COURSE&PROGRAMOUTCOMESOF
(B.COM PASS COURSE)

Semester	Subject Name and Code	Course Outcomes
SEM-1	**subject 1 Business Management**	After completing the course, the student shall be able to: • Understand dynamics of business organizations and managementpractices with respect to stakeholders. • Understand varied perspectives related to business environment and entrepreneurship. • Analyze how organizations adapt to an uncertain environment anddecipher decision making techniques managers use to influence and control the internal environment. • Analyze the relationship amongst functions of management i.e.planning, organizing, directing and controlling. • Appreciate the change in working pattern of modern organizations.
	subject 2 Financial Accounting	•This subject provides an in-depth knowledge of basic accounting features to the students. • To understand the role of accounting concepts and conventions in accounting • To understand the Accounting process which starts from recording of business transactions to preparation of trial balance i.e. Journal, Ledger, Cash- Book and other subsidiary books etc. • To learn how to prepare depreciation accounts in straight and written down value method. • To understand the basics differences between capital and revenue expenditures and learn how to prepare financial statements for different organization froma trial balance.
	subject 3 Business Mathematics	• Comprehend the concept of systematic processing and interpreting the information in quantitative terms to arrive at an optimum solution to businessproblems. • Develop proficiency in using different mathematical tools (matrices, calculus, linear programming, and mathematics of finance) in solving daily lifeproblems. • Acquire competence to use computer for mathematical computations, especially with Big data. • Obtain critical thinking and problem-solving aptitude. • Evaluate the role played by mathematics in the world of business and economy.

	subject 4 **Basic of Computer**	• Understand the various concepts and terminologies used in computer networks and internet and be aware of the recent developments in the fast changing digital business world. • Handle document creation for communication. • Acquire skills to create and make good presentations • Make various computations in the area of accounting and finance and represent the business data using suitable charts. S/He should be able to manipulate andanalyze the business data for better understanding of the business environment and decisionmaking • Understand and apply the various database concepts and tools in the related business areas with the help of suggested popular software
	subject 5 **Business Economics**	•To know the basic concept of demand and supply and types of elasticity of demand: price, income and cross. • To have the perfect knowledge of notion of indifference curve analysis of consumer behaviour and theory of revealed preference. • To have in-depth knowledge of the consumer surplus and use the Indifference curves as an analytical tool. • To get the insights of various factors of productions, production function, law of productions. • To understand the basic differences between return to scale and factor.
	subject 6 **Business Communications**	•This subject prepares students in basic as well as business communication. • To understand the importance of one-way, two-way, oral and written communications,group discussions etc. • How to write office memos and inter/intra office communications. • To understand the basics of the Spoken English for Business communication: Presentation of Plans, Objectives; speech-Preparation, Mode of deliverypresentation; Addressing the Audience. • Explore the E – correspondence and its usage, impact etc
SEM-2	**subject 1** **Business Environment**	• Systematically explores the external environment-legal & regulatory, macroeconomic,cultural, political, technological and natural. • Analyze the environment of a business from the legal & regulatory, Macroeconomic, cultural, political, technological and natural perspectives. • Discuss the supply and demand theory and its impact on insurance. • Explain the effects of government policy on the economic environment and insurance industry. • Outline how an entity operates in a business environment.

	subject 2 Business Economics	• Basic understanding of Cost of Production and apply the various cost concepts •To have the insights of various markets structures and the equilibrium conditions of a firm and industry in short and long run. • To analyse the market demand and supply and the models of Stability analysis-Walrasian and Marshallian. • To know the various factors responsible for economic-Development: Physical and Capital Formation, and Technology. •Analyse the several Sustainability Institutional factors / variables in development
	subject 3 Financial Accounting	• Build an understanding of theoretical framework of accounting and be able to prepare financial statements. • Explain and determine depreciation and inventory value • Develop understanding of accounting for hire purchase transactions and lease transactions • Understand branch and departmental accounting • Develop the skill of preparation of trading and profit and loss account and balance sheet using computerized accounting or prepare accounts for dissolutionof a partnership firm
	subject 4 Business Management	• To understand about the Business Activities, Manufacturing, service Sectors, globalization,liberalization and privatization, Multinational corporations. • To understand the Entrepreneurial opportunities i.e. Networking marketing, Franching,Business Process Outsourcing, E-commerce and M-commerce. • How to explore the business opportunities, idea generation, creativity & innovation. •To aware about Product and pricing decisions, Distribution and promotional decisions,human resources etc. • To understand the basics of the process on how to set up a small business, preliminary screening and aspects of the detailed Project report with their feasibility.
	subject 5 Business Mathematics	• Comprehend the concept of systematic processing and interpreting the information in quantitative terms to arrive at an optimum solution to businessproblems. • Develop proficiency in using different mathematical tools (matrices, integration,differential equation linear and mathematics of finance) in solvingdaily life problems. • Acquire competence to use computer for mathematical computations, especially with Big data. • Obtain critical thinking and problem-solving aptitude.

	subject 6 **Basic of Computer**	• Understand the various concepts and terminologies used in computer networks and internet and be aware of the recent developments in the fast changing digitalbusiness world. • Handle document creation for communication. • Acquire skills to create and make good presentations • Make various computations in the area of accounting and finance and represent the business data using suitable charts. S/He should be able to manipulate andanalyze the business data for better understanding of the business environment and decisionmaking • Understand and apply the various database concepts and tools in the related business areas with the help of suggested popular software.
SEM-3	**subject 1** **Business regulatory framework-I**	• Understand basic aspects of contracts for making the agreements, contracts and subsequently enter valid business propositions. • Handle the execution of special contracts used in different types of business. • Learn legitimate rights and obligations under The Sale of Goods Act.
	subject 2 **Corporate Accounting-I**	• A comprehensive understanding of regulatory environment of issue and forfeiture of shares; redemption of preference shares and Buy back. • Ability to accounting treatment for valuation of goodwill; valuation of securities; issue and redemption of debentures. •An understanding of principles of amalgamation and internal reconstruction of companies as perAS-14. • Ability to analyze the complex issues of holding companiesaccounts; profit or loss prior and subsequent to incorporation. • To know the accounting environment and financial reporting requirements for companies and various corporate related issues.
	subject 3 **Business Statistics**	• To provide a basic knowledge of the application of mathematics and statistics to business disciplines. • Learn how to calculate and apply measures of location and measures of dispersion grouped and ungrouped data cases. • How to calculate and apply measures of location and measures of dispersion grouped and ungrouped data cases. • How to apply probability for taking various business decisions.

	subject 4 **Company Law- I**	• Development of student skills in regulatory practice relating to company law. •Provide students with knowledge and appreciation of the major core topics in company law. • Helpful at the time of formation of company to the young entrepreneurs . • Students become aware of legal nature and significance of limited liability of company. • Understanding about borrowing powers of the company to the money lenders under companies act.
	subject 5 **Human Resource Management**	• Understand basic nature and importance of human resource management. • Analyze the current theory and practice of recruitment and selection. • Realize the importance of performance management system in enhancing employee performance. • Recommend actions based on results of the compensation analysis and design compensation schemes that are cost effective, that increase productivity of theworkforce, and comply with the legalframework. • Understand role of modern HRM in meeting challenges of changing business environment.
	subject 6 **Basics of Retailing**	• To be able to understand the meaning of Retail, Retailing, Retailers, growth and present size of Indian retail, career and growth opportunities, latestTechnology and future of retailing in India. • To learn about the different types of Retailing such as traditional retail formats *vs.* modern retail formats, Store and non-store, Franchiser- franchisee. • To gain an insight about the level of operations of retailing, their functions and strategy formulation. • To be able to develop strategic action plans to gain an edge over rivals. • Monitoring and evaluating their actions, pricing strategies and location strategies
SEM-4	**subject 1** **Corporate Accounting-II**	• To recognise and understand the ethical issues in while preparing Final Accounts of acompany. • An understanding of the regulatory environment regarding accounts of Banking Companies and Underwriting of shares and debentures • The ability to prepare the accounts of Insurance Companies and consolidated accounts after Liquidation of companies • An understanding of accounting requirement of corporate groups like preparing the accounts of Electricity Companies. • To employ the critical thinking skills to analyse the accounting data as well as the effects of

		different accounting methods on financial statements of a company.
	subject 2 Business Statistics	• This subject will introduce students to the quantitative tools that are necessary for day-todaybusiness needs. • To develop an ability to analyse and interpret data to provide meaningful information toassist in making management decisions. • How to apply discrete and continuous probability distributions to various business problems. • Compute and interpret the results of Bivariate and Multivariate Regression and Correlation Analysis
	subject 3 Marketing Management	• Develop understanding of basic concepts of marketing, marketing philosophies and environmental conditions effecting marketing decisions of a firm. • Understand the dynamics of consumer behaviour and process of market selection through STP stages. • Understand and analyze the process of value creation through marketing decisions involving product development. • Understand and analyze the process of value creation through marketing decisions involving product pricing and its distribution. • Understand and analyze the process of value creation through marketing decisions involving product promotion and also to equip them with theknowledge of various developments in marketing area that may govern marketingdecisions of a firm.
	subject 4 Business Regulatory Framework	• Understand basic aspects of contracts for making the agreements, contracts and subsequently enter valid business propositions. • Handle the execution of special contracts used in different types of business. • Learn legitimate rights and obligations under The Sale of Goods Act. • Acquire skills to initiate entrepreneurial ventures as LLP. • Understand the basic aspects consumer protection Act.
	subject 5 Secretarial Practice:	•Understand the duties and responsibilities of company secretaries regarding the different provisions/functions/activities • Understand the rules and the broader procedural aspects involved in different types of companies covering the Companies Act 2013.

		• Comprehend and appropriately use the basic legal documents essential for operations and management of company. • Distinguish between varied company processes, meetings and decisions. • Know the framework of dividend distribution and role of auditors in a company. • Understand and evaluate working of depositories and their functions for working in stock market. • Computer Applications
	subject 6 Corporate Law-II	• Development of student skills in regulatory practice relating to company law. • Provide students with knowledge and appreciation of the major core topics in company law. • Helpful at the time of formation of company to the young entrepreneurs . • Students become aware of legal nature and significance of limited liability of company. • Understanding about borrowing powers of the company to the money lenders under companies act.
SEM 5	**subject 1 Cost Accounting - I**	• Understand conceptual framework of Cost Accounting. • Understand in detail the accounting and control of material and labour cost. • Understand classification, allocation, apportionment and absorption of overheads in cost determination. • Calculate the cost of products, jobs, contracts, processes and services. • Have basic understanding of cost accounting book keeping systems and reconciliation of cost and financial account profits.
	subject 2 Entrepreneurship and small scale business	• To know the basics of Entrepreneurship, Factors & Problems (Operational and Non-Operational) and Obstacles. • To understand the Theories of Entrepreneurship, Schumpeter's, Ducker's and Walker'sviews on Entrepreneur. • To learn about the converting business opportunities into reality, feasibility Report andanalysis, Entrepreneurial Problems. • To be familiar with External Environment Analysis, Venture Capital, entrepreneurship Development Programmes in India. •Understand the concept of small scale business tier problem and redressal mechinery
	Subject 3 Accounting for Manager	• Understand thoroughly the conceptual framework of Management Accounting; differentforms of accounting—Financial, Cost and Managerial; types of costsfor decision making and cost control; cost control and cost reduction.

		• Understand the concept of marginal cost and marginal costing; statements using absorption and variable costing; learning of cost-volume-profit analysis and break-even analysis using mathematical and graphical approaches; and their application in businesses. • Understand the concept of relevant cost and make decisions related situations using marginal costing and differential costing techniques.
	Subject 4 **International** **Business** **Environment**	• Understand the process of globalization, its impact on the evolution and growth of international business and to appreciate the changing dynamics of the diverse international business environment. • Analyze the theoretical dimensions of international trade and and to understand the concept of Balance of payment account and its components. • Understand the significance of different forms of regional economic integration and to appreciate the role played by various international economic organisations such as the WTO, UNCTAD, IMF and World Bank. • Familiarize students with the international financial environment, and get them acquainted with the basic features of the foreign exchange market – its characteristics and determinants. • Critically examine the concept and form of foreign direct investment, and to create awareness about emerging issues in international business such as outsourcing and ecological issues.
	Subject 5 **Taxation Laws I**	• Understand the basic concepts in the law of income tax and determine the residential status of different persons. • Identify the five heads in which income is categorised and compute income under the heads ‘Salaries’ and ‘Income from House Property’. • Compute income under the head ‘ Profits and gains of business or profession’, ‘Capital gains’ and ‘Income from other sources’. • Understand clubbing provisions, aggregate income after set-off and carry forward of losses, and deductions allowed under the Income Tax Act; and further to compute taxable income and tax liability of individuals and firms. • Develop the ability to file online returns of income.

	Subject 6 Financial Markets operations	• Understand the meaning and scope of financial markets as well as institutions in India. • Understand the concepts of Money Market and Capital Market • Explain Commercial Banking and its Current developments. • Explain concept of Non-Banking Financial Companies (NBFC's) • Examine the Financial Services Industry
SEM 6	**Subject 1 Auditing**	Differentiate between different aspects of auditing especially for internal check, internal control and for overall corporate governance. Understand the concept of corporate governance in organisationsand its essence for management. • Provide and assimilate information leading to failure of organisation and corporate scams. Comprehend the governance framework for an organisationprovided by different regulatory bodies in India and Abroad. Recognise the essence of ethics in business. Company Law After completing the course, the student shall be able to: Understand the rules and the broader procedural aspects involvedin different types of companies covering the Companies Act 2013. Comprehend and appropriately use the basic legal documents essential for operations and management of company. • Distinguish between varied company processes, meetings and decisions. • Know the framework of dividend distribution and role of auditors in a company. • Understand and evaluate working of depositories and their functions for working in stock market.
	Subject 2 Taxation Laws II	• Understand clubbing provisions, aggregate income after set -off and carry forward of losses, and deductions allowed under the Income Tax Act; andfurther to compute taxable income and tax liability of individuals and firms. • Develop the ability to file online returns of income. •Understand the concept of appeals punishment prosecution etc • To know about the different types of assessment
	Subject 3 Financial Management	• Explain the nature, scope and objective of financial management, along with Time Value of Money, Risk & Return. • Analyze Capital Budgeting Process and Techniques including NPV, IRR and Profitability Index. • Examine various Capital structure theories and estimating cost of capital. • Critically examine basic Theories and policies of Dividend.

		• Estimate working capital along with an overview of cash receivables and inventory management.
	Subject 4 **Goods and Service Tax**	• Connect with the genesis of goods and services tax (GST), decipher the constitutional amendment carried out to install GST in India and comprehend thecomposition and working of GST council. • Understand the meaning of supply under GST law, differentiate between intra-state and inter-state supply, comprehend rules related to the place of supplyand compute the value of supply. • Comprehend the utilization of input tax credit, and the reverse charge mechanism of paying GST and to know the procedure for claiming refund under GST law. • Understand the provisions for registration under GST along with special provisions such as those related to anti-profiteering and avoidance of dual control. • Know the basic concepts of Customs Act and to compute the assessable value for charging customs duty.
	Subject 5 **International Marketing**	• To know the concept of International Marketing, problems in international marketing and ways to be international. • To understand the external marketing environment and different International market entry strategies. • To be familiar with different techniques of foreign market selection, their segmentation, positioning. • How to make successful International Marketing Plan, Organizing and controlling, evaluating the Impact of globalization. • To learn the New Product planning & development, branding, Packaging and labeling, Pricing Decisions and strategies.
	Subject 6 **Cost Accounting**	• Demonstrate domain knowledge in installation of costing system; • Better knowledge about the how to get over from the labour turnover, overtime and idle time; • Understanding the distribution scheme of production overhead and factory overhead • Making the decisions regarding make or buy • understand the concept of contract costing process costing • To know the basics of standard costing variance analysis budgetary control and marginal costing

COURSE&PROGRAMOUTCOMESOF
Mathematics (BA & BSc)

Semester	Subject Name and Code	Course Outcomes
SEM-1	**ALGEBRA**	**CO-1:** Paper:Algebra Subject: Mathematics The course will enable the students to **CO-2:** Recognize Symmetric, Skew-symmetric, Hermitian and skew Hermitian matrices **CO-3:** Recognize consistent and inconsistent systems of linear equations by the row echelon form of the augmented matrix. **CO-**4: Perform Elementary Operations on matrices and find Rank of a matrices **CO-5:** Compute the characteristic polynomial, eigenvalues, eigenvectors, and eigenspaces, as well as the geometric and the algebraic multiplicities of an eigenvalue and apply the basic diagonalization result. **CO-6:** Find eigen values and corresponding eigenvectors for a square matrix.
	CALCULUS	**CO-1:** Sketch the curves in Cartesian and polar coordinates as well as learn techniques of sketching the conics **CO-2:** Visualize three dimensional figures and calculate their volumes and surface areas. **CO-3:** Understand limits, continuity and derivatives of functions of single variable. **CO-4**: Compute area of surfaces of revolution and the volume of solids by integrating over cross-sectional areas. **CO-5**: Compute successive differentials. **CO-6**: Understand asymptotes, reduction formula, rectification.
	SOLID GEOMETRY	**CO1:**Learn concepts in two-dimensional geometry. **CO2;** Identify and sketch conics namely, ellipse, parabola and hyperbola. **CO3:** Learn about three-dimensional objects such as spheres, conicoids, straight lines and plane
SEM-2	**Differential Equations**	**CO-1:** Learn basics of differential equations and mathematical modeling. **CO-2:** Formulate differential equations for various mathematical models. **CO-3:** Solve first order non-linear differential equations and linear differential equations of higher order using various techniques. **CO-4:**Apply these techniques to solve and analyze various mathematical models.

	NUMBER THEORY AND TRIGNOMETRY	**CO-1:** Learn about some fascinating discoveries related to the properties of prime numbers. **CO-2:** • Know about number theoretic functions and modular arithmetic. **CO-3:** • Learn about equivalent classes and cardinality of a set. **CO-4:** • Use modular arithmetic and basic properties of congruence. **CO-5:** Solve linear, quadratic and system of linear congruence equations. **CO-6:** Employ De Moivre's theorem in a number of applications to solve numerical problems
	VECTOR CALCULUS	**CO-1:**Compute Scalar and vector product of three vectors and four vectors and Reciprocal vectors. **CO-2:** Compute and apply gradient, divergence and curl of functions. **CO-3:**Transform curvilinear coordinates to Cartesian coordinates and vice versa. **CO-4:**Apply Gauss, Green and Stocks Theorem.
SEM-3	**Advanced Calculus**	**CO-1:** Have a rigorous understanding of the concept of limit of a function. **CO-2:** Learn about continuity and uniform continuity of functions defined on intervals. **CO-3:** Understand geometrical properties of continuous functions on closed and bounded intervals. **CO-4:** Learn extensively about the concept of differentiability using limits, leading to a better understanding for applications. **CO-5:** Know about applications of mean value theorems and Taylor's theorem. **CO-6:** Learn basics of differential geometry
	PARTIAL DIFFERENTIAL EQUATIONS	**CO-1:** Formulate, classify and transform first order PDEs into canonical form. **CO-2:** Learn about method of characteristics and separation of variables to solve first orders PDE's. **CO-3:** Classify and solve second order linear PDEs. **CO-4:** Learn about Cauchy problem for second order PDE and homogeneous and non homogeneous wave equations. **CO-5:** Apply the method of separation of variables for solving many well-known second order PDEs
	STATICS	**CO-1:** Understand Composition and resolution of forces, Parallel forces, Moments and Couples.. **CO-2:** • Derive Analytical conditions of equilibrium of coplanar forces. • **CO-3:** Understand the concept of Friction and Centre of Gravity. • **CO-4:** Understand the concept of Virtual work, Wrenches, Stable and unstable equilibrium
	Sequence and series	**CO-1:** Understand the real numbers and their basic properties **CO-2:** Be familiar with convergent and Cauchy sequences. **CO-3:** Test the convergence and divergence of infinite series of real numbers. **CO-4:** Test the behavior of sequences. **CO-5:** Learn about power series expansion of some elementary functions

SEM-4	**Special Functions and Integral Transforms**	**CO-1:** Derive Series solution of differential equations. **CO-2:** • Explore Legendre and Hermite differentials equations and their solutions. •. **CO-3:** Understand and use Laplace and Fourier transforms and their Properties. • Approximate transcendental functions in terms of power series as well as, differentiation and integration of power series **CO-4:** Approximate transcendental functions in terms of power series as well as, differentiation and integration of power series
	Programming in C and Numerical Methods	**CO-1:** Learn basics of Programming of C. **CO-2:** Learn some numerical methods to find the zeroes of nonlinear functions of a single variable and solution of a system of linear equations, up to a certain given level of precision. **CO-3:** Know about methods to solve system of linear equations, such as Gauss−Jacobi, Gauss−Seidel and SOR methods.
Sem 5	**GROUP AND RINGS**	**CO-1:** Recognize the mathematical objects that are groups, and classify them as abelian, cyclic and permutation groups, etc. • **CO-2:** Link the fundamental concepts of groups and symmetrical figures. • **CO-3:** Analyze the subgroups of cyclic groups and classify subgroups of cyclic groups. • **CO-4:** Explain the significance of the notion of cosets, normal subgroups and factor groups. … **CO-5:** • Know about group homomorphism and group isomorphism. • **CO-6:** Learn about the fundamental concept of rings, integral domains and fields. • **CO-7:** Know about ring homomorphism's and isomorphism's theorems of rings. • Appreciate the significance of unique factorization in rings and integral domains …
	REAL ANALYSIS	**CO-1:** Learn about some of the classes and properties of Riemann integral functions, and the applications of the Fundamental theorems of integration. • .**CO-2:** Know about improper integrals including, beta and gamma functions. **CO-3:** • Learn about Cauchy criterion for uniform convergence and Weierstrass M-test for uniform convergence. • **CO-4:** Learn various natural and abstract formulations of distance on the sets of usual or unusual entities. Become aware one such formulations leading to metric spaces. • **CO-5:** Learn about the two important topological properties, namely connectedness and compactness of metric spaces
	LINEAR ALGEBRA	**CO-1:** Learn about the concept of linear independence of vectors over a field, and the dimension of a vector space. **CO-2:** • Basic concepts of linear transformations, dimension theorem, matrix representation of a linear transformation, and the change of coordinate matrix.. **CO-3:** • Compute inner products and determine orthogonality on vector spaces, including Gram−Schmidt orthogonalization to obtain

		orthonormal basis. • **CO-4:** Find the adjoint, normal, unitary and orthogonal operator
SEM 6	**NUMERICAL ANALYIS**	**CO-1:**Understand Finite Differences operators and their relations. • **CO-2:** Use Gauss forward and Gauss's backward interpolation formulae, Sterling, Bessel Formula. • **CO-3:** Use Interpolation techniques to compute the values for a tabulated function at points not in the table. • **CO-4:** Applications of numerical differentiation and integration to convert differential equations into difference equations for numerical solutions
	REAL AND COMPLEX ANALYSIS	**CO-1:** Use Jacobins, Beta and Gama functions, Double and Triple integrals, Drichlet's integrals, change of order of integration in double integrals. • **CO-2:** Understand Fourier expansion of piecewise monotonic functions, Properties of Fourier Coefficient, Stereographic projection of complex numbers. • **CO-3:** Explore Analytic functions and their properties. • Use different type of transformations.
	DYNAMICS	**CO-1:** Understand the concept of Velocity and acceleration along radial, transverse, tangential and normal directions as well as Relative velocity and acceleration. • **CO-2:** Understand the terminology of Mass, Momentum and Force. • **CO-3:** State and apply Newton's laws of motion. • Understand General motion of a rigid body. • **CO-4:**Study Central Orbits, Kepler laws of motion

COURSE & PROGRAM OUTCOMES OF

B.Sc. Non-Medical (Physics)

Semester	Subject Name and Code	Course Outcomes
SEM-1	***Mechanics***	CO-1. Mechanics of single And system of particles. CO-2. Conservation of Linear and angular momentum, and their use in real-life problems. CO-3. Lagrangian equation of motion and using this equation. We can get complete information of particles i.e. position, velocity and acceleration. CO-4. Rotation of rigid body and parameter associated with it. Understanding of rotational motion of the rigid body.

	Electricity, Magnetism and Electromagnetic Theory	CO-1. Basics of electromagnetics. CO-2. Electrostatic field and Gauss Law , its application to find out the electric field for different configuration of charge CO-3. Magneto-statics and different laws, domain theory, cycle of magnetization, Hysteresis loop of different materials, classification of magnetic materials. **CO-4.** Electromagnetic theory, Maxwell equation, and electromagnetic waves , their application in ICT.
SEM-2	***Properties of Matter, Kinetic Theory and Relativity***	CO-1. Elasticity Hooke's law and application of these laws to find out the strength of material used for different application CO-2. Kinetic theory of gases. Its application in our daily life. "We can understand the whole thermodynamics in a kitchen" CO-3. Theory of relativity, Galilean and Lorentz transformation, their application to justify space contraction, time dilation, velocity addition theorem, mass dilation etc.
	Electromagnetic Induction and Electronic Devices	CO-1. DC transient (voltage and current equation of RL, RC and RLC ckt) CO-2. AC transient (voltage and current equation of RL, RC and RLC ckt) CO-3. Basics of semiconductor and semiconductor devices i.e. solar cell photo diode LED CO-4. Application of Diodes : rectifier, Zener Diode, I-V characteristics and application in voltage regulation CO-5. Basics of transistors and cathode ray oscilloscope CO-6. Application of transistor as an amplifier And application positive feedback to generate sinusoidal signal (Oscillator)

SEM-3	***Computer Programming and Thermodynamics***	CO-1. Understand the basic concepts of Thermodynamics and Thermodynamical Variable. CO-2. Different Laws and its application (Carnot Cycle). CO-3. Draw and understand the flow Chart and its Interpretation. CO-4. Understand conversion :Binary to digital conversion. IF ,DO Loop .Applications of Claperyon Equation, Maxwell Function (F,H,G,U)and Relation
	Waves and Optics	CO-1. The concept of Transverse and Longitudenal Waves. CO-2. Concept of Fourier series and transforms. CO-3. Aberrations in lenses and their removal. Interference by division of wavefront
SEM-4	***Statistical Mechanics***	CO-1. Understand the basic concepts of Thermodynamics and Probability CO-2. Different aspects of Statistics to understand Thermodynamical System. CO-3. Understand the different Quantum mechanics on particles and its Interpretation. CO-4. Understand Fermi gas, Photon gas, Boson gas and zero point energy. CO-5. Applications of STASTICS to develop Radiation Law and Specific Heat (metal)Relation.
	Waves and Optics	CO-1. Interference by Division of Amplitude: Colour of thin, films, wedge shaped film, Newton's rings. CO-2. Interferometers: Michelson's interferometer and its application to (I) Standardisation of a meter (II) determination of wave length. CO-3. Fresnel's Diffraction: Fresnel's half period zones, zone plate, diffraction at a straight edge, rectangular slit and circular aperture. CO-4. Fraunhoffer diffraction : One slit diffraction, Two slit diffraction N-slit diffraction, Plane transmission granting spectrum, Dispersive power of a grating , Limit of resolution, Rayleigh's criterion, resolving power of telescope and a grating. CO-5. Polarization: Polarisation and Double Refraction : Polarisation by reflection, Polarisation by scattering, Malus law, Phenomenon of double refraction, CO-6. Huygen's wave theory of double refraction (Normal and oblique incidence), CO-7. Analysis of Palorised light : Nicol prism, Quarter wave plate and half wave plate, production and detection of (i)

		Plane polarized light (ii) Circularly polarized light and (iii)Elliptically polarized light, CO-8. Optical activity, Fresnel's theory of rotation, Specific rotation, Polarimeters (half shade and Biquartz).
Sem 5	***Solid State Physics***	CO-1. Understand different types of lattices. CO-2. Crystal structures of different materials CO-3. Understand the x ray diffraction and different experimental methods of it CO-4. Understand Reciprocal lattice of different lattices.Know about Specific heat of solids
	Quantum Mechanics	CO-1. Understand Photoelectric effect, Compton effect. CO-2. Understand about concept of wave duality. Understand about wave function and its significance. Understand particle potential energy at different positions in Lattice
SEM 6	***Atomic , Molecular and Laser Physics***	CO-1. Understand atomic model and different atomic spectra. CO-2. Understand effects of Magnetic and Electric field on spectra. CO-3. Understand molecular spectra. CO-4. Understand basics of LASER ,its construction and working .Know about application of LASER
	Nuclear Physics	CO-1. Understand basic properties of Nucleus. CO-2. Know about construction of mass spectrograph and its working. CO-3. Understand alpha decay, beta decay, gamma particle. CO-4. Understand nuclear reactions and conservation laws. CO-5. Know about Nuclear reactors.

COURSE & PROGRAM OUTCOMES OF CHEMISTRY B.Sc. PASS COURSE

CourseOutcomes

Semester	Course Code	CourseOutcomes
Sem-1	**CH-101**	**CO-1** To understand Atomic Structure Idea of de Broglie matter waves, Heisenberg uncertainty principle, atomic orbitals, quantum numbers, wave functions and shapes of s, p, d orbitals. **CO-2** To study Periodic Properties, General principles of periodic table. Electronic configurations of the elements, effective nuclear charge, Slater's rules. **CO-3** To study about types of chemical bonds, Valence bond theory and its limitations, directional characteristics of covalent bond, various types of hybridization and shapes of simple inorganic molecules and ions Valence shell electron pair repulsion, theory to. MO theory. **CO-4** To study about Ionic Solids Ionic structures, radius ratio rule, lattice defects, semiconductors, lattice energy and Born-Haber cycle, solvation energy and its relation with solubility of ionic solids, polarizing power and polarisability of ions, Fajan's rule.

SEM-I		
	CH-102	**CO-1** To understand Gaseous States- Maxwell's distribution of velocities and energies, Calculation of root mean square velocity, average velocity and most probable velocity. Deviation of Real gases from ideal behaviour. Derivation of Vander Waal's Equation of State, its application in the calculation of Boyle's temperature and Explanation of behaviour of real gases using Vander Waal's equation. **CO-2** To study about Critical Phenomenons, PV isotherms of real gases, continuity of states. The Law of corresponding states and Liquification of gases. **CO-3** To study about To Liquid States Structure of liquids. Properties of liquids – surface tension, viscosity vapour pressure and optical rotations and their determination. Applications of liquid crystals. **CO-4** To study about Solid State Classification of solids, Laws of crystallography. Unit cell & space lattice. Bravais lattices, crystal system. X-ray diffraction by crystals. Derivation of Bragg equation. Determination of crystal structure o fNaCl, KCl.
	CH-103	**CO-1** To understand Structure and Bonding of organic compounds van der Waals interactions, resonance:,hyperconjugation, inductive effect, Electromeric Concept of isomerism. optical activity, chiral and achiral molecules meso compounds, resolution of enantiomers, inversion, retention and racemization. **CO-2** To study about Stereochemistry of Organic CompoundsR & S systems of nomenclatureE & Z system of nomenclature, Conformational isomerism, Newman projection and Sawhorse formulae **CO-3**To understand Mechanism of Organic Reactions Types of reagents – electrophiles and nucleophiles. Types of organic reactions. Energy considerations. carbocations, carbanions, free radicals, carbenes , arynes and nitrenes **CO-4** To study about IUPAC nomenclature,classification, Isomerism in alkanes, sources, methods of formation alkane and cyclo alkane, Baeyer's strain theory and its limitations.

SEM-2	**CH-201**	**CO-1** To understand Hydrogen Bonding & Vander Waals Forces Hydrogen Bonding Metallic Bond and Semiconductors. **CO-2** To study about s-Block Elements, Chemistry of Noble Gases **CO-3** To understand p-Block Elements, Boron family (13th gp), Carbon Family (14th group. **CO-4** To study about Nitrogen Family (15th group) , Oxygen family (16th group). Halogen Fami l y (17th group).
	CH-202	**CO-1** To understand Rate of reaction, rate equation, factors influencing the rate of a reaction, Kinetics of different order reaction. **CO-2** To study about Effect of temperature on the rate of reaction – Arrhenius equation. Theories of reaction rates. **CO-3** To understand Electrolytic conduction, factors affecting electrolytic conduction.Arrhenius theory of ionization, Ostwald's Dilution Law. Debye- Huckel – Onsager's equation for strong electrolytes .Transport number concept. **CO-4** To study about Kohlarausch's Law study about strong and weak electrolytes. conductometric titrations.
	CH-203	**CO-1** To Study about Nomenclature of alkenes. Chemical reactions of alkenes mechanisms involved in it. **CO-2**.To understand concept of Arenes and Aromaticity, Nomenclature Aromatic electrophilic substitution general pattern of the mechanism. Energy profile diagrams. Activating , deactivating subs tituents and orientation. **CO-3**To understand concept of Dienes and Alkynes Nomenclature and classification of dienes. **CO-4**To understand concept of Alkyl and Aryl Halides Nomenclature
		and classes of alkyl halides, methods of formation, chemical reactions. Mechanisms and stereochemistry of nucleophilic substitution reactions of alkyl halides.
SEM-3	**CH-301**	**CO-1** To study the Chemistry of Elements of Ist transition series: position in the periodic table, General characteristics & properites, Structures & properties of compounds of transition elements – TiO_2, $VOCl_2$, $FeCl_3$, $CuCl_2$ and $Ni(CO)_4$ **CO-2** To study the General characteristics and properties of the IInd and IIIrd transition elements, Comparison of properties of 3d elements with 4d & 5d elements **CO-3**To study Coordination Compounds ,Werner's coordination theory, effective atomic number concept, chelates, valence bond theory **CO-4**Study and analysis of Non-aqueous Solvents, Physical properties, types of solvents and their general characteristics, reactions in non-aqueous solvents with reference to liquid NH_3 and liquid SO_2
	CH-302	**CO-1**To understand the thermodynamic terms: system, surrounding. To know intensive and extensive properties, heat and work. To Understand the Zeroth Law, First law of thermodynamics & Joule's law. **CO-2** Tocalculate of w.q. dU&dH for the expansion of ideal gases under isothermal and adiabatic conditions for reversible process, Temperature, Kirchoffs equation. Bond energies. **CO-3** To understand Equilibrium constant and free energy, concept of chemical potential. To understand Temperature dependence of equilibrium constant;To understand Applications of Le-Chatetier's principle and Clausius – Clapeyron equation.
SEM-3		**CO-4:**To understand Nernst distribution law, Modification of distribution law when solute undergoes dissociation, association and chemical combination. To understand applications of distribution law: (i) Determination of degree of hydrolysis and hydrolysis constant of aniline hydrochloride. (ii) Determination of equilibrium constant of potassium tri-iodide complex and process of extraction.

	CH-303	**CO-1:** To learn about nomenclature, methods of formation, chemical reactions of □Monohydric, dihydric , Trihydric alcohols. Synthesis of epoxides. Acid and base-catalyzed ring opening of epoxides, orientation of epoxide ring opening, reactions of Grignard and organolithium reagents with epoxides **CO-2:** To learn about Nomenclature, structure and bonding. Preparation of phenols, physical properties and acidic character. Comparative acidic strengths of alcohols and phenols. **CO-3:** To know about Ultraviolet (UV) absorption spectroscopy Concept of chromophore and auxochrome. Bathochromic, hypsochromic, hyperchromic and hypochromic shifts. Woodward-Fieser rules. **CO-4:** To Understand Nomenclature, structure and bonding, physical properties, acidity of carboxylic acids and its derivatives.
SEM-4	**CH-401**	**CO-1** Study of Chemistry of Lanthanides, Electronic structure, oxidation states and ionic radii and lanthanide contraction, complex formation, occurrence and isolation, lanthanide compounds. **CO-2**Study of Chemistry of Actinides, General features and separation of Np, Pu and Am from U, Comparison of properties of Lanthanides and Actinides and with transition elements. **CO-3** To analyze the various acidic radicals, identification of acid radicals in typical combinations, interference of acid radicals including their removal in the analyses is of basic radicals. **CO-4**-To analyses the various groups of basic radicals, Theory of precipitation, co- precipitation, Post- precipitation, purification of precipitates
	CH-402	**CO-1** To understand Second law of thermodynamics, Carnot's cycles, entropy as a function of V & T & function of P & T. Entropy as a criteria of spontaneity and equilibrium. **CO-2**To understand Third law of thermodynamics, Nernst heat theorem, residual entropy. To understand Gibbs function (G) and Helmholtz function (A) as thermodynamic quantities, A &G as criteria for thermodynamic equilibrium and spontaneity. **CO-3** To understand electrolytic and Galvanic cells – reversible & Irreversible cells , EMF and its measurement, Wes ton standard cell, Types of reversible electrodes. Nernst equations, Standard Hydrogen electrode, reference electrodes, electrochemical series and its applications. **CO-4** To understand concentration cells with and without transference, liquid junction potential, application of EMF measurement, potentiometric titration . Determination of pH using Hydrogen electrode, Quinhydrone electrode and glass electrode by potentiometric methods.

	CH-403	**CO-1:** To learn in detail about Infrared (IR) absorption spectroscopy and Applications of IR spectroscopy in structure elucidation of organic compounds **CO-2:** To understand Structure, nomenclature, physical properties and Stereochemistry of amines. **CO-3:** To understand Mechanism of diazotization, structure of benzene diazonium chloride and Nitro Compounds **CO-4:** To learn about Nomenclature and structure of Aldehydes and Ketones, Wittig reaction, Mannich reaction, Baeyer–Villiger oxidation of ketones, Cannizzaro reaction. MPV, Clemmensen, Wolff-Kishner
SEM-5	**CH-501**	**CO-1** To understand Metal-ligand Bonding in Transition Metal Complexes Limitations of valence bond theory. **CO-2** To understand Thermodynamic and Kinetic Aspects of Metal Complexes. A brief outline of thermodynamic stability of metal complexes and factors affecting the stability, substitution reactions of square planar complexes of Pt(II). **CO-3** To understand Magnetic Properties of Transition Metal Complexes. Types of magnetic behavior. **CO-4** To understand Electron Spectra of Transition Metal Complexes. Types of electronic transitions, selection rules for d-d transitions, spectroscopic ground states.
	CH-502	**CO-1** To understand about Quantum mechanics, Postulates of quantum mechanics, Role of operators in quantum mechanics, To show quantum mechanically that position and momentum cannot be predicated simultaneously, Determination of wave function & energy of a particle in one dimensional box, Pictorial representation and its significance. **CO-2** To understand Thermodynamic and Kinetic Aspects of Metal Complexes A brief outline of thermodynamic stability of metal complexes and factors affecting the stability, substitution reactions of square planar complexes of Pt(II). **CO-3** To understand Magnetic Properties of Transition Metal Complexes. Types of magnetic behavior. **CO-4** To understand Electron Spectra of Transition Metal Complexes Types of electronic transitions, selection rules for d-d transitions, spectroscopic ground states.
	CH-503	**CO-1**To Study of Principle of NMR , the PMR signals, peak areas, equivalent and nonequivalent protons, positions and chemical shift, shielding and deshielding, proton counting, splitting of signals and coupling constants, magnetic equivalence of protons. **CO-2**To Study of PMR spectra of the molecules: ethyl bromide, n-propyl bromide, isopropyl bromide, 1,1-dibromoethane, 1,1,2-tribromoethane, ethanol, acetaldehyde, ethyl acetate, toluene, benzaldehyde and acetophenone. PMR spectroscopy for structure determination of organic compounds. **CO-3**To Study of Carbohydrates, Monosaccharides, mechanism of osazone formation, interconversion of glucose and fructose, Formation of glycosides, ethers and esters. Determination of ring size of glucose and fructose. Open chain and cyclic structure of D(+)-glucose & D(-) fructose. Mechanism of mutarotation. Structures of ribose and deoxyribose. **CO-4** To Study of disaccharides (maltose, sucrose and lactose) and polysaccharides (starch and cellulose), the Grignard reagents, Organozinc compounds, Organolithium compounds.

SEM-6	**CH-601**	**CO-1** To Study of Organometallic Chemistry Definition, nomenclature and classification of organometallic compounds. **CO-2** To Study of Acids and Bases, HSAB Concept Arrhenius, Bronsted – Lowry, the Lux – Flood, Solvent system and Lewis concepts of acids & bases. **CO-3**To Study of Bioinorganic Chemistry, Essential and trace elements in biological processes. **CO-4**To Study of Silicones and Phosphazenes. Their preparation, properties, structure and uses.
	CH-602	**CO-1** To Study of Electronic Spectrum Concept of potential energy curves for bonding,Franck- Condon principle. **CO-2** To Study about Photochemistry. Laws of photochemistry, Jablonski diagram, photosensitized reactions-energy transfer processes. **CO-3**To Study about. Dilute Solutions and Colligative Properties, Osmosis law of osmotic pressure. Elevation of boiling point and depression of freezing point. **CO-4** To Study about Phase Equilibrium, Gibbs phase rule, phase equilibria of one component system. Phase equilibria of two component systems solid-liquid equilibria, eutectic mixtures.
	CH-603	**CO-1**To Study of Heterocyclic Compounds- pyrrole, furan, thiophene and pyridine. Methods of synthesis and chemical reactions with mechanism of electrophilic substitution, nucleophilic substitution reactions, Comparison of basicity of pyridine, piperidine and pyrrole. **CO-2**To Study of Prepration and reactions of indole, quinoline and isoquinoline, Mechanism of electrophilic substitution reactions of, quinoline and isoquinoline, Organosulphur Compounds, Synthetic detergents alkyl and aryl sulphonates. **CO-3** To Study of Organic Synthesis via Enolates, alkylation of diethyl malonate and ethyl acetoacetate. The Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate, Synthetic polymers, Natural and synthetic rubbers. **CO-4**To Study of Amino Acids, Peptides& Proteins, end group analysis, selective hydrolysis of peptides, Classical peptide synthesis, solid–phase peptide synthesis. Structures of peptides and proteins: Primary & Secondary structure.

ProgramOutcomes

PO-1: Disciplinary knowledge and skill: A graduate student is expected to be capable of demonstrating comprehensive knowledge and understanding both theoretical and practical knowledge in all disciplines of Chemistry. Students can solve their subjective problems very methodically, independently and finally draw a logical conclusion. Further, the student will be capable of applying modern technologies, handling advanced instruments and Chemistry related soft-wares for chemical analysis, characterization of materials and in separation technology.

PO-2: Skilled communicator: The course curriculum incorporates basics and advanced training in order to make a graduate student capable of expressing the subject through technical writing as well as through oral presentation.

PO-3: Critical thinker and problem solver: The course curriculum also includes components that can be helpful to graduate students to develop critical thinking and to design, carry out, record and analyze the results of chemical reactions. Students will be able to think and apply evidence based comparative chemistry approach to explain chemical synthesis and analysis.

PO-4: Sense of inquiry: It is expected that the course curriculum will develop an inquisitive

characteristics among the students through appropriate questions, planning and reporting experimental investigation.

PO-5: Team player: The course curriculum has been designed to provide opportunity to act as team player by contributing in laboratory, field based situation and industry.

PO-6: Skilled project manager: The course curriculum has been designed in such a manner as to enabling a graduate student to become a skilled project manager by acquiring knowledge about chemistry project management, writing, planning, study of ethical standards and rules and regulations pertaining to scientific project operation.

PO-7: Digitally literate: The course curriculum has been so designed to impart a good working knowledge in understanding and carrying out data analysis, use of library search tools, use of chemical simulation software and related computational work.

PO-8: Ethical awareness: A graduate student requires understanding and developing ethical awareness or reasoning which is adequately provided through the course curriculum. Students can also create an awareness of the impact of chemistry on the environment, society, and also make development outside the scientific community.

PO-9: Environmental Awareness: As an inhabitant of this green planet a Chemistry graduate student should have many social responsibilities. The course curriculum is designed to teach a Chemistry graduate student to follow the green routes for the synthesis of chemical compounds and also find out new greener routes for sustainable development. The course also helps them to understand the causes of environmental pollution and thereby applying environmental friendly policies instead of environmentally hazard ones in every aspect.

PO-10: **Lifelong learner:** The course curriculum is designed to inculcate a habit of learning continuously through use of advanced ICT technique and other available e-techniques, e-book sand e-journals for personal academic growth.

PO-11: Analytical skill development and job opportunity: The course curriculum is designed in such a way that Chemistry graduate students can handle many Chemistry based software, decent instruments and advanced technologies to synthesize, characterize and analyze the chemical compounds very skillfully. Such a wonderful practice in the graduate level will bring a good opportunity to the students for getting job in industries besides academic and administrative works.

Programme Specific Outcomes

PSO-1: Co-recompetency: The chemistry graduates are expected to gain knowledge of the fundamental concepts of chemistry and applied chemistry through theory and practical. These fundamental concepts would be reflected in the latest understanding of the field to keep continues its progression.

PSO-2: Communication skills: Chemistry graduates are expected to possess minimum standards of communication skills to read and understand documents so that they can solve their problems very methodically, independently and with logical argument. Graduates are expected to build good communication skill so that they can easily share their idea/finding/concepts to others.

PSO-3: Critical thinking: Chemistry graduates are expected to achieve critical thinking ability to design, carry out, record and analyze the results of chemical reactions. They can have that much potential and confidence that they can overcome many difficulties with the help of their sharp scientific knowledge and logical approaches.

PSO-4: Psychological skills: Chemistry graduates are expected to possess basic psychological skills so that they can deal with individuals and students of various socio-cultural, economic and educational levels. Psychological skills are very important for proper mind setting during performing, observing and giving conclusion of a particular reaction. It is also important for self-compassion, self-reflection, inter personal relationships, and emotional management.

PSO-5: Problem-solving: Graduates are expected to be well trained with problem-solving philosophical approaches that are pertinent across the disciplines.

PSO-6: Analytical skill development and job opportunity: Chemistry graduates are expected to possess sufficient knowledge how to synthesize a chemical compound and perform necessary characterization and analysis in support of the formation of the product by using modern analytical tools and advanced technologies. Because of this course curriculum chemistry graduates have lot of opportunity to get job not only in academic and administrative field but also in industry.

PSO-7: Research motivation: Chemistry graduates are expected to be technically well trained with modern devices and Chemistry based software and has powerful knowledge in different disciplines of Chemistry so they can easily involve themselves in theory and laboratory-based research activities.

PSO-8: Teamwork: Graduates are expected to be team players, with productive co-operations involving members from diverse socio-cultural backgrounds.

PSO-9: Digital Literacy: Graduates are expected to be digitally literate for them to enroll and increase their core competency via e-learning resources has MOOC and other digital tools for lifelong learning.

PSO-10: Social Awareness: As an inhabitant of this green world it is our duty to make our planet clean and suitable for living to all. In this context Chemistry graduates are expected to be more aware about finding green chemical reaction routes for sustainable development. They are expected to maintain good laboratory practices and safety.

SUBJECT:ZOOLOGY

PROGRAMME OUTCOMES

1.Students get knowledge and skill in animal sciences,understands the complex interactions among vartious living beings.
2.Analyse complex classification of living beings.
3.Analyse interaction among various living organisms of different phyla and their relationship with the enviorement.
Develops love and sympathy towards lower animals too.
4.Reading zoology propagate ethical values and one becomes sensitive towards all nature.
Understands the various concepts of genetics…
5.It focuses on the importance of human health.
6.Understands the evolutionary behaviour of animals.
7.Understanding of environmental conservation processes.

- **Course outcomes**

1.Animal diversity -invertebrates and vertebrates.
Detailed description of taxonomic rules and classification.
Classification from phylum protozoa to echinodermata.
Complex vertebrate interactions.
Comparative knowledge of
digestive,circulatory,excretory and
other Systems.
Basic understanding of animal physiology.

2.Physiology and biochemistry
Interaction of biological and physiological processes.
Students learn the concepts of endocrine systems and homeostasis

3.Genetics and Evolutionary Biology
Division aspects of cell.
Theories of evolution.
Knowledge of eras and genetics.

4.Applied zoology

Understanding of in vitro culturing of organisms.

Aqua culture systems and harvesting technique

5.**Insects vectors and diseases**

6.Apiculture

7.Sericulture

SUBJECT:BOTANY

PROGRAMME SPECIFIC OUTCOMES

It develops critical thinking of students that frames thinking and actions and looking at their ideas from different perspectives.
It creates the problem solving attitude and meets the specified needs using the knowledge,skill and attitude required.
Understand the issues of environmental context and sustainable development.
Acquire the ability to deal with socio-technological changes.
Importance of botany in every field in dealing with environmental issues,agriculture,ethics and health care.
Develops scientific attitude.
Understand role of plants in sustaining life on earth and creates awareness on natural resources.
Analyse the importance of biodiversity.
Develop conservation strategies.
Understand plant life processes,basic hereditary and evolutionary principles.

COURSE OUTCOME

Demonstrates the ability to differentiate plant organs.
Differentiate tissues and their function.
Illustrate primary and secondary structure of plant organ.
Understand basics of microbial life and their economical importance.
Appriciate the diversity and evolutionary significance of lower plant groups.
Understand ecological importance of plants.
Prepare permanent slides.
Realise the importance of fossil studies.
Recognise the phytoeographic zones of India.
Appriciate the diverse morphology of angiosperms.
Apply various horticultural practices in the field.
Enumerate the functions of each cell organelle.
Predict the pattern of inheritance.
Observing anatomical features of plant.
Realising the importance of economy.
Understand plant tissue culture and its application.

Subject-Hindi

Programme Specific Outcome

1.Proficiency in Language Skills: Develop the ability to read, write, speak, and understand Hindi effectively.

2.Literary Appreciation: Gain an understanding and appreciation of Hindi literature, including its historical and cultural contexts.

3.Critical Analysis: Develop the capacity to critically analyze literary works, identifying themes, motifs, and stylistic elements.

4.Creative Expression: Cultivate the ability to express thoughts and ideas creatively in written and spoken Hindi.

5.Translation and Interpretation: Acquire skills in translating between Hindi and other languages, as well as interpreting literary and cultural nuances.

6.Cultural Awareness: Develop an awareness of the cultural diversity within Hindi-speaking communities and their contributions to the wider world.

7 Skills: Learn to conduct research in Hindi literature, including the ability to access and evaluate relevant sources.

Course outcomes of Hindi compulsory subject under B.A.

1.Demonstrate proficiency in reading, writing, speaking, and understanding Hindi.

Effectively communicate in both formal and informal settings.

2.Literary Appreciation:

Analyze and appreciate Hindi literature, including its historical and cultural context.

Identify and interpret major literary works, genres, and literary movements.

3.Creative Writing:

Produce original creative works in Hindi, such as essays, poems, short stories, and critical analyses.

4.Translation Skills:

Translate texts accurately from Hindi to English and vice versa, while maintaining the nuances and cultural context.

5.Cultural Understanding:

Demonstrate an understanding of the cultural and social aspects of Hindi-speaking regions, including customs, traditions, and contemporary issues.

Subject-English

Programme Specific Outcome

The scope and application of English is vast and diverse, reflecting its status as a global lingua franca. Here are some key areas where English plays a significant role:

1.International Communication:

English is the primary language of international communication, used in diplomacy, business, tourism, and academia

2.Business and Economics:

Most multinational corporations conduct their affairs in English, and proficiency in English is often a prerequisite for many jobs in the global job market.

3.Academia and Research:

English is the dominant language of scientific research and academic publishing.

4.Technology and the Internet:

The majority of content on the internet is in English. Most programming languages, software, and technical documentation are also written in English. This makes English proficiency crucial for anyone working in the technology sector.

5.Tourism and Hospitality:

English is widely used in the tourism and hospitality industry. It is the primary language for communication between travelers and service providers in many parts of the world.

6.Education:

English is often the medium of instruction in higher education, especially in fields like science, technology, engineering, and mathematics (STEM). Many students worldwide study English as a second language to access international educational opportunities.

7.Media and Journalism:

English-language media outlets have a global reach, and many international news agencies publish their content in English.

Diplomacy and International Relations:

It is used in diplomatic negotiations and official documents.

Course outcomes of English compulsory subject under B.A.

1.Basic Communication Skills:

Students will be able to engage in basic conversations, introducing themselves, asking and answering questions about personal information, and expressing simple needs and preferences.

2.Vocabulary Building:

Students will expand their vocabulary and be able to use a wider range of words and expressions in various contexts.

3.Grammar Proficiency:

Students will have a solid understanding of English grammar rules and be able to apply them correctly in their writing and speaking.

4.Reading Comprehension:

Students will be able to understand and extract information from various types of written texts, including articles, short stories, and essays.

5.Writing Skills:

Students will be able to write clear and coherent sentences, paragraphs, and short essays on various topics.

6.Listening Comprehension:

Students will be able to understand spoken English in various contexts, including conversations, lectures, and presentations.

Subject-Politcal Science

Programme Specific Outcome

1.Knowledge of Political Systems and Tbeories

Understand and analyze different political systems, including democracies, autocracies, and other forms of governance.

2: Analytical Thinking and Critical Evaluation

Apply analytical thinking skills to assess political phenomena, policies, and events.

3: Understanding of Political Institutions and Processes

Comprehend the functioning of political institutions such as legislatures, executives, and judiciaries.

4: Knowledge of International Relations and Global Politics

Understand the dynamics of international relations, including diplomacy, conflict, and cooperation among nations.

5: Research and Data Analysis Skills

Demonstrate proficiency in conducting political research, including literature reviews, data collection, and analysis.

Course outcomes of Political science subject under B.A.

1.Introduction to Political Science

To Understand the basic concepts and theories in political science.

Analyze the historical development of political thought and ideologies.

Identify and evaluate different forms of government and political systems.

2.Comparative Politics

To Compare and contrast political systems across different countries.

Analyze the factors influencing political behavior and outcomes in various contexts.

Evaluate the strengths and weaknesses of different governance structures.

3.International Relations

To Understand the theories and frameworks that govern international relations.

Analyze global issues and conflicts from a political perspective.

Evaluate the role of international organizations and institutions in global governance.

Course outcome

1.The Department of Political Science has a broad range of studies varying from Human Behavior to National/International Phenomena

2.The Department aims on interdisciplinary studies in diverse areas like Public

Policy, Human Rights, Political Leadership, Indian National Movement, Good Governance, New World, Indian Political Economy, Political Sociology, Research Methodology, and Democracy in India, Indian Political

Thought, and Value Education etc.

3.To train students to Political Science envisions where a deep understanding of the past and present politics, old and modern thoughts enriches the present and guides a sustainable and enlightened future.

4..Through analytical

views of research, critical analysis, and dissemination of knowledge of Political Science literature, the department

strives to foster an inclusive and informed global community that values diversity, respects humanity, human rights, and embraces the lessons of Political Science and its literature.

5..The mission of the Department of Political Science is to advance the scholarly exploration and deep knowledge of

Political Science and its concepts, thoughts, principles and working of government systems. This mission is achieved through the following objectives:

.Excellence in Research: Conducting innovative and interdisciplinary research that uncovers new insights into political

thoughts and theories, working of political systems.

6..Education and Teaching: Providing comprehensive and high-quality education that equips students with the analytical

skills, critical thinking abilities and constitutional awareness.

7..Community Engagement: Engaging with local communities to foster political and social awareness among students and society.

8..Promoting Ethical Awareness: Addressing ancient and modern political issues with modern political concerns,

problems and respect for diverse perspectives of rich Indian political thought and concepts.

9..Interdisciplinary Collaboration: Collaborating with other academic departments, institutions, and organizations to

promote inter-disciplinary approaches to Political Science research and problems.

10.Professional Development: Nurturing and supporting faculty, staff, and students in their professional growth and

continuous learning to maintain excellence in teaching, research, and service for all round development of department.

Subject-Economics

Programme Specific Outcome

1.Analyze Market Behavior: Graduates should be able to analyze market behavior, including supply and demand dynamics, price determination, and the impact of market structures.

2.Evaluate Economic Policies and Interventions: Graduates should be capable of critically evaluating the effectiveness and consequences of economic policies, both at the micro and macro levels.

3.Understand Global Economic Trends and Issues: Graduates should have a comprehensive understanding of global economic trends, international trade, and the implications of globalization on economic systems.

4.Apply Quantitative Methods in Economics: Graduates should be proficient in using quantitative tools and techniques to analyze economic data, including statistical methods and econometric models.

5.Communicate Economic Ideas Effectively: Graduates should be able to communicate economic concepts and findings effectively, both in written and oral forms, to various stakeholders.

6.Ethical Considerations in Economics: Graduates should be aware of the ethical considerations and responsibilities associated with economic analysis and decision-making.

7.Apply Economics in Real-world Contexts: Graduates should be able to apply economic principles and concepts to real-world situations, including policy-making, business decisions, and socio-economic issues.

Course Outcome of economics

Introductory Economics Course (Microeconomics and Macroeconomics):

Understand the basic principles of microeconomics, including supply and demand, consumer behavior, and market structures.

Analyze how individual economic agents (consumers, firms) make decisions to allocate resources.

Comprehend the concepts of inflation, unemployment, GDP, and fiscal/monetary policy in the context of macroeconomics.

Intermediate Microeconomics:

Analyze consumer behavior using utility theory and demand theory.

Understand and apply production and cost theory for firms.

Explore market structures in-depth, including perfect competition, monopoly, oligopoly, and monopolistic competition.

Examine how firms make decisions regarding pricing and output.

Intermediate Macroeconomics:

Evaluate the determinants of aggregate demand and aggregate supply.

Analyze the role of money, banking, and financial markets in the economy.

Understand the impacts of fiscal and monetary policy on the economy.

Examine long-term economic growth and the factors that influence it.

International Economics:

Analyze international trade patterns and the gains from trade.

Understand exchange rate determination and its impact on trade balances.

Evaluate the effects of trade policies (e.g., tariffs, quotas) on domestic and global economies.

Examine the benefits and challenges of globalization.

Labor Economics:

Understand labor market dynamics, including wage determination and labor supply and demand.

Analyze topics such as human capital, discrimination, and immigration.

Evaluate government policies related to labor markets, such as minimum wage laws and unemployment insurance.

Development Economics:

Analyze the determinants of economic development and growth in different regions.

Understand the challenges of poverty, inequality, and underdevelopment.

Evaluate various strategies for promoting economic development, including foreign aid, trade policies, and institutional reforms.

Subject: Geography

Program Specific Outcomes (PSOs):

PSO-1 The 1st semester of Geography at UG level enables the students to understand the Geography of India. It enables the students to understand the resourses available in India. The 2nd semester of Geography curriculum enables the students to understand the concept of physical geography and Geomorphology

PSO-2 The 3rd semester of geography at UG level enables the students to understand the concept of climatology. The 4th semester of B.A Geography provide the knowledge of human Geography like nature and scope of human geography,distribution and density of world population

PSO-3 The 5th semester of Geography inculcate the knowledge of economic condition and classification economic activities. The 6th semester of Geography provide the knoeledge about latest technology of mapping,remote sensing and Geographical information system

PSO-4 After the completion of all 6 semester course in geography the learner will gain understanding about latest technology of survey

PSO-5 The learner will be able to qualify compitative examination of UG level as well as entrance test for M.Sc Geography in various universities.

PSO-6 Students will be prepared to apply the skills in professional carrier

PSO-7 after completion the course successful condidates will be eligible for position like Geographer, Surveyer,scientist in Remote sensing

Course Outcomes:

Geography of India-Paper-101: Students will be able to understand the natural hazards,disasters and land resources

Physical Geography -Paper-102: After the completion of the course students will be able to gain the knowledge of interior structure of the earth,earthquakes and volcanoes

Climatology-Paper-201: After the completion of the course students will able to understand the concept of climatology.

Human Geography-Paper-202: Students will have a general understanding of distribution of race of india, distribution of density of world population, rural settlements.

Economic Geography-Paper-301After the completion of the course students will be able to understand economic activities and their impacts on environment, world natural resources

Remote Sensing and GIS Paper-303 After the completion of the course students will be able to use the tools and methods of GIS. Students will be familiar with modern techniquues in Geography

Subject-History

Programme Specific Outcome

1.Knowledge Acquisition: Develop a comprehensive understanding of historical events, processes, and trends, both globally and within specific regions or time periods.

2.Analytical Skills: Cultivate critical thinking and analytical skills necessary to evaluate and interpret historical sources, evidence, and arguments.

3.Research Proficiency: Acquire proficiency in conducting historical research, including locating and evaluating primary and secondary sources, and employing appropriate research methodologies.

4.Effective Communication: Enhance written and oral communication skills to effectively convey historical analysis, arguments, and narratives.

5.Cultural Awareness: Foster an appreciation for diverse cultures, societies, and perspectives across different historical contexts.

6.Contextualization: Develop the ability to contextualize historical events within broader social, political, economic, and cultural frameworks.

7.Historiographical Understanding: Familiarize students with various historiographical approaches, interpretations, and debates within the field of history

8.Historical Consciousness: Cultivate a sense of historical consciousness, enabling students to appreciate the relevance and impact of past events on the present and future.

Course outcomes of History subject under B.A.

1.Demonstrate Knowledge: Acquire a comprehensive understanding of specific historical periods, events, or themes covered in the course.

2.Critical Analysis: Develop the ability to critically analyze historical sources, including primary documents, secondary literature, and visual materials.

3.Historical Interpretation: Formulate and articulate interpretations of historical events or phenomena based on evidence and analysis.

4.Research Skills: Demonstrate proficiency in conducting historical research, including the identification, evaluation, and use of primary and secondary sources.

5.Effective Communication: Improve written and oral communication skills, enabling the clear and coherent expression of historical arguments and analysis.