## Subject Outcomes

### Physics

| Paper Code | Paper Name | Outcome |
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| **B.Sc-I Sem I** | | |
| PH-101 | Classical Mechanics & Theory of Relativity | After successful completion of the course, Students will be able to-<br>• Know and understand the mechanics of a single particle and system of particles.<br>• Solve and analyze equations of motions using Lagrange's eqn of motion.<br>• Differentiate between inertial and Non-inertial frame of references and describe how fictitious forces arise in a non-inertial frame. Understand the importance of Michelson Morley's experiment in reference to special theory of relativity.<br>• Understand Lorentz transformations, Length contraction, time dilation, twin paradox, velocity addition analyze the problems relating to mass-energy equivalence. |
| PH-102 | Electricity and Magnetism | • Know about Gradient of a scalar and its physical significance, Line, Surface and Volume integrals of a vector and their physical significance<br>• Introduce Gauss' Law and clearly understand how to apply it.<br>• Analyze the value of Maxwell equation- boundary conditions<br>• Learn about the Magnetic induction & flux, Solenoidal nature of vector field of induction, properties & Electronic theory of dia and paramagnetism.<br>• Analyze the chemical and heating effect of current, AC &DC |
| **B.Sc.-I Sem-II** | | |
| PH-201 | Mechanics | After successful completion of the course, Students will be able to-<br>• Understand the application of both translational and rotational dynamics motions. Write the expression for the moment of inertia about the given axis of symmetry for different uniform mass distributions. Understand the concept of MOI by application of flywheel.<br>• Know and understand the principles and basic terms related to elasticity through the study of Young Modulus and modulus of rigidity.<br>• Learn about Kinetic interpretation of Temperature, the real gas equations, Van der Waal equation of state and Brownian motion.<br>• Learn and explain the basic aspects of kinetic theory of gases, Maxwell-Boltzman distribution law, mean free path of molecular collisions, viscosity, thermal conductivity and diffusion. |

| PH-202 | Electronics Devices | <ul><li>learn about semiconductor physics of the intrinsic, p and n materials</li><li>Understanding the characteristics of the p-n junction, the diode and some special function diodes and these diodes' application in electronic circuits</li><li>know about Amplifiers, Classification of amplifiers, common base and common emitter amplifiers, coupling of amplifiers</li><li>Learn about (RC) coupled amplifier, Feedback in amplifiers, advantages of negative feedback, emitter follower, distortion in amplifiers.</li><li>Know about Oscillators , classification of oscillators & Tuned collector common emitter oscillator, Hartley oscillator</li></ul> |
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## B.Sc.-II Sem-III

| PH-301 | Computer Programming & Thermodynamics | After successful completion of the course, Students will be able to-<ul><li>Know and understand the Computer Organization, Binary Representation, Algorithm development, Flowchart, Programming in Fortran.</li><li>Create algorithms, flowcharts and programs in FORTRAN for any given problem.</li><li>Learn and understand the Thermodynamics system and laws of thermodynamics, Carnot cycle, Carnot theorem, Kelvin scale, Joule Thomson Effect, Entropy and Liquefication of gases.</li><li>Learn about Thermodynamical potentials, Maxwell's thermodynamic relations their physical interpretations.</li></ul> |
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| PH-302 | Waves and Optics I | <ul><li>Introduce Young's double slit experiment & clearly understand</li><li>Learn about Thin film, Plane parallel film , production of colours in thin films, classification of fringes in films.</li><li>Introduce Huygen's-Fresnel's theory, Fresnel's assumptions, & half-period zones clearly understand</li><li>Know about diffraction due to a narrow slit and diffraction due to a narrow wire</li><li>Learn about resolving power of telescope and a grating difference between prism and grating spectra .</li></ul> |

## B.Sc.-II Sem-IV

| PH-401 | Statistical Physics | After successful completion of the course, Students will be able to-<ul><li>Understand and explain the concepts of microstate, macrostate, thermodynamic probability, the studies of particles with their distinguishably or indistinguishably nature and conditions which lead to the three different distribution laws e.g. Maxwell Boltzmann distribution, Bose-Einstein distribution and Fermi-Dirac distribution laws of particles.</li><li>Learn the basic Postulates of statistical physics, Phase space, Division of Phase space into cells and be able to derive the</li></ul> |
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| | | expression for average speed, r.m.s. speed, average velocity, r. m. s. velocity for Maxwellian distribution.<br>• . Derive Bose-Einstein & Fermi-Dirac statistics and be able to differentiate between classical statistical mechanics and quantum statistical mechanics.<br>• Learn and understand the different laws and theories of specific heat of solids and their significance. |
| PH-402 | Waves and Optics II | • Learn about polarisation by reflection & scattering, Malus Law, Huygen's wave theory.<br>• Understand analysis of polarized Light & Nicol prism, Quarter wave plate and half wave plate<br>• Introduce the Fourier series, Fourier coefficients, odd functions, even functions, Fourier theorem<br>• Learn abou t Fourier transforms and its properties<br>• Intoduce the optics fiber & its type , Normalized frequency, Pulse dispersion, Attenuation,   Applications, Fiber optic Communication |
| **B.Sc.-III  Sem-V** | | |
| PH-501 | Quantum  and Laser Physics | After successful completion of the course, Students will be able to-<br>• Know and understand the difference between classical and Quantum Physics,<br>Photoelectric Effect, Compton Effect, De-Broglie Hypothesis, Uncertainty Principle, Schrodinger wave equation.<br>• Apply and Solve Schrodinger equation for ground state energy and wave functions of  various simple quantum mechanical one dimensional and three dimensional potentials.<br>•  Familiar with optical phenomena and different concepts related to laser physics,<br>Understand and explain the basic principles of working of LASER.<br>• Know and understand the working of He-Ne Laser, Ruby Laser, Semiconductor Laser, understand and appreciate the applications of Lasers in developing LED, Holography, in materials processing, in Medicine, Industry and Military. |
| PH-502 | Nuclear Physics | • Learn about concepts of nuclear physics and nuclear energies and importance of their use for mankind.<br>•  Understand the relationship between particles & atom, as well as their creation & decay. Relate the structure of atoms & subatomic particles.<br>• Understand nuclear composition and elementary particles, charge symmetry and independence, spin dependency and nuclear force<br>• Analyze the ideas of basics of nucleus and their energy, nuclear fission and fusion.<br>• Distinguish between types of nuclear models.<br>• Understand basic principal and classification of reactors. |
| **B.Sc.-III  Sem-VI** | | |

| PH-601 | Solid State Physics | After successful completion of the course, Students will be able to-<br>• Know about crystalline and amorphous substances, lattice, unit cell, primitive cell, miller indices, Bravais lattices in two & three dimensions and crystal structures of Zinc Sulphide, Sodium Chloride and Diamond.<br>• Understand and learn X-ray diffraction, Bragg's Law and experimental X-ray diffraction methods and about the reciprocal lattice to a simple cubic lattice, b.c.c. and f.c.c. lattice.<br>• Understand the basic idea about superconductors, their classifications and practical applications.<br>• Know the basics of nanotechnology and appreciate the role of nanotechnology in different fields such as automobile, electronics, nano-biotechnology, materials, medicine |
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| PH-602 | Atomic and Molecular Spectroscopy | • Spectroscopic studies were central to the development of Quantum mechanics and study of atoms and molecules.<br>• Learn about vector atom model , salient feature of vector atom model , spin orbital interaction energy.<br>• Understand the fine structure of alkali spectra & coupling in case a more than one valence electron atom .<br>• Learn about Lermor's theorem , Pauli Exclusion Principal ,symmetric & anti- symmetric , wave function.<br>• Learn about ,infra red rotational & vibrational spectra and their energy level , Raman effect & its application & checking of assignment . |

## Chemistry

| Paper Code | Paper Name | Outcome |
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| **B.Sc-I Sem I** | | |
| CH-101 | Inorganic Chemistry | • Understand atomic structure and write quantum numbers<br>• Draw shapes of different orbitals & energy level diagrams<br>• Compare reactivities of various elements on the basis of periodic properties<br>• Learn different types of bonds & hybridisations<br>• Learn various bonding theories<br>• Understand ionic bond & lattice energy<br>• Understand the concept of polarizability |
| CH-102 | Physical Chemistry | • Understand various state of matter .<br>• Deep study of liquid ,gas solid state .<br>• Learn various method for their determination .<br>• Compare liquid crystals of liquid and solid .<br>• Learn the polarimeter for determination of optical rotation. |

| CH-103 | Organic Chemistry | <ul><li>Name various alkanes</li><li>Understand various basic concepts of organic chemistry</li><li>Compare reactivities of various reaction intermediate</li><li>Learn method of preparation & properties of alkane & cycloalkanes</li><li>Learn various types of isomerism</li><li>Differentiate among different isomers</li><li>Assign configuration to optical & geometrical isomers</li></ul> |
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| **B.Sc.-I  Sem-II** | | |
| CH-104 | Inorganic Chemistry | <ul><li>Define & understand hydrogen bonding</li><li>Understand various basic concepts of s&p block elements</li><li>Compare reactivities of various elements of s & p block elements</li><li>Learn method of preparation & properties of noble gas elements</li><li>Learn various concepts of carbon family</li><li>Learn various concepts of nitrogen family</li><li>Learn various concepts of oxygen  family</li><li>Know interhalogen compounds & their properties</li><li>Differentiate among different s and p block elements</li><li>Compare alkali and alkaline earth metals</li></ul> |
| CH-105 | Physical Chemistry | <ul><li>Learn the reactions and its rate .</li><li>Study various laws of electrochemistry</li><li>Know about ph its values ,buffer solution which help in practical work .</li><li>Study of electrolytes and conductance which also help in handling of conductometer .</li></ul> |
| CH-106 | Organic Chemistry | <ul><li>Name various alkenes, alkynes & alkyl halides</li><li>Understand various basic concepts of mechanisms</li><li>Compare reactivities of various compounds and explain the reason</li><li>Learn method of preparation & properties of alkenes, alkynes & alkyl, aryl halides</li><li>Learn various types of dienes and alkyl halides</li><li>Differentiate among different alkyl halides</li><li>Understand effects of various factors on reaction mechanism</li></ul> |
| **B.Sc.-II  Sem-III** | | |
| CH-201 | Inorganic Chemistry | <ul><li>Learn about the chemistry of d-block elements.</li><li>Know about the various transition series and their compounds.</li><li>Study about coordination compounds which will help them further in chemicals industries.</li><li>Study about stereochemistry and isomerism in coordination compounds.</li><li>Learn about various non-aqueous solvents.</li></ul> |

| CH-202 | Physical Chemistry | • Thermodynamics terms ;systems and surroundings .<br>• . Laws of thermodynamics .<br>• Learn the conditions of temperature , pressure , heat .<br>• Understand about the distribution law.<br>• Determination of degree of hydrolysis . |
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| CH-203 | Organic Chemistry | • Name various alcohols, phenols, ethers & acid and their derivatives<br>• Understand various basic concepts of mechanisms<br>• Compare reactivities of various compounds and explain the reason<br>• Learn method of preparation & properties of alcohols, phenols, ethers & acid<br>• Learn the basic principle of UV spectroscopy<br>• Differentiate among different type of shifts in UV spectroscopy<br>• Understand effects of various factors on absorption maxima<br>• Understands Woodward Fischer Rules<br>• calculate absorption maxima for different compounds |
| **B.Sc.-II Sem-IV** | | |
| CH-204 | Inorganic Chemistry | • Learn about chemistry of lanthanides.<br>• Know about chemistry of actinoids.<br>• Study of transuranic elements which will help in scientific work.<br>• Learn about theory of qualitative and quantitative analysis.<br>• Study about detection of radicals. |
| CH-205 | Physical Chemistry | • Learn about engine its efficiency .<br>• Learn about carnot cycle.<br>• Clear the concept of entropy.<br>• Importance of thermodynamics laws for us.<br>• . Study of cells hoe cells work .<br>• Understand how the batteries work by the study of electrochemistry .<br>• Study of electrodes and its working |
| CH-206 | Organic chemistry | • Name various amines, aldehydes & ketones<br>• Understand various basic concepts of mechanisms<br>• Compare reactivities of various compounds and explain the reason<br>• Learn method of preparation of amines, diazonium salts, aldehydes & ketones<br>• Learn properties of amines, diazonium salts, aldehydes & ketones<br>• Learn the basic principle of IR spectroscopy<br>• Differentiate among different type of vibrations in IR spectroscopy<br>• Understand effects of various factors on wave number<br>• Understands selection rules<br>• Identify given functional group on basis of IR |
| **B.Sc.-III Sem-V** | | |

| CH-301 | Inorganic Chemistry | <ul><li>Learn about metal-ligand bonding in transition metal complexes.</li><li>Know about thermodynamic and kinetic aspects of metal complexes.</li><li>Study about magnetic properties of transition metal complexes.</li><li>Learn about electronic spectra of transition metal complexes.</li><li>Study about spectrochemical series.</li></ul> |
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| CH-302 | Physical Chemistry | <ul><li>Know the importance of quantum mechanics it is an important tool to understand at the theoretical level the electronic structure of chemical compounds .</li><li>Difference between classical mechanics and quantum mechanics .</li><li>Study of wave nature</li><li>Learn about electromagnetic spectrum .</li><li>Study of paramagnetic ,diamagnetic behaviour of substances .</li><li>Study of spectroscopy which has an importance in many industries of detection .</li><li>Study of different energy levels in vibrational spectrum and rotational spectrum .</li><li>Learn raman spectrum .polarizability.</li></ul> |
| CH-303 | Organic Chemistry | <ul><li>Name various Organometallic compounds</li><li>Understand various methods of preparation, properties & concepts of mechanisms O.M .</li><li>Compare reactivities of various organometallic compounds and explain the reason</li><li>Learn name & classification of carbohydrates</li><li>Learn & understand structure of glucose & fructose</li><li>Learn & understand various interconversions and mechanisms of carbohydrates</li><li>Differentiate among disaccharides and polysaccharides</li><li>Understand the principle of NMR spectroscopy</li><li>Understand factors affecting chemical shift, various scales & spin spin splitting</li><li>Understand various applications of NMR spectroscopy</li></ul> |
| **B.Sc.-III Sem-VI** | | |
| CH-304 | Inorganic Chemistry | <ul><li>Learn about organometallic chemistry.</li><li>Study about metal carbonyls which will help in pharmaceuticals.</li><li>Know about acids and bases concept.</li><li>Study about bioinorganic chemistry.</li><li>Learn about silicones and phosphazones.</li></ul> |
| CH-305 | Physical Chemistry | <ul><li>Study electronic spectrum .</li><li>Concept of bonding and non bonding .</li><li>Learn molecular orbitals .</li><li>Laws of photochemistry .</li><li>Difference between thermal and photochemical reactions .</li></ul> |

| | | • Learn about fluorescence , phosphorescence , photosentitized. |
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| CH-306 | Organic Chemistry | • Name & learn various addition and condensation polymers<br>• Understand various basic concepts of mechanisms of polymers<br>• Compare reactivities, aromaticity and basicity of various heterocycles<br>• Learn method of preparation of various heterocycles<br>• Learn properties of heterocycles & orientation of mechanism<br>• Learn & analyze the synthetic applications of enolates<br>• Know & learn various types of amino acids and peptides<br>• Understand analysis of peptides<br>• Understands and write classical and Merrifield synthesis of peptides<br>• Learns various classes of proteins & understand their structures |

## Mathematics

| Paper Code | Paper Name | Outcome |
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| **BSc./B.A. Sem-1** | | |
| BM-111 | Algebra | Use of algebraic methods help students to solve a variety of problems. It helps them to recognize consistent and inconsistent system of linear equations by the row echelon form of the augemented matrix, using rank. Through this course they can find eigen values and corresponding eigen vectors for a square matrix. |
| BM-112 | Calculus | Calculus is the study of how things change. Students can understand modeling systems in which there is change and it also provides a way to deduce the predictions of such models. Students can solve various mathematical problem, where there is change. It also provides a way to the students to construct relatively simple quantitative models of change, and to deduce their consequences. |
| BM-113 | Solid Geometry | Through this subject, students gain complete knowledge of 3-dimensional figures like sphere, cone, cylinder, ellipsoid, paraboloid etc. It provides a wat to find out equations of tangent plane, polar plane, normal plane, radical plane. Students come to know about different terms clearly such as pole, polar, confocal conics etc. |
| **BSc./B.A. Sem-II** | | |
| BM-121 | Number theory and trigonometry | Students find this subject interesting as it helps them to learn some important results in the theory of numbers including the prime number |

| | | theorem, Chinese remainder theorem, Wilson's theorem and their consequences and this also makes them to get familiar with modular arithmetic. |
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| BM-122 | Ordinary differential equations | This course will enable the students to learn various techniques of getting exact solutions of first order differential equations and linear differential equations of higher order,to know Picard's method of obtaining successive approximations of solutions, formulate mathematical models in the form of ordinary differential equations to suggest possible solutions of the day to day problems. |
| BM-123 | Vector Calculus | Students through this subject learn to visualize and manipulate multivariable and vector valued functions presented in graphical, numeric, and symbolic form.They also learn to graph, differentiate, integrate, and solve applied problems involving parametric equations and vector-valued functions. |

**BSc./B.A. Sem-III**

| BM-231 | Advance Calculus | The study of advance calculus enables to understand theoretical and geometrical concepts of Rolle's theorem, mean value theorem and various indeterminate forms. It also provides knowledge of concepts of limit and continuity, partial derivatives of functions of two or more variables and problems based on maxima minima. This course also includes study of curves in space, concepts of surface and envelops etc. |
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| BM-232 | Partial Differential Equations | This course focuses on providing understanding basics of partial differential equations with their physical significance. It provides methodologies to solve linear and non linear partial differential equations of first and second order. Applications like solutions of heat, wave and Laplace equations are also explained. |
| BM-233 | Statics | This course provides a base for the applied mathematics which deals with study of composition and resolution of forces, their moments and couples. It also enables the understanding of analytic conditions of equilibrium of coplanar forces, centre of gravity and concept of virtual work. This paper also explains the mathematics of wrenches along with stable and unstable equilibrium. |

**BSc./B.A. Sem-IV**

| BM-241 | Sequence and Series | This course builds a foundation in understanding of sequences and series. It focuses on developing skill of computation with real sequence and series. It covers study of infinite, bounded, monotonic and oscillating sequences, concept of convergence and divergence, sequence of partial sum for an infinite series, various tests such as ratio test, root test etc. for determining the convergence or divergence of an infinite series. |
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| BM-242 | Special Functions and integral transformations | This course includes study of Bessel's, Legendre's and Hermite's differential equations and understanding recurrences relations of their generating functions. It also provides the study of two important tools- |

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| | | Fourier and Laplace transformations and their applications in solving various differential equations. |
| BM-243 | Programming in C and Numerical Methods | Through this subject, student will be able to learn basics of C language including various input output functions, various loops, conditional statements and arrays. Programs are based on various numerical methods which include the study of solution of linear equation, interpolation and extrapolation, integrals and differential equations using various numerical techniques. This program helps in solving many practical problems where analytical solution does not exist. |

**BSc./B.A. Sem-V**

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| BM-351 | Real Analysis | Real Analysis is the branch of mathematical analysis that studies the behavior of real numbers, sequences and series of real numbers, and real functions. Some particular properties of real-valued sequences and functions that real analysis studies include convergence, limits, continuity, smoothness, differentiability and integrability. |
| BM-352 | Groups and Rings | The concept of a group is central to abstract algebra: other well-known algebraic structures, such as rings, fields, and vector spaces, can all be seen as groups endowed with additional operations and axioms. Thus group theory and the closely related representation theory have many important applications in physics, chemistry, and materials science. |
| BM-353 | Numerical Analysis | Numerical Analysis is the area of mathematics and computer science that creates, analyzes, and implements algorithms for solving numerically the problems of continuous mathematics. Such problems originate generally from real-world applications of algebra, geometry, and calculus, and they involve variables which vary continuously. These problems occur throughout the natural sciences, social sciences, medicine, engineering, and business. Numerical methods are used for deeper understanding to predict the anomalies which are not possible in the analytical methods because the analytical method can solve only two or three unknown variables but numerical methods can do much more than it very accurately. |

**BSc./B.A. Sem-VI**.

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| BM-361 | Real and Complex Analysis | Real and Complex Analysis an introduction to the theory of holomorphic functions. Multivalued functions and branches have been dealt carefully with the application of the machinery of complex measures and power series. Intended for undergraduate students of mathematics and engineering, it covers the essential analysis that is needed for the study of functional analysis, developing the concepts rigorously with sufficient detail and with minimum prior knowledge of the fundamentals of advanced calculus required. |

| BM-362 | Linear Algebra | Linear algebra is a branch of mathematics, but the truth of it is that linear algebra is the mathematics of data. Matrices and vectors are the language of data. Linear algebra is about linear combinations. That is, using arithmetic on columns of numbers called vectors and arrays of numbers called matrices, to create new columns and arrays of numbers. Linear algebra is the study of lines and planes, vector spaces and mappings that are required for linear transforms. |
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| BM-363 | Dynamics | Dynamics is the branch of classical mechanics that is concerned with the study of forces and their effects on motion . It allows one to predict the motion of an object or objects, under the influence of different forces, such as gravity or a spring. It can be used to predict the motion of planets in the solar system or the time it takes for a car to brake to a full stop. It is widely used for forecasting and predicting in the field of machine learning. |
| Paper Code | Paper Name | Outcome |
| M.Sc.-Mathematics  Sem-I | | |
| MM-401 | Advance Abstract Algebra-I | The concept of a group is surely one of the central ideas of mathematics. The main aim of this course is to introduce Sylow theory and some of its applications to groups of smaller orders. An attempt has been made in this course to strike a balance between the different branches of group theory, abelian groups, nilpotent groups, finite groups , infinite groups and to stress the utility of the subject. A study of Modules, submodules, quotient modules, finitely generated modules etc. is also promised in this course. Hilbert basis theorem and Wedderburn -Artin theorem are the heighlights of this course. |
| MM-402 | Real Analysis-I | Through this subject student studies concepts such as Riemann Stieltjes integral, uniform convergence of sequences and series of functions, and functions of several variables. |
| MM-403 | Topology | Topology lets us talk about the notion of closeness (i.e, neighbourhoods), which in turn allows us to talk about things such as continuity, convergence, compactness and connectedness without the notion of a distance. So, topology generalizes fundamental concepts of analysis/calculus. Some of the main topics taught in this course include Product and Quotient spaces, Embedding and Metrization, Compactness, Continuity and Filters. |
| MM-404 | Complex Analysis-I | One objective of this course is to develop the parts of the theory that are prominent in applications of the complex numbers. Other objective is to furnish an introduction to applications of residues and conformal mapping. With regard to residues, special emphasis is given to their use in evaluating real improper integrals, finding inverse Laplace |

| | | transforms, and locating zeros of functions. Conformal mapping find its use in solving boundary value problems that arise in studies of heat conduction, fluid flow and elastodynamics. |
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| MM-405 | Differential Equations-I | This course has been framed to learn the theory of ordinary differential equations. Existence and uniqueness theory of solution of an ordinary differential equation and of an initial value problem is to be learnt during the course. Theory of homogeneous and non-homogeneous linear differential equations of higher order, Adjoint equations and Wronskian theory are also learnt during the course. Students will also learn second order ordinary differential equations and Sturm theory, Oscillation theory, boundary value problems and Greens functions in the context of such differential equations. On completion of the course, a student will be able to understand the theory of ordinary differential equations of 2nd and higher order and to know the techniques of solving them. |
| MM-406 | Practical-I (Programming in C) | Students will learn simple application of C programming in maths. The objective of this course is to acquaint the students with the practical use of ANSI-C, for solving some problems of social and mathematical kind. Also some problem solving techniques based on papers MM- 401 to MM- 405 will be taught. |
| **M.Sc.-Mathematics Sem-II** | | |
| MM-407 | Advance Abstract Algebra-II | As suggested by the name of the course itself, some of the advanced topics of abstract algebra will be taught to the students in this course including field extensions, finite fields, normal extensions, finite normal extensions as splitting fields. A study of Galois extensions , Galois groups of polynomials, Galois radical extensions shall also be made. Similar linear transformations, Nilpotent transformations and related topics are also included in the course. |
| MM-408 | Real Analysis-II | Through this subject student studies concepts such as Lebesgue outer measure, outer measure, Lebesgue integral, Lebegues measurable functions and their properties. |
| MM-409 | Computer programming (Fortran) | This course introduces beginning students to the basics of Fortran 90/95 programming and brief history of Fortran. The course enables the students to write any source program to compute the numerical solutions of the mathematics problems, which arise in the research studies with applications to engineering, physical, biological or social sciences. |
| MM-410 | Complex Analysis-II | The objective of this course is to familiarize the students withsome advanced topics in complex analysis. Starting from the compactness and convergence in the space of analytic functions we move on to establish the Runge's theorem and Mittag-Leffler's theorem followed by analytic continuation and 15 Riemann surfaces. Entire functions and the range of an analytic function are the concluding topics of this advance course in complex analysis |
| MM-411 | Differential Equations-II | This course has been designed to understand system of differential equations including linear and nonlinear systems. Initially, linear |

| | | differential systems (homogeneous and non-homogeneous) and the existence and uniqueness theory for such systems are to be learnt and thereafter the theory is extended to system of n differential equations including non-linear systems. Characteristics and stability of critical points of non-linear systems and stability analysis of such non-linear systems would be studied during the course. After successful completion of this course, a student would be able to understand the theory of linear and non-linear differential systems and will also be able to do practical problems related to solutions of linear systems and related to critical points and stability of solutions of non-linear systems. |
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| MM-412 | Practical-II (Fortran) | This course aims to train the students for practical implementations of all the features of FORTRAN 90, 95 programming, which they study as a theory course MM-409, i.e., Computer Programming. Also some problem solving techniques based on papers MM-407 to MM-411 will be taught. |
| **M.Sc.-Mathematics Sem-III** | | |
| MM-501 | Functional Analysis | Through this course work students gain the knowledge of central concepts including Hahn Banach theorem, open mapping and closed graph theorems , dual spaces, self joint operators |
| MM-502 | Analytical Mechanics and Calculus of Variation | Through this subject students solve the problems which are related to small changes in functions, to find maxima and minima of functional and analytical mechanics allows students to solve numerous mechanical problems using generalized coordinates and equation of motions |
| MM-503 (OPT-1) | Elasticity | This course aims to provide the knowledge of tensor algebra with the study of different types of tensors. It aims to provide theoretical detailed study of strain and stress. Analysis of stress and strain is discussed including Mohr's circle, generalized hook's law etc. Equilibrium and dynamic equations of an isotropic elastic body is explained with examples. |
| MM-504 (OPT-1) | Fluid Mechanics-I | Fluid mechanics is the study of fluid behavior (liquids, gases, blood, and plasmas) at rest and in motion. Fluid mechanics has a wide range of applications in mechanical and chemical engineering, in biological systems, and in astrophysics. In this chapter fluid mechanics and its application in biological systems are presented and discussed. First the fluid mechanics governing equations and blood properties are explained. In the following section different models for blood as a non-Newtonian fluid are presented |
| MM-505 (OPT-1) | Integral Equations | In mathematics, integral equations are equations in which an unknown function appears under an integral sign.There is a close connection between differential and integral equations, and some problems may be formulated either way. See, for example, Green's function, Fredholm theory, and Maxwell's equations. |
| MM-506 | Practical-III | Students learn basics of programming in FORTRAN |

| | (FORTRAN) | language. This course focuses on applications of string operations, logical operations, Modules, subroutine, non conformable array etc. |
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| **M.Sc.-Mathematics Sem-IV** | | |
| MM-507 | General Measure and Integration Theory | The theory of Measures and Integration illuminates the fundamental ideas of the subject-fascinating in their own right-for both students and researchers, providing a useful theoretical background as well as a solid foundation for further inquiry. Discussions of extensions, the structure of Borel and Lebesgue sets, set-theoretic considerations, the riesz representation theorem, and the Hardy-Littlewood theorem etc. |
| MM-508 | Partial Differential Equations | In this course students calculate the fundamental solutions of laplace equations, wave equations, heat equations and uniqueness of their solutions by using appropriate methods of partial differential equations |
| MM-509 (OPT-1) | Mechanics of Solids | This paper provides an advance version of stress and strain theory. It discusses the concepts of biharmonic equations, boundary value problem in plane elasticity, propagation, dilation and distortion of waves. It also focuses on the study of elasticity in beams, torsion in bars along with the variational methods for energy distribution. |
| MM-510 (OPT-1) | Fluid Mechanics-II | In this section of fluid mechanics we will study about irrotational motion in two dimensions. Complex velocity potential. Sources, Sinks, doublets and their images. Thomson circle theorem. Two-dimensional irrotational motion produced by motion of circular cylinder etc. |
| MM-511 (OPT-1) | Mathematical Aspects of Seismology | This subject relates the students with the study of natural phenomenas like earthquakes, volcanic eruptions |
| MM-512 | Practical-IV (MATLAB) | This course gives an opportunity to the students to learn and practice one of the important purely mathematics based programming language. Here students are supposed to learn the basics and apply them in programs like solution of simultaneous linear equations, inverse of a matrix, solutions of differential equations etc. |

## Botany

**B.Sc-I Sem I**

| Paper Code | Paper Name | Outcome |
|---|---|---|
| Paper-1 | Diversity of Microbes | 1. Learn about Algae ,its Structure andLlife Cycle<br>2. Know about Fungi ,and its Economic Importance<br>3. Learn about Bacteria and its role in daily life<br>Know about Virus in detail |
| Paper-2 | Cell Biology | 1. Learn about detailed Structure and Functions of Cell Wall and Plasma membrane<br>2. Know about Ultrasturcture of Cell Organelles<br>3. Learn about Mitosis and Meiosis<br>4. Know about Chromosomes in detailed |

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**B.Sc.-I  Sem-II**

| Paper-1 | Diversity of Archegoniate | 1. Know about various Bryophytes,its habitat and its Structure and Reproduction<br>2. Learn about Various Pteridophytes ,their habitat , structure and reproduction<br>3. Read Fossil Plants also |
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| Paper-2 | Genetics | 1. Know about Genetic materials and Genetic Inheritance<br>2 . Learn about Genetic Variations, Gene Expressions |

**B.Sc.-II  Sem-III**

| Paper-1 | Biology and Diversity of Seeds Plants-1 | 1. Gain knowledge about Gymnosperms diversity and its characters<br>2. Learn about Geological Time Scale<br>3. Know about Importance of Fossils and Reconstruction of various Fossil plants<br>Learn details of various Gymnosperms |
|---|---|---|
| Paper-2 | Plant Anataomy | 1. Gain knowledge about Tissues and Diversity in Plant forms<br>2. Learn about Leaf structure in detail<br>3. Know about Secondary Growth in various Roots and Stems |

**B.Sc.-II  Sem-IV**

| Paper-1 | Biology and Diversity of Seeds Plants-2 | 1. Know about taxonomy, its Components and role<br>2Llearns about identifications Keys and Taxonomic Ranks<br>3. Learn about Floral Structures of Angiospermic families and its Economic uses |
|---|---|---|
| Paper-2 | Plant Embryology | 1. Know about Flower and its Various Floral parts<br>2.Learns about detail Structure of Micro and Mega sporangium<br>3. Learn about Dispersal Mechanism in Fruit and Seed |

**B.Sc.-III  Sem-V**

| Paper-1 | Plant Physiology | 1.Know about various plant Physiological Processes like Imbibtion ,Osmosis etc. 2.Learn about mineral Nutrition and Transpiration 3.Photosynthesis detailed  process  4.Detailed  Process of Respiration |
|---------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Paper-2 | Ecology | 1. know about Ecology 2.Various Environmental factors 3. Detail account of Global Warming |

**B.Sc.-III  Sem-VI**

| Paper-1 | Biochemistry and Plant Biotechnology | 1.Learn about different kinds of Enzymes and its role in our daily life 2.Detail account of Various Plant hormones 3.Lipid and Nitrogen Metabolism 4. Role of Genetic Engineering and Biotechnology in our daily life . |
|---------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Paper-2 | Economic Botany | 1.Learn about Cereal ,Pulses ,Vegetables and their Economic Uses 2.Know about idea of Cultivation & Economic uses of Spices ,Medicinal Plants & Beverages 3.Know about General Account of Timber Yielding Plants |

**Zoology**

| Paper Code | Paper Name | Outcome |
|------------|------------|---------|
| | | |

**B.Sc-I  Sem I**

| Paper- | Life          and | 1.  Pathogenicity of pathogens and its economic importance. |
|--------|--------------------|-------------------------------------------------------------|

| 1 | Diversity from Protozoa to Porifera and cell biology-I) | 2. Biodiversity and economic importnace of poriferans.<br>3. Ultrastructure of cell organelles |
|---|---|---|
| Paper-2 | life and diversity from Coelentrata to Helminthes and cell biology-II) | 1. Biodiversity and economic importance of coelentrates and helminthes.<br>2. Infection and disease caused by helminthes.<br>3. Cell division(mitosis and meiosis), structure and functionsof nucleus and chromosomes and cellular basis of immunity |

## B.Sc.-I Sem-II

| Paper-1 | life and diversity from Annelida to Hemichordata and genetics) | 1. Biodiversity and economic importance of annelids and vermicomposting.<br>2. Largest taxon of Metazoa and their vastness,diversity of insects and their extremely successful existence upon this earth.<br>3. Genes, sex determination systems,heredity,ene interactions, cytoplasmic inheritence |
|---|---|---|
| Paper-2 | Life and diversity of Mollusc to Hemichordate and Genetics-II) | 1. Provide knowledge about Mollusc,Echinoderms, Hemichordates-their diversity and economic importance.<br>2. About multiple allellism, chromosome and abnormalities, function of genetic material, genetic counselling, prenatal diagnosis, DNA fingerprinting, transgenic animals |

## B.Sc.-II Sem-III

| Paper-1 | life and diversity of Chordates-I and Mammalian physiology-I) | 1. Origin and evolutionary tree of chordates and lower chordates.<br>2. Migration in fishes, their scales,fins and how do they care about their young ones. |
|---|---|---|
| Paper-2 | Life and diversity of chordates-IIand Mammalian physiology-II) | 1. Life and diversity from chordates and their economic importance.<br>2. Nutritional and excretional physiology.<br>3. Different biophysical processes in body bones and muscke physiology. |

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## B.Sc.-II Sem-IV

| Paper-1 | life and diversity of Chordates –II and Mammalian physiology) | 1. Amphibia, Reptilia, Aves and Mammalia. <br> 2. Parental care in animals. <br> 3. Snakes poisonous and non poisonous)and their poison apparatus. <br> 4. Principle of aerodynamics of bird flight ,flight adaptation& migration in birds. <br> Dentition in mammals |
|---------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Paper-2 | Mammalian physiology-II | 1. Know about mechanism of circulation, respiration excretion, neural integration, chemical integration and reproduction. |

## B.Sc.-III Sem-V

| Paper-1 | Environmental biology | 1.Students know about practical application of ecology in agriculture, biological surveys, forestry. <br> 2. This environmental biology will help in conservation of natural resouces. <br> 3. Restoration of natural environment to ensure human survival, protection of animal and plant species. <br> 4. Conservation of biodiversity |
|---------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Paper-2 | Evolution and Developmntal Biology | 1. Students learn about origin of life, earthand planets, various theories for evoltuon an dits types, evolution of horse and mammals. <br> 2. Historical prespectives& scope of developmental biology. <br> 3. From the process of gastrulation to zygote formation. <br> 4. Concept of regeneration, organisers, diffrentiation, competence etc |

## B.Sc.-III Sem-VI

| Paper-1 | aquaculture and pest management-I | 1.Students will know about world and indian fisheries, fishing crafts and gears. <br> 2. Life Cycles of insect pests of sugracane, cotton, wheat, padddy, vegetables and their control methods |
|---------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Paper-2 | Aquaculture and Pest Management-II | 1. Knowledge about , natural resources, its assessment, collection& hatchery production, souces of food, feed composition, culturing and its technologies. <br> 2. Pest of stored grains, their systemic positions, habits and nature of |

| | | damage caused, their life cycle and control. |
| | | 3. Integrated pest management (biological, chemical) |

**Commerce**

| Paper Code | Paper Name | Outcome |
|---|---|---|
| **B.Com Sem-1(General)** | | |
| BC 101 | **Financial Accounting I** | The students will able to understand about book-keeping, accounting and their principles- concepts and conventions. This will help in preparing journal, ledger and trail balance. They will also get to know how to rectify the errors. They learn about capital and revenue. The students prepare depreciation account and also get to know about provisions and reserves. They learn how to prepare final accounts, accounts of Non-profit Organizations, consignment accounts. |
| BC-102 | **Micro Economics** | Students learn how we manage our limited resources to get maximum satisfaction. Under this students also learn about market types |
| BC 103 | **Principles of Business Management** | The students will able to understand about commerce, management - concept, approaches, functions. They will learn about planning, organizing- delegation and decentralization, staffing, directing, controlling. |
| BC-104 | **Computer Application in Business** | • Helps to understand basic of computer system including hardware's and software's.<br>• Students got familiar with internal processing of CPU and pars of CPU.<br>• Course introduces the concept of programming languages and available open source software's.<br>• Basics of networking allows students to get knowledge and concept of network connectivity.<br>• Hands on practice on MS-word, Excel and PowerPoint builds student confidence in report writing and accounts maintaining. |
| BC 105 | **Business Mathematics I** | The students will able to understand about Logarithms, Anti-logarithms, Sequences and series, Differentiation, Maxima and Minima of functions, Matrices and Determinants, compound Interest and Annuities. |
| BC 106 | **Business Communication** | The students will able to learn about Business communication- models and theories. Along with this, Corporate communication- audience analysis, communication network and barriers, effective presentation skills, practices in business communication. The students also able to know about Self development and communication, Practices of effective learning. This helps in increasing their interviewing skills, how to write business letters and emails. |
| **B.Com Sem-1(Computer Application)** | | |
| BC 101 | **Financial Accounting I** | The students will able to understand about book-keeping, accounting and their principles- concepts and conventions. This will help in preparing journal, ledger and trail balance. They will also get to know how to rectifythe errors.They learn about capital and revenue. The students prepare depreciation account and also get to know about provisions and reserves. They learn how to prepare final accounts, accounts of Non-profit Organizations, consignment accounts. |

| BC 103 | **Principles of Business Management** | The students will able to understand about commerce, management - concept, approaches, functions. They will learn about planning, organizing- delegation and decentralization, staffing, directing, controlling. |
|---|---|---|
| BC 106 | **Business Communication** | The students will able to learn about Business communication- models and theories. Along with this Corporate communication- audience analysis, communication network and barriers, effective presentation skills, practices in business communication. The students also able to know about Self development and communication, Practices of effective learning. This helps in increasing their interviewing skills, how to write business letters and emails. |

**B.Com Sem-II (General)**

| BC 201 | **Financial Accounting II** | The students will able to understand how to prepare branch accounts, partnership accounts. Along with this they also get to know about reconstitution of partnership firm, dissolution of partnership. This subject helps students to know about hire purchase and installment purchase system. |
|---|---|---|
| BC-202 | **Macro Economics** | In this paper students learn how we measure our national income. In this paper we study about economy as a whole. |
| BC 203 | **Fundamentals of Marketing** | The students will able to understand about Marketing- concepts and principles, Marketing management, Marketing mix, Analysis of marketing environment, Marketing segmentation. Along with this students will learn about consumer behaviour and Product, Pricing, Promotion and Distribution channel. |
| BC 204 | **E-commerce** | The students will able to learn about Internet- application and uses, Internet services, Information Technology and Business- Transaction Processing System, Management Information System. Along with this, students will learn about E-commerce, their Models-B2B, B2C, C2C and also important topics like Electronic Data Interchange, M-commerce, E-governance. |
| BC 205 | **Business Mathematics II** | The students will able to understand about Permutations and Combinations, Binomial Theorem, Linear inequalities, Linear programming, Data representation and interpretation. |
| BC 206 | **Business Environment of Haryana** | The students will able to know about Haryana economy, Haryana agriculture, Agriculture credit. The students will also understand about Micro, small & medium enterprises in haryana. They also understand about role of HSIIDC, HFC, HAFED, HKVIB and also Haryana budget. |

**B.Com Sem-II (Computer Application)**

| BC 201 | **Financial Accounting II** | The student will able to understand how to prepare branch accounts, partnership accounts. Along with this they also get to know about reconstitution of partnership firm, dissolution of partnership. This subject help students to know about hire purchase and installment purchase system. |
|---|---|---|

| | | |
|---|---|---|
| BC 203 | **Fundamentals of Marketing** | The students will able to understand about Marketing- concepts and principles, Marketing management, Marketing mix, Analysis of marketing environment, Marketing segmentation. Along with this students will learn about consumer behaviour and Product, Pricing, Promotion and Distribution channel. |
| BC 204 | **E-commerce** | The students will able to learn about Internet- application and uses, Internet services, Information Technology and Business- Transaction Processing System, Management Information System. Along with this students will learn about E-commerce, their Models-B2B, B2C, C2C and also important topics like Electronic Data Interchange, M-commerce, E-governance. |

## Subject Outcomes

| | Paper Name | Outcome |
|---|---|---|
| **B.com Sem-3-Odd-(General)** | | |
| BC-301 | **Corporate Accounting** | After studying this course students will be able to classify different types of sources of finance. They will be able to understand and analyze the financial statements of companies and will be able to interpret the amalgamation and reconstruction of companies. |
| BC-302 | **Business Statistics** | This course will help in learning different sources of data and methods to collect them. Students will be able to understand the measures of central tendency and can easily apply these in real life. On the other hand, the learning of index numbers and time series will enhance their statistical skills used in research. |
| BC-303 | **Business Law-1** | This course will help students in learning the contact act, its basis, validity and legality of contract, remedies available in case of breach of contract etc. They will be able to understand the sales of goods act, its legality and different goods covered under this act. |
| BC-304 | **Company Law** | This course will make students understand about company and its formation. The process of formation of company, including all documents required for formation of company. It will also help them understand the process of issue of shares and debentures and concepts related to them. |
| BC-305 | **Indian Financial System** | This course covers a lot of things about Indian Financial System. This will make students learn about the financial system of India and its |

| | | components. It will also make them understand about the debt market and different financial institutions of India. And students will be able to understand the banking process and different components of banks. |
|---|---|---|
| BC-306 | **Rural Marketing** | This course id basically about the rural marketing and students will be able to understand the process and different approach to do rural marketing. It's also talks about the product planning, distribution of product and concepts of E-commerce in rural area. |

## B.com Sem-3-Odd-( Computer Application)

| | | |
|---|---|---|
| BC-301 | **Corporate Accounting** | After studying this course students will be able to classify different types of sources of finance. They will be able to understand and analyze the financial statements of companies and will be able to interpret the amalgamation and reconstruction of companies. |
| BC-302 | **Business Statistics** | This course will help in learning different sources of data and methods to collect them. Students will be able to understand the measures of central tendency and can easily apply these in real life. On the other hand, the learning of index numbers and time series will enhance their statistical skills used in research. |
| BC-303 | **Business Law-1** | This course will help students in learning the contact act, its basis, validity and legality of contract, remedies available in case of breach of contract etc. They will be able to understand the sales of goods act, its legality and different goods covered under this act. |
| BC-304 | **Company Law** | This course will make students understand about company and its formation. The process of formation of company, including all documents required for formation of company. It will also help them understand the process of issue of shares and debentures and concepts related to them. |

## B.com Sem-4-even-(General)

| | | |
|---|---|---|
| BC-401 | **Corporate Accounting-2** | After studying this subject student will be able to do valuation of goodwill. They will be able to understand and analyze the accounts of banking and insurance companies. |
| BC-402 | **Business Statistics-2** | After studying this subject student will be able to understand the concept of simple correlation and different type of correlation like, multiple & partial and liner and non-liner diagrams. They can also learn about different method of KarlPearsons co-efficient, & spearman's rank correlation. On the other hand, students will be learn about regression |

| | | |
|---|---|---|
| | | and probability & probability distribution and different concept of probability distribution like , Binomial, Poisson and normal distribution & their prosperities and parameters. |
| BC-403 | **Business Law-2** | This course will help the students to understand different acts like, negotiable Act 1881 and Indian partnership act 1932 and limited liabilities partnership act 2008. On the other it also enable the students how to use information act 2008 in current scenario. |
| BC-404 | **Company Law - 2** | After studying this course students will be able to know about the memberships in companies  as well as they can understand the management & administration of companies and duties and limitations & role and appointments, rights and dismissal  of general directors, managing directors and manager ,secretary. On the other hand they will be able to know different type of meetings and also about agenda, quorum minutes & proxy. It also helps them to understand the accounts of companies and amalgamation & reconstruction and winding up producers of companies. |
| BC-405 | **Computerized Accounting System** | This course will help the students to learn different tally programmers like, ERPS, and licensing configuration & tally vault password, ERP9. On the other hand they will be able to learn how to make payroll and basic salary, overtime, gratuity loan ESI, provident fund & pension, and commission at computerized system. |
| BC-406 | **Advertising** | After studying this subject students will be able to understand the concept of advertising and different aspect of advertising like, communication, advertising mix, & type of advertising and objectives, Dagmar approach and advertising budgets. On the other hand they can learn about creative aspect of advertising and advertising media, advertising agencies and effectiveness of advertising in dynamic environment. |
| | | |
| **B.com Sem-4-even-( Computer Application)** | | |
| BC-401 | **Corporate Accounting-2** | After studying this subject student will be able to do valuation of goodwill. They will be able to understand and analyze the accounts of banking and insurance companies. |
| BC-402 | **Business Statistics-2** | After studying this subject student will be able to understand the concept of simple correlation and different type of correlation like, multiple & partial and liner and non-liner diagrams. They can also learn about different method of KarlPearsons co-efficient, & spearman's rank |

| Paper Code | Paper Name | Subject Outcome |
|---|---|---|
| | | correlation. On the other hand, students will be learn about regression and probability & probability distribution and different concept of probability distribution like , Binomial, Poisson and normal distribution & their prosperities and parameters. |
| BC-403 | **Business Law-2** | This course will help the students to understand different acts like, negotiable Act 1881 and Indian partnership act 1932 and limited liabilities partnership act 2008. On the other it also enable the students how to use information act 2008 in current scenario. |
| BC-404 | **Company Law - 2** | After studying this course students will be able to know about the memberships in companies as well as they can understand the management & administration of companies and duties and limitations & role and appointments, rights and dismissal of general directors, managing directors and manager ,secretary. On the other hand they will be able to know different type of meetings and also about agenda, quorum minutes & proxy. It also helps them to understand the accounts of companies and amalgamation & reconstruction and winding up producers of companies. |

| Paper Code | Paper Name | Subject Outcome |
|---|---|---|
| **B.COM (Gen)Sem-5TH** | | |
| BC-501 | Cost accounting | This course will be enable the students to understand the nature and scope & methods and techniques of cost accounting . On other hand, it enables the students to understand the concept & Techniques of inventory control and also lear how to analysis the variance between standing costing and marginal costing . |
| BC-502 | Financial management | This course will be enable the students to understand the nature, scope, objectives and recent developments in financial management as well as about financial planning and forecasting need, importance, drafting a financial plan and capitalization, overcapitalization and under-capitalization. On the other hand it also to learn about sources of finance like, short-term, medium term and long term and how to calculate Cost of capital and how to take capital budgeting decision and how to manage working capital in current business environment. |
| BC-503 | GOODS AND SERVICES TAX | This course will help the students to understand the meaning of gst, and taxable person, registration, procedure and documents required. Levy and collection of GST. On the other hand it also enable, them to understand time and place of supply of goods and services. |

| BC-504 | Income-Tax-1 | This course will be enable the students to understand the concept of income, tax, person and agricultural income, casual income, previous year, financial year, assessment year, gross total income total income. It also helps them to learn tax management, and tax evasion, avoidance, and tax planning. On the other hand it also make them enable to know the scope of total income, residence and tax liability, income which does not form part of total income and heads of income like, salary, house property; profit and gains from business and profession, & capital gains and other sources like, Clubbing and aggregation of income and provisions regarding set-off and carry forward of losses. |
|---|---|---|
| BC-505 | Auditing | This course will be enable the students to understand the meaning, objectives and advantages,& types of audit, and internal and external audit & proprietary and efficiency of audit. It also enable them to learn about audit process, audit programme, audit working papers and evidences audit of e-commerce transactions and methods of audit work and routine checking and test checking or internal control and internal checking system. On the other hand it will help them to understand the meaning, objectives and importance of vouching and vouching of cash books and ethics of auditing |
| BC-506 | SUPPLY CHAIN MANAGEMENT | This course will be helpful in learning the students about the concept, scope and importance and approaches to SCM and role of SCM in a firm and economy and SCM and marketing mix & SCM as coordination functions and elements of SCM like transportation and warehousing or channel design and information system in SCM |
| **B.COM(Gen) 6TH Sem.** | | |
| **Paper Code** | **Paper Name** | **Subject Outcome** |
| BC-601 | Management accounting | This course will help the students to understand the concept, scope, techniques and significance,comparison between financial accounting, cost accounting and management accounting and also to understand the management reporting , need and type of reports and management information system. It also Analysis the financial statement through comparative statements, common size statements, ratio ,liquidity, solvency, profitability and turnover; trend analysis. Cash flow and funds flow statements: need and method of preparing statements. On the other hand it enables the students to understand the concept of budgeting and budgetary control. |

| BC-602 | FUNDAMENTAL SOF INSURANCE | This course will help the students to understand the concept of insurance life and general insurance purpose, need and principles of insurance and about the social security tool of insurance and economic development. On the other hand the concept of fire insurance and principles of fire insurance contracts. |
|---|---|---|
| BC-603 | HUMAN RESOURCE MANAGEMENT | This course will be helpful for the students to understand the concept of human resource management meaning, nature, history and scope, objectives, functions and different between HRM and HRD and personal management. It also enable them to learn about human resource planning an Job Analysis, and recruitment or selection. |
| BC-604 | INCOME TAX-II | This course will be helpful to learning the students about deductions under section 80C to 80U in computing total income and computation of total income and tax liability of an individual and H.U.F. Computation of total income and tax liability of a Firm and deduction of tax at source; advance payment of tax and income tax authorities and their powers and also procedure for assessment; different types of returns |
| BC-605 | BUSINESS ENVIRONMENT | This course will be helpful to learning the students about the concept components, and importance and scanning of business environment and economic systems and economic planning in India. It also make them enable to learn about competition Act, and foreign Exchange Management Act &foreign exchange market. |
| BC-606 | RETAIL MANAGEMENT | This course will be helpful to learning the students about concept, characteristics and importance and theories of retailing & strategic planning in retailing and planning location of retail institution. It also enable them to understand the trading area analysis, deciding the most desirable type of location and choice of a general location, and Organizational structures and store management or trends in retailing in India and FDI in retail. |

| Paper Code | Paper Name | Subject Outcome |
|---|---|---|
| **M.COM Sem-1** | | |
| MC-101 | **organizational behavior** | After studying **organizational behavior** the student will be able to know the conceptual frame work and development of organizational behaviour. And understand the determinants and theories of personality and apply the understanding of perception and learning in managing people at workplace, understanding of the group dynamics and transactional analysis. |

| MC-102 | **Business environment** | After studying **Business environment** the student will be able to understand the role and importance of business environment and examine the environmental factors affecting business decisions and evaluate the impact of privatization and globalization in the expansion of Indian business and critically examine different economic policies and their contribution in the success of Indian business and making it competitive at global level and also understand regulatory framework of business to make effective decision making |
|---|---|---|
| MC-103 | **Managerial economics** | After studying **Managerial economics** , the student will be able to estimate trends in demand through various forecasting techniques and analyze the cost behavior for production decisions, ,understand types of market conditions and taking decisions accordingly and also study the different business phases such as boom, depression, inflation, etc. for effective decision making.. |
| MC-104 | **company law** | After studying **company law** the student will be able to understand the concept, types and characteristics of companies, and be aware of the objectives and contents of MoA an AoA and know the provisions regarding issue, allotment and transfer of shares and understand the appointment, powers of directors, and the process of amalgamation and winding up of the companies. |
| MC-105 | **Accounting for managerial decisions** | After completing **Accounting for managerial decisions**, the student will be able to know the concept and scope of management accounting, define the role of management and designing management information system for business organizations and understand the concept of responsibility accounting and measure the performance and enable the students to learn the preparation and application of budgetary statements, standard costing and marginal costing, and prepare the students to apply the recent accounting systems required to meet the challenges of competitive business environment. |
| MC-106 | **Marketing management** | After studying **Marketing management**, the student will be able to familiarity with the concepts of marketing and the irrelevance in the current scenario and understand the product and pricing decision in a business. And also study developing promotional skills and logistics for efficient and effective connecting with the markets and learning responsible and tech-survey market operations. |
| **M.COM 2ND Sem.-II** | | |
| **Paper Code** | **Paper Name** | **Subject Outcome** |

| MC-201 | **Human resource management** | After studying **Human resource management** , the student will be able to understand the concept and functions of HRM in dynamic business environment and understand the inter linkages among the pivotal functions concerning procurement of human resources viz. human resource planning, human resource policy, job analysis, recruitment, selection, induction and placement. Get the knowledge of different aspects concerning maintenance, developments and control of human resources in an organization. And also learn how to deal with emerging issues concerning employee empowerment, quality of work life, job satisfaction and job stress. |
|---|---|---|
| MC-202 | **International business environment** | After studying **International business environment** , the student will be able to understand the importance and scope of international business and examine the differences in environmental factors of various countries and their implications for international business decisions and appreciate the role of international economic institution like WTO, UNCTAD, IMF and World Bank in regulating international business, know the evolution and working of regional economic cooperation such as EU, NAFTA ASEAN, SAFTA in expansion of international business and developments in foreign exchange. |
| MC-203 | **Strategic marketing** | After studying **Strategic marketing**, the student will be able to understand the conceptual framework of strategic marketing planning and analyse the business environment for strategic decision making and learn different types of marketing strategic alternatives at various stages of development of a firma and link business strategies with marketing mix and analyze how marketers implement and control marketing strategies. |
| MC-204 | **financial Management & policy** | After studying the **financial Management & policy**, the student will be able to know the scope and recent developments in the field of financial management and understand financial forecasting and develop financial plans and ascertain the cost of capital and estimate the working capital requirement for the business. Also learn capital expenditure and risk analysis for better decision making. |
| MC-205 | **Corporate accounting** | After completing the **Corporate accounting** , the student will be able to        understand the provisions of regulatory bodies relating to issue, forfeiture and valuation of share and presentation of final statements and prepare and present the accounts for restructuring, human resource and lease accounting,  develop consolidated financial statements and learn the specific requirements of financial statements |

| | | and harmonization of corporate reports. |
|---|---|---|
| MC-206 | **Business statistics** | After completing the **Business statistics** , the student will be able to apply correlation and multiple regression to know relationship between the variables and be aware of the concepts of index number and their applications and know the components of time series, its models and application, understand the concepts of probability and probability distributions |
| MC-207 | **VIVA/VOCE CUM CASE STUDY** | Knowledge appraisal of students |

| Paper Code | Paper Name | Outcome |
|---|---|---|
| **M.com 3rd Semester** | | |
| MC 301 | **COMPUTER APPLICATION IN BUSINESS** | After studying this course the students will be able to understand the structure and organization of the computers and will be able to recognize and use the hardware and software of the computers. The students will be able to know the concept of computer network topologies and basic information technology and use of computer in business operations. |
| MC 302 | **ADVANCED FINANCIAL MANAGEMNET** | The students will be able to acquaint them with dividend decision & models. The will be able to know the determinants of capital structure and analysis EBIT. They will know the broad areas and techniques of corporate restructuring and will be able to understand and implement financial restructuring. |
| MC304 | **Financial institution of market** | After studying this subject the students will be able to understand the Indian financial system and cc its role in economic development and they will be able to know the role of different types of financial market and their regulatory framework as well as operational and promotional activities of development banks and they will be able to understand about merchant banking and mutual funds.. |
| MC 311 | **International Marketing** | Through this subject the students will be able to identify the opportunities and challenges in international marketing. They will be able to analyze he international marketing environment and strategies for entering international markets. They will know the techniques for controlling international marketing operations. |

| MC313 | **Retail Management** | After studying this subject the students will be able to understand the conceptual framework and strategic planning for retailing formats and plan location of retail store. The students will get knowledge of customer service and financial management in retail organizations. After the knowledge of this subject the will able to understand that how we can handle issues concerning information technology, social ethical and legal aspect in retailing. |
|---|---|---|
| MC316 | **Human resource Development** | After having the knowledge of this subject the students will be able to understand the conceptual framework of HRD and the role, responsibility, and quality of HRD manager. The students will be able to understand a framework of HRD in an organization based on the understanding of theoretical edifice of HRD system, HRD strategies and emerging trends in HRD for ensuring organizational effectiveness. They will be able to understand of learning and knowledge management in developing human resources. They will get knowledge of role analysis, competency mapping and employee socialization. |
| | | |
| **M.com 4th semester** | | |
| MC 401 | **IT AND E-COMMERCE** | After studying this subject the students will be able to the understand the concept of e commerce, its difference and relationship with traditional commerce and business models of e commerce. The students will be able to know the use of online recourses for marketing, advertising and they will be able to learn the use of cloud computing, ERP and cyber laws and appreciate the security issues in e-commerce and measures to safeguard from them. |
| MC 402 | **CORPORATE TAX PLANNING AND MANAGMENT** | The students will be able to understand the difference between Tax planning, tax Evasion and Tax avoidance. They will be able to learn the techniques to apply the tax planning with respect to form of business organization, nature and location and computation of tax liability of companies and tax planning for various managerial decisions. |

| MC 417 | **ORGANISATI ONASL CHANGE AND INTERVENTI ON STARTEGIES** | The students will be to understand the natures and forces of change and managing the transition and to deal with individual and group while bringing change and overcoming resistance to change and to know the concept of organizational development an implementing OD interventions at individual and team level to introduce planned change and explore issue and challenges for OD practitioners and evaluating OD practices in India. |
|---|---|---|
| MC 418 | **STARTEGIC MANAGEME NT** | The students will be able to get the knowledge of strategic management process and develop analytical ability to make environmental and organizational appraisal and will understand various level of strategy along with generic strategy alternatives and strategy alternatives available and learn the international strategic alternatives and strategic choice making process. Understand the various issues and decision involved in strategy implementation along with process and techniques of strategic evaluation and control |
| MC 411 | **CONSUMER BEHAVIOUR** | The students will be able to understand the consumer buying process to enable the markets decisions and explore the underlying variable resulting into difference in consumer decision making, opinion leadership and its role in spreading the innovations among masses and consumer models of buying behavior. |
| MC 412S | **RURAL MARKETING** | The students will be able to understand the rural environment to know potential and challenges in the rural markets, explore rural marketing strategies to tap rural markets and also to remain competitive ,research the rural market to explore areas where companies can position itself in the market., examine the 4p's and 4A's in the rural marketing and use of IT in rural marketing. |

## Computer Science

| Paper Code | Paper Name | Outcome |
|---|---|---|
| **BCA Sem-1** | | |
| 111 | Computer and Programming Fundamentals | • Understand basics of H/W & S/W. Basics of various Operating sys.<br>• Be aware of Problem Solving Techniques like Algorithms & Flowcharts to develop logic steps of simple problems |
| 112 | Windows and PC | • Be able to use Windows operating sys. & MS |

| | Software | Excel |
|---|---|---|
| 113 | Mathematical Foundation-I | <ul><li>Understand the foundations of mathematics.</li><li>Students understands the concept of sets,relations,functions, and discete structures.</li><li>Use mathematical ideas to model real world problems.</li><li>Develop and maintan problem-solving skills</li></ul> |
| 114 | Logical Organization of Computers – I | <ul><li>Understand Binary no. Sys. Also Hexadecimal & Octal no. sys.</li><li>Understand Boolean algebra & various Logic Gates.</li></ul> |
| 115 | Communicative English | <ul><li>Know the process of technical communication and its components</li><li>Improve the language skills i.e. Listening Skills, Speaking Skills, Reading Skills and Writing Skills (LSRW)</li><li>Construct basic and intermediate skills in English language.</li><li>Enhance comprehension skills, presentation skills, group discussion skills etc</li><li>Create literature sensibility and learn life skills through Essays, Stories and one act play.</li><li>Develop confidence for communicating in English and create interest for the life-long learning of English language</li></ul> |
| 116 | Programming in C | <ul><li>Understand basic C-programming concepts like data-types, operators, arrays & various C-statements.</li><li>Apply control structures and user defined functions for solving problem.</li></ul> |
| **BCA Sem-2** | | |
| 121 | Advanced Programming in C | <ul><li>Understand use of Strings, Pointers and also Files.</li><li>Understand Macros & command line arguments.</li></ul> |
| 122 | Logical Organization of Computers – II | <ul><li>Understand various types Flip flops & Sequential Circuits – Registers & Counters.</li><li>Also understand Memory, I/O Devices, m/c Instructions & Instruction Cycle.</li></ul> |
| 123 | Mathematical Foundations-II | <ul><li>Think creatively with curiosity and wonder when exploring problems</li><li>Explore,analyze and apply mathematical ideas using reason,technology and others</li></ul> |

| | | • tools.<br>• Estimate reasonably and demonstrate fluent, flexible and strategic thinking about number. |
|---|---|---|
| 124 | Office Automation Tools | • Know Desktop Publishing – Page Maker, Word processing – MS-Word and be able to design Power Point Presentations. |
| 125 | Structured System Analysis and Design | • Understanding the life cycle of a systems development project.<br>• Learn to analyze, model and design business system and process requirements using common tools and methodologies. |
| 126 | Personality Development | • Enhance one's Personality & Personal Grooming.<br>• Understand Interpersonal Skills, Role playing, Group Discussion & Presentation skills.<br>• Design effective resume & prepare oneself to face interviews. |
| **BCA Sem-3** | | |
| 231 | Object Oriented Programming Using C++ | • Understand Object oriented Programming concepts.<br>• Know about Constructor handling, Functions, Array of objects, Passing and Returning Objects to Functions, Dynamic Memory Management.<br>• Polymorphism - Operator Overloading & function overloading |
| 232 | Data Structures | • Understand difference between data type & Data Str.<br>• Know about Strings, Arrays, Stacks, Queue & Trees.<br>• Learn to develop simple applications using various data str. |
| 233 | Computer Architecture | • Describe the fundamental organization of a computer system<br>• Understand Register Transfer and Micro-operations.<br>• Explain addressing modes, instruction formats and program control statements.<br>• Know about Memory Organization & Peripheral Devices. |

| 234 | Software Engineering | • Understand program vs. Software, Software Engineering, Programming paradigms.<br>• Knowing Software Development Process Models – Waterfall, etc.<br>• Feasibility Study, Software Requirement Analysis and Specifications – SRS.<br>• Structured Analysis and Tools & Maintenance Process.<br>• Role of project management including planning, scheduling and, risk management. |
|---|---|---|
| 235 | Fundamentals of Data Base Systems | • Differentiate between Data & information. Also know about File-based sys. & Database sys.<br>• Understand components of DBMS – DBA, Data dictionary, etc.<br>• Understand architecture – 3 level data representation and data independence. Differentiate Centralized and Client Server architecture to DBMS.<br>• Know data models including ER Model & be able to build a ER Model given a problem.<br>• Understand Relational Model – Keys & Data Constraints. Also compare RDBMS with Hierarchical & Network Model. |
| 236 | Computer Oriented Numerical Methods | • Understand that a numerical solution can be obtained for problems, where an analytical solution does not exist.<br>• Know computer arithmetic, iterative methods, linear equations and ordinary differential equations, Interpolation and Approximation & Numerical Differentiation and integration. |
| **BCA Sem-4** | | |
| 241 | Advanced Data Structures | • Understand Trees & Graphs structures.<br>• Learn to compare various searching & sorting techniques on the basis of their complexity.<br>• Able to to implement Files & know about various File organization methods. |
| 242 | Advanced Programming using C++ | • Understand Dynamic Polymorphism - Function Overriding, Abstract Class, etc.<br>• Type Conversion, Inheritance, Genericity in C++: |

| | | Templates, Class templates & Exception Handling in C++. |
|---|---|---|
| 243 | E-Commerce | • Able to analyze the impact of E-commerce on business models and strategy.<br>• Know Applications in governance<br>• Understand how procurement and supply chains relate to B2B E-commerce.<br>• Emerging Business models – Retail model; Media model; advisory model, made-to-order manufacturing model, etc. |
| 244 | Relational Data Base Management System | • Understand RDBMS concepts – keys, Data Constraints, etc.<br>• Able to understand role of Relational algebra & Tuple/domain calculus.<br>• Able to build efficient Databases using Normalization.<br>• Able to use SQL queries & Design programs using PL/SQL constructs. |
| 245 | Computer Oriented Statistical Methods | • Able to formulate complete, concise, and correct mathematical proofs.<br>• Prepare Frequency Distribution Table, Coefficient of mean Deviation, Standard Deviation.<br>• Understand Probability Distribution, Correlation, Regression, Curve Fitting, Baye's Theorem in Decision Making, Forecasting Techniques.<br>• Know sampling & Statistical Inference. |
| 246 | Management Information System | • Evaluate the role of information systems in today's competitive business environment.<br>• Identify managerial risks related to information system organization processing and utilizing.<br>• Analyze the role played by the six major types of information systems in organizations<br>• Identify the salient characteristics of organizations.<br>• Identify the hardware components in computer system<br>• Describe the major types of software.<br>• Evaluate models for determining the business |

| | | - value of information systems. |
| | | - Analyze the principal causes of information system failure. |

**BCA Sem-5**

| 351 | Web Designing Fundamentals | - Write HTML and understand how to effectively implement it in the web environment. |
| | | - Write CSS effectively to create well organized, styled web pages. Create a functioning web store with variable products. |
| 352 | Operating System-I | - Students will learn how Operating System is Important for Computer System. |
| | | - To make aware of different types of Operating System and their services. |
| | | - To learn different process scheduling algorithms and synchronization techniques to achieve better performance of a computer system. |
| | | - To know virtual memory concepts. |
| | | - To learn secondary memory management. |
| 353 | Artificial Intelligence | - Demonstrate fundamental understanding of the history of artificial intelligence (AI) and its foundations. |
| | | - Apply basic principles of AI in solutions that require problem solving, inference, perception, knowledge representation, and learning. |
| | | - Demonstrate awareness and a fundamental understanding of various applications of AI techniques in intelligent agents, expert systems, artificial neural networks and other machine learning models. |
| 354 | Computer Networks | - Recognize the technological trends of Computer Networking. |
| | | - Discuss the key technological components of the |

| | | | |
|---|---|---|---|
| | | | Network. |
| | | • | Evaluate the challenges in building networks and solutions to those. |
| 355 | Programming Using Visual Basic | • | Students list the visual programming concepts. |
| | | • | Explain basic concepts and definitions. |
| | | • | Express constants and arithmetic operations. |
| | | • | Distinguish variable and data types. |
| 356 | Multimedia Tools | • | Describe the types of media and define multimedia system. |
| | | • | Describe the process of digitizing (quantization) of different analog signals (text, graphics, sound and video). |
| | | • | Use and apply tools for image processing, video, sound and animation. |
| | | • | Apply methodology to develop a multimedia system. |
| | | • | Apply acquired knowledge in the field of multimedia in practice and independently continue to expand knowledge in this field. |
| **BCA Sem-6** | | | |
| 361 | Web Designing Using Advanced Tools | • | Write HTML and understand how to effectively implement it in the web environment. |
| | | • | Write CSS effectively to create well organized, styled web pages. Create a functioning web store with variable products. |
| 362 | Operating System-II | • | This course is a constructive study of an operating system. Key topics include the kernel, process and memory managers, file access, I/O driver, scheduler, etc. |
| | | • | Throughout the course, a seminar approach will be adopted and much time will be given to group discussion simulating an industrial environment. |
| | | • | Students are collectively expected to analyze and document an operating system using MacOS, UNIX/Linux like, Windows, Netware and mainframe as practical examples. |
| 363 | Computer Graphics | • | Understand the basics of computer graphics, different graphics systems and applications of |

| | | |
|---|---|---|
| | | computer graphics. |
| | | • Discuss various algorithms for scan conversion and filling of basic objects and their comparative analysis. |
| | | • Use of geometric transformations on graphics objects and their application in composite form. |
| | | • Extract scene with different clipping methods and its transformation to graphics display device. |
| | | • Explore projections and visible surface detection techniques for display of 3D scene on 2D screen. |
| | | • Render projected objects to naturalize the scene in 2D view and use of illumination models for this |
| 364 | Internet Technologies | • Analyze a web page and identify its elements and attributes. |
| | | • Create web pages using XHTML and Cascading Style Sheets. |
| | | • Build dynamic web pages using JavaScript (Client side programming). |
| | | • Create XML documents and Schemas. |
| 365 | Advanced Programming with Visual Basic | • This course is a Visual BASIC programming language with object-oriented programming principles. |
| | | • Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test, debug, and implement objects using the appropriate environment. |
| | | • This course has been approved for transfer under the CAA as a premajor and/or elective course requirement. |
| 366 | Programming in Core Java | • Use an integrated development environment to write, compile, run, and test simple object-oriented Java programs. |
| | | • Read and make elementary modifications to Java programs that solve real-world problems. |
| | | • Validate input in a Java program. |
| | | • Identify and fix defects and common security issues in code. |

| Paper Code | Paper Name | Outcome |
|---|---|---|
| | | • Document a Java program using Javadoc.<br>• Use a version control system to track source code in a project. |

**B.Sc. NM Sem-1 Computer Sc.**

| Paper Code | Paper Name | Outcome |
|---|---|---|
| P-1 | Computer and Programming Fundamentals | • Understand basics of H/W & S/W. Basics of various Operating sys.<br>• Be aware of Problem Solving Techniques like Algorithms & Flowcharts to develop logic steps of simple problems |
| P-2 | PC Software | • Be able to use Windows operating sys. & MS Excel |

**B.Sc. NM Sem-2 Computer Sc.**

| Paper Code | Paper Name | Outcome |
|---|---|---|
| P-1 | Programming in C | • Understand basic C-programming concepts like data-types, operators, arrays & various C-statements.<br>• Apply control structures and user defined functions for solving problem.<br>• Understand use of Strings, Pointers and also Files.<br>• Understand Macros & command line arguments. |
| P-2 | Logical Organization of Computers | • Understand Binary no. Sys. Also Hexadecimal & Octal no. sys.<br>• Understand Boolean algebra & various Logic Gates.<br>• Understand various types Flip flops & Sequential Circuits – Registers & Counters.<br>• Also understand Memory, I/O Devices, m/c Instructions & Instruction Cycle. |

**B.Sc. NM Sem-3 Computer Sc.**

| Paper Code | Paper Name | Outcome |
|---|---|---|
| P-1 | Data Structures | • Understand difference between data type & Data Str.<br>• Know about Strings, Arrays, Stacks and Queue & Trees.<br>• Learn to develop simple applications using various data str. |

| | | |
|---|---|---|
| | | • Understand Trees & Graphs structures.<br>• Learn to compare various searching & sorting techniques on the basis of their complexity.<br>• Able to implement Files & know about various File organization methods. |
| P-2 | Software Engineering | • Understand program vs. Software, Software Engineering, Programming paradigms.<br>• Knowing Software Development Process Models – Waterfall, etc.<br>• Feasibility Study, Software Requirement Analysis and Specifications – SRS.<br>• Structured Analysis and Tools & Maintenance Process.<br>• Role of project management including planning, scheduling and, risk management. |

**B.Sc. NM Sem-4 Computer Sc.**

| | | |
|---|---|---|
| P-1 | Object Oriented Programming with C++ | • Understand Object oriented Programming concepts.<br>• Know about Constructor handling, Functions, Array of objects, Passing and Returning Objects to Functions, Dynamic Memory<br>• Management.<br>• Polymorphism - Operator Overloading & function overloading<br>• Understand Dynamic Polymorphism - Function Overriding, Abstract Class, etc.<br>• Type Conversion, Inheritance, Genericity in C++: Templates, Class templates & Exception Handling in C++. |
| P-2 | Operating System | • Students will learn how Operating System is Important for Computer System.<br>• To make aware of different types of Operating System and their services.<br>• To learn different process scheduling algorithms and synchronization techniques to achieve better performance of a computer system.<br>• To know virtual memory concepts  & to learn secondary memory management. |

**B.Sc. NM Sem-5 Computer Sc.**

| | | |
|---|---|---|
| P-1 | Fundamentals of Data Base Systems | • Differentiate between Data & information. Also know about File-based sys. & Database sys.<br>• Understand components of DBMS – DBA, Data dictionary, etc. |

| | | • Understand architecture – 3 level data representation and data independence. Differentiate Centralized and Client Server architecture to DBMS.<br>• Know data models including ER Model & be able to build a ER Model given a problem. |
|---|---|---|
| P-2 | Web Designing | • Write HTML and understand how to effectively implement it in the web environment.<br>• Write CSS effectively to create well organized, styled web pages. Create a functioning web store with variable products. |
| **B.Sc. NM Sem-6 Computer Sc.** | | |
| P-1 | RDBMS | • Understand Relational Model – Keys & Data Constraints. Also compare RDBMS with Hierarchical & Network Model.<br>• Understand RDBMS concepts – keys, Data Contraints, etc.<br>• Able to understand role of Relational algebra & Tuple/domain calculus.<br>• Able to build efficient Databases using Normalization.<br>• Able to use SQL queries & Design programs using PL/SQL constructs. |
| P-2 | Computer Networks | • Recognize the technological trends of Computer Networking.<br>• Discuss the key technological components of the Network.<br>• Evaluate the challenges in building networks and solutions to those. |

| Paper Code | Paper Name | Outcome |
|---|---|---|
| **B.Com CAV Sem-1** | | |
| BC-VOC-105 | Computer Fundamentals & Logical Organizations | • Students will exacerbate their knowledge by studying Evolution of computer, Basic components of a Digital Computer, Computer Classification.<br>• They will study about Input Output Units, Video Standard, Printer and its types.<br>• They will gain the knowledge about Memory, Storage Fundamentals, and Various Storage Devices.<br>• They will expedite their knowledge by studying about Information Representation, Integer Representation, and Binary Arithmetic. |

| BC-VOC-106 | Business Data Processing & PC Software- 1 | <ul><li>Demonstrate a basic understanding of computer hardware and software.</li><li>Demonstrate problem-solving skills.</li><li>Apply logical skills to programming in a variety of languages.</li><li>Utilize web technologies.</li><li>Present conclusions effectively, orally, and in writing.</li></ul> |
|---|---|---|
| **B.Com CAV Sem-2** | | |
| BC-VOC-205 | Programming in C | <ul><li>The course is designed to provide complete knowledge of C language. Students will be able to develop logics which will help them to create programs, applications in C.</li><li>Also by learning the basic programming constructs they can easily switch over to any other language in future.</li></ul> |
| BC-VOC-206 | Business Data Processing and PC Software-II | <ul><li>Demonstrate basic understanding of network principles.</li><li>Working effectively in teams.</li><li>Apply the skills that are the focus of this program to business scenarios.</li></ul> |
| **B.Com CAV Sem-3** | | |
| BC-VOC-305 | Data Structure | <ul><li>Designs and analyzes simple algorithms.</li><li>Defines the meaning of iterative and recursive algorithms.</li><li>Calculates the running time of iterative algorithms.</li><li>Uses Big 'O' notation to express algorithmic running time.</li><li>Describes and analyzes elementary sorting algorithms such as Selection sort, Bubble sort, Insertion sort, and Shell sort.</li></ul> |
| BC-VOC-306 | Fundamentals of Database Management System | <ul><li>Designs SQL queries to create database tables and make structural modifications.</li><li>Designs SQL queries to add data to the database, edit existing data, and to delete data from the database.</li></ul> |

| | | |
|---|---|---|
| | | • Effectively designs basic and advanced SQL queries to retrieve data from the database<br>• Declares and enforces integrity constraints on a database.<br>• Understands and applies indexing mechanisms in databases. |
| **B.Com CAV Sem-4** | | |
| BC-VOC-405 | Programming in Java | • Use an integrated development environment to write, compile, run, and test simple object-oriented Java programs.<br>• Read and make elementary modifications to Java programs that solve real-world problems.<br>• Validate input in a Java program.<br>• Identify and fix defects and common security issues in code.<br>• Document a Java program using Javadoc.<br>• Use a version control system to track source code in a project. |
| BC-VOC-406 | Advanced Computer Applications | • Work effectively with a range of current, standard, Office Productivity software applications.<br>• Evaluate, select and use office productivity software appropriate to a given situation.<br>• Apply basic adult learning and assessment principles in the design, development, and presentation of material produced by office productivity applications.<br>• Demonstrate employability skills and a commitment to professionalism.<br>• Operate a variety of advanced spreadsheet, operating system and word processing functions.<br>• Solve a range of problems using office productivity applications, and adapt quickly to new software releases. |
| **B.Com CAV Sem-5** | | |
| BC-VOC-505 | Web Technology | • Students are able to develop a dynamic webpage by the use of java script and Students will be able to connect a java program to a DBMS and perform insert, |

| | | |
|---|---|---|
| | | • Students will be able to write a well formed / valid XML document & DHTML.<br>• Students will be able to write a server side java application called Servlet to catch update and delete operations on DBMS table form data sent from client, process it and store it on database. |
| BC-VOC-506 | Systems Analysis & Design | • Explain what systems are and how they are developed.<br>• Identify and describe the phases of the systems development life cycle.<br>• Follow the analysis portion of the Systems Development Life Cycle in a disciplined manner.<br>• Develop and evaluate system requirements.<br>• Work effectively in a team environment. |
| **B.Com CAV Sem-6** | | |
| BC-VOC-605 | Social Networking and Data Analytics | • Measure and prove ROI and marketing impact. ...<br>• Make better strategic and business decisions. ...<br>• Compare your social media performance against competitors.<br>• Track marketing teams' efficiency. ... |
| BC-VOC-606 | Enterprise Resource Planning | • Make basic use of Enterprise software, and its role in integrating business functions<br>• Analyze the strategic options for ERP identification and adoption.<br>• Design the ERP implementation strategies.<br>• Create reengineered business processes for successful ERP implementation |
| **B.A/B.Sc. Sem-1 & 2** | | |
| Level-1(Computer Awareness) | Basic Computer Education | • Students became familiar with computer hardware's and software's.<br>• Be aware with the different operating systems and functionalities of the operating systems.<br>• Got hand on practice on windows and controls, Microsoft word, excel and PowerPoint.<br>• Understands the ways to access internet and using email ids for communication.<br>• This course brings confidence among students for working on Pc's, prepare them for future and make them skill & job oriented. |

# Fashion Designing

## B.Sc. Fashion designing –Ist year

| S.no. | Course No. | Subject name | Outcomes |
|---|---|---|---|
| 1. | 101 | BASIC OF DESIGN & ILLUSTRATION | It enhance the knowledge of coloring and sketching of students. |
| 2 | 102 | Basics of Sewing | With this undergraduate learn basic skills of stitching. |
| 3 | 103 | Traditional Textiles | Students get to know about Indian traditional embroideries as well as printing skills . |
| 4 | 106 | Textile chemistry- I | This subject help to tutee understands about fiber to thread construction process. |
| 5 | 107 | CONCEPT OF FASHION | Learn about clothing and fashion terms. |
| 6 | 108 | Fabric construction | They get to know about weaving of fabric. |
| 7 | 109 | Garment construction | Students learn sewing terms and drafting of apparels. |

## B.Sc. Fashion designing –2nd year

| S.no. | Course No. | Subject name | Outcomes |
|---|---|---|---|
| 1. | 201 | Needle craft | Learn basic skills of hand embroidery such as cutwork , appliqué work , ribbon work and so on. |
| 2. | 202 | Pattern Making –I | Basic knowledge about pattern making and create the pattern as well for example basic bodice block etc. |
| 3. | 203 | Computer | Enhance the drawing mastery on computer with the help of Corel draw software. |
| 4. | 204 | Knitting Technology | Basic knowledge about knitting wears like how it created by hand and machines. |
| 5. | 206 | Textile Chemistry-II | Wide knowledge about dyes and printing skills. |
| 6. | 207 | Fashion design & Illustration | Tutee learn about flat sketching and figure drawing by hand and computer. |
| 7. | 208 | History of Indian costumes | In this students know about deep knowledge about history of Indian costumes . |
| 8. | 209 | Pattern Making-II | Undergraduate learn grading ,draping as well as pattern in wide. |
| 9. | 210 | Garment Construction-II | Drafting and construction of different garments for example blouse kalidar kurta. |

## B.Sc. Fashion designing –3rd year

| S.no. | Course No. | Subject name | Outcomes |
|---|---|---|---|
| 1. | 301 | History of World Costumes | Tutee gets to know that from where fashion start and there history worldwide. |
| 2. | 302 | Apparel Manufacturing Technology | Knowledge about garment industry and how it works. |
| 3. | 303 | Pattern & Marker Making on computer | Create pattern on computer with costume with the help of corel draw . |
| 4. | 304 | Pattern Making-III | Learn about dart manipulation , fullness, Contouring pattern and so on. |
| 5. | 305 | Project report | They have to work on five project related to garment designing in which involved sketching, pattern and stitching. |
| 6. | 306 | Marketing and merchandising | Enhance the knowledge of different types of merchandising ,retailing , forecasting of fashion and so on. |
| 7. | 307 | Marketing and merchandising(Prac.) | In this undergraduate survey the different brands ,trims, display the window and many more activates. |
| 8. | 308 | Line Development | Portfolios create in this and in which all three years best work involved. |
| 9. | 309 | Garment Construction – III | advance garment construction done by students. |
| 10. | 310 | Internship | Student go for training in apparel industry and make file on that . |

## History

| Paper Code | Paper Name | Outcome |
|---|---|---|
| **B.A. Sem-1** | | |
| | History of India-Equliest time to Gupta Age opt (i) | Students are able to understand the development of History and Sources of Ancient History, Indus Civilization. |
| **B.A. Sem-II** | | |
| | History of India Gupta Age to 1526 AD opt (i) | More learn about the King Kaniska, Harsha and sultanate period. |

| B.A. Sem-III | | |
|---|---|---|
| | Political History of India- 1526 to 1857 opt (i). | This paper is covered for civil services and allied services course to prepare the examination. |
| **B.A. Sem-IV** | | |
| | Indian National Movement opt (i). | This paper gives an idea about the British Empire in India and also the Consequences of National Movement in India. |
| **B.A. Sem-V** | | |
| | Rise of Modern World opt (i). | This Paper learns about the Renaissance & Reformation and many Revolutions out breaks in Modern World. |
| **B.A. Sem-VI**. | | |
| | History of Europe 1789 to 1870) opt (i). | This paper deal with changes of Europe after the French Revolution and Political Changes in Russia, Italy and Russia etc. |

## Hindi

| Paper Code | Paper Name | Outcome |
|---|---|---|
| **ch0,0 izFke l=** | | |
| | **fgUnh vfuok;Z** | d½ fo|kfFkZ;ksa esa Hkk'kk dkS"ky dk fodklA |
| | | [k½ lEizs'k.k dh dyk fodflr djukA |
| | | x½ Hkk'kk ds "kq) mPpkj.k esa leFkZ cukukA |
| | | ?k½ fgUnh lkfgR; ds vkjfEÒd dky dk cks/kA |
| | | ³½ HkfDrdkyhu o jhfrdkyhu dfo;ksa dh jpukvksa ds ek/;e ls ;qxhu tkudjh izkIr gksukA |
| | | p½ fo|kfFkZ;ksa dks uSfrdrk dk Kku nsukA |
| **ch0,0 f}rh; l=** | | |

| | | |
|---|---|---|
| | **fgUnh vfuok;Z** | d½ lkfgR; ds ek/;e ls cnyrs le; o lekt ds vuqlkj Nk=kvksa dks l"kDr] LokfHkekuh] vkRefuHkZj o tkx:d cukukA |
| | | [k½ bfrgkl ds ek/;e ls viuh lH;rk o laLd`fr dk Ckks/k djkukA |

**ch0,0 r`rh; l=**

| | | |
|---|---|---|
| | **fgUnh vfuok;Z** | d½ Nk=kvksa esa uSfrdrk] Ikekftd IkSgknZ] ns"kHkfDr dh Hkkoukvksa dk fodkl djukA |
| | | [k½ thou ds izfr fprau"khy cukukA |
| | | x½ thou esa la?k'kZ djus dh "kfDr fodflr djukA |

**ch0,0 prqFkZ l=**

| | | |
|---|---|---|
| | **fgUnh vfuok;Z** | d½ ;qok oxZ dks lkfgfR;d] Ikekftd laLdkj nsdj jk'Vª ds LoLFk ukxfjd cuus ds ;ksX; cukukA |
| | | [k½ lkfgR; dh fofHkUu fo/kkvksa dk cks/k djkuk o ys[ku {kerk fodflr djkukA |
| | | x½ orZeku le; ds vuqlkj Nk=kvksa esa Hkk'kk dk O;kogkfjd Kku mRiUu djukA |

**ch0,0 iape ,oa 'k'B l=**

| | fgUnh vfuok;Z | d½ dEi;wVj ds mi;ksx dk Kku iznku djukA |
|---|---|---|
| | | [k½ fgUnh v/;;u dh uohure] egRoiw.kZ vkSj jkstxkj ewyd o iz;kstuewyd fgUnh dk Kku nsukA |
| | | x½ gfj;k.koh yksdlkfgR; o yksdlaLd`fr ls ifjfpr djkukA |
| | | ?k½ usr`Ro dh {kerk fodflr djukA |
| | | ³½ vk/kqfud lekt] laLd`fr rFkk ekuo O;ogkj ls ifjfpr djkukA |
| | | p½ Hkk'kk vkSj lkfgR; esa :fp mRiUu dj jpukRed ys[ku dh vksj vxzlj djukA |
| | | N½ O;kolkf;d o ckSf)d fodkl iSnk djukA |
| | | t½ lkfgfR;d lanHkksZ dh "kq) djus ds ;ksX; cukukA |

**ch0,l0lh0 r`rh; l=**

| | fgUnh | d½ Nk=kvksa esa uSfrdrk dk fodkl djukA |
|---|---|---|
| | | [k½ Hkk'kk&dkS"ky dks fodflr djukA |
| | | x½ ys[ku {kerk cukukA |
| | | ?k½ jkstxkj izkfIr ds voljks dks vuqdwy cukukA |

**ch0,l0lh0 prqFkZ l=**

| | fgUnh | d½ Hkk'kk dk O;kogkfjd Kku nsukA |
|---|---|---|
| | | [k½ lkfgR; ds ek/;e ls cnyrs le; o lekt ds vuqlkj Nk=kvksa dks l"kDr] LokfHkekuh] vkRefuHkZj o tkx:d cukukA |
| | | x½ Nk=kvksa dk ckSf)d o ekufld fodkl djukA |
| | | ?k½ Nk=kvksa dks jkstxkjewyd o iz;kstuewyd fgUnh ls ifjfpr djkukA |
| | | ³½ Nk=kvksa eas laiz's'k.kk dh dyk fodflr djukA |

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## Health and Physical Education

| Paper Code | Paper Name | Outcome |
|---|---|---|
| **B.A. Sem-1** | | |
| PE-01 | Health and Physical Education | Students will apply knowledge of Physical Education, Health Education<br>• To explain Aim& Objectives of Phy.Edu.<br>• To understand Human Anatomy& Physiology &It's Importance.<br>• To  Use an understanding of history of yoga to effectively know about its value in everyday life<br>• Further study in Physical Education. |
| **B.A. Sem-II** | | |
| PE-02 | Health and Physical Education | After completion of this course, students will apply<br>• Knowledge of First-Aid, Health Education, Physical Fitness to explain Aim & Objectives of Health Education.<br>• Use an understanding of history of Physical Education.<br>• Learn to develop Physical Fitness Components.<br>• To know Human Bones,Joints& Functions. |
| **B.A. Sem-III** | | |
| PE-03 | Health and Physical Education | • At the end of this course students will learn.<br>•  Safety Education,Sports Injuries, Preventions&control, Common Diseases,Balanced Diet.<br>• To know the Anatomy & Physiology of Circulatory System,Exercise Physiology.<br>• Health&First-Aid-Management. |
| **B.A. Sem-IV** | | |
| PE-04 | Health and Physical Education | • To know the Significance & Physiology of Warming up& Limbering down. |

| | | |
|---|---|---|
| | | • To understand the Psychological aspects of Physical Education &Learning Outcomes,Laws of learning & Curve.<br>• To develop an understanding of world major Sports Events:Olympic& Asian Games.etc.<br>• To know the Anatomy & Physiology of Respiratory System,Exercise Physiology.BMI. |
| **B.A. Sem-V** | | |
| PE-05 | Health and Physical Education | • Successfully Completion of this course will enable the students to learn.<br>• Principles of Growth& Development,Body Postures & Deformities.<br>• To understand the anatomy & physiology of muscular system, Composition of Human Blood.<br>• Sports Organization & Administration&Prepration of Fixtures |
| **B.A. Sem-VI**. | | |
| PE-06 | Health and Physical Education | At the end of this course students will be able to understand<br>• Motivationa& Socialization to explain its Relevance in sports Performance.<br>• Sports Training, Biomechanics & Laws of motion to effectively know about the scientific aspects of Phy.Edu.& It's application.<br>• Anatomy & Physiology of digestion & Exercise,Key factor of Sports Performance.<br>• Practical Approach of Yoga&First Aid.<br>• Further Study in Physical Education. |

## Economics

| Paper Code | Paper Name | Outcome |
|---|---|---|
| **B.A. Sem-1** | | |
| | Micro Economics | In this semester  Micro Economics teaches us how we can use our limited resources to get maximum satisfaction .Its also study about consumer behavior. |
| **B.A. Sem-II** | | |
| | Micro Economics |  In this semester students learn about market types like perfect Competition, Monopoly and Monopolistic. In this students learns about actual market type that prevails in our economy. |

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|---|---|---|
| **B.A. Sem-III** | | |
| | Macro Economics | Macro Economics studies about economy as a whole. Under this paper students learn how we calculate our national income. |
| **B.A. Sem-IV** | | |
| | Macro Economics | In this semester students learn about economy investment process, rent ,wages and profit. |
| **B.A. Sem-V** | | |
| | INDIAN ECONOMICS | In this paper students learn about Indian Economic problems like unemployment, poverty. |
| **B.A. Sem-VI**. | | |
| | INDIAN ECONOMICS | In this paper students learn about how our country do trade with other countries,What are the directions nd composition of foreign trade, Balance of payments. |

## English

| Paper Code | Paper Name | Outcome |
|---|---|---|
| **B.A. Sem-1** | | |
| | English Compulsory | • Know the process of communication and its components. <br> • Improve the language skills i.e. Listening Skills, Speaking Skills, Reading Skills and Writing Skills (LSRW) <br> • Construct basic and intermediate skills in English language. <br> • Enhance comprehension skills, presentation skills, group discussion skills etc <br> • Create literature sensibility and learn life skills through Literature and Language-I including Essays. <br> • Develop confidence for communicating in English and create interest for the life-long learning of English language |
| **B.A. Sem-II** | | |
| | English Compulsory | • Know the process of communication and its components <br> • Improve the language skills i.e. Listening Skills, Speaking Skills, Reading Skills and Writing Skills (LSRW) |

| | | |
|---|---|---|
| | | • Construct basic and intermediate skills in English language.<br>• Enhance comprehension skills, presentation skills, group discussion skills etc<br>• Create literature sensibility and learn life skills through Literature and Language-II including stories.<br>• Develop confidence for communicating in English and create interest for the life-long learning of English language |
| **B.A. Sem-III** | | |
| | English Compulsory | • Know the process of communication and its components<br>• Improve the language skills i.e. Listening Skills, Speaking Skills, Reading Skills and Writing Skills (LSRW)<br>• Construct basic and intermediate skills in English language.<br>• Enhance comprehension skills, presentation skills, group discussion skills etc<br>• Create literature sensibility and learn life skills through Poetry.<br>• Develop confidence for communicating in English and create interest for the life-long learning of English language |
| **B.A. Sem-IV** | | |
| | English Compulsory | • Know the process of communication and its components<br>• Improve the language skills i.e. Listening Skills, Speaking Skills, Reading Skills and Writing Skills (LSRW)<br>• Construct basic and intermediate skills in English language.<br>• Enhance comprehension skills, presentation skills, group discussion skills etc<br>• Create literature sensibility and learn life skills through one act plays<br>• Develop confidence for communicating in English and create interest for the life-long learning of English language |
| **B.A. Sem-V** | | |
| | English Compulsory | • Know the process of communication and its components<br>• Improve the language skills i.e. Listening Skills, Speaking Skills, Reading Skills and Writing Skills (LSRW)<br>• Construct basic and intermediate skills in English language.<br>• Enhance comprehension skills, presentation skills, group discussion skills etc<br>• Create literature sensibility and learn life skills through Novel Kanthapura by Raja Rao.<br>• Develop confidence for communicating in English and create interest for the life- long learning of English language |
| **B.A. Sem-VI**. | | |
| | English | • Know the process of communication and its components |

| Paper Code | Paper Name | Outcome |
|---|---|---|
| | Compulsory | • Improve the language skills i.e. Listening Skills, Speaking Skills, Reading Skills and Writing Skills (LSRW)<br>• Construct basic and intermediate skills in English language.<br>• Enhance comprehension skills, presentation skills, group discussion skills etc<br>• Create literature sensibility and learn life skills through Shakespeare Play The Merchant of Venice. |

## Punjabi

| Paper Code | Paper Name | Outcome |
|---|---|---|
| **B.A. Sem-1** | | |
| | Elective Punjabi | The Student aquires the detailed knowledge about Modern Punjabi Literature, Specially about novel. 'Idoms' and 'Official Termionology' increase the knowledge of the students about Punjabi Language. |
| **B.A. Sem-II** | | |
| | Elective Punjabi | The syllabus of this semester gives the knowledge about Modern Punjabi Poetry and Punjabi One-Act Play. The students also understand about their writting mistakes and becomes able to improve through 'Error Correction Part. |
| **B.A. Sem-III** | | |
| | Elective Punjabi | The Student aquires knowledge about Punjabi Short Stories, Meter and Medivial Punjabi Poetry. |
| **B.A. Sem-IV** | | |
| | Elective Punjabi | The Student understands about the History of Medival Punjabi Literature, role of Ornament in Poetical Writing, and learns how to write an essay. |
| **B.A. Sem-V** | | |
| | Elective Punjabi | The Student becomes able to understand about various poetic forms and the properties of Punjabi Essay. |
| **B.A. Sem-VI**. | | |
| | Elective Punjabi | The Student aquires knowledge about History of Punjabi Literature and Different forms of Punjabi Literature |

## Home Science

| Paper Code | Paper Name | Outcome |
|---|---|---|

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|---|---|---|
| **B.A. Sem-1** | | |
| | Family Resource Management | • Better implementation of time, energy and money.<br>• Job opportunities in Home Science field.<br>• Interior decoration ideas of implementation.<br>• Decoration of Earthern pots.<br>• Importance of table manners of table setting. |
| **B.A. Sem-II** | | |
| | Health, Hygiene & Applied Science | • Importance of hygiene for better health.<br>• Learning about mode of spread of various diseases and precautions to be taken to avoid them.<br>• Importance of immunity in present scenario.<br>• Cleaning of polishing of household articles. |
| **B.A. Sem-III** | | |
| | Physiology | • Knowledge about Body mechanism through psychology.<br>• Repair and care of sewing machine at home.<br>• Learning basic stitches, seams, process, embriodary, knitting, tie and dye. |
| **B.A. Sem-IV** | | |
| | Clothing and Textiles | • Drafing and Stitching of garments at home.<br>• Learning about tradition textiles.<br>• Various soap of detergent for different fabrics.<br>• Finishing of fabric at home. |
| **B.A. Sem-V** | | |
| | Foods & Nutrition | • Importance of nutrition especially in present scenario.<br>• Planning and preaparing diets for various age groups of invalid diets for patients. |
| **B.A. Sem-VI**. | | |
| | Human Development | • Understanding Child Pscyhology.<br>• Developing learning skills, personality traits, role of play in childhood.<br>• Common ailments of children.<br>• Care of pregnant women.<br>• Cooking using different methods, preservation of vegetable and fruits |

| | | in the form of jams, pickles etc. |
| --- | --- | --- |
| | | • Fancy cooking. |

## Political Science

| Paper Code | Paper Name | Outcome |
| --- | --- | --- |
| **B.A. Sem-1** | | |
| | Indian Constitution | The students came to know about the basics of Indian Constitution. They had learnt about the digital platforms. They knew about the current affairs and mythology in group discussion and E -Newspaper. The qualities of leadership and confidence developed in them. They had learnt about their supreme law in class discussion. |
| **B.A. Sem-II** | | |
| | Indian Politics | The students come to know about the basics ofIndian Politics .They had learnt about the digital platforms. They knew about the current affairs and mythology in group discussion. The qualities of leadership and confidence developed in them. They had cleared their therotical knowledge with real example. |
| **B.A. Sem-III** | | |
| | Indian Political Thinkers | The students came to know about the basics of Indian political thought.They had learnt about the digital platforms. They knew about the Indian Political thinkers. They had participated in group discussion,tests and other skill development programs. They had discussedIndian Political thinker's thought and learnt more aboutvaluable methods. |
| **B.A. Sem-IV** | | |
| | Indian Political Thinkers | The students came to know about the basics of IndianPolitical Thinkers . They had learnt about the digital platforms. They knew about the mythology in group discussion. The qualities of leadership and confidence developed in them. |
| **B.A. Sem-V** | | |
| | International Relations | The students came to know about the basics International Relations. They had learnt about the digital platforms. They knew about the current affairs and mythology in group discussion. The qualities of leadership and confidence developed in them. They had discussed the relationamong thenations in class and India'srelations with |

| Paper Code | Paper Name | Outcome |
|---|---|---|
| | | neighborhood |
| **B.A. Sem-VI**. | | |
| | International Organization | The students came to know about the basics of International Organization. They had learnt about the digital platforms. They knew about the current affairs and mythology in group discussion.Students haddiscussed current issues in class. They had used E -newspaper for International news and updates. |

## Commercial Art, Designing and Painting

| Paper Code | Paper Name | Outcome |
|---|---|---|
| **B.A. Sem-1** | | |
| | Advertising Foundation | <ul><li>Understanding in Basic knowledge of art in the beginning.</li><li>Detailed study of drawing in art.</li><li>Introducing the basics of commercial art.</li><li>Introducing the art material used in commercial art</li><li>Analyse the basics of art aesthetics.</li></ul> |
| | Practical | **Course Outcome for STILL LIFE**<ul><li>Create a Drawing by focusing an object</li><li>Able to concentrate on the different angles on still objects</li><li>Observing the small details of objects.</li><li>Become confident in attempting something new in their drawings</li><li>Ability to look at the finer details through light and shade via colours or pencils.</li></ul>**Course Outcome for GRAPHICS**<ul><li>Create an official stationery for any organisation or any institution</li><li>Basic knowledge of standard size of stationary paper</li><li>Understanding of content mention in official document</li><li>Creative designing includes watermarks</li><li>Use of colour according to printing methods.</li></ul>**Course Outcome for MAGAZINE LAYOUT**<ul><li>Design a layout including their elements</li><li>Creative harmonious design in illustration and typography</li><li>Helping the reader to grasp the essence of the idea</li><li>Focus on the main concept of ad</li><li>Able to communicate the viewer via creative slogan and illustration</li></ul> |
| **B.A. Sem-II** | | |
| | Advertising Foundation | <ul><li>Understanding of colours and colour theory</li><li>Detailed explanation of advertising with reference to design</li></ul> |

| | | |
|---|---|---|
| | | • Identification of a product or company through pictures, logos, symbol etc.<br>• Able to design the structural process of an advertisement through creative thinking.<br>• Able to Perform the steps from Visualization to final artwork |
| | Practical | **Course Outcome for STILL LIFE**<br>• Create a Drawing by focusing an object<br>• Able to concentrate on the different angles on still objects<br>• Observing the small details of objects.<br>• Become confident in attempting something new in their drawings<br>• Ability to look at the finer details through light and shade via colours or pencils.<br><br>**Course Outcome for GRAPHICS**<br>• Create an official stationery for any organisation or any institution<br>• Basic knowledge of standard size of stationary paper<br>• Understanding of content mention in official document<br>• Creative designing includes watermarks<br>• Use of colour according to printing methods.<br><br>**Course Outcome for MAGAZINE LAYOUT**<br>• Design a layout including their elements<br>• Creative harmonious design in illustration and typography<br>• Helping the reader to grasp the essence of the idea<br>• Focus on the main concept of ad<br>• Able to communicate the viewer via creative slogan and illustration |

**B.A. Sem-III**

| | | |
|---|---|---|
| | Advertising Foundation | • Knowledge about the history of printing<br>• Understanding of methods in printing<br>• Update knowledge about latest technology<br>• Formulate the design of typography in copy formats<br>• Understanding of printing methods and technology in detail |
| | Practical | **Course Outcome for POSTER DESIGN**<br>• Motivate student to learn a specific topic on the social issues<br>• Capture a moving audience with a message with strong illustration<br>• Learn to execute an illustration which is visually appealing and interesting<br>• Learning of colour scheme which is best suited for the topic.<br>• Understanding of poster size, shape and its elements<br><br>**Course Outcome for ILLUSTRATION**<br>• Create an imaginary composition on the basis of given theme<br>• Use of multiple colour combination<br>• Arrangement of figures according to theme<br>• Build strong imagination |

| | | |
|---|---|---|
| | | • Improve drawing skills |
| | | **Course Outcome for MAGAZINE LAYOUT**<br>• Design a layout including their elements<br>• Creative harmonious design in illustration and typography<br>• Helping the reader to grasp the essence of the idea<br>• Focus on the main concept of ad<br>• Able to communicate the viewer via creative slogan and illustration |

**B.A. Sem-IV**

| | | |
|---|---|---|
| | Advertising Foundation | • Understanding the meaning of advertising and its history<br>• Understanding of different functions of advertising<br>• Representation of a brand in a series with same idea with campaign<br>• Descriptive knowledge of photography with the help of camera<br>• Able to perform an ad design and launch a brand in the market. |
| | Practical | **Course Outcome for POSTER DESIGN**<br>• Motivate student to learn a specific topic on the social issues<br>• Capture a moving audience with a message with strong illustration<br>• Learn to execute an illustration which is visually appealing and interesting<br>• Learning of colour scheme which is best suited for the topic.<br>• Understanding of poster size, shape and its elements<br>**Course Outcome for ILLUSTRATION**<br>• Create an imaginary composition on the basis of given theme<br>• Use of multiple colour combination<br>• Arrangement of figures according to theme<br>• Build strong imagination<br>• Improve drawing skills<br>**Course Outcome for MAGAZINE LAYOUT**<br>• Design a layout including their elements<br>• Creative harmonious design in illustration and typography<br>• Helping the reader to grasp the essence of the idea<br>• Focus on the main concept of ad<br>• Able to communicate the viewer via creative slogan and illustration |

**B.A. Sem-V**

| | | |
|---|---|---|
| | Advertising Foundation | • Knowledge of various types of media used in advertising<br>• Knowledge of Outdoor and Indoor media<br>• Explanation of print media used in daily life<br>• Latest software used in company to create advertisement<br>• Able to work in the market with efficient knowledge of software's |

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| | Practical | **Course Outcome for POSTER DESIGN**<br>• Motivate student to learn a specific topic on the social issues<br>• Capture a moving audience with a message with strong illustration<br>• Learn to execute an illustration which is visually appealing and interesting<br>• Learning of colour scheme which is best suited for the topic.<br>• Understanding of poster size, shape and its elements |
| | | **Course Outcome for ILLUSTRATION**<br>• Create an imaginary composition on the basis of given theme<br>• Use of multiple colour combination<br>• Arrangement of figures according to theme<br>• Build strong imagination<br>• Improve drawing skills |
| | | **Course Outcome for MAGAZINE LAYOUT**<br>• Design a layout including their elements<br>• Creative harmonious design in illustration and typography<br>• Helping the reader to grasp the essence of the idea<br>• Focus on the main concept of ad<br>• Able to communicate the viewer via creative slogan and illustration |

**B.A. Sem-VI**.

| | | |
|---|---|---|
| | Advertising Foundation | • Basic knowledge of marketing in the context of advertising<br>• Analysing the nature of market with presenting the product in the right place<br>• Representation of a brand in a series with same idea with campaign<br>• Comparing the types of agencies in detail<br>• Future Awareness in the career of commercial art |
| | Practical | **Course Outcome for POSTER DESIGN**<br>• Motivate student to learn a specific topic on the social issues<br>• Capture a moving audience with a message with strong illustration<br>• Learn to execute an illustration which is visually appealing and interesting<br>• Learning of colour scheme which is best suited for the topic.<br>• Understanding of poster size, shape and its elements |
| | | **Course Outcome for ILLUSTRATION**<br>• Create an imaginary composition on the basis of given theme<br>• Use of multiple colour combination<br>• Arrangement of figures according to theme<br>• Build strong imagination<br>• Improve drawing skills<br><br>**Course Outcome for MAGAZINE LAYOUT**<br>• Design a layout including their elements<br>• Creative harmonious design in illustration and typography |

- Helping the reader to grasp the essence of the idea
- Focus on the main concept of ad
- Able to communicate the viewer via creative slogan and illustration

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**laLd`r& ikB~;Øe fof”k’k’V ifj.kke**

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**;qDr gksaxs%&**

| Øe lM.[;k | ifj.kke | ifj.kke&o.kZu |
|---|---|---|
| 1 | Ikk0 fo0i0 **1** | **Lkkekftd &tkx:drk%&** <br> lkfgR; dk bfrgkl] lekt laLd`fr ,oa ekuo&O;ogkj ls lEcU/k dks le> ik,axsA |
| 2 | Ikk0 fo0i0 **2** | **ys[ku&dkS”ky%&** <br> O;kolkf;d&is”ks lEcU/kh okD; ys[ku ,oa jpukRed ys[ku ds ;ksX; gksxs |
| 3 | Ikk0 fo0i0 **3** | **lEizs’k.k.k&dkS”ky%&** <br> fHkUu&fHkUu ikfjfLFkr;ksa esa ekSf[kd ,oa xSj&ekSf[kd lEizs’k.k.k ¼dkS”ky½ dk izHkkoiw.kZ iz;ksx djsaxsA |
| 4 | Ikk0 fo0i0 **4** | **“kks/k vukoj.k%&** <br> Hkk’kk ,oa lkfgR; esa lkFkZd&”kks/k gsrq “kks/k&izfof/k;ksa dk iz;ksx dj ik,axsA |
| 5 | Ikk0 fo0i0 **5** | **fLFkjrk@/kS;Z%&** <br> uSfrd] lkekftd] i;kZoj.k lEcU/kh my>uksa ds ifj.kke dk ewY;k³~du djus ds ;ksX; gksaxsA |
| 6 | Ikk0 fo0i0 **6** | **lexz&fodkl%&** <br> cgq&lkaLd`frd&ewY;ksa ls ifjfpr gksaxsA uSfrd Lrj dh ,oae**”** vkykspukRed lksp fodflr gksxhA lEiw.kZ&O;fDrRo dk fodkl dj ik;saxsA |
| 7 | Ikk0 fo0i0 | **Tkhou&i;ZUr&f”k{kk%&** |

| | 7 | vkthou O;kolkf;d ,oa ckSf)d fodkl ds fy, mRlqd jgsaxs ,oa iz;kl djrs jgsaxsA |
|---|---|---|
| 8 | **Ikk0 fo0i0 8** | **usr`Ro ,oa lewg esa feydj dk;Z djuk%&** lfØ; usr`Ro {kerk ls ;qDr gksdj lewg esa dk;Z dj vius vko";d y{;ksa dks izkIr dj ik,axsA |
| 9 | **Ikk0 fo0i0 9** | lkfgfR;d&lUnHkksZa dh izHkkoiw.kZ@dksS"kyiw.kZ O;k[;k djus ds ;ksX; gksaxsA |
| 10 | **Ikk0 fo0i0 10** | euks&lkekftd&cnyko lEcU/kh Kku izkIr djsaxsA |
| 11 **bR;kn;%** | **Ikk0 fo0i0 11** | bl izdkj fo|kfFkhZZ dk lkekftd] vkfRed] jktuSfrd] uSfrd] O;kolkf;d] vkfFkZd fodkl gksxk ,oa og **euqHkZo** okD; dks lkFkZd dj ik,xkA |

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laLd`r&,sfPNd&ikB~;Øe ds lQy&lekiu ds i"pkr~ fo|kfFkhZZ fuEufyf[kr ;ksX;rkvksa ls ;qDr gksaxs%&

| Øe la[;k | ifj.kke | ifj.kke&o.kZu |
|---|---|---|
| 1 | **Ikk0 fo0i0 1** | **Lkkekftd &tkx:drk%&** lkfgR; dk bfrgkl] lkekt laLd`fr ,oa ekuoh; O;ogkj ls lEcU/k dk Kku gksxkA |
| 2 | **Ikk0 fo0i0 2** | **vUr%&Hkkf'kd lEcU/k** Hkk'kkvksa esa iz;qDr ifjHkkf'kd "kCnksa ds vkFkZ ¼vFkZcks/k½ dk Kku gksxkA |
| 3 | **Ikk0 fo0i0 3** | **iqjkru ,oa uohu Kku dk lnqi;ksx%&** bfrgkl ds izfl) ys[kdksa ,oa mudh d`fr;ksa dk v/;;u dj rRdkyhu ,oa mudh orZeku izkl³fxdrk tku ik,axsA |
| 4 | **Ikk0 fo0i0 4** | **dq"ky ewY;k³□du%&** |

| | | |
|---|---|---|
| | | uSfrd] lkekftd] i;kZoj.k lEcU/kh] leL;kvksa ds ifj.kke dk ewY;k³³"du djus ds ;ksX; gksaxsA |
| 5 | Ikk0 fo0i0 5 | **"kks/k n`f'V%&**<br>lkfgR; rFkk Hkk'kk esa IkFkZd "kks/k&izfof/k;ksa dk iz;ksx dj ik,axsA |
| 6 | Ikk0 fo0i0 6 | **lEizs'k.k.k&dkS"ky%&**<br>fHkUUu&fHkUUu ifjfLFkfr;ksa esa ekSf[kd ,oa xSj&ekSf[kd ¼fyf[kr½ lEizs'k.k.k dkS"ky] dk izHkkoiw.kZ iz;ksx djus ds ;ksX; gksaxsA |
| 7 | Ikk0 fo0i0 7 | **vFkZiw.kZ&vfHkO;fDr%&**<br>vius Hkkoksa] fopkjksa dks xkxj esa lkxj Hkjrs gq, la{ksi esa dgus ds ;ksX; gksaxsA |
| 8 | Ikk0 fo0i0 8 | **O;kolkf;d&dk;Z{kerk%&**<br>O;kolkf;d dk;Z&lEcU/kh okD;&ys[ku ,oa jpukRed ys[ku ds ;ksX; gksaxsA |
| 9 | Ikk0 fo0i0 9 | lkfgfR;d&lUnHkksaZa dh izHkkoiw.kZ O;k[;k djus ds ;ksX; gksaxsA |
| 10<br><br>**bR;kn;%** | Ikk0 fo0i0 10 | **O;fDrRo&fodkl%&**<br>fo|kFkhZ dh uSfrd] ,oe" vkykspukRed lksp fodflr gksaxhA viuh tM+ksa ls tqM+dj orZeku esa lkekftd] vkfRed] jktuSfrd] O;kolkf;d rFkk vkfFkZd fodkl dj vius lEiw.kZ O;fDrRo dk fodkl dj ik,axsA |

<br>

## ,sfPNd&laLd`r& ikB~;Øe

## d{kk& ch0 ,0 iape rFkk 'k'B lkfel=

## laLd`r& ikB~;Øe &fof"k'k'V&ifj.kke

laLd`r&,sfPNd&ikB~;Øe ds lQy&lekiu ds i"pkr~ fo|kFkhZ fuEufyf[kr ;ksX;rkvksa ls
;qDr gksaxs%&

| Øe la[;k | ifj.kke | ifj.kke&o.kZu |
|---|---|---|
| 1 | Ikk0 fo0i0 1 | **Lkkekftd &tkx:drk%&**<br>vius ns"k ds bfrgkl] lekt] laLd`fr ,oa ekuo&O;ogkj ds lkFk lfgR; dk lEcU/k le> ik,axsA |

| 2 | Ikk0 fo0i0 2 | **izkphu&Hkkjrh;&"kks/k&Kku%&** <br> vius Hkkjr&ns"k ds izdk.M fo}kuksa ,oe~ mudh d`fr;ksa] muesa fufgr xw<+ jgL;ksa dk Kku vftZr dj rRdkyhu ,oa vk/kqfud le; esa mudh izklafxdrk dk cks/k dj ik,axsA |
|---|---|---|
| 3 | Ikk0 fo0i0 3 | **/kS;Zrk ,oa fLFkjrk%&** <br> uSfrd] lkekftd] jktuSfrd ,oa i;kZoj.k ls lEcfU/kr leL;kvksa ds ifj.kke ,oa muds lek/kku esa l{ke gksxsaA |
| 4 | Ikk0 fo0i0 4 | **lEizs'k.k.k&dkS"ky%&** <br> okpu ,oa ys[ku dkS"ky esa l{ke gksxsaA vius Hkkoksa] fopkjksa dks Li'V :Ik ls dgus ds ;ksX; gksxsaA |
| 5 | Ikk0 fo0i0 5 | **"kks/k rduhd%&** <br> lfgR; rFkk Hkk'kk esa IkFkZd "kks/k&izfof/k;ksa dk iz;ksx dj ik,axs |
| 6 | Ikk0 fo0i0 6 | lkfgfR;d lanHkksaZ dh izHkkoiw.kZ O;k[;k dj ik,axsA |
| 7 | Ikk0 fo0i0 7 | **lexz&O;fDRkRo&fodkl%&** <br> cgq&lkaLd`frd&ewY;ksa ls ifjfpr gksaxsA uSfrd Lrj et+cwr djrs gq, vkykspukRed fpUru fodflr gksxkA ikjEikfjd ,oa vk/kqfudrk ds feJ.k ls vUroZS'kf;d fo'k;ksa esa lEcU/k LFkkfir djrs gq, lexz&O;fDrRo dk fodkl dj ik,xsaA |
| 8 | Ikk0 fo0i0 8 | **l³~x.kdh;&laLd`re~%&** <br> O;kdjf.kd fu;eksa ds Kku ls lekU; O;ogkj ,oa l³~x.kdh;&laLd`re~ ds fy, rS;kj gksxsaA |
| 9 | Ikk0 fo0i0 9 | **"kks/k n`f'V%&** <br> Hkk'kk&lkfgR; esa IkFkZd "kks/k gsrq fofHkUu "kks/k&izfof/k;ksa dk iz;ksx djus esa dq"ky gksxsaA |
| 10 | Ikk0 fo0i0 10 | **Yks[ku&dkS"ky%&** <br> vkSipkfjd] vukSipkfjd okD;&ys[ku ,oa jpukRed ys[ku ds ;ksX; gksxsaA |
| 11 | Ikk0 fo0i0 11 | **usr`Ro {kerk %&** <br> IfØ; usr`Ro xq.kksa ls ;qDr gksdj lewg esa dk;Z dj vius ln"&mÌs";ksa dks izklr djsaxsA |
| 12 <br> **bR;kn;%** | Ikk0 fo0i0 12 | **vkthou&f"k{kk%&** <br> thou i;ZUr ckSf)d] vkfRked ,oa O;kolkf;d fodkl gsrq iz;kljr jgsaxsA **olq/kSo&dqVqECde~** dh Hkkouk ls dk;Z dj Lo ,oa loZfgr esa vxlj jgsaxsA |

# M.A. Fine Arts Subject Outcomes

| Paper Code | Paper Name | Outcome |
|---|---|---|
| **MA Fine Arts –(Painting) Sem-1** | | |
| PaperI (Theory) | History of Modern Western Art | • Trace the development of Modern Western art from the 18<sup>th</sup>centaury to 20<sup>th</sup> century. <br>• Develop a critical understanding of western Art Movements and its relevance and impact on art. <br>• Critical understanding of the art work of some of the seminal/prominent artists and their contributions to modern art**.** <br>• Develop a critical understanding of History of Western Art and its relevance and impact on art. |
| Paper II (Theory) | Philosophy of Art | • Introduction and effective knowledge of art and aesthetics, for carrier development/ art appreciation. <br>• Critical understanding of Indian Vedic Philosophy and Literature and its relevance to art. <br>• To develop a keen insight into the contribution of Indian Philosophy in development of art in India. <br>• Develop a critical understanding of Indian philosophy of art and aesthetics and its relevance to Indian art. |
| Paper III (Practical) | Portrait and Life study | • Study of figure from life and its transformation into composition. |
| Paper IV (Practical) | Creative Composition | Advancement of previous experience towards a complete pictorial interpretation, theme and expression of mood, symbolism, dramatization, distortion for emotional effect including abstract expressionism projects with emphasis on independent creative work. <br>**a) Advanced Drawing** <br>• Exploration of an individual approach to drawing as an aesthetic exercise of visual sign and symbol and locate your practice in the broader context of contemporary art <br>• Exercise of different drawing techniques of traditional and contemporary masters Exercise on application of different mediums both traditional and contemporary as a drawing tool <br>• Medium: pencil, charcoal, pastel, pen and ink, water color Acrylic and oil, photocopy, impression, stencil, etc. <br>**b) Composition** <br>• Identify and synthesis the connection between process and concept in reference to collage/collision <br>• Exercise with different methods and traditions of representation of space, form and color in reference to history and visual |

| | | culture |
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| | | • Medium: Develop, test and employ materials, process and mediums in a way that activates your ideas and concepts |

## MA Fine Arts –(Painting) Sem-2

| Paper I (Theory) | History of Modern Western Art | • Trace the development of Modern Western art from the 18th centaury to 20th century. <br> • Develop a critical understanding of western Art Movements and its relevance and impact on art. <br> • Critical understanding of the art work of some of the seminal/prominent artists and their contributions to modern art. <br> • Develop a critical understanding of History of Western Art and its relevance and impact on art. |
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| Paper II (Theory) | Philosophy of Art | • Introduction and effective knowledge of art and aesthetics, for carrier development/ art appreciation. <br> • Critical understanding of Indian Vedic Philosophy and Literature and its relevance to art. <br> • To develop a keen insight into the contribution of Indian Philosophy in development of art in India. <br> • Develop a critical understanding of Indian philosophy of art and aesthetics and its relevance to Indian art. |
| Paper III (Practical) | Portrait and Life study | • Study of figure from life and its transformation into composition. |
| Paper IV (Practical) | Creative Composition | Advancement of previous experience towards a complete pictorial interpretation, theme and expression of mood, symbolism, dramatization, distortion for emotional effect including abstract expressionism projects with emphasis on independent creative work. <br> **a) Advanced Drawing** <br> • Exploration of an individual approach to drawing as an aesthetic exercise of visual sign and symbol and locate your practice in the broader context of contemporary art <br> • Exercise of different drawing techniques of traditional and contemporary masters Exercise on application of different mediums both traditional and contemporary as a drawing tool <br> • Medium: pencil, charcoal, pastel, pen and ink, water color Acrylic and oil, photocopy, impression, stencil, etc. <br> **b) Composition** <br> • Identify and synthesis the connection between process and concept in reference to collage/collision <br> • Exercise with different methods and traditions of representation of space, form and color in reference to history and visual culture <br> • Medium: Develop, test and employ materials, process and mediums in a way that activates your ideas and concepts |

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## MA Fine Arts –(Painting) Sem-3

| Paper I (Theory) | History of Modern Indian Art | • To identify the issues and challenges of modernism and nationalism in the Indian context.<br>• Effective knowledge of Visual arts, for carrier development<br>• Critical understanding of various modern art movements, art groups of India.<br>• To develop a keen insight into the contribution of movements and artists in shaping modern art in India. |
|---|---|---|
| Paper II | Dissertation | • A critical and analytical aspect of Painting, Applied Arts, Sculpture, Graphics (Print Making) etc.<br>• A critical and analytical aspect of History of Art.<br>• Folk, Tribal Art and Popular form of Art.<br>• Concept of Aesthetics or Philosophy.<br>• Contemporary Artists.<br>• New trends in Contemporary Art.<br>• Any other new relevant topic including experimentation etc. |
| Paper III (Practical) | Life Study | • Study of figure from life and its transformation into composition. |
| Paper IV (Practical) | Creative Composition | Advancement of previous experience towards a complete pictorial interpretation, theme and expression of mood, symbolism, dramatization, distortion for emotional effect including abstract expressionism projects with emphasis on independent creative work.<br>**a) Advanced Drawing**<br>• Exploration of an individual approach to drawing as an aesthetic exercise of visual sign and symbol and locate your practice in the broader context of contemporary art<br>• Exercise of different drawing techniques of traditional and contemporary masters Exercise on application of different mediums both traditional and contemporary as a drawing tool<br>• Medium: pencil, charcoal, pastel, pen and ink, water color Acrylic and oil, photocopy, impression, stencil, etc.<br>**b) Composition**<br>• Identify and synthesis the connection between process and concept in reference to collage/collision<br>• Exercise with different methods and traditions of representation of space, form and color in reference to history and visual culture<br>• Medium: Develop, test and employ materials, process and mediums in a way that activates your ideas and concepts |

## MA Fine Arts –(Painting) Sem-4

| Paper I (Theory) | History of Modern Indian Art | • To identify the issues and challenges of modernism and nationalism in the Indian context.<br>• Effective knowledge of Visual arts, for carrier development<br>• Critical understanding of various modern art movements, art groups of India. |
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|---|---|---|
| | | • To develop a keen insight into the contribution of movements and artists in shaping modern art in India. |
| Paper II | Dissertation | • A critical and analytical aspect of Painting, Applied Arts, Sculpture, Graphics (Print Making) etc.<br>• A critical and analytical aspect of History of Art.<br>• Folk, Tribal Art and Popular form of Art.<br>• Concept of Aesthetics or Philosophy.<br>• Contemporary Artists.<br>• New trends in Contemporary Art.<br>• Any other new relevant topic including experimentation etc. |
| Paper III (Practical) | Life Study | • Study of figure from life and its transformation into composition. |
| Paper IV (Practical) | Creative Composition | Advancement of previous experience towards a complete pictorial interpretation, theme and expression of mood, symbolism, dramatization, distortion for emotional effect including abstract expressionism projects with emphasis on independent creative work.<br>**a) Advanced Drawing**<br>• Exploration of an individual approach to drawing as an aesthetic exercise of visual sign and symbol and locate your practice in the broader context of contemporary art<br>• Exercise of different drawing techniques of traditional and contemporary masters Exercise on application of different mediums both traditional and contemporary as a drawing tool<br>• Medium: pencil, charcoal, pastel, pen and ink, water color Acrylic and oil, photocopy, impression, stencil, etc.<br>**b) Composition**<br>• Identify and synthesis the connection between process and concept in reference to collage/collision<br>• Exercise with different methods and traditions of representation of space, form and color in reference to history and visual culture<br>• Medium: Develop, test and employ materials, process and mediums in a way that activates your ideas and concepts |