for a critical and comparative study of other literatures in English and to examine the similarities and differences in attitudes, vision and idiom of expression.</p> <p>c. .To provide an overview of the various phases of the evolution of Indian writing in English.</p> <p>d.To introduce students to the thematic concerns, genres and trends of Indian writing in English.</p> <p>e. To generate discussions on the constraints and challenges encountered in articulating Indian sensibility in English.</p> <p>f.. To expose students to the pluralistic aspects of Indian culture and identity.</p>			
8	EN5B2	LANGUAGE AND LINGUISTICS	90(5hours per week)	4
	<p>The course studies what is language and what knowledge a language consist of. This is provided by basic examination of internal organization of sentences, words, and sound systems. The course assumes no prior training in linguistics. Students of Linguistics begin their studies by learning how to analyze languages, their sounds (phonetics and phonology), their ways of forming words (morphology), their sentence structures (syntax), and their systems of expressing meaning (semantics).</p> <p>a.To lead to a greater understanding of the human mind, of human communicative action and relations through an objective study of language</p> <p>b.To familiarize students with key concepts of Linguistics and develop awareness of latest trends in Language Study.</p> <p>c.To help students towards a better pronunciation and to improve the general standard of pronunciation in every day conversation and in reading.</p> <p>d. To help the students develop a sense of English grammar, idioms, syntax and usage.</p> <p>e. To improve writing and speech skills.</p>			
9	EN5B3	METHODOLOGY OF LITERATURE	90(5hours per week)	4
	<p>a. To familiarize the student with the critical tools used in the reading of literature</p> <p>b. To instill a broader and holistic sensibility in the student with the aim of eventually equipping him to approach, analyze and assess literary discourses through a host of complementary as well as conflictingly different theoretical frameworks.</p> <p>c. To form an idea of the complex nature of literary studies and how they are entangled with other aspects of the social body.</p> <p>d. To unveil the constitutive elements and cultural specificity of literature along with the intricate process of cannon formation.</p> <p>e. To help the student gain perceptive insights into the socio-political dynamics, the structuring points of view, the dominant ideology, hegemony, the prevailing common sense and communal underpinnings that mediate the writing, production, reception and survival of a work.</p>			

			<ul style="list-style-type: none"> e. To familiarize the student with other media, popular literature and emerging trends. f. To introduce and discuss the evolution of literature g. To sensitize the student to his own readings, to develop a critical sensibility, to inculcate a love of literature, and to instill a serious approach to literature. h. To enable the student to read literature using critical and theoretical schools viz. textual approaches - New Critical, psychoanalytic, gender based, ethnic , subaltern , post-colonial, cultural, archetypal, postmodern, ecological perspectives. 	
10	EN5B4	INFORMATICS	90(5hours per week)	4
			<ul style="list-style-type: none"> a. This course introduces students to all the different aspects of Information Technology and Computers that an educated citizen of the modern world may be expected to know of and use in daily life. The topics in the syllabus are to be presented as much as possible with a practical orientation so that the student is given a perspective that will help him to use and master technology. b. The student will have a thorough general awareness of Computer hardware and software from a practical perspective. c. The student will have good practical skill in performing common basic tasks with the computer 	
11	EN6B1	LITERARY CRITICISM AND THEORY	90(5hours per week)	4
			<ul style="list-style-type: none"> a. To familiarise the students with the literary terms and introduce to them the various streams in literary criticism, to make them aware of the inter-disciplinary nature of contemporary criticism and to develop in students, skills for literary criticism. b. To make the students aware that all readers are critics c. To familiarise them with the factors involved in criticism like interpretation, elucidation, judgement and appreciation. d. To introduce the students to basic texts in criticism, relating to various movements and schools of thought e. To develop critical thinking by introducing various tools of criticism-analysis, comparison, theoretical approaches etc. 	
12	EN6B2	LITERATURES IN ENGLISH: AMERICAN & POST COLONIAL	90 (5hours per week)	4
			<ul style="list-style-type: none"> a. To inculcate a literary, aesthetic and critical awareness of diverse cultures and literary creations and thus to arrive at a broader vision of the world. b. To initiate the students to varied literatures in English c. To expose them to diverse modes of experiences and cultures d. To familiarize them with the concepts of Post Colonialism. e. To enable students to compare and contrast their indigenous literature and culture with other literatures and cultures. 	
13	EN6B3	WOMEN'S WRITING	90 (5hours per week)	4
			<ul style="list-style-type: none"> a. To introduce students to women's voices articulated in literature from various countries 	

			<ul style="list-style-type: none"> b. To introduce them to the evolution of the Feminist movement and to familiarize them with the various issues addressed by Feminism c. To sensitize them to issues like marginalization and subjugation of women d. To motivate them to rethink and redefine literary canons. e. To enable students to identify concepts of class, race and gender as social constructs and interrelated throughout women's lives f. To lead them to explore the plurality of female experience in relation of these g. To equip them with analytical, critical and creative skills to interrogate the biases in the construction of gender and patriarchal norms
14	EN6B4-	WRITING FOR THE MEDIA	90(5hours per week) 4
			<ul style="list-style-type: none"> a. This Course introduces students to writing in a professional environment and to the forms of writing for the Mass Media. b. The Course involves lectures, discussions and practice in data gathering, organizing and writing for various media, including newspapers, magazines, radio, television, film and the Web. c. Understand the nature of news, the role of journalism, advertising in a democratic society, the ethical and legal restrictions on media writing, and the criteria for writing excellence. d. Master the basic writing and reporting skills for various media, including news writing for print and broadcast media, and advertising copywriting. e. Think critically about writing for the media (specifically broadcast journalism, digital media and advertising); develop and apply media writing skills. f. Exhibit competence in the mechanics of concise and clear writing through the use of acceptable grammar, correct spelling, proper punctuation, and appropriate AP style.
15	EN6B5-	WORLD CLASSICS IN TRANSLATION	54(3 hours per week) 2
			<ul style="list-style-type: none"> a. To develop sensible response to great classics in translation and fine tune analytical skills with a view to achieving a broad, wholesome vision of life. b. To introduce students to the world's best classics in translation. c. To generate a broad vision of life by making the students to come to grips with universal problems and varied life situations. d. To make the students to have a feel of excellent classics in translation in various genres-Poetry, Fiction, Short Story and Drama-by a judicious selection. It should instill in the students a spirit of enquiry and further exploration.
1	OPEN COURSE EN5DO3	APPLIED LANGUAGE SKILLS	55(3hours per week) 4
			<ul style="list-style-type: none"> a. English is moving into a position of strength, emerging as the single universally known spoken and accepted language. There is a growing thrust on the language, specifically the communicative aspect of English. b. The course shall cater to equipping the students through a rigorous training and result in comprehensive language enhancement. c. Fulfill their educational and professional goals as they relate to their knowledge and use of the English language.

	<p>d. Gain a sound functional competence in the English language without the impediment of language difficulties.</p> <p>e. Overcome difficulties cropping up at the time of interviews, in group discussions, or during entrance examinations.</p> <p>f. Develop a high level of proficiency in all skill areas of the English language in an integrated curriculum.</p> <p>g. Develop a solid understanding and usage of academic English.</p> <p>h. Attain an appropriate level of expertise in the skill area: reading, listening comprehension, grammar, writing and verbal skill.</p>		
Post Graduation Course - MA English			
ENICO1-	British Literature from the Age of Chaucer to the Eighteenth Century		4
This core paper aims at introducing the students of MA programme to the English literary canon. It traces the growth of English literature from the early beginnings till to the end of eighteenth century, highlighting the major contributions in the fields of poetry, drama and fiction.			
EN1CO2-	British Literature: The Nineteenth Century		4
This core paper offers an overview of Romantic and Victorian Literature, scanning the major contributions of English writers to the fields of poetry, drama and fiction			
EN1E01 -	Shakespeare		4
This optional paper is devoted to a deep study of the greatest of all dramatists, William Shakespeare. It also offers a glimpse into the non-dramatic works of the great playwright. The paper also offers the students a chance to examine the contemporary relevance of the Bard to India and the world at large. Students are also informed about the technical aspects of Renaissance British Theatre.			
EN1E03	World Drama		4
This optional paper aims at familiarising the students with the classical trends in the field of theatre, offering samples from classical Greek, English and Sanskrit theatres. Stalwarts from the world stage are also offered.			
EN2C03	Twentieth Century Literature up to World War II		4
This core is an attempt to take the students of English literature through the tumultuous decades of early Twentieth century and the literary output of the modern era. Experimentation in the fields of fiction and drama are also highlighted			
EN2C04	Criticism and Theory		4
This core paper is technical in nature, and attempts to offer samples from the earliest schools of Indian, Greek and Latin criticism. From the classical origins of Literary criticism, the student reads about the evolution of literary theory both in India and abroad. Recent schools of Philosophy such as Feminism, Marxism, Structuralism and Poststructuralism are also discussed.			

EN2E07	American Literature		4
This optional paper familiarises the student with the growth and evolution of literature in America, from the eighteenth century to the modern times. The student is also introduced to the evolution of African American Literature.			
EN2E11	Canadian Literature		4
This optional paper is devoted to providing awareness about growth of Canadian Literature. The paper also offers insights into the Native Canadian literature, its growth and development in the more recent times.			
EN3C05	Twentieth Century British Literature: Post 1940		4
This paper continues to offer glimpses into English literature of the post-war years. The student learns about avant –garde theatre and various trends such as Absurd drama, Kitchen Sink drama Comedy of Menace. Also in the field of fiction, the emergence of postmodernism and working class fiction are also traced.			
EN3C06	English Language: History and Structure		4
This core paper attempts to give the students of language awareness of the technical facts underlying language use. The origins of English language and its gradual evolution is traced through the three main stages: Old English, Middle English and Modern English. Foreign influences on English language, and ways in which new words become part of the English language are also examined.			
EN3E13	Advanced Literary Theory		4
This optional paper provides the students with an overview of the latest trends in the field of theoretical systems			
EN3E18	Malayalam Literature in Translation		4
This optional paper offers glimpses into the regional literature, its growth and evolution. Masterpieces by Malayalam poets, novelists and Playwrights are recommended for study.			
EN4CO7	Indian English Literature		4
This core paper aims at introducing Indian English Literature, tracing its evolution from postcolonial times through postcolonial decades.			
EN4E21	Indian English Fiction		4
This core paper focuses exclusively on Indian English Fiction, introducing the stalwarts in the field.			
EN4E25	Introduction to Cultural Studies		4
This Optional paper offers students insights into the upcoming area of Cultural Studies intersections of Literature, media and technology.			
EN4E28	American Ethnic Writing		4

	This Optional paper is devoted to the study of ethnic writing in the U.S
	ABOUT PG SYLLABUS
	Each semester offers two core papers and two electives, and the selection of the same ensures that the students of English Language and Literature gain a deep awareness of its history and also the newly emergent trends.

MASTER OF SOCIAL WORK

Key Indicator - 2.6 Student Performance and Learning Outcomes (40)
2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered

Programme Specific Outcome: (MSW)

The Post Graduate Programme in Social Work will benefit students from a wide range of teaching and learning methods that suit the content and aims of each course unit. These range from lectures, tutorials and practical's to field study and research projects.

- Will get knowledge about the basics of social work, about its history, social work education in India and abroad. Role of social worker, basic methods, philosophical; concepts and also about various fields of social work.
- Gain knowledge about the western and Indian ideologies related to social work and also the various concepts about contemporary social work, will improve the individuals ideas, beliefs and experiences along with improvement of ethical responsibility to social work.
- It helps to identify the various concepts about society, its problems, economic system in the present society.
- Helps to understand the basic concepts of the psychology and its importance in the field of social work. And also the changes occurring during the developmental stages in the human life. And the theories involved in the development of human life.
- This paper focused on the gaining of knowledge related to the importance of self-esteem, self-awareness, skills needed for social worker in the practical field, improving the interaction and communication skills. To know about the ict methods.
- This paper focuses on the important aspects of case work, group work. How to work with groups and also individuals.
- Gets knowledge about the theoretical and therapeutic approaches used in counseling session, to make aware about the process of counseling.
- To increase the knowledge regarding the various methods of social work which can be applied in the community level, various elements of the community organization.
- This paper focused on the understanding of the individuals and collective behavior and the various aspects of mental health in the contemporary society. To know about the mental disorders and the dysfunctions.
- This paper deals with the importance of legislation and the human rights and also focuses on the various laws which helps for the importance of human rights protection especially

focusing women and in general. And also helped in knowing the various laws which helps the vulnerable groups.

- Helped in understanding the importance of research and also the characteristics of research. It also helped in understanding the research processes included in quantitative and qualitative research. It helped in the knowing of the application level of SPSS in the statistical methods.
- This paper helped in the application levels of a project planning, it also helped in knowing the importance of participatory planning. The various skills needed in the participatory training is also acquired through this paper.
- This paper gave an understanding about the various concepts related to health and health care. It also focused on the making clear about the various communicable diseases and non-communicable diseases and its epidemiology. It also focused on the various legislations pertaining in the health care.
- This paper focused on the possibilities of a social worker in the health care. Through this to know about the role and functions of social worker. And the interventions in the health care field.
- This term paper focused in understanding the various aspects of psychiatric illness, its treatment and after care facilities. It also focused on the roles and functions of a social worker in the mental health settings. This mainly helped in understanding the various policies and programs in the mental health field. Also helped in knowing the current trends and future of psychiatric social worker in the Indian context.
- Well knowledge about rural community and tribal community. Help to understand contemporary challenges in rural communities and role of social workers in rural development governance.
- Well knowledge on urban communities and the process like urbanization and its impact. This subject can develop the knowledge about scope of social work intervention in urban communities and institutions for urban governance.
- This paper gave an idea about the evolution of administration and its importance in the social work practice. It also gave an idea about the various processes and procedures involved in the organization. various types of organization and procedures included in it.
- This paper helped in understanding the prevailing realities of vulnerable groups and marginalized people, and also helped in understanding in the roles and functions of social worker when working with these groups and also helped to understand the contributions of govt. and non govt. organizations welfare activities and the policies and programs for the people.
- It helped in understanding the contemporary psychosocial approaches in the medical and psychiatric settings and helped in gaining the knowledge in the application level of various therapies practiced in the general and mental health.
- It is helped to understand environment, ecology, environmental ethics and environmental problems. This subject give an idea about conservation and management of resources .this can be help to know environment issues and what is disaster management
- This helped in gaining the knowledge about the various welfare activities which helps in the development of the family. To understand about the conceptual framework about the marriage and family. To demonstrate about the importance of the family social work, and to understand about the knowledge and skills needed in the family therapy.

- This paper helped in understanding the prevailing realities of gender issues and also helped in understanding in the roles and functions of social worker when working with these issues and also helped to understand the contributions of govt. and non govt. organizations welfare activities and the policies and programs.

Course Outcomes

Core Courses under MSW

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	SW I C 01	History, Philosophy and Fields of Social Work	Theory	4
Course Outcome <ul style="list-style-type: none"> • To get an insight into the basic concepts of Social Work • To understand the history of Social work and Social Work education in India and abroad • To appraise social work as a profession • To understand the methods and functions of Social Work • To understand the philosophical assumptions and values of Social Work. • To understand the various fields of Social Work practice 				
2	SW I C 02	Ideologies for Social Work	Theory	4
Course Outcome <ul style="list-style-type: none"> • To gain information about the Western and Indian ideologies (historical and contemporary) for social change and in reference to the perception of people and social problems and rationale and goals for social change • To gain knowledge about ideologies of professional social work approaches and their limitations • To develop skills of understanding contemporary social reality in its historical context • To learn to explore one's own ideals, values and experiences about people and their problems • To be sensitive to systemic marginalization of vulnerable groups and to examine the emerging value framework and ethical responsibilities of social work 				
3	SW I C 03	Sociology and Economics for Social Work Practice	Theory	4
Course Outcome <ul style="list-style-type: none"> • To acquaint the students with the basic concepts in Psychology & Human growth and development relevant for Social Work practice • To acquaint the students with the developmental stages in human life across the Life span • To familiarize students with the theories of development and its relevance in Human growth and development 				

4	SW I C 04	Human Growth and Development	Theory	4
Course Outcome <ul style="list-style-type: none"> To acquaint the students with the basic concepts in Psychology & Human growth and development relevant for Social Work practice To acquaint the students with the developmental stages in human life across the Life span To familiarize students with the theories of development and its relevance in Human growth and development 				
5	SW I C 05	Personal and Professional Skills for Social Workers	Theory	4
Course Outcome <ul style="list-style-type: none"> To gain an understanding on concepts of self-esteem, self-awareness, self-development etc. To familiarize with managerial skills required for social work practice To provide training to enhance competence in interpersonal communication and development communication To enhance skills in ICT 				
6	SW I C 06	Concurrent fieldwork	Field	4
<ul style="list-style-type: none"> To provide a variety of opportunities to develop and enhance professional practice skills. To make opportunities for the students to be involved in the selective utilization of all social work methods. To assign students in small studies, organization, of programmes for the clientele of the agency and training programmes To ensure faculty & agency supervision To improve the report writing & documentation skill 				
7	SW II C 07	Social Case Work and Group Work	Theory	4
Course Outcome <ul style="list-style-type: none"> To understand the basic concepts in Social Case Work and Social Group Work To acquaint the students with the process of Social case work and Group Work to enable them to work with individuals and Groups To develop in students the necessary attitude and competence to practice Social case work and Group Work 				
8	SW II C 08	Theory and Practice of Counselling	Theory	4

	Course Outcome			
	<ul style="list-style-type: none"> To acquire knowledge of the theoretical and therapeutic approaches in counseling To understand the process of Counselling. To gain knowledge and skills for practice of counselling in different settings 			
9	SW II C09	Community Organization and Social Action	Theory	4
	Course Outcome			
	<ul style="list-style-type: none"> Develop understanding regarding community organization and social action as methods of social work Understand the elements of community organization practice and social action. Understand the practice of community organization in various fields of social work. Learn the models and strategies for community organization and social action Learn and develop skills and attitudes for participatory Community work and social action 			
11	SW II C 10	Psychology for Social Work	Theory	4
	Course Outcome			
	<ul style="list-style-type: none"> To develop an understanding regarding individual and collective behavior and determinants of social behavior To acquire knowledge regarding the concept of mental health and mental health issues in the contemporary society. To gain basic knowledge regarding various mental disorders and dysfunctions 			
12	SW II C 11	Social legislation and Human rights	Theory	4
	Course Outcome			
	<ul style="list-style-type: none"> To familiarize the students with Indian Constitution, and the fundamental rights, duties and directive principles To acquaint the students with human rights and organizations to protect human rights To acquaint them with the statutory bodies for the protection of the rights of the individuals in general and women and children in particular To understand the provisions of the social legislations and utilize them as a tool for empowerment of the vulnerable and marginalized sections of the society 			
13	SW II C 12	Concurrent Field Work	Theory	4
	<ul style="list-style-type: none"> To provide a variety of opportunities to develop and enhance professional practice skills. To make opportunities for the students to be involved in the selective utilization of all social work methods. 			

		<ul style="list-style-type: none"> To assign students in small studies, organization, of programmes for the clientele of the agency and training programmes To ensure faculty & agency supervision <p>To improve the report writing & documentation skill</p>		
14	SW III C 13	Quantitative and Qualitative Research Methods for Social Work	Theory	4
<p>Course Outcome</p> <ul style="list-style-type: none"> To understand the significance and characteristics of scientific research To develop competence in conducting qualitative and quantitative research To develop an understanding about the research process of qualitative and quantitative research To gain an understanding about the application of statistical techniques in social work research 				
15	SW III C 14	Participatory Project Planning and Training	Theory	4
<p>Course Outcome</p> <ul style="list-style-type: none"> Understand the basic concepts in project planning and management Develop skills in proposal writing and project management through practical experience. Learn the concept and importance of participatory train in. Develop skills in participatory training and facilitation 				
16	SW III C 15	Community Health	Theory	4
<p>Course Outcome</p> <ul style="list-style-type: none"> To learn basic concepts in health and health care To understand the epidemiology of common communicable diseases and non-communicable diseases To understand the community health programs To acquaint with nutritional problems and management To know the various legislations pertaining to health care 				
17	SW III E 16	Health Care Social Work	Theory	4

	Course Outcome			
	<ul style="list-style-type: none"> • To understand the scope of health care social work • To understand the role and functions of social worker in acute and chronic health conditions • To understand various social work interventions in health care 			
18	SW III E 1 17	Social Work in Mental Health Settings	Theory	4
	Course Outcome			
	<ul style="list-style-type: none"> • To help the students gain knowledge regarding psychiatric illnesses, their treatment and aftercare. • To understand the specific roles and functions of psychiatric social worker in different mental health settings • To help the students gain an understanding regarding the policies and programs in the field of mental health • To understand the current trends and future of Psychiatric Social Work in India 			
19	SW III E216	Rural Community development and Governance	Theory	4
	Course Outcome			
	<ul style="list-style-type: none"> • Understand the features of rural and tribal communities • To understand the concept, philosophy and principles of rural community development • To learn the programs and services in the governmental and voluntary sector. • To understand the structure and functions of PRIs and their role in community development • To understand the scope of social work interventions in rural communities. 			
20	SW III E217	Urban Community Development and Governance	Theory	4
	Course Outcome			
	<ul style="list-style-type: none"> • To understand about the urban communities and the process like urbanization and its impact. • To learn about the challenges faced by urban communities in general and vulnerable population in particular • To understand the scope of social work intervention in urban communities. • To understand the structures and institutions for urban governance. 			
21	SW II C 11	Concurrent Fieldwork	Theory	4

	<ul style="list-style-type: none"> • To provide a variety of opportunities to develop and enhance professional practice skills. • To make opportunities for the students to be involved in the selective utilization of all social work methods. • To assign students in small studies, organization, of programmes for the clientele of the agency and training programmes • To ensure faculty & agency supervision • To improve the report writing & documentation skill • To be familiarize with the settings in different settings like hospitals, NGOs etc
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22	SW IV C 19	Administration of Human Service Organizations	Theory	4
Course Outcome <ul style="list-style-type: none"> • Develop understanding of the evolution of administration as a science and as a method in Social Work Practice. • Develop understanding and appreciate the utility of the administrative structures, processes and procedures in an organization. • To understand the types of organizations and registration of these organizations • Develop an overview of human resource management as an important component of AHSOs 				
23	SW IV C 20	Social Work with Vulnerable groups	Theory	4
Course Outcome <ul style="list-style-type: none"> • To understand the prevailing realities and problems of vulnerable and marginalized groups in India. • To learn the roles and functions of social workers in helping them. • To understand the contribution of Govt. and non Govt. organizations in promoting welfare of the marginalized and vulnerable groups. • To understand the policies and other welfare programs for these groups 				
24	SW IV E 1 21	Therapeutic Approaches in Medical and Psychiatric settings	Theory	4
Course Outcome <ul style="list-style-type: none"> • To acquaint the students with contemporary psychosocial approaches to therapy in medical and psychiatric settings • To help them gain knowledge regarding various therapies practiced in the field of general and mental health • To understand the application and effectiveness 				
25	SW IV E 2 21	Environmental Studies and Disaster Management	Theory	4
Course Outcome				

	<ul style="list-style-type: none"> • Understand the basic concepts in environment studies. • Understand the environment problems and impact of development initiatives. • Examine the utilization and management of natural resources. • Study the role of social work practice in dealing with environmental problems and in disaster management.
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26	SWIV EI 22	Social Work Practice with Families	Theory	4
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Course Outcome <ul style="list-style-type: none"> • Be acquainted with the various programs for the welfare and development of the family. • Understand family as a social institution and the different conceptual frameworks for understanding marriage and family • Demonstrate an understanding of family Social Work • Familiarize with family life education programs • Develop knowledge and skills of Family Therapy. • Develop an understanding of Various Settings of family practice. 				
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27	SWIV E2 22	Social Work Practice With Gender issues	Theory	4
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Course Outcome <ul style="list-style-type: none"> • Be acquainted with the various programs for the welfare and development of the Gender • Understand Concepts related to gender and its significance in social work • Develop perspectives concerning what constitutes a gender issue and learn to create a multi perspective analysis of a given gender issues • Understand the status of women and appreciate the gaps therein • Develop skills and attitudes to work with gender issues. 				
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28	SWIV P 23	Concurrent Field work	Field	4
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Course Outcome <ul style="list-style-type: none"> • To provide a variety of opportunities to develop and enhance professional practice skills. • To u make opportunities for the students to be involved in the selective utilization of all social work methods. • To assign students in small studies, organization, of programmes for the clientele of the agency and training programmes • To ensure faculty & agency supervision • To improve the report writing & documentation skill • To be familiarize with the settings in different settings like hospitals, NGOs etc 				
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29	SWIV P 26	Block Field Work	Field	4
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- To provide a variety of opportunities to develop and enhance professional practice skills.
- To u make opportunities for the students to be involved in the selective utilization of all social work methods.
- To assign students in small studies, organization, of programmes for the clientele of the agency and training programmes
- To ensure faculty & agency supervision
- To improve the report writing & documentation skill
- To be familiarize with the settings in different settings like hospitals, NGOs etc

DEPARTMENT OF COMMERCE

B.COM FINANCE

Key Indicator - 2.6 Student Performance and Learning Outcomes (40)
2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered

Program Specific Objectives of B.com Finance

- PSO1.** Students will acquire knowledge about basics of banking and insurance , they will familiarize with modern trends in banking.
- PSO2.** Students will get a theoretical framework for analysis and valuation of investments familiarize with the world of investments.
- PSO3.** Students will acquire latest trends in marketing ,they will capable to choose a career in the field of marketing ,
- PSO4.** Students will be capable of oral and written scientific communication, and will prove that they can think critically and work independently. To help the students acquire conceptual knowledge of the fundamentals of the corporate accounting and the techniques of preparing the financial statements.

Course Outcomes

Core Courses under B com CA

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BCIB01	Management Concepts And Business Ethics	6	4
<p>Course Outcome</p> <p>CO 1- Acquire knowledge on Nature and scope of Management; evolution of management-Schools of management thought; principles of management; management as a science and an art; management process.</p> <p>CO 2- Learn about Functions of management- planning: types of plan; planning process; organizing: span of control, line and staff functions; centralization and decentralization; delegation; staffing: manpower planning, recruitment, selection and placement; directing: principles of direction; coordinating, and controlling</p> <p>CO 3 - Distinguish between Manager v/s leader; leadership and motivation; leadership styles; theories of motivation.MBO; Management of performance; Understanding and managing group processes; characteristics of work group, work group behaviour and productivity; team creation and management.</p> <p>CO- 4 – To analyse the Ethics, culture and values: Importance of culture in organisations; Indian ethos and value systems; Model of management in the Indian socio political environment; Work ethos; Indian heritage in production and consumption.</p> <p>CO -5 –Understand the methodology of Business ethics: Relevance of values in Management; Holistic approach for managers in decision-making; Ethical Management: Role of organisational culture in ethics; structure of ethics management; Ethics Committee</p>				
2	BC2B02	Financial Accounting	6	4
<p>Course Outcome</p> <p>CO 1- Introduction - Nature of financial Accounting - scope – objects –limitations – Accounting</p>				

	<p>concepts and conventions- Financial accounting standards –Object of accounting standards – Accounting Standard Board of India and Indian Accounting Standards –Accounting process from recording of business transactions to preparation of Trial Balance</p> <p>CO2 Understand-Conceptual Frame work for preparation and presentation of financial statements -Capital, Revenue and deferred revenue expenditure – Capital and revenue receipts – Final accounts of Sole Proprietor and not –for- profit organizations – accounting from incomplete records – statement of affairs method and conversion method</p> <p>CO 3- Understand the Accounting for Hire Purchase and Installment System -Meaning – Features of hire purchase agreement – Distinction between hire purchase and sale –Interest calculation –Recording of transaction in the books of both parties - Default and repossession - Installment system – Features – Distinction between hire purchase and installment</p> <p>CO 4- To analyse the Departmental Accounts - Meaning – Objects – Advantages - Accounting procedure –Allocation of expenses and incomes – Interdepartmental transfers – Provision for unrealized profit - Branch Accounts - Features – Objects- Types of branches – Dependent branches – Account Systems –Stock and Debtors System –Independent branch – Features – Preparation of consolidated Profit and Loss Account and Balance Sheet</p> <p>CO 5- Understand the Accounting for hotels and restaurants – Introduction - features - revenue earning and non revenue earning departments - heads of revenue and heads of expenditure – Working papers, journals – posting - preparation of trial balance – preparation of final statements - Trading accounts, Profit and Loss Accounts and Balance sheet</p>			
3	BC3B03	Business Regulatory Framework	4	4
	<p>Course Outcome</p> <p>CO 1 – Understand Indian Contract Act, 1872 – Contract- Nature and classification of contracts-offer and acceptance-consideration- capacity of parties-free consent- coercion-undue influence –misrepresentation- fraud- mistake- void agreements- discharge of contract-breach of contract and remedies-contingent contracts-quasi-contracts</p> <p>CO 2 – To learn Special contracts-Contract of Indemnity- meaning – nature- right of indemnity holder and indemnifier – Contract of Guarantee-meaning – nature and features-surety and co surety– rights and liabilities- discharge of surety from his liability – Contract of Bailment and Pledge- rights and duties of bailer and bailee, pledger and pledgee- pledge by non owners- Agency- creation of agency – duties and liabilities of agent and principal-termination of agency.</p> <p>CO 3 - Understand the Sale of Goods Act, 1930-Contract for sale of goods-Meaning – essentials of a contract of sale – Conditions and Warranties- caveat emptor-sale by non owners- rules as to delivery of goods- auction sale -rights of unpaid seller</p> <p>CO 4 To know The Consumer Protection Act,1986 – Definition – consumer – complainant – goods service – complaint – unfair trade practices – restrictive trade practices – rights and remedies for consumers - consumer protection council – consumer disputes redressal agencies.</p> <p>CO 5- To know The Information Technology Act, 2000 – Digital signature – digital signature certificate– electronic records and governance - certifying authorities – cyber crimes – offences and penalties under IT Act,2000.</p>			
4	BC3B04	Corporate Accounting	6	4
	<p>Course Outcome</p>			

	<p>CO 1-To study Accounting for share capital – Issue, forfeiture and Reissue of forfeited shares -Redemption of preference shares including buy-back of equity shares - Issue and Redemption of Debentures</p> <p>CO 2- To analyse the Final Accounts of Limited Liability Companies: Preparation of Profit and Loss Account, Profit and Loss Appropriation Account and Balance Sheet in accordance with the provisions of the existing Companies Act (Excluding Managerial Remuneration).</p> <p>CO 3- To know Accounting for Amalgamation of Companies with reference to Accounting Standards issued by the Institute of Chartered Accountant of India (excluding inter-company transactions and holdings)-Accounting for Internal Reconstruction (excluding preparation of scheme for internal reconstruction)</p> <p>CO 4- To analyse the Bank accounts- General information relating to bank accounts - legal requirements affecting final accounts – Concept of Non-Performing Assets (NPA) - preparation of Profit and Loss Accounts and Asset classification - Balance sheet</p> <p>CO 5- Understand the Insurance Companies- Books maintained by insurance companies, Explanation of special terms peculiar to insurance business, Accounts for life insurance business, types of policies, Annuity business, surrender value, paid up policy, life assurance fund - valuation balance sheet, preparation of final accounts of Life and General insurance business (as per the provisions of IRDA Act)</p>			
5	BC4B05	Cost Accounting	6	4
	<p>Course Outcome</p> <p>CO 1 - To familiarise Introduction: - Definition – Meaning and Scope – Objectives – Functions – Merits and Demerits – Cost Accounting and Financial Accounting-Cost classification – Elements of cost – cost units- cost centre – profit centre – Types, Methods and Techniques of Costing- Cost sheet</p> <p>CO 2- To study Materials :- Importance of Material cost control – Purchase procedure – Stores control –types of stores – stores records – perpetual inventory – ABC analysis – VED analysis – JIT inventory – stock levels - EOQ - Issue of materials – FIFO, LIFO, simple and weighed average methods.</p> <p>CO 3- Understand the Labour and Overheads: - Importance of Labour Cost Control – Time keeping and Time Booking – Idle Time – Over Time – Computation of Labour Cost – Remuneration systems and Incentive Schemes Overheads: - Definition – Overhead allocation – Apportionment - Re apportionment – Direct distribution – Step Ladder – Reciprocal service methods – repeated distribution and simultaneous equation methods – Absorption of overheads – methods of absorption– Labour Hour Rate and Machine Hour Rate</p> <p>CO 4-To find out Methods of Costing: Unit costing - Job costing - Contract Costing – Process costing (process losses and valuation of work in progress) - Service costing (only transport).</p> <p>CO 5- To identify Cost Control Techniques:A. Budgetary Control and standard Costing: Budget and Budgetary Control –Need and Importance – Types of Budgets – Preparation of Financial Budget- Flexible Budget and Fixed Budget –ZBB – Programme and Performance Budgets. B. Standard Costing and Variance Analysis – Meaning, advantages and limitations of standard costing – Variance Analysis – material – Labour- Overhead Variance</p>			
6	BC4B06	Regulatory Frame Work For Companies	4	4
	<p>Course Outcome</p>			

	<p>CO 1-To understand Company: - Meaning and definition – characteristics - Kinds of Companies –private and public, government companies - statutory companies – Chartered – Registered – Limited and unlimited - Lifting of the corporate veil.</p> <p>CO 2- Understand the Formation of Companies:- Promotion – incorporation - capital – minimum capital requirements - subscription - Commencement of Business - Pre-incorporation and provisional contracts. Documents of Companies:- a. Memorandum of Association – definition, clauses, provisions and procedures for alteration – Doctrine of <i>ultravires</i> - b. Articles of Association – definition, contents, provisions and procedures for alteration – Doctrine of Indoor management – Constructive notice of Memorandum and Articles of Association - distinction between Memorandum and Articles of Association. c. Prospectus – Contents – Statements in Lieu of Prospectus – Liabilities for misstatement</p> <p>CO 3- To know Shares – Classes of shares – Preference and equity shares – Public issue of shares – SEBI guidelines – Employees stock option scheme – Book building – Allotment of shares – Irregular allotment – Issue of shares at premium, par and discount – Listing of shares –Sweat equity shares – Right shares - Bonus shares – Shares with differential rights - Share certificate and share warrant. Calls, forfeiture, lien, surrender of shares - Demat of shares – Transfer and transmission of shares – Transfer under depository system.</p> <p>CO 4- Understand the Management of Companies: - Directors - Managing Director – Appointment – Qualification - Rights - Responsibilities and liabilities – Disqualification of directors Meetings: - Requisites - Statutory, Annual, Extra ordinary and Board Meetings, Resolutions – Types. Winding up: - Meaning – modes of winding up – winding up by the tribunal – Members voluntary winding up – creditor’s voluntary winding up - winding up under the supervision of the court.</p> <p>CO 5- To analyse Emerging issues in Company Law: - Producer Company – Limited liability partnership -Concept and formation Corporate governance – Concept - relevance and provisions under listing agreement Securities and Exchange Board of India act 1992.Introduction –Object – establishment and management of SEBI. Functions and powers of SEBI – Securities Appellate Tribunal (SAT).</p>			
7	BC5B07	Accounting For Management	5	4
<p>Course Outcome</p> <p>1- Learn out Management Accounting –Nature and Scope – Difference between Cost Accounting, Financial Accounting and Management accounting–Recent Trends in Management Reporting. Analysis and Interpretation of financial Statement: - Meaning-Types and Methods of Financial Analysis – Comparative statements – Trend Analysis – Common size statements (a general discussion only). Ratio Analysis: - Meaning –Nature – uses and limitations of Ratios –liquidity, profitability, Turnover ,Solvency, Leverage, Market test ratios – Constructions of Financial Statements from ratios –Judgment of financial stability through ratios –(Stress to be given to problem solving and interpretation skills)</p> <p>CO 2- Understand the Fund Flow and Cash Flow Analysis: a. Fund Flow Statements : Meaning and concept of fund – Current and Non- Current Accounts – Flow of Fund – Preparation of Fund flow statements – uses and significance b. Cash Flow Statement : Difference between fund flow statement and cash flow statements – Preparation of cash flow statements as per AS-3 Norms – Direct and Indirect methods.(Stress to be given to problems)</p> <p>CO 3- To identify Managerial decision making with the help of C.V.P. Analysis : Marginal Costing- Fixed Cost, Variable Cost, Contribution, P/V ratio, Break Even Analysis – Algebraic</p>				

	and Graphic presentation – Decision making: Fixation of Selling Price – Exploring new markets – make or buy-key factor – Product Mix – Operate or Shutdown CO 4 - To study Responsibility Accounting –Concept – Significance – Responsibility centers- Activity Based Costing – (General outline only)			
8	BC5B08	Business Research Methods	4	4
	<p>Course Outcome</p> <p>CO 1- Understand Business research – meaning and definition – features of business research – theory building- induction and deduction theory – concept – operational definition – variable – proposition – hypothesis – types of business research – basic and applied, exploratory, descriptive and causal – phases of business research.</p> <p>CO 2- Identify Exploratory research – objectives – methods – experience survey – secondary dataanalysis – case study – pilot study by focus group interview – process of problem definition – understanding background of the problem - determination of unit of analysis– determine the relevant variables and state the research questions – hypothesis and research objectives.</p> <p>CO 3- Meaning of research design – methods of descriptive and causal research – survey – experiments – secondary data studies and observation – sampling design – simple random sampling – restricted random sampling – stratified, cluster and systematic - nonrandom sampling – convenient and judgment sampling – sampling error and non sampling error.</p> <p>CO 4- To analyse Measurement and scaling – nominal - ordinal – interval and ratio scale – criteria for good measurement – reliability and validity – designing questionnaire – means of survey data collection – personal interview – telephonic, mail and internet.</p> <p>CO 5- Understand the A. Data processing – processing stages – editing – coding and data entry –descriptive analysis under different types of measurements – percentages frequency table – contingency table –graphs – measures of central tendency and index number – interpretation. Preparation of research report – format – report writing stages – gathering material and data -make overall format - make detailed outline – write first draft - rewrite – final word processing and publishing.</p>			
9	BC5B09	Basics of Banking and Insurance	5	4
	<p>Course Outcome</p> <p>CO 1- Evolution of Banking: Origin and Development of Banking - Structure of Banking in India – Banks and Economic Development –Functions of Commercial banks (conventional and innovative functions) – Central Bank – RBI – functions – Emerging trends in Banking</p> <p>CO 2- Discuss Types of Customers and Account holders: Procedure and practice in opening and operating the accounts of customers - individuals including minors - joint account holders -Partnership firms - joint stock companies - executors and trustees-clubs and associations</p> <p>CO 3- Introduction to insurance: Purpose and need of insurance, insurance as a social security tool - insurance and economic development - Principles of insurance - various kinds of insurance - life, marine, fire, medical, general insurance - features.</p> <p>CO 4- Understand the Life Insurance - Law relating to life Insurance; General Principles of Life Insurance Contract; Proposal and policy; assignment and nomination; title and claims; General Insurance - Law relating to general insurance; different types of general insurance; general insurance Vs life insurance – Insurance business in India</p>			
10	BC6B12	Income Tax Law And Practice	6	4
	Course Outcome			

	<p>CO 1- Basic concepts: Income - agricultural income – person – assesses - assessment year - previous year - gross total income - total income - maximum marginal rate of tax - Residential status - Scope of total income on the basis of residential status - Exempted income under section 10.</p> <p>CO 2- Computation of income under different heads: Salaries – Allowances – Perquisites – Profit in lieu of salary – Gratuity – Pension - Income from house property: Annual Value of House property – Computation under different circumstances – Deduction from annual value.</p> <p>CO 3- To find out Profits and gains of business or profession: Definition - Computation – Allowable expenses and not allowable expenses – General deductions - Provisions relating to Depreciation.</p> <p>CO 4- Understand the Capital gains: Definition of Capital Assets – Long term and Short term – Transfers –Cost of acquisition – Cost of improvement – Exempted Capital gains. Income from other sources: Definition - Computation – Grossing up – Deductions and other relevant provisions. Total income and tax computation: Income of other persons included in assessee’s total income - Aggregation of income - set-off and carry forward of losses - Deductions from gross total income - Rebates and reliefs - Computation of total income tax liability of individuals.</p>			
11	BC6B13	Auditing	5	4
	<p>Course Outcome</p> <p>CO 1- To know Introduction: Meaning, Objects, Basic Principles, Auditing and Assurance Standards and Techniques. Classification of Audit - Audit planning - qualities of auditor – advantages and limitations of audit.</p> <p>CO 2- To study Internal Control, Internal Check and Internal Audit: – Introduction, Necessity, Definitions - Internal Check: Definitions, Difference between Internal Check and Internal Control, Fundamental Principles of Internal Check – Difference between Internal check and Internal audit.</p> <p>CO 3- Discuss Audit Procedure: Vouching – definition – features – examining vouchers - Vouching of Cash book – Vouching of trading transactions - Verification and Valuation of Assets & Liabilities: Meaning, definition and objects – Vouching vs. Verification – Verification – Valuation of different asset and liabilities.</p> <p>CO 4- Understand the Audit Approach: EDP and Mechanical Systems - Use of Computers - Nature of EDP - Internal Control in EDP - Evaluating Internal Control in an EDP System - Auditing with the Aid of Computers.</p> <p>Audit of Limited Companies: Company Auditor - Qualifications and disqualifications – Appointment - Removal, Remuneration, Rights, Duties and Liabilities - Audit Committee - Auditor’s Report - Contents and Types - Auditor’s certificates</p> <p>CO 5- Understand the Special Areas of Audit: Tax audit and Management audit - Recent Trends in Auditing – Basic considerations of audit in EDP Environment.</p>			
12	BC5B10	Financial Reporting	5	4
	<p>Course Outcome</p> <p>CO 1 – to understand basics of financial reporting, IFRS, its adoption in India, difference between Ind AS and IFRS</p> <p>CO 2 – To study asset based accounting standards including tangible non – current assets, intangible assets, inventories and borrowing costs.</p> <p>CO 3 – to know revenue and liabilities based accounting standards</p>			

		CO 4 – to understand other reporting standards.		
13	BC5B11	Financial Management	5	4
		<p>Course Outcome</p> <p>CO 1- Introduction: Nature, scope and objectives of financial management - Time value of money and mathematics of Finance - Concept of risk and return.</p> <p>CO 2 – To solve Investment Decision: Capital budgeting process - Estimation of Relevant cash flows–Payback Period Method, Accounting Rate of Return, Net Present Value, Net Terminal Value, Internal Rate of Return, Profitability Index</p> <p>CO 3- To identify Financing Decision: Cost of Capital and Financing Decision-Estimation of components of cost of capital, Equity capital, Retained earnings, Debt and Preference Capital, Weighted average cost of Capital and marginal cost of capital, Sources of long term financing- capital structure, operating and financial leverage, determinants of capital structure.</p> <p>CO 4- To study Dividend Decision: Dividend Decision-relevance and irrelevance of dividend decision – Cash and stock dividends-Dividend policy in practice.</p> <p>CO 5- Learn out Working Capital Management: Meaning and nature of working capital – Determination of working capital requirement - A brief overview of Cash management, Inventory management and Receivables management.</p>		
13	BC6B14	Financial Services	5	4
		<p>Course Outcome</p> <p>CO 1- to learn Financial services – meaning - features – importance – contribution of financial services in promoting industry – service sector</p> <p>CO 2 – To Understand Financial services – meaning - features – importance – contribution of financial services in promoting industry – service sector</p> <p>CO 2 - to study Merchant banking – meaning, origin and growth of merchant banking in India. Scope of merchant banking services – merchant bankers and management of public issues – merchant banking practices in India. Weakness in the functioning of merchant bankers in India.</p> <p>CO 3 – to know Mutual funds: Concept of mutual funds. Growth of mutual funds in India. Mutual fund schemes – money market mutual funds – private sector mutual funds – functioning of mutual funds in India.</p> <p>CO 4 - to understand Lease financing: Meaning – types of leasing – factors influencing lease – performance of leasing industry in India – RBI guidelines for hire-purchase – problems of hire purchasing companies in India.</p> <p>CO 5- to Learn about factoring, retail banking services and venture capital</p>		
14	BC6B15	Fundamentals Of Investments	5	5
		<p>Course Outcome</p> <p>CO1- Discuss The Investment Environment: The investment decision process - Types of Investments – Commodities, Real Estate and Financial Assets - Security market indices - Sources of financial information - Concept of return and risk</p> <p>CO2- Understand the Fixed Income Securities: Bond features - types of bonds - estimating bond yields - types of bond risks - default risk and credit rating – Bond valuation</p> <p>CO3- Deals different Approaches to Security Analysis: Fundamental Analysis - Technical Analysis and Efficient Market Hypothesis - dividend capitalisation models - price earnings multiple approach to equity valuation.</p>		

	<p>CO4- Understand the Portfolio Analysis and Financial Derivatives: Portfolio and Diversification -Portfolio Risk and Return – Introduction to Financial Derivatives - Financial Derivatives Markets in India.</p> <p>CO5- To analyse Investor Protection: SEBI & role of stock exchanges in investor protection -investor grievances and their redressal system - insider trading - investors’ awareness and activism.</p>		
15	BC6B16	Project Work	2
<p>Course Outcome</p> <ul style="list-style-type: none"> Student participatory projects were included in the curriculum, where, they conceive the idea of research leading to new findings by, conducting research with relevant experimental designs and methodology. Recording, analysis and evaluation of data and presenting reports. 			

Complimentary Courses under B com Finance

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BC1C01	Managerial Economics	5	4
<p>Course Outcome</p> <p>CO 1- Introduction - Definition of Managerial economics - objectives - characteristics - uses - decision making and forward planning - basic economic tools in management economics.</p> <p>CO 2- The concept of demand and elasticity of demand - Demand curve: Individual demand curve, Market demand curve, Movement along Vs shifts in the Demand curve, Elasticity of Demand: Price, Income and cross - Demand estimation and demand forecasting - concept of revenue: Average Revenue and Total Revenue - Marginal Revenue and Incremental Revenue.</p> <p>CO 3- Production: Fixed and Variable inputs, Production function, Total, Average and Marginal Product, Law of variable proportions, Linear homogeneous production function - production isoquants, marginal rate of technical substitution - optimal combination of resources - return to scale - cost of production - social and private cost of production - difference between economic and accounting cost - long run and short run cost of production - Economics and diseconomies of scale.</p> <p>CO 4- Price and output decisions under different market structures: Price and output decisions under perfect competition, monopoly and monopolistic competition - pricing under oligopoly - kinked demand curve - price leadership - pricing, under collusion.</p> <p>CO 5 A. Pricing policies and practices: factors governing prices - objectives of pricing policy - Role of cost in pricing - demand factor in pricing - consumer psychology and pricing - pricing methods: cost-plus or full-cost pricing - Target pricing - Marginal cost pricing - going rate pricing - follow up pricing - Barometric pricing - customary prices - Pricing of new products: Penetrating pricing - Price skimming.</p> <p>B. Macro Economics and Business decisions: Phases of Business cycle - Evil effects of cyclical fluctuations on business firms - Minimising effects of Business cycles. Economic Forecasting for business: Economic and Business forecasting - uses of economic forecasts - Methods of economic forecasting - selecting a forecast - evaluating forecasts.</p>				
2	BC2C02	Marketing Management	5	4

	Course Outcome		
	<p>CO 1- Marketing-meaning and definition-scope and importance-evolution of marketing concepts-modern concept of marketing-marketing mix-marketing environment-consumer behaviour- buying motives-consumer buying process-factors influencing consumer buying decision-market segmentation-basis-target marketing-product positioningimportance and bases</p> <p>CO2-Product-meaning and importance-classification-concept of product mix-packaging branding- brand loyalty and brand equity-labeling-product life cycle-new product development-pricing-factors influencing product price-pricing policies and strategies</p> <p>CO 3- Physical distribution-meaning and importance-levels of marketing channels-wholesaling and retailing- types of retailing - factors influencing choice of distribution channel</p> <p>CO 4- Promotion-meaning and importance –promotion mix-advertising-personal selling-sales promotion-public relation-factors affecting promotion mix decisions</p> <p>CO 5 - Rural marketing-growing importance-unique features of rural markets-market mix planning for rural market-service marketing Vs. product marketing-green marketingsocial marketing-relationship marketing-niche marketing</p> <p>CO 6- E-marketing-traditional marketing vs. e-marketing-internet marketing-e advertising-new trends in internet marketing-e branding - e-payment systems and security features in internet.</p>		
3	BC3C03	E- Commerce Management	4
	Course Outcome		
	<p>CO 1- Introduction to E- commerce : Meaning and concept – E- commerce v/s Traditional Commerce- E- Business & E- Commerce – History of E- Commerce – EDI – Importance , features & benefits of E- Commerce – Impacts, Challenges & Limitations of Ecommerce – Supply chain management & E – Commerce</p> <p>CO 2-Business models of E – Commerce: Business to Business – Business to customers – customers to customers - Business to Government – Business to employee – E – Commerce strategy – Influencing factors of successful E- Commerce – E- Business Infrastructure – The internet – Intranets and Extranets – World Wide Web – Voice over IP (VoIP) – The Internet Standards – The HTTP Protocol – Audio and Video Standards –Managing E- Business Infrastructure – Web services and Service-oriented architecture – (SOA) – New access devices – future of the internet infrastructure</p> <p>CO 3-Marketing strategies & E – Commerce : Website – components of website – Concept & Designing website for E- Commerce – Corporate Website – Portal – Search Engine – Internet Advertising – Emergence of the internet as a competitive advertising media- Models of internet advertising – Weakness in Internet advertising – Mobile Commerce.</p> <p>CO 4– Electronic Payment system : Introduction – Online payment systems – prepaid and postpaid payment systems – e- cash, e- cheque, Smart Card, Credit Card , Debit Card, Electronic purse – Security issues on electronic payment system – Solutions to security issues – Biometrics – Types of biometrics.</p> <p>CO 5- Legal and ethical issues in E- Commerce: Security issues in E- Commerce-Regulatory frame work of E- commerce.</p>		
4	BC4C04	Quantitative Techniques For Business	4
	Course Outcome		

<p>CO 1- Quantitative Techniques – Introduction – meaning and definition – classification of QT, QT and other disciplines – application of QT in business – limitations.</p> <p>CO 2-Correlation and regression analysis-meaning and definition of correlation- Karl Pearson’s coefficient of correlation-rank correlation-Regression-typesdetermination of simple linear regression-Coefficient of determination.</p> <p>CO 3-Set theory- Probability-concept of probability –meaning and definition-approaches to probability-Theorems of probability-addition theorem-multiplication theoremconditional probability-inverse probability-Baye’s theorem.</p> <p>CO 4- Theoretical distribution-binomial distribution-basic assumptions and characteristics fitting of binomial distribution-Poisson distribution –characteristics-fitting of Poisson distribution-Normal distribution-features and properties-standard normal curve.</p> <p>CO 5-Statistical inference- testing of hypothesis-procedure-error in testing-two tail tests and one tail tests-nonparametric tests- Chi-square test, Wilkoxen test. Parametric tests- Students t test-Analysis of variance-F-test-one way ANOVA and two way ANOVA test</p>

Common Courses under B com Finance

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BC3A11	Basics Of Business And Management	5	4
<p>CO 1- Functioning of economic systems - divisions of labour, innovation, flow of goods and services and accumulation of wealth under different economic systems - capitalism, socialism, communism, mixed economies, planned economies etc.; different forms of business organisation - individual and organized business - family and corporate entities - business for profit, business not for profit and business for non-profit. Business entities - individuals, cooperatives, trusts, partnerships, undivided families, joint stock companies - private public and joint ventures. Business examples in different sectors of the economy (primary, secondary and tertiary) - agriculture, trading, retailing, manufacturing, hospitality, tours, travels, recreations, adventures, healthcare, education and other contemporary business areas as examples.</p> <p>CO 2- Role of business in economic development, Indian development experience-role of public and private sectors in the post-colonial period, experience of liberalization and globalisation. Different stakeholders of business firms - owners, managers, employees and others. Emergence of "managerialism" and the role of corporate governance; the goals of business - shareholder value maximisation and its alternatives; goals of public sector, cooperatives and non-profit enterprises. Government regulation of business - objectives, methods and problems.</p> <p>CO 3- Establishing a business - entrepreneurship - legal, physical, financial, social and psychological endowments for entrepreneurs - individual and group entrepreneurs "intrapreneurs". Mobilisation of financial resources for business - individual savings – loans and advances - source of funds - markets for raising money - short-term and long-term funds - lending institutions for business funds - banks and non-banking financial institutions-cost of capital - documenting finding sources and areas of expenses - accounting and accounting practices - returns on investment - factors of production and rewards to factors like payment of wages, rent, interest and profits - payment to Government - taxes direct and indirect – state and national levels - funds from the primary and secondary markets - stock exchanges and their role, stock broking, stock exchange cues.</p>				

	<p>CO 4- Role of trained manpower for enhanced quality of individual, family, organisational and national level. Functioning of organisation - the role of Human resources – management problems in small/medium/large organisations - quality of life - production of tangible and intangible products - marketing and its role - market conditions - perfect and imperfect market and their impact on prices and profit - use of technology in organisation – electronic storage of business data - retrieval and analysis - user-friendly software.</p> <p>CO 5- Learning business information - use of reading techniques - listening to lectures by individual and team faculty, and note taking - student seminars - individual and team presentations - field studies, case studies and project reports. Posing problems for investigation, data location, primary and secondary sources, use of cross tabulation, tabular presentations, diagrammatic representation of data, deducting inferences, reporting results and suggesting executive action.</p>			
2	BC4A12	General Informatics	5	4
	<p>CO1- To know Computers and Operating Systems : Features of New Generation Personal Computers and Peripherals - Computer networks - Types of networks - Components of networks – Topology – Internet - Uses of internet - Introduction to Software – License – Open source - Overview of operating systems and major application software.</p> <p>CO2 – to understand Basics of IT : Information – Pre-requisites and needs - IT and its components - IT and Internet – IT Applications - E-Governance - IT for National Integration - IT Applications in Health Care, Business, Commerce and Resource Management - Emerging Trends in IT: Electronic Data Inter change - Mobile Computing – SMS – MMS - Wireless Applications – Blue Tooth - Global Positional System - Infra Red Communication - Smart Card - DNA Computing - Cloud computing</p> <p>CO 3 – to study Knowledge Skills for Higher Education : Data, Information and Knowledge - Knowledge Management - Internet as a knowledge repository - Academic search techniques - Case study of academic websites - Basic concepts of IPR – Copy rights and Patents. Introduction to use of IT in teaching and learning. Case study of educational software - Academic Service – INFLIBNET – NICENET - BRNET.</p> <p>CO 4 - to learn Social Informatics : IT and society - Issues and concerns - Digital Divide - Free Software Movement – IT and industry - New opportunities and threats - Cyber ethics - Cyber crimes – Security – Privacy issues - Cyber Laws - Cyber addictions - Information overload - Health issues - Guidelines for proper usage of computers and internet – e waste and Green Computing – Unicode - IT and regional languages</p> <p>CO 5 - to understand Programmes for Office Management : Introduction to Linux - Linux systems - Linux distributions – Operating systems and Linux - History of Linux and UNIX - Open source software – Linux software - Software Repositories - Third party Linux Repositories - Linux Office and Data base software - Internet servers - Development resources - Setting the Desktop - The GNOME Desktop environment – Using the Metacity Window Manager – Using GNOME Panels – Change in the GNOME preferences - Exiting GNOME – Working with words and images - Desktop Publishing in Linux – Using Open Office.org office suit.</p>			
3	BC4A13	Basic Numerical Skills	5	4
	<p>CO 1- Sets and set operation - Venn Diagrams - Elements of Co-ordinate system. Matrices, Fundamental ideas about matrices and their operational rules – Matrix multiplication -</p>			

	<p>Inversion of square matrices of not more than 3rd order- solving system of simultaneous linear equations.</p> <p>CO 2- Theory of equations: meaning, types of equations –simple linear and simultaneous equations (only two variables) eliminations and substitution method only. Quadratic equation factorization and formula method ($ax^2 + bx + c = 0$ form only) problems on business application.</p> <p>CO 3- Progressions: Arithmetic progressions finding the ‘n’th term of an AP and also sum to ‘n’ terms of an AP. Insertion of Arithmetic means in given terms of AP and representation of AP. Geometric progression: finding nth term of GP. Insertion of GMs in given GP and also representation of GP - Mathematics of Finance - simple and compound interest. (Simple problems only).</p> <p>CO 4-Meaning and Definitions of Statistics - Scope and Limitations – Statistical enquiries – Scope of the problem - Methods to be employed - types of enquiries - Presentation of data by Diagrammatic and Graphical Method - Formation of Frequency Distribution</p> <p>CO 5- Measures of Central tendency - Arithmetic Mean, Median, Mode, Geometric and Harmonic mean, Measures of variation and standard, mean and quartile deviations - Skewness and Kurtosis and Lorenz curve. Analysis of Time Series: Methods of Measuring - Trend and Seasonal variations - Index number - Unweighted indices - Consumers price and cost of living indices.</p>			
3	BC4A14	Entrepreneurship Development	5	4
	<p>CO 1- Entrepreneur and fundamentals of Entrepreneurship: - Entrepreneurial competencies –Factors affecting entrepreneurial growth – Role of entrepreneur in economic Development –Challenges of women Entrepreneurs.</p> <p>CO 2- Micro small and Medium Enterprises – Legal Framework – Licenses – Role of Promotional Institutions with Special Reference to KINFRA, KITCO. MSME & DICs – Concessions –Incentives and Subsidies.</p> <p>CO 3- Project Management – Feasibility and Viability analysis – Technical – Financial – Network – Appraisal and Evaluation – Project Report Preparation</p> <p>CO 4- Identification of Business Opportunities in the context of Kerala – Rate of ED Clubs – Industrial Policies – Skill Development for Entrepreneurs. Business incubation – Meaning – Setting up of Business Incubation Centres.</p>			

Open Course under B com Finance

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BC5D03	Basic Accounting	3	4
<p>Course Outcome</p> <p>CO 1-Basic Accounting concepts - Kinds of Accounts – Financial Accounting vs. Cost Accounting - Financial Accounting vs. Management Accounting -Double Entry Book Keeping – Rules of Debit and Credit – Preparation of Journal and Ledger Accounts problems - Subsidiary books - cash book – types of cash book - problems – purchase book - sales book - sales return - purchase return books – Journal proper</p> <p>CO 2- Trial balance - Errors – types of errors - Rectification of errors – problems – Bank reconciliation statement – problems.</p> <p>CO 3-Financial Statements – Manufacturing, Trading and Profit & Loss Account – Balance sheet – Problems with simple adjustments.</p>				

CO 4- Accounting for non-trading institutions-Income & Expenditure Account- Receipts and Payment Accounts and Balance sheet - Preparation of accounts from incomplete records
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B COM COMPUTER APPLICATIONS

Key Indicator - 2.6 Student Performance and Learning Outcomes (40)

2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered
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Program Specific Objectives of B.com CA

PSO1. Students will acquire knowledge about basics of banking and insurance, they will familiarize with modern trends in banking.

PSO2. Students will acquire knowledge on in management and their effective functioning.

PSO3. Students will acquire latest trends in marketing, they will capable to choose a career in the field of marketing

PSO4. To help the students acquire conceptual knowledge of the fundamentals of the corporate accounting and the techniques of preparing the financial statements.

Course Outcomes

Core Courses under B COM CA

Course Outcomes...

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BCIB01	Management Concepts And Business Ethics	6	4
Course Outcome CO 1- Acquire knowledge on Nature and scope of Management; evolution of management-Schools of management thought; principles of management; management as a science and an art; management process. CO 2- Learn about Functions of management- planning: types of plan; planning process; organizing: span of control, line and staff functions; centralization and decentralization; delegation; staffing: manpower planning, recruitment, selection and placement; directing: principles of direction; coordinating, and controlling CO 3 - Distinguish between Manager vs leader; leadership and motivation; leadership styles; theories of motivation.MBO; Management of performance; Understanding and managing group processes; characteristics of work group, work group behaviour and productivity; team creation and management. CO- 4 – To analyse the Ethics, culture and values: Importance of culture in organisations; Indian ethos and value systems; Model of management in the Indian socio political environment; Work ethos; Indian heritage in production and consumption. CO -5 – Understand the methodology of Business ethics: Relevance of values in Management; Holistic approach for managers in decision-making; Ethical Management: Role of organisational culture in ethics; structure of ethics management; Ethics Committee				
2	BC2B02	Financial Accounting	6	4

	Course Outcome		
	<p>CO 1- Introduction - Nature of financial Accounting - scope – objects –limitations – Accounting concepts and conventions- Financial accounting standards –Object of accounting standards – Accounting Standard Board of India and Indian Accounting Standards – Accounting process from recording of business transactions to preparation of Trial Balance</p> <p>CO2 -Conceptual Frame work for preparation and presentation of financial statements - Capital, Revenue and deferred revenue expenditure – Capital and revenue receipts – Final accounts of Sole Proprietor and not –for- profit organizations – accounting from incomplete records – statement of affairs method and conversion method</p> <p>CO 3- Accounting for Hire Purchase and Installment System -Meaning – Features of hire purchase agreement – Distinction between hire purchase and sale –Interest calculation – Recording of transaction in the books of both parties - Default and repossession - Installment system – Features – Distinction between hire purchase and installment</p> <p>CO 4- Departmental Accounts - Meaning – Objects – Advantages - Accounting procedure – Allocation of expenses and incomes – Interdepartmental transfers – Provision for unrealized profit - Branch Accounts - Features – Objects- Types of branches –Dependent branches – Account Systems –Stock and Debtors System –Independent branch – Features – Preparation of consolidated Profit and Loss Account and Balance Sheet</p> <p>CO 5-Accounting for hotels and restaurants – Introduction - features - revenue earning and non revenue earning departments - heads of revenue and heads of expenditure – Working papers, journals – posting - preparation of trial balance – preparation of final statements , Trading accounts, Profit and Loss Accounts and Balance sheet</p>		
3	BC3B03	Business Regulatory Framework	4
	Course Outcome		
	<p>CO 1 - Indian Contract Act, 1872 – Contract- Nature and classification of contracts - offer and acceptance-consideration- capacity of parties-free consent- coercion- undue influence misrepresentation- fraud- mistake- void agreements- discharge of contract- breach of contract and remedies-contingent contracts-quasi-contracts</p> <p>CO 2 -Special contracts-Contract of Indemnity- meaning – nature- right of indemnity holder and indemnifier – Contract of Guarantee-meaning – nature and features- surety and cosurety–rights and liabilities- discharge of surety from his liability – Contract of Bailment and Pledge-rights and duties of bailer and bailee, pledger and pledgee- pledge by non owners- Agency-creation of agency – duties and liabilities of agent and principal-termination of agency.</p> <p>CO 3 - Sale of Goods Act, 1930-Contract for sale of goods-Meaning – essentials of a contract of sale – Conditions and Warranties- caveat emptor-sale by non owners- rules as to delivery of goods- auction sale -rights of unpaid seller</p> <p>CO 4 -The Consumer Protection Act,1986 – Definition – consumer – complainant – goods service – complaint – unfair trade practices – restrictive trade practices – rights and remedies for consumers - consumer protection council – consumer disputes redressal agencies.</p> <p>CO 5- The Information Technology Act, 2000 – Digital signature – digital signature certificate– electronic records and governance - certifying authorities – cyber crimes – offences and penalties under IT Act,2000..</p>		
4	BC3B04	Corporate Accounting	6
	Course Outcome		

	<p>CO 1- Accounting for share capital – Issue, forfeiture and Reissue of forfeited shares - Redemption of preference shares including buy-back of equity shares - Issue and Redemption of Debentures</p> <p>CO 2- Final Accounts of Limited Liability Companies: Preparation of Profit and Loss Account, Profit and Loss Appropriation Account and Balance Sheet in accordance with the provisions of the existing Companies Act (Excluding Managerial Remuneration).</p> <p>CO 3- Accounting for Amalgamation of Companies with reference to Accounting Standards issued by the Institute of Chartered Accountant of India (excluding inter-company transactions and holdings)-Accounting for Internal Reconstruction (excluding preparation of scheme for internal reconstruction)</p> <p>CO 4- Bank accounts- General information relating to bank accounts - legal requirements affecting final accounts – Concept of Non-Performing Assets (NPA) - preparation of Profit and Loss Accounts and Asset classification - Balance sheet</p> <p>CO 5- Insurance Companies- Books maintained by insurance companies, Explanation of special terms peculiar to insurance business, Accounts for life insurance business, types of policies, Annuity business, surrender value, paid up policy, life assurance fund - valuation balance sheet, preparation of final accounts of Life and General insurance business (as per the provisions of IRDA Act)</p>			
5	BC4B05	Cost Accounting	6	4
	<p>Course Outcome</p> <p>CO 1 - Introduction: - Definition – Meaning and Scope – Objectives – Functions – Merits and Demerits – Cost Accounting and Financial Accounting-Cost classification – Elements of cost- cost units- cost centre – profit centre – Types, Methods and Techniques of Costing- Cost sheet</p> <p>CO 2- Materials :- Importance of Material cost control – Purchase procedure – Stores control types of stores – stores records – perpetual inventory – ABC analysis – VED analysis –JIT inventory – stock levels - EOQ - Issue of materials – FIFO, LIFO, simple and weighed average methods.</p> <p>CO 3- Labour and Overheads: - Importance of Labour Cost Control – Time keeping and Time -Booking – Idle Time – Over Time – Computation of Labour Cost – Remuneration systems and Incentive Schemes Overheads: - Definition – Overhead allocation – Apportionment - Re apportionment –Direct distribution – Step Ladder – Reciprocal service methods – repeated distribution and simultaneous equation methods – Absorption of overheads – methods of absorption– Labour Hour Rate and Machine Hour Rate</p> <p>CO 4- Methods of Costing: Unit costing - Job costing - Contract Costing – Process costing (process losses and valuation of work in progress) - Service costing (only transport).</p> <p>CO 5- Cost Control Techniques: A. Budgetary Control and standard Costing: Budget and Budgetary Control –Need and Importance – Types of Budgets – Preparation of Financial Budget- Flexible Budget and Fixed Budget –ZBB – Programme and Performance Budgets. B. Standard Costing and Variance Analysis – Meaning, advantages and limitations of standard costing – Variance Analysis – material – Labour- Overhead Variance</p>			
6	BC4B06	Regulatory Frame Work For Companies	4	4
	<p>Course Outcome</p> <p>CO 1- Company: - Meaning and definition – characteristics - Kinds of Companies –private and public, government companies - statutory companies – Chartered – Registered – Limited and unlimited - Lifting of the corporate veil.</p>			

	<p>CO 2- Formation of Companies:- Promotion – incorporation - capital – minimum capital requirements - subscription - Commencement of Business - Pre-incorporation and provisional contracts. Documents of Companies:- a. Memorandum of Association – definition, clauses, provisions and procedures for alteration – Doctrine of <i>ultravires</i> - b. Articles of Association – definition, contents, provisions and procedures for alteration – Doctrine of Indoor management – Constructive notice of Memorandum and Articles of Association - distinction between Memorandum and Articles of Association. c. Prospectus – Contents – Statements in Lieu of Prospectus – Liabilities for misstatement</p> <p>CO 3- Shares – Classes of shares – Preference and equity shares – Public issue of shares – SEBI guidelines – Employees stock option scheme – Book building – Allotment of shares – Irregular allotment – Issue of shares at premium, par and discount – Listing of shares –Sweat equity shares– Right shares - Bonus shares – Shares with differential rights -Share certificate and share warrant. Calls, forfeiture, lien, surrender of shares - Demat of shares – Transfer and transmission of shares – Transfer under depository system.</p> <p>CO 4- Management of Companies: - Directors - Managing Director – Appointment Qualification - Rights - Responsibilities and liabilities – Disqualification of directors Meetings: - Requisites - Statutory, Annual, Extra ordinary and Board Meetings, Resolutions – Types. Winding up: - Meaning – modes of winding up – winding up by the tribunal – Members voluntary winding up – creditor’s voluntary winding up - winding up under the supervision of the court.</p> <p>CO 5- Emerging issues in Company Law: - Producer Company – Limited liability partnership - Concept and formation Corporate governance – Concept - relevance and provisions under listing agreement Securities and Exchange Board of India act 1992.Introduction –Object – establishment and management of SEBI. Functions and powers of SEBI – Securities Appellate Tribunal (SAT)</p>			
7	BC5B07	Accounting For Management	5	4
	<p>Course Outcome</p> <p>CO 1-Management Accounting –Nature and Scope – Difference between Cost Accounting, Financial Accounting and Management accounting–Recent Trends in Management Reporting. Analysis and Interpretation of financial Statement: - Meaning- Types and Methods of Financial Analysis – Comparative statements – Trend Analysis – Common size statements (a general discussion only). Ratio Analysis: - Meaning –Nature – uses and limitations of Ratios –liquidity, profitability, Turnover ,Solvency, Leverage, Market test ratios – Constructions of Financial Statements from ratios –Judgment of financial stability through ratios –(Stress to be given to problem solving and interpretation skills)</p> <p>CO 2- Fund Flow and Cash Flow Analysis: a. Fund Flow Statements : Meaning and concept of fund – Current and Non- Current Accounts – Flow of Fund –Preparation of Fund flow statements – uses and significance b. Cash Flow Statement : Difference between fund flow statement and cash flow statements – Preparation of cash flow statements as per AS-3 Norms – Direct and Indirect methods.(Stress to be given to problems)</p> <p>CO 3- Managerial decision making with the help of C.V.P. Analysis : Marginal Costing-Fixed Cost, Variable Cost, Contribution, P/V ratio, Break Even Analysis – Algebraic and Graphic presentation – Decision making: Fixation of Selling Price – Exploring new markets – make or buy-key factor – Product Mix – Operate or Shutdown</p> <p>CO 4- Responsibility Accounting –Concept – Significance – Responsibility centers- Activity Based Costing – (General outline only)</p>			

8	BC5B08	Business Research Methods	4	4
<p>Course Outcome</p> <p>CO 1- Business research – meaning and definition – features of business research – theory building- induction and deduction theory – concept – operational definition – variable proposition – hypothesis – types of business research – basic and applied, exploratory,descriptive and causal – phases of business research.</p> <p>CO 2- Exploratory research – objectives – methods – experience survey – secondary dataanalysis – case study – pilot study by focus group interview – process of problemdefinition – understanding background of the problem - determination of unit of analysis– determine the relevant variables and state the research questions – hypothesis andresearch objectives.</p> <p>CO 3- Meaning of research design – methods of descriptive and causal research – survey – experiments – secondary data studies and observation – sampling design – simplerandom sampling – restricted random sampling – stratified, cluster and systematic -nonrandom sampling – convenient and judgment sampling – sampling error and nonsampling error.</p> <p>CO 4- Measurement and scaling – nominal - ordinal – interval and ratio scale – criteria for good measurement – reliability and validity – designing questionnaire – means of survey datacollection – personal interview – telephonic, mail and internet.</p> <p>CO 5- A. Data processing – processing stages – editing – coding and data entry –descriptive analysis under different types of measurements – percentagesfrequency table – contingency table –graphs – measures of central tendency andindex number – interpretation.B. Preparation of research report – format – report writing stages – gatheringmaterial and data -make overall format - make detailed outline – write first draft -rewrite – final word processing and publishing.</p>				
9	BC5B09	Basics Of Banking And Insurance	4	4
<p>Course Outcome</p> <p>CO 1- Evolution of Banking: Origin and Development of Banking - Structure of Banking in India – Banks and Economic Development –Functions of Commercial banks(conventional and innovative functions) – Central Bank – RBI – functions – Emergingtrends in Banking</p> <p>CO 2- Types of Customers and Account holders: Procedure and practice in opening and operating theaccounts of customers - individuals including minors - joint account holders - Partnership firms - joint stock companies - executors and trustees-clubs and associations</p> <p>CO 3- Introduction to insurance: Purpose and need of insurance, insurance as a social security tool - insurance and economic development - Principles of insurance -various kinds of insurance - life, marine, fire, medical, general insurance - features.</p> <p>CO 4- Life Insurance - Law relating to life Insurance; General Principles of Life Insurance Contract; Proposal and policy; assignment and nomination; title and claims; GeneralInsurance - Law relating to general insurance; different types of general insurance;general insurance Vs life insurance – Insurance business in India.</p>				
10	BC5B10	Fundamentals Of Computers	5	4
<p>Course Outcome</p> <p>CO 1-Exploring the Computer Computer – definition - Computer users - Computer for individual users - Computer for organizations - Computer in society –Components of Computer - input unit - output unit - storage unit CPU- ALU - control unit - registers - computer hardware – System software - Application software</p>				

	<p>CO 2-Computer systems - Types of Computer systems- Micro, Mini, Mainframe and Super Computers - Analog, Digital and Hybrid Computers - Business and Scientific Computer systems - First, second, third and fourth generation Computers - Laptop and notebook Computers</p> <p>CO 3-Computer data - Information – Data Processing - Data Storage and Data retrieval capabilities – -magnetic tape, hard disk, Compact disks - Importance of computers in business - Computer applications in various areas of business- Computer related jobs in business</p> <p>CO 4- Input devices – keyboard, mouse, scanner - output devices – monitor - VDU, LCD, CRT - printers - Commonly used printers, High-quality printers, Thermal-wax printers, Dyesublimation printers, Plotters.</p> <p>CO 5-Operating Systems: DOS - Internal commands - External commands - Windows - UNIX - Windows NT - Windows98 – Windows XP - Types of operating Systems: Batch, Online and Real time system - Time sharing, Multiprogramming and Multiprocessing systems – /home/digital/tmp/Order-B.Com.Computer Application.doc</p> <p>CO 6-Networking Basics - Sharing data anywhere, anytime - The uses of a network - Common types of networks - Hybrid networks – structure of network - Network topologies and protocols - Network media - Network hardware - Local and Wide Area Network - ECommerce – Internet – Extranet - E-mail and its uses - World Wide Web. Books for Reference 1. Computer and Common Sense-Roger Hunt and John Shelley 2. Using Micro Computers- Bright man and Dims dale 3. 4. Introduction to Computers-Alexis Leon and Mathews Leon 4. Michael Miller, Absolute Beginner’s guide to computer Basics, Fourth Edition, Pearson Education (2007) 5. Peter Norton, Introduction to computers, Sixth Edition Tata McGraw Hill (2007)</p>			
11	BC5 B11	Business Information Systems	5	4
<p>Course Outcome</p> <p>CO 1- Information Technology in Business / Business Pressures - Global Competition - Real-time Operations - Work force Customer Behaviour - Technological Innovation and Obsolescence -Organizational responses - Strategic Alliances - Office Automation Technologies - Overview of Information systems - IT Support at different organizational levels - Managing Information systems in Organizations.</p> <p>CO 2-Data, Information and Knowledge Definition of information - History of Information - Quality of Information -Information processing - Management decision making - IT support for management decision making - Data transformation and management - Decision Support Systems (DSS) - Characteristics and capabilities of DSS -Components and structures of DSS - Data and information analysis.</p> <p>CO 3- Information Systems for Enterprise Information and enterprises - Information systems to support business functions - Functional information systems - Management information systems - Transaction processing information systems - Integrated information systems - Enterprise Resource Planning (ERP) - Advantages of ERP - Benefits of an ERP system - Inter-Organizational information systems - Global information systems - Information as a competitive weapon. /home/digital/tmp/Order-B.Com.Computer Application.doc</p> <p>CO 4- Data Base Management Systems DBMS - Definition - Necessity of a database - Characteristics of database -Database management systems - Types of database management systems - Logical data models - Hierarchical model - Network model - Relational model - Object-oriented model – Object relational model - Deductive/inference model - Comparison between various database models</p>				

	CO 5- Computer Software Definition - Hardware/Software interaction - Software categories - Retail software - Public domain software - Shareware - Freeware - Cripple ware - Classification of software - Utilities - Compilers and interpreters - Word processor - Spreadsheets Presentation software - Image processors - Enterprise software. Books for Reference: 1. Introduction to Information Systems, Alexis Leon, Mathews Leon, and Vijay Nicole imprints private Limited, Chennai, 2004 2. Management Information Systems, Uma G Gupta, Galgotia Publications Pvt Ltd, New Delhi, 1998 3. Software Project Management, Third Edition, Bob Hughes and Mike Cotterell, Tata McGrawHill Publishing Company Limited, New Delhi, 2004 4. Information Technology for Management-Henry C.Lucas			
12	BC6B12	Income Tax Law And Practice	6	4
	<p>Course Outcome</p> <p>CO 1- Basic concepts: Income - agricultural income – person – assessee - assessment year - previous year - gross total income - total income - maximum marginal rate of tax -Residential status - Scope of total income on the basis of residential status - Exempted income under section 10.</p> <p>CO 2- Computation of income under different heads: Salaries – Allowances – Perquisites – Profit in lieu of salary – Gratuity – Pension - Income from house property: Annual Value of House property – Computation under different circumstances – Deduction from annual value.</p> <p>CO 3- Profits and gains of business or profession: Definition - Computation – Allowable expenses and not allowable expenses – General deductions - Provisions relating to Depreciation.</p> <p>CO 4- Capital gains: Definition of Capital Assets – Long term and Short term – Transfers – Cost of acquisition – Cost of improvement – Exempted Capital gains. Income from other sources: Definition - Computation – Grossing up – Deductions and other relevant provisions. Total income and tax computation: Income of other persons included in assessee’s total income - Aggregation of income - set-off and carry forward of losses - Deductions from gross total income - Rebates and reliefs - Computation of total income tax liability of individuals.</p>			
13	BC6B13	Auditing	5	4
	<p>Course Outcome</p> <p>CO 1- Introduction: Meaning, Objects, Basic Principles, Auditing and Assurance Standards and Techniques. Classification of Audit - Audit planning - qualities of auditor– advantages and limitations of audit.</p> <p>CO 2- Internal Control, Internal Check and Internal Audit: – Introduction, Necessity, Definitions - Internal Check: Definitions, Difference between Internal Check and Internal Control, Fundamental Principles of Internal Check – Difference between Internal check and Internal audit.</p> <p>CO 3- Audit Procedure: Vouching – definition – features – examining vouchers - Vouching of Cash book – Vouching of trading transactions - Verification and Valuation of Assets & Liabilities: Meaning, definition and objects – Vouching vs. Verification – Verification Valuation of different asset and liabilities.</p> <p>CO 4- Audit Approach: EDP and Mechanical Systems - Use of Computers -Nature of EDP - Internal Control in EDP - Evaluating Internal Control in an EDPSystem - Auditing with the Aid of Computers.Audit of Limited Companies: Company Auditor - Qualifications and disqualifications –Appointment - Removal, Remuneration, Rights, Duties and Liabilities – Audit Committee - Auditor’s Report - Contents and Types - Auditor’s certificates</p>			

	CO 5- Special Areas of Audit: Tax audit and Management audit - Recent Trends in Auditing – Basic considerations of audit in EDP Environment.			
14	BC6B14	Office Automation Tools	5	5
	<p>Course Outcome</p> <p>CO 1-MS-Word Word Basics : Starting word - Creating a new document - Opening preexisting document - The parts of a word window - Typing text - Selecting text - Deleting text - Undo – Redo – Repeat - Inserting text - Replacing text - Formatting text - Cut - Copy - Paste – Formatting Text and Documents - Auto format - Line spacing – Margins - Borders and Shading. Headers and Footers : Definition - creating basic headers and footers –Tables - Creating table - adding changing Deleting rows - Inserting changing Deleting column - Graphics - Importing graphics – Clipart - Insert picture - Clip Art Gallery - drawing objects - text in drawing. Templates: Template types - using templates - exploring templates - modifying templates. Macros: Macro - Record in macros - editing macros - running a macro. /home/digital/tmp/Order-B.Com.Computer Application.doc Mail Merge: Mail Merge concept - Main document - data sources - merging data source and main document - Overview of word menu options - word basic tool bar.</p> <p>CO 2- MS EXCEL Electronic Spreadsheet - Structure of spreadsheet and its applications to accounting, finance, and marketing functions of business - Creating a dynamic / sensitive worksheet - Concept of absolute and relative cell reference - Using built in functions - Goal seeking and solver tools - Using graphics and formatting of worksheet - Sharing data with other desktop applications - Strategies of creating error- free worksheet.</p> <p>CO 3-Power Point : Basics – Terminology - Getting started - Views - Creating Presentations - Using auto content wizard - Using blank presentation option - Using design template option - Adding slides - Deleting a slide - Importing Images from the outside world - Drawing in power point - Transition and build effects - Deleting a slide - Numbering a slide - Saving presentation - Closing presentation - Printing presentation elements.</p> <p>CO 4- The internet and its basic concepts Internet concept – History - Development in India - Technological foundation of internet - Distributed computing - Client – server computing - internet protocol suite - Application of distributed computing - Client server computing - Internet protocol suite in the internet environment - Domain Name System (DNS) - Generic Top Level Domain (g TLD) - Country code Top Level Domain (cc TLD) – Indian - Allocation of second level domains - IP addresses - Internet Protocol - Applications of internet in business, Education, Governance, etc. Books for Reference 1. Ron Mansfield, Working in Microsoft office, Tata McGraw Hill (2008) 2. Ed Bott, woody Leonhard, using Microsoft Office 2007, Pearson Education (2007) 3. PCSoftware Made Simple-R.K.Taxali 4. Office 2000 complete reference - Stephen L.Nelson 5. Quick course in Micro-soft office - Joyce Cox, Polly Orban 6. Mastering Office 2000 - Gimi Couster 7. Rajkamal, Internet and web Technologies, Tata McGraw Hill (2007) /home/digital/tmp/Order-B.Com.Computer Application.doc.</p>			
15	BC6B15	Computerised Accounting With Tally	5	5
	<p>Course Outcome</p> <p>CO 1-Introduction to accounting - accounting basis and terms - branches of accounting - mode of accounting - manual accounting - computerized accounting fundamentals.</p> <p>CO 2- Introduction to Tally - tally interface - f11 features-f12 configuration - company creation - accounting groups - accounting ledgers - accounting vouchers - vouchers entry.</p>			

	<p>CO 3-Inventory management with tally - stock groups - stock items - stock category - unit of measures – godown inventory vouchers (Pure inventory and inventory vouchers)</p> <p>CO 4-Integration of accounting with inventory - bill wise details – invoicing - voucher entry - cost centre - cost category - budget and control - bank reconciliation - interest calculation - order processing - stock valuation methods - reorder levels - tracking numbers - bill of material - inventory ageing analysis.</p> <p>CO 5-Tax application in Tally - Introduction to VAT - VAT activation and classification - VAT computation - composite VAT - input VAT on capital goods - CST introduction - central Excise Tax - interstate transfer - service tax.</p> <p>CO 6-Accounting and inventory reports - Trading, Profit and loss A/c - balance sheet - ledgers – cost centre and budget reports - cash book and bank book - inventory reports - Decision supporting tools - Ratio analysis - cash flows - fund flow-budgeting system - printing of reports - voucher and bill printing etc. /home/digital/tmp/Order-B.Com. Computer Application.doc.</p> <p>CO 7- Technology advantage of Tally - Tally audit - Tally vault-back up, restore, merge and split of database - ODBC interface - export and import of data - web enabled reporting - online support of software. Recommended readings: 1.A.K. Nadhani and K.K. Nadhani – Implementing Tally 6.3, I/e BPB Publications; New Delhi 2. Namrata Agarwal – Tally 6.3; 2004 edition; Dream Tech; New Delhi 3. Tally, Sridharan, Narmadha publications, May 2003.</p>		
16	BC6B16	Project Work	2
<p>Course Outcome</p> <ul style="list-style-type: none"> • Student participatory projects were included in the curriculum, where, they conceive the idea of research leading to new findings by, conducting research with relevant experimental designs and methodology. Recording, analysis and evaluation of data and presenting reports. 			

Complimentary Courses under B com Computer Applications

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BC1C01	Managerial Economics	5	4
<p>Course Outcome</p> <p>CO 1- Introduction - Definition of Managerial economics - objectives - characteristics - uses - decision making and forward planning - basic economic tools in management economics.</p> <p>CO 2- The concept of demand and elasticity of demand - Demand curve: Individual demand curve, Market demand curve, Movement along Vs shifts in the Demand curve, Elasticity of Demand: Price, Income and cross - Demand estimation and demand forecasting - concept of revenue: Average Revenue and Total Revenue - Marginal Revenue and Incremental Revenue.</p> <p>CO 3- Production: Fixed and Variable inputs, Production function, Total, Average and Marginal Product, Law of variable proportions, Linear homogeneous production function - production isoquants, marginal rate of technical substitution - optimal combination of resources - return to scale - cost of production - social and private cost of production - difference between economic and accounting cost - long run and short run cost of production - Economics and diseconomies of scale.</p>				

	<p>CO 4- Price and output decisions under different market structures: Price and output decisions under perfect competition, monopoly and monopolistic competition - pricing under oligopoly - kinked demand curve - price leadership - pricing, under collusion.</p> <p>CO 5 A. Pricing policies and practices: factors governing prices - objectives of pricing policy - Role of cost in pricing - demand factor in pricing - consumer psychology and pricing - pricing methods: cost-plus or full-cost pricing - Target pricing - Marginal cost pricing - going rate pricing - follow up pricing - Barometric pricing - customary prices - Pricing of new products: Penetrating pricing - Price skimming.</p> <p>B. Macro Economics and Business decisions: Phases of Business cycle - Evil effects of cyclical fluctuations on business firms - Minimising effects of Business cycles. Economic Forecasting for business: Economic and Business forecasting - uses of economic forecasts - Methods of economic forecasting - selecting a forecast - evaluating forecasts.</p>			
2	BC2C02	Marketing Management	5	4
	<p>Course Outcome</p> <p>CO 1- Marketing-meaning and definition-scope and importance-evolution of marketing concepts-modern concept of marketing-marketing mix-marketing environment-consumer behaviour- buying motives-consumer buying process-factors influencing consumer buying decision-market segmentation-basis-target marketing-product positioningimportance and bases</p> <p>CO2-Product-meaning and importance-classification-concept of product mix-packaging branding- brand loyalty and brand equity-labeling-product life cycle-new product development-pricing-factors influencing product price-pricing policies and strategies</p> <p>CO 3- Physical distribution-meaning and importance-levels of marketing channels-wholesaling and retailing- types of retailing - factors influencing choice of distribution channel</p> <p>CO 4- Promotion-meaning and importance –promotion mix-advertising-personal selling-sales promotion-public relation-factors affecting promotion mix decisions</p> <p>CO 5 - Rural marketing-growing importance-unique features of rural markets-market mix planning for rural market-service marketing Vs. product marketing-green marketingsocial marketing-relationship marketing-niche marketing</p> <p>CO 6- E-marketing-traditional marketing vs. e-marketing-internet marketing-e advertising-new trends in internet marketing-e branding - e-payment systems and security features in internet.</p>			
3	BC3C03	E- Commerce Management	5	4
	<p>Course Outcome</p> <p>CO 1- Introduction to E- commerce : Meaning and concept – E- commerce v/sTraditional Commerce- E- Business & E- Commerce – History of E- Commerce – EDI – Importance , features & benefits of E- Commerce – Impacts, Challenges & Limitations of Ecommerce – Supply chain management & E – Commerce</p> <p>CO 2-Business models of E – Commerce: Business to Business – Business to customers – customers to customers - Business to Government – Business to employee – E – Commerce strategy – Influencing factors of successful E- Commerce – E- Business Infrastructure – The</p>			

	<p>internet – Intranets and Extranets – World Wide Web – Voice over IP (VoIP) – The Internet Standards – The HTTP Protocol – Audio and Video Standards –Managing E- Business Infrastructure – Web services and Service-oriented architecture – (SOA) – New access devices – future of the internet infrastructure</p> <p>CO 3-Marketing strategies & E – Commerce : Website – components of website – Concept & Designing website for E- Commerce – Corporate Website – Portal – Search Engine – Internet Advertising – Emergence of the internet as a competitive advertising media- Models of internet advertising – Weakness in Internet advertising – Mobile Commerce.</p> <p>CO 4– Electronic Payment system : Introduction – Online payment systems – prepaid and postpaid payment systems – e- cash, e- cheque, Smart Card, Credit Card , Debit Card, Electronic purse – Security issues on electronic payment system – Solutions to security issues – Biometrics – Types of biometrics.</p> <p>CO 5- Legal and ethical issues in E- Commerce: Security issues in E- Commerce- Regulatory frame work of E- commerce.</p>			
4	BC4C04	Quantitative Techniques For Business	5	4
	<p>Course Outcome</p> <p>CO 1- Quantitative Techniques – Introduction – meaning and definition – classification of QT, QT and other disciplines – application of QT in business – limitations.</p> <p>CO 2-Correlation and regression analysis-meaning and definition of correlation- Karl Pearson’s coefficient of correlation-rank correlation-Regression-typesdetermination of simple linear regression-Coefficient of determination.</p> <p>CO 3-Set theory- Probability-concept of probability –meaning and definition-approaches to probability-Theorems of probability-addition theorem-multiplication theoremconditional probability-inverse probability-Baye’s theorem.</p> <p>CO 4- Theoretical distribution-binomial distribution-basic assumptions and characteristics fitting of binomial distribution-Poisson distribution –characteristics-fitting of Poisson distribution-Normal distribution-features and properties-standard normal curve.</p> <p>CO 5-Statistical inference- testing of hypothesis-procedure-error in testing-two tail tests and one tail tests-nonparametric tests- Chi-square test, Wilcoxon test. Parametric tests- Students t test-Analysis of variance-F-test-one way ANOVA and two way ANOVA test</p>			

Common Courses under B com Computer Applications

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BC3A11	Basics Of Business And Management	5	4
	<p>CO 1- Functioning of economic systems - divisions of labour, innovation, flow of goods and services and accumulation of wealth under different economic systems - capitalism, socialism, communism, mixed economies, planned economies etc.; different forms of business organisation - individual and organized business - family and corporate entities - business for profit, business not for profit and business for non-profit. Business entities - individuals, cooperatives, trusts, partnerships, undivided families, joint stock companies - private public and joint ventures. Business examples in different sectors of the economy (primary, secondary and tertiary) - agriculture, trading, retailing, manufacturing, hospitality, tours, travels, recreations, adventures, healthcare, education and other contemporary business areas as examples.</p>			

	<p>CO 2- Role of business in economic development, Indian development experience-role of public and private sectors in the post-colonial period, experience of liberalization and globalisation. Different stakeholders of business firms - owners, managers, employees and others. Emergence of "managerialism" and the role of corporate governance; the goals of business - shareholder value maximisation and its alternatives; goals of public sector, cooperatives and non-profit enterprises. Government regulation of business - objectives, methods and problems.</p> <p>CO 3- Establishing a business - entrepreneurship - legal, physical, financial, social and psychological endowments for entrepreneurs - individual and group entrepreneurs "intrapreneurs". Mobilisation of financial resources for business - individual savings – loans and advances - source of funds - markets for raising money - short-term and long-term funds - lending institutions for business funds - banks and non-banking financial institutions-cost of capital - documenting finding sources and areas of expenses - accounting and accounting practices - returns on investment - factors of production and rewards to factors like payment of wages, rent, interest and profits - payment to Government - taxes direct and indirect – state and national levels - funds from the primary and secondary markets - stock exchanges and their role, stock broking, stock exchange cues.</p> <p>CO 4- Role of trained manpower for enhanced quality of individual, family, organisational and national level. Functioning of organisation - the role of Human resources – management problems in small/medium/large organisations - quality of life - production of tangible and intangible products - marketing and its role - market conditions - perfect and imperfect market and their impact on prices and profit - use of technology in organisation – electronic storage of business data - retrieval and analysis - user-friendly software.</p> <p>CO 5- Learning business information - use of reading techniques - listening to lectures by individual and team faculty, and note taking - student seminars - individual and team presentations - field studies, case studies and project reports. Posing problems for investigation, data location, primary and secondary sources, use of cross tabulation, tabular presentations, diagrammatic representation of data, deducting inferences, reporting results and suggesting executive action.</p>			
2	BC4A12	General Informatics	5	4
<p>CO1- To know Computers and Operating Systems : Features of New Generation Personal Computers and Peripherals - Computer networks - Types of networks - Components of networks – Topology – Internet - Uses of internet - Introduction to Software – License – Open source - Overview of operating systems and major application software.</p> <p>CO2 – to understand Basics of IT : Information – Pre-requisites and needs - IT and its components - IT and Internet – IT Applications - E-Governance - IT for National Integration - IT Applications in Health Care, Business, Commerce and Resource Management - Emerging Trends in IT: Electronic Data Inter change - Mobile Computing – SMS – MMS - Wireless Applications – Blue Tooth - Global Positional System - Infra Red Communication - Smart Card - DNA Computing - Cloud computing</p> <p>CO 3 – to study Knowledge Skills for Higher Education : Data, Information and Knowledge - Knowledge Management - Internet as a knowledge repository - Academic search techniques - Case study of academic websites - Basic concepts of IPR – Copy rights and Patents. Introduction to use of IT in teaching and learning. Case study of educational software - Academic Service – INFLIBNET – NICENET - BRNET.</p>				

	<p>CO 4 - to learn Social Informatics : IT and society - Issues and concerns - Digital Divide - Free Software Movement – IT and industry - New opportunities and threats - Cyber ethics - Cyber crimes – Security – Privacy issues - Cyber Laws - Cyber addictions - Information overload - Health issues - Guidelines for proper usage of computers and internet – e waste and Green Computing – Unicode - IT and regional languages</p> <p>CO 5 - to understand Programmes for Office Management : Introduction to Linux - Linux systems - Linux distributions – Operating systems and Linux - History of Linux and UNIX - Open source software – Linux software - Software Repositories - Third party Linux Repositories - Linux Office and Data base software - Internet servers - Development resources - Setting the Desktop - The GNOME Desktop environment – Using the Metacity Window Manager – Using GNOME Panels – Change in the GNOME preferences - Exiting GNOME – Working with words and images - Desktop Publishing in Linux – Using Open Office.org office suit.</p>			
3	BC4A13	Basic Numerical Skills	5	4
	<p>CO 1- Sets and set operation - Venn Diagrams - Elements of Co-ordinate system. Matrices, Fundamental ideas about matrices and their operational rules – Matrix multiplication - Inversion of square matrices of not more than 3rd order- solving system of simultaneous linear equations.</p> <p>CO 2- Theory of equations: meaning, types of equations –simple linear and simultaneous equations (only two variables) eliminations and substitution method only. Quadratic equation factorization and formula method ($ax^2 + bx + c = 0$ form only) problems on business application.</p> <p>CO 3- Progressions: Arithmetic progressions finding the ‘n’th term of an AP and also sum to ‘n’ terms of an AP. Insertion of Arithmetic means in given terms of AP and representation of AP. Geometric progression: finding nth term of GP. Insertion of GMs in given GP and also representation of GP - Mathematics of Finance - simple and compound interest. (Simple problems only).</p> <p>CO 4-Meaning and Definitions of Statistics - Scope and Limitations – Statistical enquiries – Scope of the problem - Methods to be employed - types of enquiries - Presentation of data by Diagrammatic and Graphical Method - Formation of Frequency Distribution</p> <p>CO 5- Measures of Central tendency - Arithmetic Mean, Median, Mode, Geometric and Harmonic mean, Measures of variation and standard, mean and quartile deviations - Skewness and Kurtosis and Lorenz curve. Analysis of Time Series: Methods of Measuring - Trend and Seasonal variations - Index number - Unweighted indices - Consumers price and cost of living indices.</p>			
3	BC4A14	Entrepreneurship Development	5	4
	<p>CO 1- Entrepreneur and fundamentals of Entrepreneurship: - Entrepreneurial competencies –Factors affecting entrepreneurial growth – Role of entrepreneur in economic Development –Challenges of women Entrepreneurs.</p> <p>CO 2- Micro small and Medium Enterprises – Legal Framework – Licenses – Role of Promotional Institutions with Special Reference to KINFRA, KITCO. MSME & DICs – Concessions –Incentives and Subsidies.</p> <p>CO 3- Project Management – Feasibility and Viability analysis – Technical – Financial – Network – Appraisal and Evaluation – Project Report Preparation</p>			

	CO 4- Identification of Business Opportunities in the context of Kerala – Rate of ED Clubs – Industrial Policies – Skill Development for Entrepreneurs. Business incubation – Meaning – Setting up of Business Incubation Centres.
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Open Course under B Com Computer Applications

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BC5D03	Basic Accounting	3	4
<p>Course Outcome</p> <p>CO 1-Basic Accounting concepts - Kinds of Accounts – Financial Accounting vs. Cost Accounting - Financial Accounting vs. Management Accounting -Double Entry Book Keeping – Rules of Debit and Credit – Preparation of Journal and Ledger Accounts problems - Subsidiary books - cash book – types of cash book - problems – purchase book - sales book - sales return - purchase return books – Journal proper</p> <p>CO 2- Trial balance - Errors – types of errors - Rectification of errors – problems – Bank reconciliation statement – problems.</p> <p>CO 3-Financial Statements – Manufacturing, Trading and Profit & Loss Account – Balance sheet – Problems with simple adjustments.</p> <p>CO 4- Accounting for non-trading institutions-Income & Expenditure Account- Receipts and Payment Accounts and Balance sheet - Preparation of accounts from incomplete records</p>				

M COM FINANCE

Key Indicator - 2.6 Student Performance and Learning Outcomes (40)
2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered

Program Specific Objectives of M.com Finance

- PSO1.** Students will give an idea about the policies of the government and assess their impact on business. They know various concepts of foreign trade and international business. Students will efficient in the area of derivatives, by giving them the knowledge of basics in options, futures, swaps etc.
- PSO2.** Students acquaint with important quantitative techniques, which enable sound business decision making, they will learn the process of applying appropriate quantitative techniques for validating findings and interpreting results and they know the applications of accounting tools, techniques and concepts in managerial decision making process.
- PSO3** .Students will get theoretical knowledge of International Financial Reporting Standards., they gain the ability to solve problems relating to Holding Company, Accounts, Liquidation of Companies and various other Accounts.
- PSO4.** Students will be capable of oral and written scientific communication, and will prove that they can think critically and work independently. Students will get a sound information and knowledge of broad framework of financial markets and institutions. And impart them an understanding of the inter-linkages and regulatory• framework within which the system operates in India

Course Outcomes

Core Courses under M com Finance

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	MC1C1	Business Environment	5	4
<p>Course Outcome</p> <p>CO 1- To Understand the Business Environment: Components and significance – Scope – political, Economic, Social, Technological, Legal, Cultural and Labour Environment – Trade Unions – Quality Circles – External Factors Influencing Business Environment – Dimensions of International Business Environment – Challenges.</p> <p>CO 2- To know the Structure of Indian Economy: Economic Systems – Economic Planning – Planning Commission and NITI Ayog – Public Sector – Changing Role – Relevance – Public Sector Reforms – Public Private Participation – Privatization and Disinvestments – Fiscal Policy – Monetary Policy – Structure of Union and State Budgets – Sources of Revenue – Management of Public Debt.</p> <p>CO 3 - To study the Profile of Indian Economy: New Economic and Industrial Policy – Economic Reforms – Land Reforms – Liberalization – Problems of Growth – Unemployment – Poverty – Regional Imbalances – SEZ – Social Injustices – Inflation – Black Money – Lack of Technical Knowledge and Information – Globalization Various Aspects – Consequences.</p> <p>CO- 4 – To acquire knowledge about Foreign Direct Investment and Institutional Investment : Forms – Policy - FDI in Retail Trade – Problems and Consequences – FEMA – Multinational Corporations Role and Recent Trends – Problems and Consequences – Competition Law.</p> <p>CO -5 – Awareness about International Agreements – An Overview: WTO – WTO and India – Trade Related Intellectual Property Rights (TRIPS) – Trade related Investment Measures (TRIMS) – General Agreement on Trade in Services (GATS) – BRICS – GAAT – SAARC – ASEAN – OPEC – Intellectual Property Rights – Barriers to Trade – Recent Foreign trade policy.</p>				
2	MC1C2	Quantitative Techniques For Business Decisions	5	4
<p>Course Outcome</p> <p>CO 1-To analyse Quantitative Techniques :Qualitative and quantitative approaches – role in decision making – Significance of quantitative decisions - Inferential analysis for management – statistical estimation – point estimation – interval estimation – Confidential Limits – estimating population mean –estimating population proportion – Sample size and its determination.</p> <p>CO2 – Find out Tests of significance : Basic concepts – parametric tests – sampling distribution – large and small samples – standard error – hypothesis – level of significance – degree of freedom – central limit theorem – critical value. Parametric tests – tests for means, tests for proportions, tests for variance – Z test, t test, F test – Test for Paired Observations – Analysis of Variance – one way and two way classifications.</p> <p>CO 3- To know about Non-parametric tests : assumptions – Features – Advantages – Limitations – Chi Square test – contingency tables – tests for goodness of fit – test for independency – Sign test, Wilcoxon Signed Rank test – Mann Whitney U test – Kruskell Wallis test – Wald Wolfowitz Runs test – Applications in business.</p>				

	<p>CO 4- Identify the meaning of Statistical quality control : variations – Assignable variations and chance variations – process control – product control – control charts for variables – control for attributes – X chart –R chart – P chart –np chart –C chart – merits of control charts – Applications in business.</p> <p>CO 5- study the Correlation : types – Coefficient of Correlation – Rank correlation – Partial and Multiple correlation – Regression – probable error – Software for Quantitative methods – SPSS – Data Entry – Analysis tools – Descriptive statistics – Inferential Analysis.</p>			
3	MC1C3	Accounting For Managerial Decisions	5	4
	<p>Course Outcome</p> <p>CO 1 – Acquire knowledge about Management Accounting: Nature, Scope and functions – Role of management Accountant – Cost concepts and classifications – Variable costing and Absorption costing – emerging costing approaches – Life Cycle Costing – Quality costing – kaizen costing – throughput costing – Back flush costing. Activity based costing – Introduction – Concepts – cost drivers and cost pools – Steps to develop ABC system – ABC system – ABC system and corporate strategy.</p> <p>CO 2 – To study Capital investment Process : Investment appraisal methods – Payback period – ARR – Time adjusted methods – Discounted payback period – Net Present value method – IRR – Profitability index – Terminal value method – Capital Rationing – Risk analysis – Decision tree approach – sensitivity analysis – Other statistical methods.</p> <p>CO 3 - meaning of CVP Analysis and Decision making : Managerial applications of CVP analysis – Make or Buy decisions – Alternative methods of Production – Buy or lease decision – Shut down or continue – Repair or replace – Accepting bulk orders for Idle capacity utilization – Pricing under different situations – Suitable product mix, and Key Factor.</p> <p>CO 4 – Understand Cost of capital: Concept – Relevance – Elements of cost of capital – Cost of equity – Cost of debt – Cost of retained earnings – calculation of weighted Average Cost of Capital – Cost control and cost reduction techniques – Value Engineering</p> <p>CO 5- To analyse Performance measurement : Financial and non-financial measurement of performance – Return on investment – Residual income – Economic value added (EVA) – Concept – measurement – Balanced score card – Concept – objectives – Multiple score card measures – New horizons in Managerial control – Transfer pricing – Responsibility accounting – Performance Budgeting – ZBB – Social cost benefit analysis.</p>			
4	MC1C4	IT Applications In Commerce	5	4
	<p>Course Outcome</p> <p>CO 1- To understand Concept of MIS : Information- Concept of information – Characteristics of information – quality of information - information overload – System - System concepts – Types of systems – characteristics of system – control in systems – system stress – Characteristics of MIS – MIS architecture – Basic structural concepts – MIS and other academic disciplines – Need for MIS – Strategic role of MIS - Limitations of MIS – Approaches for system development : System development life cycle – prototyping – Rapid Application development – End user development.</p> <p>CO 2 Introduction to different Sub-systems: Transaction Processing Systems, Office Automation Systems - Decision Support Systems - Executive Information Systems - Artificial intelligence and Expert systems. Functional Information Systems in Business - Production Information system – Marketing Information System – Financial Information System – HR Information System.</p>			

	<p>CO 3- Know about Spread sheet based application for business : basic concept of spreadsheet – popular spreadsheet based programmes – Modeling in spreadsheet – formulation – Logical functions – Financial functions – Statistical analysis – spreadsheet security – database function in spreadsheet – linking data between work sheets – developing models for liquidity and profitability analysis by using accounting ratios – Project appraisal using spread sheet – Inventory management.</p> <p>CO 4- Database management technology : Data base concept – Database terminology – DBMS – Popular DB softwares – Components of DBMS – Database structure – RDBMS – DBA – Data mining – Data warehousing – Introduction to database software – Elements and objects of database software – Table creation – 8 Query creation – Form creation – Report Generation – Business application of Database software</p> <p>CO 5- Learn about Enterprise Resource Planning : Introduction – Features of ERP – Database and ERP – ERP & BPR – ERP Modules – ERP implementation methodology – Popular ERP Packages.</p>			
5	MC1C5	Organisational Theory And Behavior	5	4
	<p>Course Outcome</p> <p>CO 1 – To acquire knowledge about Organizational basis for behavior – Contributing disciplines to the OB field - Need for the knowledge of OB – Need for a contingency approach to the study of OB – Emerging challenges and opportunities for OB – the organization as a system – System – System approach to organizational behavior – Managerial functions – The organization and people.</p> <p>CO 2- learn about Basic psychological process – Perception – Factors influencing perception - Attribution theory – Specific applications in organizations – Learning - Theories of learning – Using learning concepts for self management – implications for performance and satisfaction – Remembering – Basic motivational concepts – Theories of motivation</p> <p>CO 3- To study Personality – Determinants of personality – Theories of personality – Major personality attributes influencing organization behavior - Building and maintaining the self values, attitudes and job satisfaction – Ethical issues in organizational behavior – Mental and health problems in organizations – role of counseling.</p> <p>CO 4- To study the Group dynamic and inter group relationships – Characteristics of workgroup – Basic forces of group behavior – Dynamics of effective operating groups – Work group behavior and productivity - Team management – Styles and skills in leadership and communication – Power and politics in organization – Managing differences and conflicts – managing change – Organization and society.</p> <p>CO 5- to know Organizational development – Techniques of organizational development Interventions – Grid management – Transactional analysis – Sensitivity training – Process consultancy - Case discussions and analysis.</p>			
6	MC2C6	International Business	5	4
	<p>Course Outcome</p> <p>CO 1- Learn about International Business: Meaning and Scope – Theories of International trade: classical and modern theories – protectionism vs. free trade – Trade barriers - Tariff and Non-tariff barriers – Terms of trade – Balance of payment – disequilibrium and corrective measures.</p> <p>CO 2- Study International Business Analysis: Internal and External environment analysis – Modes of Entry - exporting – Licensing – franchising – contract manufacturing – Management contracts, turnkey projects – Foreign Direct Investments: Greenfield</p>			

	Investments – Mergers & Acquisitions – joint ventures – FDI in emerging markets: recent trends. CO 3- to provide different Stages of Internationalization: International, Multinational, Global and Transnational corporations – strategic orientations – Growth of MNCs - contributing factors – merits and demerits of MNC – transfer of technology – regulation of MNCs – MNCs in India. CO 4- To Familiarize International Traded Agreements: Bilateral, Plurilateral and Multilateral agreements – GATT and WTO – WTO agreements - TRIPs, TRIMs, GATS and AoA – Trade Facilitation Issues – Environmental issues – India and WTO CO 5- To provide knowledge about Regional Economic Integrations: Meaning and rationale – Forms of integrations – EU, NAFTA, ASEAN, SAFTA, APEC and other groupings – International Financial Institutions - IMF, World Bank and ADB – functions and role in economic development.			
7	MC2C7	Advanced Corporate Accounting	5	4
	Course Outcome CO 1- Learn about International Financial Reporting Standards (IFRS): Introduction – Meaning – Scope – An Overview of the International Financial Reporting Standards – IFRS 1 to 13, Role of IASB – Arguments for Global Convergence – Required disclosure as per IFRS – Achievements of IASB and Obstacles in Convergence – Difference between IFRS and Indian Accounting Standards – US GAAP. CO 2- To resolve Accounting for Group companies: Holding Companies – Definition – Accounts Consolidation – Preparation of Consolidated Balance Sheet – Minority Interest – Pre – acquisition or Capital Profits – Cost of Control or Goodwill – Intercompany Balance – Unrealized inter company profits – Revaluation of assets and liabilities – Bonus Shares – Treatment of Dividend CO 3- To analyse Accounting for corporate restructuring - Internal - External - Merges and Acquisition - Accounting for Liquidation of Companies: Preparation of Statement of Affairs – Deficiency/Surplus Account – Liquidator's Final Statement of Account-Receiver's Statement of Accounts. CO 4 – to study Voyage Accounts: Meaning of important terms – Voyage in progress - Farm Accounts: Characteristics – Advantages and Disadvantages – Final Accounts of Farms. CO-5- To understand Human Resources Accounting: Objectives – Methods of Valuation – Advantages and Disadvantages Accounting for Price Level Changes: Methods – CPP, CCA and Hybrid.			
8	MC2C8	Business Communication	5	4
	Course Outcome CO 1- To understand Business Communication : meaning – need – process – methods – written, verbal, non-verbal, visual, telecommunications; types of business communications – internal and externals, upward and downward, lateral; barriers to communication – physical, psychological, linguistic, mechanical. CO 2- To acquire required skills Communication through letters: business letters - layout of letters kinds of business letters - characteristics of a good letter, application for appointment – resume – references; appointment orders: Business enquiries - offers and quotations - orders execution of orders – cancellation of orders - Letters of complaint, letters of agency – status enquiries - circulars and circular letters notices report by individuals - reports by committees- annual report - writing of reports			

		<p>CO 3- To give awareness about Non-verbal communication: Body language - Kinesics, proxemics, para language -Effective listening- Principles of effective listening: factors affecting listening - Interviewing skills - appearing in interviews - conducting interviews.</p> <p>CO 4- understand Self development and communication: development of positive personal attitudes SWOT analysis - Personality development- concept of personality, concept of self-perception, personality Types.</p> <p>CO 5- To acquire required skills Transactional analysis: Games and exercises: Business games, Group discussions; Mock interviews; Seminars - effective listening exercises - Public speaking - preparing and delivering effective public speeches - Physical exercises - Yoga and meditation for personality development.</p>		
9	MC2C9	Management Science	5	4
	<p>Course Outcome</p> <p>CO 1- To familiarize Management science: basic concepts – Operations Research and Management science – Models – modeling – important management science techniques – Merits and demerits.</p> <p>CO 2- Linear Programming : basic concepts – formulation of LPP – solutions to LPP – Graphic method – simplex method – maximizing and minimizing with inequality of constraints – applications in business</p> <p>CO 3- To acquire required knowledge about Transportation and Assignment :Transportation – basic concepts – NWC method – Least Cost method – Vogel's approximations method – stepping stone method – Modified Distribution method – Assignment - basic concepts – solution for assignment model – Hungarian assignment method.</p> <p>CO 4- To familiarize Network Analysis : Basic concepts – network – CPM – Calculation of project duration – critical activities – PERT – Time estimates in PERT – Probability of project completion – applications in business.</p> <p>CO-5- To enable Queuing theory: basic concepts – Waiting line models – characteristics of single facility - single line model - Game theory– Traffic in Orenity – decision making on queues - Applications – software.</p>			
10	MC2C10	Strategic Management And Corporate Governance	5	4
	<p>Course Outcome</p> <p>CO 1- To give awareness about Introduction: Basic concepts of strategy and strategic management – level of strategy – Strategic Management Process – Models of strategic management – Approaches to strategic decision making – vision – mission – objectives – goals – strategic implications of social and ethical issues.</p> <p>CO 2- To understand Environmental Analysis – Concept of environment – Micro and macro environment – Environmental Scanning – SWOT analysis – Strategy and Competitive advantage.</p> <p>CO 3- To give awareness about Strategic Choice: Generating strategic alternatives – Strategic options at corporate level – Stability, Growth and Defensive Strategies – Strategic Alliance – SBUs – Portfolio models – BCG matrix – Michael Porter's competitive strategies – External growth strategies – Merger, acquisition, joint venture and strategic alliance (with business cases)</p> <p>CO 4 : To understand Strategic implementation: Various approaches to implementation of strategy – Planning and allocating resources – Strategic Control.</p>			

	CO5- To give awareness about Corporate Governance and Business ethics – issues and concepts of corporate governance – Corporate governance practices in India – Board composition and audit committee – Corporate governance in family business and state owned business – An overview of business ethics – Concept – nature – relationship between ethics and corporate excellence – social, environmental and economic responsibilities of business			
11	MC3C11	Financial Markets and Institutions	5	4
	<p>Course Outcome</p> <p>CO 1- An overview of financial markets: Financial markets – Nature – Functions – money market – Capital markets – Markets for derivatives – Working of stock exchange in India – NSE, BSE, OTCEI – Role of SEBI – Major international stock markets.</p> <p>CO 2- To give awareness about Interest rates :Theories of Interest rate - determination - Maturity and structure of interest rates - Term structure of interest rates - Financial repression and interest rate - The yield curve - interest rates savings - Interest rate and investment - issues of relative rates and return.</p> <p>CO 3- To impart the students an understanding Commodity markets : MCX, NCDEX, and NMCE – Functions, administration, regulations and general mechanism – International commodity markets – Debt market – Types, functions, instruments – Operational mechanism – Hindrances for the development of debt market.</p> <p>CO 4- To impart the students an understanding Development financial institutions: IDBI, IFCI, NABARD, SFCs, UTI, SIDBI – Mutual Fund SEBI guidelines on mutual fund – Provident Fund – Pension Funds – PFRDA – Insurance Companies – IRDA.</p> <p>CO 5- To give awareness about Foreign capital flows : forms of foreign capital – FDI and FPI – FIIs – International financial instruments – ADR, GDR, IDR and Euro bonds – Role of foreign capital in Indian financial system – Trends in foreign capital inflows to India – Regulatory framework for foreign capital flows.</p>			
12	MC3C12	Income Tax Law and Practice	5	4
	<p>Course Outcome</p> <p>CO 1- Computation of Taxable Income: An overview of different heads of income – Clubbing of incomes and aggregation of income – Set off and carry forward of losses – Incomes exempt from taxes – Deductions in computing total income – Rebates and reliefs of tax.</p> <p>CO 2 - To enable Assessment of various entities: i. Assessment of agricultural Income – Computation of Agricultural Income – Calculation of tax on integration. ii. Assessment of individuals – Treatment of income received from various institutions – Applicability of Alternate Minimum Tax (AMT) – Computation of Taxable Income and Tax Liability. iii. Assessment of Hindu Undivided Family (HUF) – Computation of Total Income and Tax Liability of HUF.</p> <p>CO 3-To study the Assessment of firms (Including Limited Liability Partnership – LLP): i. Computation of book profit – Remuneration to partners – Computation of Total Income and Tax Liability – Applicability of Alternate Minimum Tax on firms. ii. Assessment of AOP/BOI – Computation of Total Income and Tax liability of AOP/BOI – Application of Alternate Minimum Tax on AOP/BOI iii. Assessment of Co-operative societies and trusts – Deductions under 80P – Other deductions – Computation of trusts – Definition – Creation – Types of trusts – Tax exemptions – Accumulation of income – Assessment of trusts.</p>			

	<p>CO 4-To Enable Income Tax Authorities : Powers and functions – Provisions of advance payment of tax – Tax payment – Deduction and collection of tax at source – Recovery of tax – Computer applications in tax management.</p> <p>CO 5- To find out Procedure for assessment of Income Tax: Filing of return of Income – Voluntary return of income – Statutory obligations for filing of return – Time and documents for filing of returns – Return of loss – Belated returns – Revised returns – Defective returns – PAN – Different types of assessment – Self assessment – Assessment on the basis of return – Best judgment assessment – Regular assessment – Reassessment – Protective assessment</p>			
13	MC3C13	Research Methodology	5	4
	<p>Course Outcome</p> <p>CO1- To acquaint Research: Basic concepts - Meaning – Objectives – Types – Approaches – Significance of research in social sciences – Process of research – Formulating problem – Literature Survey – Hypothesis – Research Design – Types – Exploratory, Descriptive, Diagnostic, Experimental – Sample Design – Collecting, analyzing, testing, interpreting and presenting result.</p> <p>CO2- To enable Population Survey and Sample Study: Population & Sample – Sampling theories - Techniques of sampling – Random and Non random techniques – Sample Size – Determination of sample size – Sampling Errors – Non sampling Errors – Factors influencing sample size – Optimum sample size – Case Study – Pilot Survey.</p> <p>CO3- To acquaint Data collection : collection of Primary Data – Methods of Data Collection – Observation – Field Survey – Questionnaire - Interview Schedule – Preparation of Questionnaire – Process of Interviewing – Collection of secondary data – Sources of secondary data.</p> <p>CO4- To familiarise Measurement and Scaling : Variables – Attributes – Process of measurement – Attitude Measurement – Scaling - Scaling Techniques – Graphic Rating – Likert – Thurstone – Semantic Differential – Stapel – Dichotomous – Scales – Types of Scales – Scale Values – Validity and Reliability of Scales – Errors in measurement.</p> <p>CO5- To acquaint Data Processing and Presentation : Field Work – Editing – Classification – Coding – Tabulation – Summarization – Analysis of data – One way ANOVA - Univariate, Bivariate and Multi variable methods - Tools of Analysis – Descriptive Analysis – Inferential analysis – Interpretation – Presentation – Report Writing - Types of Reports – Contents of Reports – Format of Reports – Documentation Styles.</p>			
14	MC4C14	Financial Derivatives And Risk Management	5	4
	<p>Course Outcome</p> <p>CO-1 –To Introduction to risk management – Meaning and need – importance – Types of market risk – Risk management issues in business – Financial derivatives – Meaning – Need – Growth of financial derivatives markets in India – Derivative markets – Exchange traded financial derivatives for risk management in India – Participants – Functions – Types of risk management instruments – Forwards – Futures – Options – Swaps – The regulatory framework of derivative trading in India.</p> <p>CO-2- To understand Future's growth and development t- Difference between forwards and futures - financial future - Future trading – currency futures – Interest rate futures Pricing and valuation – of future contracts – Value at risk-Hedging risk – Hedging with stock index future – types of members and margin system in India-Future trading in stock exchange for risk management.</p>			

		<p>CO-3- To find out meaning Options – meaning – needs and importance-options and futures fundamental option strategies-type of option-put-call-trading strategies of risk instruments-positions in options-stock indices-options in Indian stock market.</p> <p>CO-4- To familiarize Risk pricing of options-intrinsic value and time value-pricing at the expiry of contract-factors affecting option pricing-put-call-parity pricing-models of pricing-binomial option-pricing models-Black Schole's pricing methods.</p> <p>CO-5- To understand Swaps-meaning and definition-development-structure of swap dealing for risk management-interest rate swaps-forward swaps and swap option contracts cancellable and extendable swaps-no generic swaps transactions. Currency swaps - Valuation and pricing of swaps - risk management function of swap transaction.</p>		
15	MC4C15	Cost Management	5	4
		<p>Course Outcome</p> <p>CO-1 – Cost Management – Nature – Cost management system – Strategic cost management (SCM) – Components of SCM – Cost concepts in decision making. Activity Based Costing (ABC) – Need for emergence of ABC – Concept of ABC – Kaplan and Cooper's approach to ABC-Cost drivers and cost pools – Characteristics of ABC-Allocation of overheads under ABC-Steps in ABC system Implementation of ABC and its benefits.</p> <p>CO-2- To understand Modern cost management concepts–Kaizen costing–concepts–procedures–evaluation–benefits–target costing– nature– methods–steps-life cycle costing–phases-features-stages and importance-Product Life Cycle costing and cost contr</p> <p>CO-3- To find out Emerging Costing Approaches: Measuring productivity - Productivity index - Advantages of Higher productivity - Causes of low productivity - Business Process Reengineering - Concept-Importance - Issues in BPR-Just In Time (JIT) - Objectives – Features - Implementation and benefits of JIT - Value Chain Analysis - Internal linkages - Supplier linkages - role of value chain in decision analysis.</p> <p>CO-4- To familiarize Costing in service sector and process costing : Classification and collection of costs in operating costing - Transport costing-Boiler house costingPower house costing - Hospital costing – Canteen costing – Cinema theatre costingHotel costing - Process costing - process losses and gains – valuation of work in progress (equivalent production) – Joint products and by products – Accounting for joint products and by products – Inter – process profits..</p> <p>CO-5- To understand Standard costing and variance analysis: Types of standard-setting standards – advantages – variance analysis – importance – material, labour, overhead, sales and profit variance – interpretation of variance - control and efficiency ratios – investigation of variances – techniques of interpretation of variances.</p>		
16	MC3 E (F) 01	Financial Management	5	4
		<p>Course Outcome</p> <p>CO-1 – Learn out Foundation of Finance: Goals and functions of finance – Legal – Operating and Tax environment for financial decisions – Sources of short term finance – Sources of long term finance – Retained earnings – Common stock and right issues – ADRs and GDRs – Long term debt – Preferred stock – Convertible securities – Warrants and exchangeable – ECBs – FCCBs – Lease finance.</p> <p>CO-2- To understand Working Capital Management: Working Capital – meaning – concept and cycle – Working capital management strategy – Estimation of working capital – Mathematical and simulation models of working capital decisions – Management of cash and marketable securities – Cash management techniques – Lock box system, Concentration</p>		

	<p>baking – Methods of Inventories – Techniques of inventory management – Management of receivables – Techniques of receivable management.</p> <p>CO-3- To acquaint knowledge about Cost of Capital: Concept – significance – Computation of cost of Debt, Preference capital, Equity capital and Retained Earnings – Opportunity cost of capital – Marginal cost of capital – WACC – Capital Asset Pricing Model.</p> <p>CO-4- To understand Capital Structure: Leverage Analysis – Operating, Financial & Combined leverage – EBIT – EPS Analysis – Financial Breakeven – Indifference Point – Capital Structure Theories – Optimum capital Structure – NI approach, NOI approach, Traditional approach & Modigliani Miller approach – Arbitrage process – Determinants of Capital Structure</p> <p>CO-5- To study Dividend policy : Mechanics and practices of dividend payment – factors affecting dividend policy – legal framework of payment of dividend – dividend theories – determinants of dividend policy and some case studies.</p>			
17	MC3 E (F) 02	Security Analysis and Portfolio Management	5	4
	<p>Course Outcome</p> <p>CO-1 – Learn out Foundation Investments: Meaning and concept – Investment objectives – various asset classes – factors in investment decisions- Investment process – concept of risk and return – sources of risk – Measurement of risk and return – Diversification and hedging – ethical investing.</p> <p>CO-2- To understand Bond Investment analysis: Types of bonds – International bonds – Bond yields – Yield to Maturity (YTM) – risk analysis is bonds – Bond value theorem – Bond immunization strategies.</p> <p>CO-3- To acquaint knowledge about Equity Analysis: Approaches to equity analysis – Fundamental analysis – Economy, Industry and Company (EIC) analysis – Equity valuation models – Dividend Discount Models (DDM) and Price Earnings Ratio (PER) models – Technical analysis – Dow theory – Chart and Chart Patterns – Market and Mathematical Indicators – Efficient Market Hypothesis (EMH) and Random Walk theory – Tests of market efficiency – Critique of Investor rationality – Behavioural Finance.</p> <p>CO-4- To understand Portfolio analysis and selection: Risk return analysis of investment portfolio – Individual and Interactive risks – measurement of portfolio risks – Risks tolerance and asset allocation – optimal portfolio – portfolio selection models Markowitz model – Sharpe single index model – Capital Asset Pricing Model (CAPM) – Capital Market Line (CML) and Security Market Line (SML) – Market anomalies : calendar effect, size effect and market overreaction – Arbitrage Pricing Theory (APT) – Multifactor asset pricing Models.</p> <p>CO-5- To study Portfolio Management: Active and Passive investment strategies – Value and growth investing, contrarian strategies – index investing and tracking efficiency, Portfolio evaluation- Sharpe, Treynor and Jensen measures, Fama's Decomposition Index – Portfolio revision.</p>			
18	MC4 E (F) 03	Strategic Financial Management	5	4
	<p>Course Outcome</p> <p>CO-1 – Financial goals and strategy : Shareholder value creation (SCV) – Market Value Added (MVA) – Market – to – Book Value (M.BV) – Economic Value Added (EVA) – managerial implications of shareholder value creation – Growth ratios – Internal Growth Rate (IGR) – Sustainable Growth Rate (SGR)</p>			

	<p>CO-2- To understand Financial strategy for capital structure: Leverage effect and shareholders risk – Capital structure planning and policy – Financial options and the value of the firm – Dividend policy and the value of the firm</p> <p>CO-3- To acquaint knowledge about Lease Financial strategy: Leasing concept – Types – Cash flow consequences of lease – Financial evaluation of leasing - Lessee's point of view – leasing versus buying – NPV method – Equivalent loan method – Evaluation from lesser's point of view – NPV and IRR methods.</p> <p>CO-4- To understand Merger strategy : Theories of Merger – Horizontal, vertical and conglomerate mergers – Merger procedure – Valuation of firm – Financial impact of merger – Merger and dilution effect on EPS – Merger and dilution effect on business control.</p> <p>CO-5- To study Take over strategy : Types of takeovers – Negotiated and hostile bids – Take over procedures – Takeover defenses – Takeover regulations of SEBI – Distress restructuring strategy – Sell offs – Spin offs – Leveraged buy outs</p>			
19	MC4 E (F) 04	Tax Planning and Management	5	4
	<p>Course Outcome</p> <p>CO-1 – Introduction to tax planning and management: Concept of tax planning and management – Tax evasions and tax avoidance-Need and significance of tax planning and management-Tax Planning in respect of residential status.</p> <p>CO-2- To study Assessment of companies: Residential status and incidence of taxSpecial Provisions applicable to assessment of total income of companiesDeductions available to corporate assesses – Computation of taxable income of companies and determination of corporate tax liability – Minimum Alternate TaxTax on distributed profit of domestic companies- Tax on income distributed to unit holders-Security Transaction Tax – Tonnage Tax.</p> <p>CO-3- To acquaint with Tax Planning: Individuals – Tax Planning with reference to all five heads of income for individuals – Salary, House Property, Profit from business and profession, Capital Gains and Income from other sources – Tax planning with respect to deductions, exemptions, Rebate, Relief, Concession and incentives (Problems focused on tax planning).</p> <p>CO-4- To understand Tax planning and managerial decisions: Tax planning in respect of make or buy, own or lease, repair or replace, export or domestic sales, shut down or continue, expand or contract, amalgamate or demerger, invest or disinvest Financial Management decisions, Capital Structure, dividend policy and bonus shares.</p> <p>CO-5- To familiarise Tax planning under various circumstances: Tax planning while setting up of a business-with reference to location, nature and form of organizations-Tax planning related to Special Economic Zones (SEZ), Export Processing Zones (EPZ) 37 and Export Oriented Units (EOUs) – Infrastructure sector and background areas – Tax incentives for exporters.</p>			
20	MC4P01	Project work and Viva Voce	5	4
	<p>Course Outcome</p> <p>Student participatory projects were included in the curriculum, where, they conceive the idea of research leading to new findings by, conducting research with relevant experimental designs and methodology. Recording, analysis and evaluation of data and presenting reports</p>			

DEPARTMENT OF BIOTECHNOLOGY

Key Indicator - 2.6 Student Performance and Learning Outcomes (40)

2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered

Programme Specific Outcome: (B.SC.BIOTECHNOLOGY)

- The aim of the program is to prepare specialists with high quality and up-to-date training in a highly interdisciplinary field of Biotechnology. Basic objectives include the following
 - Learn working and analytical methods in fields of molecular biology, microbiology, biochemistry, recombinant DNA technology and fermentation technology.
 - Perform scientific and technological experiments
 - Asses the results of experiments, identify problems and propose solutions
 - Learn to develop new strategies by considering current research finding.

Course Outcomes

Core Courses under BSc Biotechnology

Sl. No.	Course Code	Course Title	Course Structure		
			Hrs/ Course	Wk/	Credits/ Course
1	BT1BO1	CELL BIOLOGY	3		3
	Course Outcome <ul style="list-style-type: none"> ➤ Provides understanding of structural and functional concepts of the living beings. ➤ Use of cellular concepts in relation to human health and diseases ➤ Learn the structures and purposes of basic components of prokaryotic and eukaryotic cells, especially macromolecules, membranes, and organelles ➤ Learn underlying principles of mitotic and meiotic division ➤ Describe cell cycle regulation and apoptosis 				
2	BT1C01, BT2C05,	CHEMISTRY	2		3
	<ul style="list-style-type: none"> ➤ To make the study of chemistry stimulating 'relevant and interesting. ➤ To understand basic facts and concepts in chemistry. ➤ To develop the ability for applying the principles of chemistry. ➤ To appreciate the achievements in chemistry. ➤ To know the role of chemistry in nature and in society. 				
3	BT1C03, BT2C07	ENVIRONMENTAL BIOTECHNOLOGY	2		3
	Course Outcome <ul style="list-style-type: none"> ➤ Understanding the aspects of human relationships with environment. ➤ Effects of human activities on environment. ➤ Understanding of various technologies used to reduce the deleterious effects caused by human encroachment on environment. ➤ Study ecological concepts and ecosystem, biotic and abiotic environmental factors ➤ Learn with renewable and non renewable sources of energy ➤ Describe biogeochemical cycles and significance 				

		➤ Learn about human influences on ecosystem like pollution, ozone depletion , ozone warming etc		
4	BT2B02	GENERAL MICROBIOLOGY	4	3
	Course Outcome Study of microbial structure, function and classification. <ul style="list-style-type: none"> ➤ Provides an understanding of the microbial world and effective means to cultivate and use them for human benefits. ➤ Learn history and classes of microorganism ➤ Study types of media, sterilization and pure culture techniques ➤ Studies on growth and reproduction of virus, fungi, bacteria ➤ Detail microbial metabolism and microbial diseases 			
5	BT3B03.	BIOCHEMISTRY:	3	3
	Course Outcome <ul style="list-style-type: none"> ➤ To understand basic concepts of pH, Buffer, stabilizing forces etc. and to know structure & function of building blocks (proteins, amino acids, nucleic acids, lipids, and carbohydrates). ➤ To describe fundamental concepts concerning metabolic pathways and bioenergetics and know the concept of enzymes & enzyme action ➤ To explain the principle and applications of the techniques of colorimetry, spectrophotometry, electroanalytical methods of clinical significance , and other separation techniques as Chromatography, Electrophoresis etc ➤ Familiarize with biomolecules – lipids, carbohydrates, amino acids, proteins and nucleic acids ➤ Describe Vitamins and hormones- types and functions ➤ Learn different separation techniques used for biomolecules 			
6	BT4B05	GENETICS	3	3
	Course Outcome <ul style="list-style-type: none"> ➤ Learn fundamentals of Mendel’s rules of inheritance and understand range of gene Interactions ➤ Study of chromosomal basis of heredity including chromosomal morphology, number and organization ➤ Learn human inherited disorders and genetic application in human health and diseases ➤ Understand the basics of quantitative and population genetics ➤ Comprehend and describe chromatin structure, gene regulation, and the ways of gene function and the genetic regulation of cell specialization. ➤ The phenomenon and implications of Chromosome karyogamy, variation in chromosome number. ➤ The analysis of genetic variation in inheritance and transmission genetics including epistasis. Sex determination, sex linkage, and human pedigree analysis. 			
7	BT3C09, BT4C13	CHEMISTRY	3	3
	<ul style="list-style-type: none"> ➤ To familiarize the emerging areas of chemistry and their applications in various spheres of chemical sciences and to apprise the students of its relevance in future studies. ➤ To make the students aware of the applications of chemistry in day to day life. 			

		<ul style="list-style-type: none"> ➤ To expose students to various fields in chemistry and develop interest in related disciplines. ➤ The updated syllabus is based on an interdisciplinary approach to understand the application of the subject in daily life. 		
8	BT5B08	IMMUNOLOGY AND IMMUNOTECHNOLOGY	4	3
	Course Outcome <ul style="list-style-type: none"> ➤ Describe immune system – types, cells and organs ➤ Detail properties of Antigens and structure of antibodies ➤ Student understand various Ag Ab reactions ➤ Familiarise with hypersensitivity and autoimmune diseases. ➤ Students gain an understanding of monoclonal antibody and tumour immunology 			
9	BT5B09	BIOPROCESS TECHNOLOGY	4	3
	Course Outcome <ul style="list-style-type: none"> ➤ Learn isolation, screening, improvement and preservation of industrially important microorganisms. ➤ Students learn design of bioreactors ➤ Describe basic fermentation process and optimum parameters for fermentation 			
10	BT6B13	PLANT BIOTECHNOLOGY	4	3
	Course Outcome <ul style="list-style-type: none"> ➤ Learn basic techniques of tissue culture, types of cultures and in vitro morphogenesis ➤ Familiarize with plant secondary metabolites and significance ➤ Learn genetic manipulation with special focus on agrobacterium mediated gene delivery. ➤ Learn about transgenic plants and applications of genetically modified plants ➤ Understand applications in horticulture, agriculture, pharmacology 			
11	BT6B14	ANIMAL BIOTECHNOLOGY	3	3
	Course Outcome <ul style="list-style-type: none"> ➤ Learn animal cell culture conditions, basic requirements and components of media ➤ Describe primary cell culture and cell lines ➤ Learn Cytotoxicity assays and cell proliferation assays ➤ Familiarize with Biohazards, biosafety and stem cells ➤ Learn significance of transgenic animals in poultry and livestock 			
12	BT6B15	RECOMBINANT DNA TECHNOLOGY AND BIOINFORMATICS	3	3
	<ul style="list-style-type: none"> ➤ Understand the importance of plasmids and other vectors to genetic engineering and to learn different vectors employed in gene transfer techniques ➤ Describe how a chimeric genome is constructed, role of restriction endonucleases, and screening ➤ Understand gene transfer methods like particle gun approach, liposome mediated, PEG mediated and agrobacterium based transfer method ➤ Learn transgenic plants , animal and GM foods Gain knowledge on molecular mapping of genome and molecular markers like RFLP ,RAPD and AFLP . ➤ Understand the basic concept of bioinformatics including databases and database searches 			

13	BT6B17	MEDICAL BIOTECHNOLOGY	3	2
Course Outcome <ul style="list-style-type: none"> ➤ Learn sterilization and disinfection methods ➤ Describe antigen antibody reactions and complement system ➤ Learn properties of bacteria, viruses ➤ Familiarize with diseases caused by bacteria and viruses 				
14	BT1C04 (P) BT2CO8 (P) BT3C12(P) BT4C16(P)	ENVIRONMENTAL BIOTECHNOLOGY	2	-
<ul style="list-style-type: none"> ➤ Learn the aseptic techniques to practice in laboratory ➤ Learn to prepare and sterilize media ➤ Isolate and count microorganisms from different sources ➤ Learn screening of microorganisms through staining ➤ Learn about aerobic treatment methods ➤ Learn to analyse water quality 				
	BT1C02(P) BT2C06(P) BT3C10(P) BT4C14(P)	Practical related to Semester 1 ; II;III and IV CHEMISTRY	2	-
<ul style="list-style-type: none"> ➤ To develop skills in the proper handling of instruments and chemicals. ➤ To be exposed to the different processes used in industries. ➤ To make the students eco-friendly by creating a sense of environmental awareness in them. ➤ To make the students aware of the applications of chemistry in day to day life. 				
	BT5 B10 (P)	PRACTICALS IN MOLECULAR BIOLOGY	4	4
Course Outcome <ul style="list-style-type: none"> ➤ Learn to isolate genomic DNA from different sources and to determine the purity ➤ Learn to measure cell size using micrometry ➤ Understand the method of induction of lac operon as well as transformation 				
	BT5 B11 (P)	IMMUNOLOGY AND IMMUNO-TECHNOLOGY PRACTICAL	4	4
Course Outcome <ul style="list-style-type: none"> ➤ Identify blood group ➤ Identify blood cells ➤ Learn different methods of antigen-antibody interaction 				
	BT5 B12 (P)	PRACTICALS IN BIOPROCESS TECHNOLOGY	4	2
Course Outcome <ul style="list-style-type: none"> ➤ Isolate and screen antibiotic producing microbes ➤ Learn to estimate alcohol by distillation ➤ Learn technique of enzyme immobilization ➤ Understand different fermentation technique like solid state and submerged fermentation 				
	BT6 B16 (P)	PLANT BIOTECHNOLOGY PRACTICAL	4	3

	○			
	<ul style="list-style-type: none"> ➤ Learn preparation and sterilization of plant tissue culture media ➤ Learn the method of callus induction ➤ Understand production of artificial seeds ➤ Isolate protoplasts 			
15	BT 6 B18	PROJECT	4	4
	Course Outcome <ul style="list-style-type: none"> • Student participatory projects were included in the curriculum, where, they conceive the idea of research leading to new findings by, conducting research with relevant experimental designs and methodology. Recording, analysis and evaluation of data and presenting scientific reports with clear, concise language using oral, written and visual modes to science-literate and general audiences. 			

Course Outcomes...

Open Course under BSc Biotechnology

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BT5D01	INTRODUCTION TO BIOTECHNOLOGY	3	2
	Course Outcome <ul style="list-style-type: none"> ➤ Learn about history and uses of biotechnology ➤ Study biotechnology applications in food including fermentation, Single cell protein and mushrooms ➤ Understand applications in agriculture specifically GM plants • Students will familiarize with application in medicine like paternity testing and DNA finger printing 			

DEPARTMENT OF BOTANY

Key Indicator - 2.6 Student Performance and Learning Outcomes (40)

2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered
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B.Sc., Botany

Programme outcome

1. Students will be able to apply the scientific method to questions in biology by formulating testable hypotheses, gathering data that address these hypotheses, and analyzing those data to assess the degree to which their scientific work supports their hypotheses.
2. Students will be able to present scientific hypotheses and data both orally and in writing in the formats that are used by practicing scientists.
3. Students will be able to access the primary literature, identify relevant works for a particular topic, and evaluate the scientific content of these works.
4. Students will be able to apply fundamental mathematical tools (statistics, calculus) and physical principles (physics, chemistry) to the analysis of relevant biological situations.
5. Students will be able to identify the major groups of organisms with an emphasis on plants and be able to classify them within a phylogenetic framework. Students will be able to compare and contrast the characteristics of plants, algae, and fungi that differentiate them from each other and from other forms of life.
6. Students will be able to use the evidence of comparative biology to explain how the theory of evolution offers the only scientific explanation for the unity and diversity of life on earth. They will be able to use specific examples to explicate how descent with modification has shaped plant morphology, physiology, and life history.
7. Students will be able to explain how organisms function at the level of the gene, genome, cell, tissue, organ and organ-system. Drawing upon this knowledge, they will be able to give specific examples of the physiological adaptations, development, reproduction and behaviour of different forms of life.
8. Students will be able to explicate the ecological interconnectedness of life on earth by tracing energy and nutrient flows through the environment. They will be able to relate the physical features of the environment to the structure of populations, communities, and ecosystems.
9. Students will be able to demonstrate proficiency in the experimental techniques and methods of analysis appropriate for their area of specialization within biology.

Specific Outcome

1. Understand the environmental and basic concept of taxonomy, ecology.
2. Determine economic & medicinal plant in agriculture and medicine.

3. Analyse the relationship between plants and microbes.
4. Understand the biology of diversity of seed plants or phanerogames.
5. Understand the behaviors of fossils and gymnospermic plants.
6. Understand the plant diversity, chemical properties and evolutionary relationship among taxonomic groups.

Course Outcomes

Core Courses under BSc Botany

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BOT1BO1T	ANGIOSPERM ANATOMY	2Theory 2 Tutorial	3
	BOT2BO2T	RESEARCH METHODOLOGY AND MICROTECHNIQUE	2Theory 2 Tutorial	3
Course Outcome To describe Anatomical & Physiological characters related to its. To understand methodology of research To understand different techniques like microscope, microtome, staining etc.				
2	BOT3BO3T	MICROBIOLOGY, MYCOLOGY, LICHENOLOGY AND PLANT PATHOLOGY	3Theory 2 Tutorial	3
	BOT4BO4T	PHYCOLOGY, BRYOLOGY AND PTERIDOLOGY	3Theory 2 Tutorial	3
Course Outcome <ul style="list-style-type: none"> • To give information about lower plants and their life cycle. • To study in depth about fungi, algae, bryophyta & pteridophyta. • Analyse the relationship between plants and microbes. 				
3	BOT5BO5T	GYMNOSPERM, PALAEOBOTANY, PHYTOGEOGRAPHY AND EVOLUTION	3.5Theory 2Tutorial	3
	BOT5BO6T	ANGIOSPERM MORPHOLOGY AND PLANT SYSTEMATICS	3.5Theory 2Tutorial	4
	BOT5BO7T	EMBRYOLOGY, PALYNOLOGY, ECONOMIC BOTANY, ETHNOBOTANY, AND HORTICULTURE	3.5Theory 2Tutorial	4
	BOT5BO8T	GENERAL AND BIOINFORMATICS, INTORDUCTORY BIOTECHNOLOGY, MOLECULAR BIOLOGY	3.5Theory 2Tutorial	4
	BOT5DO3	TISSUE CULTURE	3 Theory	2
Course Outcome				

	<ul style="list-style-type: none"> • Understand the behaviors of fossils and gymnospermic plants • Understand the biology of diversity of seed plants or phanerogames. • Understand the plant diversity, chemical properties and evolutionary relationship among taxonomic groups. • Understand the biology of diversity of seed plants or phanerogames. • Understand the plant diversity, chemical properties and evolutionary relationship among taxonomic groups. • Plant description, describe the morphological and reproductive stretch of plant and also identify the different families. • To enable the student about diversity of plants and biology of seed plants. • Plant classification gives information about plant to classify in different families. • Embryological studies give information to student about the development of embryo to mature seed and original plants. • Economic botany gives knowledge about economic importance and their utilization. • Utilization of plants to enable the student about utility in life. • Study of Cell biology and genetics, provide knowledge about tools & technique of recombinant technology DNA technology, plant tissue culture and their importance in different scientific practices. • Study of Cell biology and genetics, provide knowledge about tools & technique of recombinant technology DNA technology, plant tissue culture and their importance in different scientific practices. • To learn cell and tissue culture techniques 			
4	BOT6BO9T	GENETICS AND PLANT BREEDING	3Theory 2Tutorial	3
	BOT6BO10T	PLANT PHYSIOLOGY AND METABOLISM	3Theory 2Tutorial	3
	BOT6BO11T	CELL BIOLOGY AND BIOCHEMISTRY	3Theory 2Tutorial	3
	BOT6BO12T	ENVIRONMENTAL SCIENCE	3Theory 2Tutorial	3
	BOT6BO13T	GENETIC ENGINEERING	4Theory 1Tutorial	3
	<ul style="list-style-type: none"> • Environment and Sustainability: Understand the issues of environmental contexts and sustainable development. • Study of Cell biology and genetics, provide knowledge about tools & technique of recombinant technology DNA technology, plant tissue culture and their importance in different scientific practices. • To give knowledge about plant metabolism, and structure among different groups of plant. • To give knowledge about chemical properties of plants 			

• To give knowledge about hybridization techniques
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Complimentary Courses under BSc BOTANY

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BOT1CO1T	ANGIOSPERM ANATOMY AND MICROTECHNIQUE	2Theory 2 Tutorial	2
	BOT2CO2T	CRYPTOGAMS, GYMNOSPERMS AND PLANT PATHOLOGY	2Theory 2 Tutorial	2
Course Outcome <ul style="list-style-type: none"> • To describe Anatomical & Physiological characters related to its. • To understand methodology of research • To understand different techniques like microscope, microtome, staining etc • To study in depth about fungi, algae, bryophyta & pteridophyta. • To know about different plant diseases and causative organisms 				
2	BOT3CO3T	MORPHOLOGY, SYSTEMATIC BOTANY, ECONOMIC BOTANY, PLANT BREEDING AND HORTICULTURE	3Theory 2Tutorial	2
	BOT4CO4T	PLANT PHYSIOLOGY, ECOLOGY AND GENETICS	3Theory 2Tutorial	2
Course Outcome <ul style="list-style-type: none"> • Plant description, describe the morphological characters of plant and also identify the different families.. • Plant classification gives information about plant to classify in different families. • Economic botany gives knowledge about economic importance and their utilization. • To give knowledge about hybridization techniques • To describe Physiological characters of plants • Understand the environmental and basic concept of ecology. 				

Open Course under BSc Botany

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BOT5DO3	Tissue culture	3Theory	2
Course Outcome <ul style="list-style-type: none"> • To learn cell and tissue culture techniques 				

Program : M.Sc. Botany

Program Outcomes (PO)

- Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.

- Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio- technological changes
- Field trip and collection of specimens enable them to do research projects
- Research oriented Exposure programme by visiting the well equipped Biotechnological labs
- Scientific project works and their analysis will lead them getting research aptitude

Program Specific Outcomes (PSO)

- Understand the nature and basic concepts of cell biology, Biochemistry, Taxonomy and ecology.
- Analyse the relationships among animals, plants and microbes
- Perform procedures as per laboratory standards in the areas of Biochemistry, Bioinformatics, Taxonomy, Economic Botany and Ecology

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	BO01CT01	PHYCOLOGY, BRYOLOGY, PTERIDOLOGY AND GYMNOSPERMS	6Theory	4
	BO01CT02	MYCOLOGY AND LICHENOLOGY, MICROBIOLOGY AND PLANT PATHOLOGY	6Theory	4
	BO01CT03	ANGIOSPERM ANATOMY, EMBRYOLOGY, PALYNOLOGY AND LAB TECHNIQUES	6Theory	4
	BO01CP04	PRACTICALS OF 1, 2, AND 3	6Tutorials	4
Course Outcome <ul style="list-style-type: none"> • Algal study deals with the diversity and the important roles. Algae, a heterogenous group and their role in environment and human welfare. • Deals with all microbes and the technologies for their effective uses in industry and mitigation of environmental concerns. • To give knowledge about anatomy, reproductive biology of angiosperms • to give knowledge about staining and preparation of permanent of permanent slides • to acquire practical skills to identify lower groups of plant, plant diseases, and causative organisms, anatomy of angiosperms and different lab techniques 				
2	BO02CT05	CELL BIOLOGY, MOLECULAR BIOLOGY, BIOPHYSICS	6Theory	4
	BO02CT06	CYTOGENETICS, BIOSTATISTICS, PLANT BREEDING AND EVOLUTION	6Theory	4
	BO02CT07	PLANT ECOLOGY, CONSERVATION BIOLOGY , PHYTOGEOGRAPHY AND FOREST BOTANY	6Theory	4
	BO02CP08		6Tutorial	4

		PRACTICALS OF 6,7, AND 8		
	Course Outcome <ul style="list-style-type: none"> • Understand the nature and basic concepts of cell biology • To study the molecular organization of cell and cell organelles • To study the molecular basis of hereditary structures • To know about the hereditary mechanisms and cytogenetic variations • To analyse the statistics of genetics • Clearing understanding of more recent development which have taken place in the field of genetics besides providing introduction to methods of plant breeding in the improvement of crop plants. • Understand hybridization techniques • Study evolutionary significance of different groups of plants • To study the interrelationship between environment plants and animals • Know different conservation strategies • To know about different forest products • To acquire practical skills. 			
3	BO03CT09	PLANT PHYSIOLOGY, METABOLISM, BIOCHEMISTRY	6Theory	4
	BO03CT10	ANGIOSPERM MORPHOLOGY , TAXONOMY AND PLANT RESOURCES	6Theory	4
	BO03CT11	BIOTECHNOLOGY AND BIOINFORMATICS	6Theory	4
	BO03CP12	PRACTICALS OF 9, 10, AND 11	6Tutorial	4
	Course Outcome <ul style="list-style-type: none"> • Create a Research aptitude in the field of Plant cell biology along with plant Physiology and Biochemistry • Enable to understand recent developments in plant systematic and phylogenetics. • Understanding the fundamentals of bioinformatics tools, computational biology and statistical methods utmost necessary for contemporary research. Fundamental bioinformatic tools for sequence analyzing and Data base. Deals mainly with scientific methodology and applications of plant tissue culture techniques. • Demonstration and management of crop diversity for meeting human for requirement forms care of this paper. 			
4	BO04ET03	GENETIC ENGINEERING	6Theory	4
	BO04CT05	PLANT TISSUE CULTURE	6Theory	4
	BO04CT07	GENETICS AND CROP IMPROVEMENT	6Theory	4
	PRACTICALS	PRACTICALS OF ELECTIVE 3,5, AND 7	6 Tutorials	4

DISSERTATION VIVA			4 4
<ul style="list-style-type: none"> • Clearing understanding of more recent development which have taken place in the field of genetics besides providing introduction to methods of plant breeding in the improvement of crop plants. • Demonstration and management of crop diversity for meeting human for requirement forms care of this paper. • Provides a detailed view of the visualizing concepts and technique for genetic engineering and biotechnology. • To learn tissue culture and its commercial aspects 			

DEPARTMENT OF LANGUAGE

SANSKRIT (COMMON COURSE)

Key Indicator - 2.6 Student Performance and Learning Outcomes (40)
2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered

Programme Specific Outcome: (Common Course of B.A./B.Sc./B.Com/BCA/CS/BT)

The Common Course (HINDI) of the Under Graduate Programmes ,B.A./,B.Sc./,B.Com/,BCA/,CS/,BT is helpful to develop language skills and appreciation of literature. The course aiming at developing a general knowledge of the Hindi language and literature in a short term.

- To sensitize the students to the aesthetic, cultural and social aspects of literary appreciation and analysis.
- To introduce basic grammar of Hindi language.
- To explain ancient and modern Hindi literature.
- To develop the technique of translation and language skill in Hindi among the students.

Course Outcomes

Common Course Hindi under B.A./B.Sc./B.Com/ BCA/ CS/ BT.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	A07(1)	(B.A/B.Sc. 1 st Semester) Common Course Hindi- Prose And Drama	4/Wk/ Theory	4
Course Outcome <ul style="list-style-type: none"> • To introduce Hindi Drama to the students for appreciation and critical analysis. • To help them develop their creative thinking and writing • To acquaint the students with different forms thoughts and style used in Hindi prose writing, to make them able to express their thoughts in these different forms. 				
2	A07(02)	(B.Com 1 st Semester)	5/Wk/	4

		Common Course Hindi: Prose Forms In Hindi Literature	Theory	
	Course Outcome <ul style="list-style-type: none"> To acquaint the students with different forms thoughts And style in Hindi prose Writing. To sensitize the students to aesthetic,cultural and social aspects of literacy appreciation and analysis. 			
3	A 07 (03)	(BCA/CS/BT. 1 st Semester) Prose And One Act Plays	5/Wk/ Theory	4
	Course Outcome <ul style="list-style-type: none"> To introduce Hindi one act plays to the students for appreciation and critical analysis. To help them develop their creative thinking and writing To acquaint the students with different forms thoughts and style used in Hindi prose writing,to make them able to express their thoughts in these different forms. 			
4	A08 (01)	(B.A/B.Sc. 2 nd Semester) Common Course Sanskrit –Grammar Correspondence And Translation	4/Wk/ Theory	4
	Course Outcome <ul style="list-style-type: none"> Grammar is essential to the study of language.Developing a correct grammar sense is very important for written communication A student who successfully complete the course should be able to prepare certain basic kinds of letters independently in their personal and professeional life. Familiarising the technology of translation with its possibilities.. 			
5	A 09(02)	B.Com 2 nd Semester) Common Course Hindi- Poetry,Correspondence And Translation.	5/Wk/ Theory	4
	Course Outcome <ul style="list-style-type: none"> A student who successfully complete the course should be able to prepare certain basic kinds of letters independently in their personal and professeional life. Familiarising the technology of translation with its possibilities To make them aware of the importance of correspondence and translation To sensitize the students to aesthetic,cultural and social aspects of literacy appreciation and analysis. 			
6	A 09 (03)	BCA/CS/BT. 2 nd Semester) Poetry And Short Stories	5/Wk/ Theory	4
	Course Outcome <ul style="list-style-type: none"> To sensitize the students to aesthetic,cultural and social aspects of literacy appreciation and analysis. To familiarize the major Short stories of Hindit literature. 			
7	A09(01)	B.A/B.Sc. 3rd Semester) Common Course Hindi-Poetry In Hindi	5/Wk/ Theory	4

		<ul style="list-style-type: none"> Appreciation of poetry using the best specimens provided in an anthology. Understanding the origin and development of Hindi Poetry through selected poems 		
8	A10(01)	B.A/B.Sc. 4 th Semester Common Course Hindi-Novel And Short Stories	5/Wk/ Theory	4
Course Outcome <ul style="list-style-type: none"> To acquaint the students with different forms thoughts and styles of Hindi fiction. To help them develop their creative thinking and writing. 				

MALAYALAM (COMMON COURSE)

Key Indicator - 2.6 Student Performance and Learning Outcomes (40)
2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered

Programme Specific Outcome: (Common Course of B.A./B.Sc./B.Com/BCA/CS/BT)

The Common Course (Malayalam) of the Under Graduate Programmes ,B.A./,B.Sc./,B.Com/,BCA/,CS/,BT is helpful to develop language skills and appreciation of literature. The course aiming at developing a general knowledge of the Malayalam language and literature in a short term.

- To sensitize the students to the aesthetic, cultural and social aspects of literary appreciation and analysis.
- To introduce basic literature forms of this language.
- To explain ancient and modern Malayalam literature.
- To develop the technique of translation and language skill in Malayalam among the students.

Course Outcomes

Common Course Malayalam under B.A./B.Sc/B.Com/ BCA/ CS/ BT.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	MAL1AO1	(B.A/B.Sc. 1 st Semester) Common Course-7- Malayalam- Malayalashahityam-1	4/Wk/ Theory	4
Course Outcome <ul style="list-style-type: none"> To introduce basic forms of Malayalam literature to the students for appreciation and critical analysis. To help them develop their creative thinking and writing To acquaint the students with different forms thoughts and style used in Malayalam prose and poems writing, to make them able to express their thoughts in these different forms. 				
2	MAL1AO1(1)	(B.Com 1 st Semester) Common Course -7: Malayalashahitya patanam-1	5/Wk/ Theory	4
Course Outcome <ul style="list-style-type: none"> To acquaint the students with different forms thoughts in Malayalam prose 				

		<ul style="list-style-type: none"> and translation technics in Malayalam language To sensitize the students to aesthetic,cultural and social aspects of literacy appreciation and analysis. 		
3	MAL1AO1(2)	(BCA/CS/BT. 1 st Semester) Malayala bhashayum sahyavum-1	5/Wk/ Theory	4
Course Outcome <ul style="list-style-type: none"> To introduce Malayalam literature forms to the students for appreciation and critical analysis. To help them develop their creative thinking and writing To acquaint the students with different forms thoughts and style used in Malayalam pros writing ,to make them able to express their thoughts in these different forms. 				
4	MAL2AO2	(B.A/B.Sc. 2 nd Semester) Common Course 8 –Malayala sahyam-2	4/Wk/ Theory	4
Course Outcome <ul style="list-style-type: none"> Introducing the critical theories in Malayalam language for students to analyse the literature in Malayalam <ul style="list-style-type: none"> A student who successfully complete the course should be able to analyse contemporary literatuer. To make students aware of origin and development of Malayalam language and literature To know the culture and heritage of this language 				
5	MAL2AO2(1)	B.Com 2 nd Semester) Common Course 9- Malayala sahyta patanam-2	5/Wk/ Theory	4
Course Outcome <ul style="list-style-type: none"> To familiarising Malayalam drama for appreciation and analysis Familiarising the technology of translation with its possibilities To make them aware of the importance of correspondence and translation To sensitize the students to aesthetic,cultural and social aspects of literacy appreciation and analysis. 				
6	MAL2AO2(2)	BCA/CS/BT. 2 nd Semester)Common course9 Malayala bhashayum sahyavum-2	5/Wk/ Theory	4
Course Outcome <ul style="list-style-type: none"> To sensitize the students to aesthetic,cultural and social aspects of literacy appreciation and analysis. To familiarise Malayalam Autobiographical works for appreciation and sensitize the social leaders life and get awareness about the society To familiarize the ancient and contemporary literature in Malayalam 				
7	MAL3AO3	B.A/B.Sc. 3rd Semester-Common course-9 Malayala sahyam-3	5/Wk/ Theory	4
<ul style="list-style-type: none"> Appreciation of poetry using the best specimens provided in an anthology. 				

	<ul style="list-style-type: none"> Understanding the origin and development of Malayalam Poetry through selected poems. 			
8	MAL4AO4	B.A/B.Sc. 4 th Semester)-Common course10-Malayalashahityam-4	5/Wk/ Theory	4
Course Outcome <ul style="list-style-type: none"> To acquaint the students with different forms thoughts and styles of Malayalam fiction. To help them develop their creative thinking and writing To familiarising with Translation works made in Malayalam language and analyzing the technics of Translations. 				

HINDI (COMMON COURSE)

Key Indicator - 2.6 Student Performance and Learning Outcomes (40)
2.6.1 Program outcome, Program specific outcome & course outcome of all programs offered

Programme Specific Outcome: (Common Course of B.A./B.Sc./B.Com/BCA/CS/BT)

The Common Course (HINDI) of the Under Graduate Programmes ,B.A./,B.Sc./,B.Com/,BCA/,CS/,BT is helpful to develop language skills and appreciation of literature.The course aiming at developing a general knowledge of the Hindi language and literature in a short term.

- To sensitize the students to the aesthetic,cultural and social aspects of literary appreciation and analysis.
- To introduce basic grammar of Hindi language.
- To explain ancient and modern Hindi literature.
- To develop the technique of translation and language skill in Hindi among the students.

Course Outcomes

Common Course Hindi under B.A./B.Sc/B.Com/ BCA/ CS/ BT.

Sl. No.	Course Code	Course Title	Course Structure	
			Hrs/ Wk/ Course	Credits/ Course
1	A07(1)	(B.A/B.Sc. 1 st Semester) Common Course Hindi- Prose And Drama	4/Wk/ Theory	4
Course Outcome <ul style="list-style-type: none"> To introduce Hindi Drama to the students for appreciation and critical analysis. To help them develop their creative thinking and writing To acquaint the students with different forms thoughts and style used in Hindi prose writing,to make them able to express their thoughts in these different forms. 				
2	A07(02)	(B.Com 1 st Semester) Common Course Hindi: Prose Forms In Hindi Literature	5/Wk/ Theory	4
Course Outcome <ul style="list-style-type: none"> To acquaint the students with different forms thoughts And style in Hindi prose Writing. To sensitize the students to aesthetic,cultural and social aspects of literacy 				

	appreciation and analysis.			
3	A 07 (03)	(BCA/CS/BT. 1 st Semester) Prose And One Act Plays	5/Wk/ Theory	4
Course Outcome				
<ul style="list-style-type: none"> To introduce Hindi one act plays to the students for appreciation and critical analysis. To help them develop their creative thinking and writing To acquaint the students with different forms thoughts and style used in Hindi prose writing, to make them able to express their thoughts in these different forms. 				
4	A08 (01)	(B.A/B.Sc. 2 nd Semester) Common Course Sanskrit –Grammar Correspondence And Translation	4/Wk/ Theory	4
Course Outcome				
<ul style="list-style-type: none"> Grammar is essential to the study of language. Developing a correct grammar sense is very important for written communication A student who successfully complete the course should be able to prepare certain basic kinds of letters independently in their personal and professional life. Familiarising the technology of translation with its possibilities.. 				
5	A 09(02)	B.Com 2 nd Semester) Common Course Hindi- Poetry, Correspondence And Translation.	5/Wk/ Theory	4
Course Outcome				
<ul style="list-style-type: none"> A student who successfully complete the course should be able to prepare certain basic kinds of letters independently in their personal and professional life. Familiarising the technology of translation with its possibilities To make them aware of the importance of correspondence and translation To sensitize the students to aesthetic, cultural and social aspects of literacy appreciation and analysis. 				
6	A 09 (03)	BCA/CS/BT. 2 nd Semester) Poetry And Short Stories	5/Wk/ Theory	4
Course Outcome				
<ul style="list-style-type: none"> To sensitize the students to aesthetic, cultural and social aspects of literacy appreciation and analysis. To familiarize the major Short stories of Hindi literature. 				
7	A09(01)	B.A/B.Sc. 3 rd Semester) Common Course Hindi-Poetry In Hindi	5/Wk/ Theory	4
<ul style="list-style-type: none"> Appreciation of poetry using the best specimens provided in an anthology. Understanding the origin and development of Hindi Poetry through selected poems. 				
8	A10(01)	B.A/B.Sc. 4 th Semester) Common Course Hindi-Novel And Short Stories	5/Wk/ Theory	4
Course Outcome				
<ul style="list-style-type: none"> To acquaint the students with different forms thoughts and styles of Hindi fiction. 				

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| | <ul style="list-style-type: none">• To help them develop their creative thinking and writing. |
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