



Christ Church College, Kanpur

POSTGRADUATE PROGRAM OUTCOMES AND COURSE OUTCOMES

Program Name	Program Outcome (PO)	Semester	Course Name & Code	Course Outcome (CO)
M.Com.	<p>PO1-The M.Com. curriculum focuses on comprehensive understanding of key areas such as human resource management, international business, and corporate laws, preparing students to navigate the dynamic business landscape.</p> <p>PO2-Through modern techniques, students develop skills to address challenges and overcome resistance, equipping them for managerial roles.</p> <p>PO3- Earning an M.Com. degree signifies persistence, intellectual prowess, and adaptability, making graduates highly desirable for managerial and directorial positions.</p>	I	ORGANISATIONAL BEHAVIOUR (C010701T)	<p>CO1 - Understand the Fundamentals of Organisational Behaviour (OB): Demonstrate a thorough understanding of the key elements, characteristics, and evolution of Organisational Behaviour.</p> <p>CO2 - Manage Organisational Culture and Change: Develop the ability to define and manage organisational culture, and understand its role in shaping ethics and organisational performance.</p> <p>CO3 - Apply Knowledge to Improve Organisational Efficiency: Use the knowledge of OB concepts to identify issues related to leadership, group dynamics, stress, and conflict, and apply strategies to enhance organisational effectiveness, particularly in high-stress situations.</p>
		I	ACCOUNTING FOR MANAGERIAL DECISIONS (C010702T)	<p>CO1 - Understand the Foundations of Management Accounting: Demonstrate a solid understanding of the nature, functions, and key concepts in management accounting, and distinguish between financial accounting, cost accounting, and management accounting.</p> <p>CO2 - Apply Costing Methods for Effective Decision Making:</p>

				<p>Analyse and apply different costing methods, including variable and absorption costing.</p> <p>CO3 - Develop and Manage Budgets for Effective Financial Control: Understand the importance of budgeting in management accounting, and be able to prepare and manage different types of budgets.</p>
		I	<p>STATISTICAL ANALYSIS (C010703T)</p>	<p>CO1 - Understand the Fundamentals of Probability and Statistical Distributions: Demonstrate a comprehensive understanding of probability concepts, including conditional probability, independence, and Bayes' Theorem.</p> <p>CO2 - Apply Correlation and Regression Analysis: Conduct simple, multiple, and partial correlation analyses to examine relationships between variables.</p> <p>CO3 - Use Sampling Techniques and Hypothesis Testing: Understand the principles of sampling and be able to apply sampling methods for hypothesis testing and parameter estimation.</p> <p>CO4 - Understand and Implement Statistical Quality Control Methods: Gain a solid understanding of statistical quality control techniques.</p>
		I	<p>MANAGERIAL ECONOMICS (C010704T)</p>	<p>CO1 - Understand the Scope and Nature of Managerial Economics: Demonstrate a clear understanding of the role and scope of managerial economics in business decision-making, including the objectives of firms such as profit and wealth maximisation.</p> <p>CO2 - Apply Demand Analysis and Forecasting Techniques: Analyse and interpret the determinants of demand and understand various distinctions in demand types.</p> <p>CO3 - Understand and Apply Production and Cost Functions: Grasp the concept of productivity and technology in production, and apply production functions to determine optimal input combinations for efficient production.</p> <p>CO4 - Evaluate Market Structures and Pricing Strategies: Examine the characteristics of various market forms such as perfect competition, monopolistic competition, monopoly, and oligopoly.</p>
		II	<p>FINANCIAL MANAGEMENT (C010801T)</p>	<p>CO1 - Understand the Principles of Financial Management: Demonstrate a clear understanding of the nature, scope, and objectives of financial management, including the principles of profit maximisation and value maximisation.</p> <p>CO2 - Make Effective Financing and Capital Structure Decisions: Analyse the various sources of capital and determine the cost of</p>

				<p>capital for a business.</p> <p>CO3 - Evaluate Investment Decisions Using Capital Budgeting Techniques: Apply capital budgeting techniques, including both discounted and non-discounted cash flow methods, to evaluate investment opportunities.</p> <p>CO4 - Manage Working Capital Efficiently: Develop the ability to estimate and manage working capital, and apply techniques for managing key components of working capital, including inventory, receivables, and cash.</p>
		II	<p>MARKETING MANAGEMENT (C010802T)</p>	<p>CO1 - Understand the Basic Concepts and Principles of Marketing: Demonstrate a comprehensive understanding of marketing concepts, including the nature, scope, and importance of marketing in a business context.</p> <p>CO2 - Conduct Market Analysis and Segmentation: Analyse the marketing environment by evaluating both macro and micro components and their impact on marketing decisions.</p> <p>CO3 - Make Effective Product and Pricing Decisions: Understand the concept of a product and apply the classification and layers of products to strategic decision-making.</p> <p>CO4 - Design and Manage Distribution Strategies: Develop an understanding of the channels of distribution, their importance, and the role of distribution middlemen.</p> <p>CO5 - Plan and Execute Promotional Strategies: Apply the concepts of the communication process and promotion mix, including advertising, personal selling, sales promotion, publicity, and public relations, to design effective promotional campaigns.</p>
		II	<p>HUMAN RESOURCE MANAGEMENT (C010803T)</p>	<p>CO1 - Understand the Concepts and Functions of Human Resource Management (HRM): Demonstrate a thorough understanding of HRM concepts, its evolution, objectives, and scope.</p> <p>CO2 - Develop Effective Recruitment and Selection Strategies: Analyse the recruitment process, identify different sources of recruitment, and design effective employer branding strategies.</p> <p>CO3 - Design and Implement Training and Performance Management Systems: Understand the importance of training and development in HRM and be able to evaluate training needs, methods, and processes.</p> <p>CO4 - Manage Employee Relations and Grievances Effectively: Develop the ability to handle grievances by identifying their causes,</p>

				understanding grievance procedures, and implementing effective grievance resolution processes.
		II	ADVANCED CORPORATE ACCOUNTING AND REPORTING (C010804T)	CO1 - Comprehend Corporate Financial Accounting Frameworks: Analyze and interpret profits prior to incorporation, managerial remuneration, and accounts of insurance companies CO2 - Apply accounting principles to amalgamations, mergers, demergers, and external reconstructions. CO3 - Utilize asset-based, equity, income-based, and market value approaches to business valuation. CO4 - Analyze financial and non-financial performance indicators in annual reports.
		II	CONSUMER BEHAVIOUR AND MARKETING RESEARCH (C010805T)	CO1 - Understand Consumer Behaviour: Comprehend the nature, importance, and scope of consumer behavior. CO2 - Conduct Marketing Research: Understand the fundamentals of marketing research, including its scope, significance, and ethical considerations. Develop structured marketing research processes, including the formulation of hypotheses, sampling, and questionnaire design. CO3 - Develop Strategic Insights: Integrate consumer behavior knowledge with marketing research methodologies to devise innovative and effective marketing strategies tailored to diverse consumer needs.
		II	TALENT MANAGEMENT (C010806T)	CO1 - Understand Talent Management Concepts: Define the concept, meaning, and objectives of talent management. Identify the key processes involved in managing talent, including recruitment, selection, HR planning, and retention. CO2 -Plan and Implement Talent Acquisition Strategies: Develop effective HR planning strategies, including job analysis, job descriptions, and job specifications. CO3 - Enhance Employee Retention and Engagement: Understand the importance of employee retention and analyze the causes of employee attrition and turnover. Develop strategies to reduce turnover and foster employee engagement, emphasizing integrated rewards and outcomes.
		II	RESEARCH PROJECT (C010807R)	CO1 - Understand and apply advanced research methods and tools to conduct a systematic study in the field of commerce and business. CO2 - Demonstrate the ability to design research frameworks,

				<p>develop hypotheses, and analyze results effectively.</p> <p>CO3 - Identify, define, and analyze complex business or financial problems using appropriate research techniques.</p> <p>CO4 - Evaluate theoretical frameworks and literature in a specialized area of commerce. Synthesize and critique scholarly work to identify research gaps and contribute to the academic body of knowledge.</p>
		III	<p>BUSINESS RESEARCH METHODOLOGY (C010901T)</p>	<p>CO1 - Formulate and Design Research Problems: Select appropriate research topics and define clear research problems. Conduct literature reviews to identify research gaps and develop well-structured research designs, including quantitative and mixed-method approaches.</p> <p>CO2 - Collect and Process Data Effectively: Use primary and secondary data sources and apply qualitative and quantitative methods for data collection.</p> <p>CO3 - Apply Sampling and Hypothesis Testing: Distinguish between population and sampling concepts, and identify characteristics of good samples.</p> <p>CO4 - Analyze Data and Derive Insights: Differentiate between descriptive and inferential analysis to make data-driven decisions. Gain an overview of statistical techniques used in hypothesis testing and analysis.</p>
		III	<p>STRATEGIC MANAGEMENT (C010902T)</p>	<p>CO1 - Understand Strategic Management Fundamentals: Define the meaning, nature, and importance of strategy and strategic management. Differentiate between levels of strategy and evaluate various schools of thought and models in strategic decision-making.</p> <p>CO2 - Conduct Environmental Scanning: Identify and analyze strategic objectives using tools like PESTEL analysis and SWOT analysis.</p> <p>CO3 - Implement Strategic Plans - Develop actionable programs, budgets, and procedures for implementing strategies.</p>
		III	<p>INDIAN FINANCIAL SYSTEM AND FINANCIAL SERVICES (C010903T)</p>	<p>CO1 - Understand the Structure of the Indian Financial System: Define the structure and components of the Indian financial system, distinguishing between savings and investments. Analyze the relationship between money, inflation, and interest rates.</p> <p>CO2 - Examine Financial Institutions and Regulatory Frameworks: Explain the organization, management, and functions of the Reserve Bank of India (RBI). Analyze the role of commercial banks, including e-banking and recent developments in the sector.</p>

				CO3 - Explore Financial Intermediaries and Services: Understand the role and significance of merchant banking in India. Evaluate the role of credit rating agencies like CIBIL and depositories in facilitating investments.
		III	CORPORATE TAX PLANNING AND MANAGEMENT (C010906T)	CO1 - Understand Corporate Tax Concepts: Define the nature, scope, and significance of tax planning and tax management in the corporate sector. CO2 - Plan Tax Strategies for New Businesses: Develop tax-efficient strategies for determining business location, nature, and organizational structure. CO3 - Incorporate Managerial Tax Planning Decisions: Evaluate tax planning strategies for asset acquisition, considering funding options such as own funds or borrowed capital. CO4 - Integrate Advanced Tax Planning Techniques: Apply tax planning principles to methods of accounting, amalgamation, and demerger scenarios.
		III	MARKETING OF SERVICES AND RETAIL MANAGEMENT (C010904T)	CO1 - Understand the Fundamentals of Services Marketing - Define the meaning, characteristics, and scope of services marketing. Analyze service markets, products, and customer behavior in service encounters. CO2 - Design and Deliver Quality Services - Differentiate between goods and services in terms of customer expectations and perceptions. Develop customer-defined service standards and implement strategies for internal and relationship marketing. CO3 - Explore Retail Management Practices - Understand the importance and opportunities in retailing, with a focus on the distinction between organized and unorganized retail sectors. CO4 - Optimize Retail Strategy and Design - Identify consumer characteristics and needs to enhance the retail experience. Select optimal retail locations and evaluate factors influencing location and site decisions.
		III	LOGISTICS AND SUPPLY CHAIN MANAGEMENT (C010907T)	CO1 - Understand Supply Chain Management (SCM) Fundamentals: Explain the evolution, importance, and scope of SCM and trade logistics. Analyze the functions and logistics activities within SCM at both macro and micro levels. CO2 - Measure and Improve Supply Chain Performance- Define supply chain metrics (KPIs) and their role in performance measurement. Evaluate strategies for continuous improvement in SCM.

				<p>CO3 - Optimize Logistics and SCM Focus Areas - Assess the importance of transportation, warehousing, and inventory management in SCM.</p> <p>CO4 - Develop Holistic SCM Strategies - Integrate SCM concepts and tools to create effective and sustainable supply chain strategies. Address real-world challenges in logistics and SCM by leveraging modern technologies and practices.</p>
		III	<p>ORGANIZATIONAL DEVELOPMENT AND CHANGE MANAGEMENT (C010905T)</p>	<p>CO1 - Diagnose and Manage Organizational Change - Identify and classify various types of organizational changes. Understand and address resistance to change by applying behavioral and situational approaches.</p> <p>CO2 - Develop Expertise in Organizational Development and Transformation - Define the principles and foundations of organizational development.</p> <p>CO3 - Harness Leadership for Effective Change Management - Evaluate the role of leadership in driving and sustaining organizational change. Develop leadership competencies, including the ability to adapt leadership styles to various scenarios.</p>
		III	<p>INDUSTRIAL RELATIONS AND LABOUR LEGISLATION (C010908T)</p>	<p>CO1 - Understand Industrial Relations and Conflict Management - Define and explain the concept, importance, and factors affecting industrial relations in India.</p> <p>CO2 - Examine the Role of Trade Unions and Collective Bargaining - Explain the meaning, rights, and liabilities of registered trade unions and assess the factors contributing to their growth in India.</p> <p>CO3 - Interpret Key Labour Laws and Legislations - Understand the Minimum Wages Act 1948 and Factories Act 1948</p>
		IV	<p>PROJECT MANAGEMENT AND PLANNING (C011001T)</p>	<p>CO1 - Formulate Effective Project Plans - Understand the project planning process, including the formulation of the project life cycle and work breakdown structure (WBS).</p> <p>CO2 - Apply Risk and Quality Management Techniques - Understand the role of risk management in project success and implement steps for risk identification and analysis.</p> <p>CO3 - Integrate Contemporary Project Management Practices - Familiarize with advanced project management tools and techniques, including computer-based applications.</p>
		IV	<p>MANAGEMENT INFORMATION</p>	<p>CO1 - Understanding MIS Fundamentals: Learn principles and techniques for designing, installing, and effectively implementing</p>

			SYSTEM (MIS) (C011002T)	MIS. CO2 - System Development and Analysis - Understand system design and evaluation processes, including tools like flowcharts, decision tables, decision trees, and simulations. CO3 - Data Communication and Networking - Learn about network topologies and their applications, including LAN, WAN, MAN, and SAN.
		IV	INTERNATIONAL FINANCIAL SYSTEM AND MANAGEMENT (C011005T)	CO1 - Understanding International Financial Markets and Instruments - Gain knowledge of global financial markets, including foreign portfolio investments, international bond and equity markets, and instruments like GDRs, ADRs, foreign bonds, and Eurobonds. CO2 - Managing Risks in International Markets - Identify various risks in international markets, including transaction, translation, economic, political, and interest rate risks. CO3 - Foreign Exchange Markets and Exchange Rate Dynamics - Understand the structure, functions, and participants of foreign exchange (forex) markets.
		IV	SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT (C011008T)	CO1 - Develop a comprehensive understanding of capital market instruments, including the primary and secondary markets, trading mechanisms, and the roles of stock brokers and intermediaries. CO2 - Analyze the concepts of return, yield, and risk, differentiating between systematic and unsystematic risk. Measure risk using beta and calculate portfolio risk and return. CO3 - Understand the process of portfolio management, including the need, objectives, and selection of securities.
		IV	CUSTOMER RELATIONSHIP MANAGEMENT (C011003T)	CO1 - Learn the evolution and concept of Customer Relationship Management. CO2 - Develop strategies for building and maintaining customer relationships, including managing emotions and enhancing brand loyalty. CO3 - Explore advanced marketing techniques such as cross-selling, up-selling, and customer retention strategies. CO4 - Learn to predict customer behavior, optimize marketing channels, and use value modeling for profitability analysis.
		IV	DIGITAL MARKETING AND E-	CO1 - Understand the role of key social media platforms in marketing strategies and master tools and techniques to increase audience views and engagement.

			COMMERCE (C011006T)	CO2 - Gain proficiency in Search Engine Optimization (SEO), content management, and the use of cookies for improving customer experience. CO3 - Understand the evolution of e-commerce and its role in marketing. Learn about legal considerations in e-commerce, customer service expectations, and the tools for conducting online marketing research.
		IV	INTERNATIONAL MARKETING (C011009T)	CO1 - Grasp the concepts of globalization, international marketing, and global trade and analyze the economic, social, political, geographical, and legal environments affecting international marketing. CO2 - Learn methods for segmenting and evaluating international markets and explore entry mode decisions, including exporting, licensing, contract manufacturing, joint ventures, and wholly-owned subsidiaries. CO3 - Understand international product decisions, including quality, design, branding, packaging, and support services.
		IV	TRAINING & DEVELOPMENT (C011004T)	CO1 - Comprehend the concepts of training and development and explore learning theories, competency models, and case-based decision-making approaches. CO2 - Understand the training needs analysis (TNA) and learn data collection methods for TNA CO3 - Explore various training methods, including traditional, computer-based, and e-learning approaches, and learn to select the most suitable methods. CO4 - Identify traits and competencies of successful trainers and understand the concept of training the trainers. CO5 - Gain insights into e-learning processes, its significance, and its advantages and limitations.
		IV	CONFLICT RESOLUTION AND STRATEGIC NEGOTIATION (C011007T)	CO1 - Distinguish between functional and dysfunctional conflict and explore its various sources, including intra-personal and interpersonal conflicts. CO2 - Understand the degree of conflict development and the role of leadership in managing conflict. CO3 - Explore different negotiation approaches, styles, and the factors influencing their application. CO4 - Learn about mediation, its merits, and its process, along with process consultation.

		IV	PERFORMANCE AND COMPENSATION MANAGEMENT (C011010T)	<p>CO1 - Understand the meaning, uses, and purpose of performance management and explore its challenges in the current scenario and its role as a system and process.</p> <p>CO2 - Analyze performance management across different organizational levels and gain insights into 360-degree performance appraisals, feedback, and counseling methods.</p> <p>CO3 - Understand the types of compensation and the conceptual framework of compensation management. Learn job evaluation methods, theories of wages, and criteria for wage fixation.</p> <p>CO4 - Understand the nature and types of employee benefits, including security, retirement, health care, and time-off benefits. Learn the administration of legally required and discretionary benefits.</p>
		IV	RESEARCH PROJECT (C011011R)	<p>CO1 - Translate theoretical knowledge into practical research insights applicable to industries like banking, finance, marketing, human resources, or taxation.</p> <p>CO2 - Use quantitative and qualitative research methods to analyze data, draw valid conclusions, and make strategic recommendations.</p> <p>CO3 - Develop the ability to present research findings effectively, both in written (research reports, thesis) and oral (presentations, seminars) formats.</p> <p>CO4 - Convey complex research insights in a clear, concise, and impactful manner to academic and professional audiences.</p> <p>CO5 - Demonstrate adherence to ethical research practices, including data integrity, plagiarism avoidance, and transparency in reporting.</p>
M. Sc. Botany	<p>PO1- The curriculum emphasizes outcome-oriented education, incorporating innovative pedagogical approaches like e-learning and flipped classrooms to nurture responsible citizens and contribute to nation- building through transformative botanical knowledge. PO2- Graduates from the program emerge as competent plant biologists, well-equipped to apply their expertise in both basic and applied aspects, significantly impacting agriculture, industry, healthcare, and the environment for sustainable development.</p> <p>PO3- The comprehensive training prepares students</p>	I	DIVERSITY OF MICROBES AND FUNGI (B040701T)	<p>CO1 - Comprehend the diversity, habitat adaptations, and ecological roles of algae and bryophytes.</p> <p>CO2 -Learn principles of classification and evolutionary relationships among algal and bryophyte groups.</p> <p>CO3 - Analyze the morphology, anatomy, reproduction, and phylogenetic significance of key groups.</p> <p>CO4 - Recognize the economic uses and ecological contributions of algae and bryophytes.</p>

	for diverse career paths, enabling them to pursue opportunities in government and private sectors, academia, research, and industry, as well as excel in national and international competitive examinations such as UGC-CSIR NET, UPSC Civil Services, and other prestigious exams.			
		I	DIVERSITY OF ALGAE AND BRYOPHYTES (B040702T)	CO1 - Explore the general characteristics, classification, and economic importance of Pteridophytes and Gymnosperms. CO2 - Analyze morphology, anatomy, reproductive biology, and evolutionary trends within major groups. CO3 - Study fossil records and trace the origin, evolution, and phylogenetic affinities of Pteridophytes and Gymnosperms. CO4 - Conduct detailed monographic studies of representative species to deepen understanding of their biology and significance.
		I	DIVERSITY OF PTERIDOPHYTES AND GYMNOSPERMS (B040703T)	CO1 - Learn the classification, general features, and economic importance of Pteridophytes and Gymnosperms. CO2 - Explore evolutionary trends, seed habit development, and fossil records of both groups. CO3 - Analyze morphology, anatomy, and reproductive biology across major groups. CO4 - Conduct monographic studies of significant Pteridophyte and Gymnosperm species for deeper understanding.
		I	PLANT ECOLOGY (B040704T)	CO1 - Study ecosystem structure, energy flow, biogeochemical cycles, and ecosystem stability. CO2 - Learn about ecological succession, biological diversity, and the impacts of biodiversity loss. CO3 - Explore issues like climate change, pollution, and ecological management strategies. CO4 - Develop insights into sustainable development, restoration ecology, and plant-environment interactions.
		I	PRACTICAL (B040705P)	CO1 - Gain proficiency in advanced laboratory and field techniques, including molecular biology, plant physiology, and ecological analysis. CO2 - Develop problem-solving abilities by designing experiments, analyzing data, and interpreting results scientifically. CO3 - Bridge theoretical concepts with practical applications in plant science, biotechnology, and conservation.

		II	TAXONOMY OF ANGIOSPERMS AND BIOSYSTEMATICS (B040801T)	CO1 - Learn evolutionary trends, classification systems, and nomenclature principles for angiosperms. CO2 - Study the taxonomic features and uses of significant dicot and monocot families. CO3 - Gain insights into biosystematics, chemotaxonomy, palynotaxonomy, and molecular approaches to plant taxonomy. CO4 - Apply modern tools like DNA barcoding and phylogenetic analysis in angiosperm taxonomy.
		II	MORPHOLOGY, ANATOMY AND EMBRYOLOGY OF ANGIOSPERMS (B040802T)	CO1 - Understand the structural organization of flowers, shoots, roots, leaves, and wood, with insights into their anatomy and taxonomic significance. CO2 - Study microsporogenesis, megasporogenesis, fertilization, and embryo development, including advanced topics like polyembryony and apomixis. CO3 - Analyze primary and secondary growth processes, including vascular cambium activity and anomalous secondary growth. CO4 - Learn the functional and morphological importance of plant anatomical features, such as stomata, trichomes, and endosperm development.
		II	CYTOGENETICS & BASIC MOLECULAR BIOLOGY (B040803T)	CO1 - Gain insights into the cell cycle, chromosomal organization, banding patterns, and genome structure, including Mendelian genetics and gene interactions. CO2 - Study chromosomal aberrations, polyploidy, and the molecular basis of spontaneous and induced mutations in crop improvement. CO3 - Learn about the structure of genes, genome organization, and the role of DNA, RNA, and nucleic acids in replication, transcription, and repair. CO4 - Understand the genetic code, mechanisms of translation, and post-translational modifications with practical implications in biotechnology.
		II	PALEOBOTANY (B040804T)	CO1 - Understand the origin and evolution of life, pre-Cambrian stratigraphy, and fossilization processes. CO2 - Analyze geological structures, plate tectonics, and principles of stratigraphy and radioactive dating. CO3 - Explore the application of paleobotany in fossil fuel formation, coal palynology, and oil exploration.

		II	PLANT BREEDING AND ELEMENTARY BIOSTATISTICS (B040805T)	CO1 - Learn breeding systems, genetic engineering, and polyploidy in plant improvement. CO2 - Understand methods of crop improvement for wheat, maize, and other economically important plants. CO3 - Gain knowledge of biostatistics, probability, and statistical tools for biological data analysis.
		II	PRACTICAL (B040806P)	CO1 - Gain proficiency in advanced laboratory and field techniques, including molecular biology, plant physiology, and ecological analysis. CO2 - Develop problem-solving abilities by designing experiments, analyzing data, and interpreting results scientifically. CO3 - Bridge theoretical concepts with practical applications in plant science, biotechnology, and conservation.
		II	RESEARCH PROJECT (B040807R)	CO1 - Acquire hands-on experience in designing, executing, and analyzing botanical research projects. CO2 - Identify significant research questions in botany and formulate hypotheses based on current scientific knowledge. CO3 - Apply critical thinking and experimental methods to solve problems related to plant science and conservation.
		III	PLANT PHYSIOLOGY AND BIOCHEMISTRY (B040901T)	CO1 - Understand the movement of water and solutes in plants, including water relations, xylem, and phloem transport. CO2 - Analyze photosynthesis, respiration, and energy transfer mechanisms in plants. CO3 - Explore plant growth regulators and their physiological roles in plant development. CO4 - Learn enzymatic actions, lipid metabolism, and their biochemical significance in plants.
		III	PLANT BIOTECHNOLOGICAL AND MOLECULAR TECHNIQUES (B040902T)	CO1 - Gain an understanding of biotechnology principles and recombinant DNA technology. CO2 - Learn advanced molecular techniques like PCR, gene cloning, and hybridization. CO3 - Explore methods for gene transfer and genetic transformation in plants. CO4 - Understand the applications of genetic engineering in agriculture and address biosafety concerns.
		III	PLANT TISSUE CULTURE (B040903T)	CO1 - Understand the principles, historical perspectives, and laboratory organization of plant tissue culture. CO2 - Explore cellular totipotency, differentiation, and techniques

				<p>like somatic embryogenesis, organogenesis, and micropropagation.</p> <p>CO3 - Learn advanced applications such as haploid culture, protoplast fusion, and germplasm conservation.</p> <p>CO4 - Analyze tissue culture-induced variations and their molecular, genetic, and industrial implications.</p>
		III	<p>BASICS BIOANALYTIC AL TECHNIQUES (B040904T)</p>	<p>CO1 - Develop a comprehensive understanding of advanced microscopy, chromatography, and labeling techniques for biomolecular analysis.</p> <p>CO2 - Explore biophysical methods, including spectrophotometry and spectroscopy, for structural and functional analysis of biomolecules.</p> <p>CO3 - Learn techniques for the isolation, purification, and characterization of DNA, RNA, and proteins.</p> <p>CO4 - Gain expertise in electrophoretic methods for molecular separation and analysis.</p>
		III	<p>BIODIVERSITY AND CONSERVATIO N (B040905T)</p>	<p>CO1 - Understand the concept, levels, and global distribution of biodiversity, including hotspots and mega-diverse regions.</p> <p>CO2 - Analyze the threats to biodiversity, causes of extinction, and strategies for its conservation using in situ and ex situ methods.</p> <p>CO3 - Explore the importance of endemism, RAMSAR sites, and wetland conservation in maintaining biodiversity.</p> <p>CO4 - Gain knowledge of biodiversity laws, IUCN categories, and principles of species restoration and protection.</p>
		III	<p>MEDICINAL AND AROMATIC PLANTS (B040906T)</p>	<p>CO1 - Understand the importance, therapeutic value, and bioactive compounds of key medicinal and aromatic plants in India.</p> <p>CO2 - Gain knowledge of essential oils, their extraction methods, and applications in cosmetics, perfumery, and nutraceuticals.</p> <p>CO3 - Explore the commercial cultivation, bioprospecting, and protection of traditional medicinal knowledge.</p> <p>CO4 - Learn about the roles of National and State Medicinal Plant Boards in promoting sustainable use of medicinal and aromatic plants.</p>
		III	<p>PRACTICAL (B040907P)</p>	<p>CO1 - Gain proficiency in advanced laboratory and field techniques, including molecular biology, plant physiology, and ecological analysis.</p> <p>CO2 - Develop problem-solving abilities by designing experiments, analyzing data, and interpreting results scientifically.</p>

				CO3 - Bridge theoretical concepts with practical applications in plant science, biotechnology, and conservation.
		IV	ADVANCED GENETICS, MOLECULAR BIOLOGY & GENOMICS (B041001T)	CO1 - Develop an understanding of genome organization, chromatin structure, and epigenetic regulation. CO2 - Master tools and techniques for gene expression analysis, including DNA-protein interactions, sequencing, and blotting methods. CO3 - Explore functional genomics approaches like PCR, microarray, RNA interference, and metagenomics. CO4 - Analyze protein-protein and RNA interactions using advanced molecular and bioinformatics tools.
		IV	ADVANCED PLANT PATHOLOGY (B041002T)	CO1 - Understand historical and molecular aspects of plant diseases caused by fungi, bacteria, viruses, and parasites. CO2 - Analyze plant defense mechanisms, including structural, chemical, and hypersensitive responses. CO3 - Develop strategies for disease management through cultural, chemical, biological, and transgenic approaches. CO4 - Gain expertise in pathogen isolation, media preparation, and controlling significant plant diseases.
		IV	ADVANCED PHYCOLOGY (B041003T)	CO1 - Understand the distribution, biochemistry, and culture of algae, including their ecological and agricultural roles. CO2 - Analyze the dynamics of algal blooms, toxins, and the significance of algae in climate regulation and carbon sequestration. CO3 - Explore the use of algae in biotechnology, environmental pollution control, and as a source of food, fodder, and bioactive compounds. CO4 - Examine the role of algae in water purification, nitrogen fixation, and land reclamation.
		IV	ENVIRONMENTAL SCIENCES (B041004T)	CO1 - Understand the evolution of Earth's environment, atmospheric composition, and climate impacts. CO2 - Analyze the effects of pollutants, ozone depletion, and water pollution on ecosystems and health. CO3 - Develop strategies for sustainable water and soil management, pollution control, and waste recycling. CO4 - Apply principles of environmental impact assessment and sustainable development laws.
		IV	ADVANCED PHYSIOLOGY	CO1 - Understand sensory photobiology, cell signaling mechanisms, and stress physiology in plants, including responses to

			AND BIOCHEMISTR Y (B041005T)	<p>biotic and abiotic stresses.</p> <p>CO2 - Explore the biosynthesis, roles, and significance of secondary metabolites, nitrogen fixation, and sulfur metabolism in plants.</p> <p>CO3 - Analyze the structure, properties, and biological significance of amino acids, proteins, carbohydrates, vitamins, and coenzymes.</p> <p>CO4 - Gain insights into plant biochemical pathways and molecular mechanisms essential for growth, adaptation, and survival.</p>
		IV	ENVIRONMENT AL & APPLIED MICROBIOLOG Y (B041006T)	<p>CO1 - Understand the role of microbes in environmental restoration, pollution abatement, and bioremediation.</p> <p>CO2 - Explore microbial applications in fermentation technology, agriculture, food, and dairy industries.</p> <p>CO3 - Gain insights into the significance of extremophiles and their biotechnological applications.</p> <p>CO4 - Learn about microbial technologies, including biosensors, biomolecules, and enzyme production.</p>
		IV	CONSERVATIO N AND RESTORATION ECOLOGY (B041007T)	<p>CO1 - Understand principles, ethics, and strategies of conservation ecology and restoration practices.</p> <p>CO2 - Analyze population dynamics, genetic variation, and habitat-specific conservation priorities.</p> <p>CO3 - Explore ecosystem disturbances and strategies for restoring degraded ecosystems.</p> <p>CO4 - Learn sustainable development models and management approaches for species and habitat conservation.</p>
		IV	BIOINFORMATI CS AND INTELLECTUA L PROPERTY RIGHTS (IPR) (B041008T)	<p>CO1 - Gain foundational knowledge of bioinformatics, databases, and computational tools for biological analysis.</p> <p>CO2 - Develop skills in using bioinformatics software for sequence alignment, gene prediction, and phylogenetic studies.</p> <p>CO3 - Understand the fundamentals of Intellectual Property Rights (IPRs), including patents, copyrights, and trademarks.</p> <p>CO4 - Learn procedures for obtaining patents and the role of WIPO and Indian patent offices.</p>
		IV	BIOFERTILIZER TECHNOLOGY (B041009T)	<p>CO1 - Understand the types, characteristics, and agricultural applications of biofertilizers.</p> <p>CO2 - Learn the mechanisms of biological nitrogen fixation and its regulation in plants.</p> <p>CO3 - Explore the role of plant growth-promoting rhizobia (PGPR) in legume symbiosis.</p>

				CO4 - Acquire knowledge of strain selection, production, and mass manufacturing techniques for biofertilizers.
		IV	MICROBIAL GENETICS (B041010T)	CO1 - Understand tools of microbial genetics, including bacteriophages, extrachromosomal DNA, and transposons. CO2 - Explore mechanisms of genetic recombination, gene conversion, and cell signaling in microbes. CO3 - Analyze gene expression and regulation through operons, regulons, and stress response pathways. CO4 - Learn about the application of microbes in genetic engineering and bacterial-plant associations.
		IV	PRACTICAL (B041011P)	CO1 - Gain proficiency in advanced laboratory and field techniques, including molecular biology, plant physiology, and ecological analysis. CO2 - Develop problem-solving abilities by designing experiments, analyzing data, and interpreting results scientifically. CO3 - Bridge theoretical concepts with practical applications in plant science, biotechnology, and conservation.
		IV	RESEARCH PROJECT (B041012R)	CO1 - Translate research insights into practical applications in agriculture, horticulture, pharmacology, or environmental management. CO2 - Effectively communicate research findings through written reports, thesis preparation, and scientific publications. CO3 - Follow ethical guidelines in botanical research, including proper documentation and acknowledgment of data sources.
M. Sc. Zoology	PO1- M.Sc. Zoology program offers a blend of classical and modern aspects, enabling students to explore animal diversity in the Indian subcontinent, environmental science, and behavioral ecology. PO2- The curriculum incorporates modern fields such as cell biology, genetics, molecular biology, biochemistry, and biostatistics, fostering relevance to human studies. Practical lab courses equip students with skills in microscopy, centrifugation, chromatography, and biochemical techniques, preparing them for employment in pathology labs and contributing to the healthcare system.	I	NON CHORDATA (B050701T)	CO1 - Develop an in-depth understanding of protists, lower metazoans, and non-chordate phyla, focusing on their classification, structure, and biological processes. CO2 - Explore the physiological and ecological adaptations such as nutrition, digestion, locomotion, osmoregulation, and respiration in non-chordates. CO3 - Analyze evolutionary relationships, larval forms, and adaptive radiations, emphasizing the significance of trochophore larva, metagenesis, and deuterostome origins. CO4 - Examine the economic importance of nematodes, parasitic adaptations, and structural modifications in mollusks and arthropods, including their ecological and economic roles.

	PO3- Graduates are trained for roles in government and private sectors, academia, research, and industry. Additionally, they are prepared for national and international competitive examinations, including UGC-CSIR NET, UPSC Civil Services, and other prestigious exams, enhancing their career opportunities.			
		I	BIOSYSTEMATICS AND EVOLUTIONARY BIOLOGY (B050702T)	CO1 - Develop a comprehensive understanding of taxonomy, classification, nomenclature, and the historical and recent trends in biosystematics, including chemotaxonomy, cytotoxicity, and molecular taxonomy. CO2 - Learn taxonomic procedures, species concepts, the International Code of Zoological Nomenclature (ICZN), and their practical applications in biological research. CO3 - Analyze evolutionary theories, mechanisms of natural selection, adaptation, speciation, and the elemental forces driving evolution, including genetic drift and mutation. CO4 - Apply concepts like Hardy-Weinberg equilibrium, molecular phylogenies, the molecular clock hypothesis, and advanced tools to study evolutionary relationships and genetic patterns.
		I	CELL BIOLOGY AND GENETICS (B050703T)	CO1 - Gain a detailed understanding of cellular membranes, cytoskeleton components, and endomembrane systems, focusing on their composition, structure, and role in intracellular transport and protein targeting. CO2 - Explore mitochondrial function, oxidative phosphorylation, and ATP synthesis, along with the molecular mechanisms of cell signaling, including pathways like JAK-STAT and MAP kinase, and processes like apoptosis. CO3 - Understand Mendelian and non-Mendelian genetics, gene mapping techniques, and the molecular basis of mutations, DNA damage, and repair mechanisms. CO4 - Study gene structure, regulation in prokaryotes (lac and trp operons), eukaryotic gene organization, mobile DNA elements, and the fundamentals of recombinant DNA technology for gene cloning and analysis.
		I	QUANTITATIVE BIOLOGY, RESEARCH	CO1 - Develop expertise in measures of central tendency, dispersion, hypothesis testing, probability distributions, and statistical tests like ANOVA, t-test, and Chi-square for biological

			METHODOLOGY AND BIOINSTRUMENTATION (B050704T)	<p>data analysis.</p> <p>CO2 - Acquire skills in research design, data collection, presentation, and analysis using diagrams, graphs, and tabulation, along with an understanding of ethical research practices and effective report writing.</p> <p>CO3 - Gain practical knowledge of advanced bioinstrumentation techniques such as microscopy, spectrophotometry, chromatography, electrophoresis, and PCR for studying biomolecules.</p> <p>CO4 - Learn histochemical, immunotechniques (e.g., ELISA, Western blot, FISH), and electrophysiological methods (e.g., ECG, fMRI, PET) for molecular detection and in situ analysis in biological research.</p>
		I	PRACTICAL (B050705P)	<p>CO1 - Acquire practical skills through detailed exercises on Non-Chordata, Biosystematics, Evolutionary Biology, Cell Biology, Genetics, and Bioinstrumentation.</p> <p>CO2 - Develop proficiency in quantitative biology techniques, data analysis, and research methodologies through experimental exercises.</p> <p>CO3 - Enhance ability to identify and interpret biological specimens (spotting) and their significance.</p> <p>CO4 - Improve scientific articulation through viva-voce and maintain accurate, detailed practical records for effective reporting.</p>
		II	CHORDATA (B050801T)	<p>CO1 - Gain comprehensive knowledge of the origin, classification, and general characteristics of Amphibia, Reptilia, Aves, and Mammalia, along with Protochordate groups like Hemichordata, Urochordata, and Cephalochordata.</p> <p>CO2 - Explore the evolutionary relationships, adaptations, and peculiarities of key groups such as Ostracoderms, Cyclostomes, Dipnoi, and tetrapods, with an emphasis on neoteny, metamorphosis, and adaptive radiation.</p> <p>CO3 - Study specialized structures and functions, including swim bladders, skull types, bird flight adaptations, beak and foot modifications, and parental care across chordate groups.</p> <p>CO4 - Examine the origin and diversification of mammals, focusing on structural peculiarities, phylogenetic relationships of Prototheria and Metatheria, uterine modifications, aquatic adaptations, and the unique digestive systems of ruminants.</p>

		II	ANIMAL PHYSIOLOGY AND BIOCHEMISTRY (B050802T)	<p>CO1 - Learn the mechanisms of digestion, circulation, respiration, excretion, muscle function, neurophysiology, endocrine regulation, and thermoregulation, including hormonal and neural controls.</p> <p>CO2 - Understand the chemical basis of life, focusing on biomolecules (carbohydrates, lipids, proteins), their metabolism (glycolysis, β-oxidation, ketogenesis), and bioenergetics, including oxidative phosphorylation.</p> <p>CO3 - Gain insights into enzyme structure, classification, kinetics, mechanisms of action, and types of enzyme inhibition, along with the roles of coenzymes and ribozymes.</p> <p>CO4 - Explore the structure and properties of amino acids and proteins, along with an introduction to secondary metabolites like alkaloids and terpenoids, emphasizing their biological significance.</p>
		II	REPRODUCTIVE AND DEVELOPMENTAL BIOLOGY (B050803T)	<p>CO1 - Understand the structure, function, and physiology of male and female reproductive systems, including gametogenesis, ovulation, implantation, pregnancy, and reproductive aging. Gain insights into puberty, its regulation, and associated phenomena like menopause.</p> <p>CO2 - Explore the evolution of reproductive mechanisms, the impact of hormones on behavior, and key issues in reproductive health, such as sexual dysfunctions, diseases, and assisted reproductive technologies.</p> <p>CO3 - Learn the basic concepts of developmental processes, including cell potency, differentiation, morphogenetic gradients, and stem cells. Study early embryonic stages like fertilization, cleavage, and gastrulation, and experimental embryology techniques.</p> <p>CO4 - Analyze the formation of body axes, organ development, and patterning in model organisms. Study metamorphosis, its hormonal regulation, and the impact of teratogens, carcinogens, and oncogenes on developmental processes.</p>
		II	APICULTURE (B050804T)	<p>CO1 - Learn about the history, species, anatomy, behavior, and social organization of honey bees, including their role in pollination, floral relationships, and agricultural improvement.</p> <p>CO2 - Gain knowledge of apiculture as an occupation, focusing on bee breeding, colony management, beekeeping tools, and techniques for honey and by-product production, including wax, royal jelly, and propolis.</p> <p>CO3 - Study common enemies, pests, and diseases affecting honey</p>

				<p>bees, their diagnosis, and control measures. Understand honey extraction, processing, and quality control standards.</p> <p>CO4 - Explore seasonal and migratory beekeeping techniques, honey product marketing, and the economic aspects of apiculture, including small-scale and large-scale operations and funding opportunities for beekeeping projects.</p>
		II	SERICULTURE (B050805T)	<p>CO1 - Learn about the history, classification, and life cycles of silkworm species, including mulberry, tasar, and eri silkworms, and their feeding habits and ecological requirements.</p> <p>CO2 - Explore the history and spread of sericulture globally, focusing on silk production practices in different climates and regions, including China, Japan, India, and Malaysia, and understand the development of the silk industry worldwide.</p> <p>CO3 - Gain knowledge of the tools, climatic and soil conditions, rearing methods, and disease management essential for starting and maintaining a silk production enterprise.</p> <p>CO4 - Understand the economic importance, marketing, and distribution of silk products, as well as the roles of national organizations like the National Sericulture Board and the Central Silk Board in supporting the industry.</p>
		II	LAC-CULTURE (B050806T)	<p>CO1 - Understand the history, global distribution, and economic significance of lac culture, including the key lac-producing regions in India and worldwide.</p> <p>CO2 - Learn the systematic position, anatomy, and life cycle of lac insects, with a focus on distinguishing features between male and female insects and species like Tachardia lacca.</p> <p>CO3 - Gain knowledge of host plants used in lac production, inoculation methods, and swarming behaviors to optimize lac cultivation.</p> <p>CO4 - Explore harvesting techniques, properties and composition of lac, challenges in lac cultivation, and the economic and industrial importance of the lac industry in India.</p>
		II	AQUACULTURE (B050807T)	<p>CO1 - Gain knowledge of major cultivable species, freshwater and brackish water aquaculture, hatchery management, and water quality requirements for sustainable aquaculture practices.</p> <p>CO2 - Learn bundh breeding, induced breeding techniques using hormones, seed technology, and hatchery processes for various species, including Indian Major Carps and prawns.</p> <p>CO3 - Study the culture methods of prawns, shrimps, ornamental</p>

				<p>fishes, air-breathing fishes, mollusks, and seaweeds, along with their commercial and ecological significance.</p> <p>CO4 - Understand the role of genetics (e.g., gynogenesis, androgenesis, transgenics, sex reversal) in aquaculture and learn about disease management, environmental impacts, and sustainable practices in aquaculture systems.</p>
		II	PRACTICAL (B050808P)	<p>CO1 - Practical studies focused on the identification, dissection, and understanding of the structural and functional aspects of various chordates.</p> <p>CO2 - Experiments related to digestion, circulation, respiration, muscle physiology, and biochemical analysis such as enzyme activity or metabolite quantification.</p> <p>CO3 - Practical activities include studying gametes, stages of fertilization, embryological development, and techniques like staining and observation of prepared slides.</p> <p>CO4 - Identification and commentary on ten specimens, slides, or skeletal structures related to chordate taxonomy and morphology.</p> <p>CO5 - Improve scientific articulation through viva-voce and maintain accurate, detailed practical records for effective reporting.</p>
		II	RESEARCH PROJECT (B050809R)	<p>CO1 - Develop the ability to design and execute research projects, including formulating hypotheses, conducting experiments, and analyzing results.</p> <p>CO2 - Acquire proficiency in modern research methodologies, tools, and techniques relevant to zoology, such as molecular biology, microscopy, and statistical analysis.</p> <p>CO3 - Analyze scientific literature critically to identify research gaps and propose innovative solutions to zoological problems.</p> <p>CO4 - Collect, process, and interpret experimental and field data using statistical software and bioinformatics tools.</p> <p>CO5 - Apply quantitative and qualitative methods to derive conclusions and validate findings.</p>
		III	ETHOLOGY, BIODIVERSITY AND WILDLIFE CONSERVATIO N (B050901T)	<p>CO1 - Comprehend key patterns, types, and evolutionary aspects of animal behavior, including learning, memory, and communication.</p> <p>CO2 - Analyze social behaviors, kin selection, mating systems, parental care, and territoriality to understand their ecological and adaptive significance.</p> <p>CO3 - Grasp the hierarchical levels of biodiversity, measure species diversity, and understand the causes and consequences of biodiversity loss at global, national, and local levels.</p>

				CO4 - Evaluate wildlife conservation techniques, legal frameworks (e.g., Wildlife Protection Act), and management strategies for endangered species and protected areas."
		III	MOLECULAR BIOLOGY, IMMUNOLOGY AND BIOINFORMATICS (B050902T)	CO1 - Develop a deep understanding of chromosomal organization, DNA replication, transcription, translation, and gene regulation in prokaryotic and eukaryotic systems, including cancer biology and apoptosis pathways. CO2 - Learn the components and mechanisms of innate and acquired immunity, immunoglobulins, antigen-antibody interactions, hypersensitivity, and autoimmune diseases. CO3 - Gain proficiency in digital laboratory tools, data retrieval systems, sequence alignment techniques, and their applications in biological research, clinical informatics, and pharmacoinformatics. CO4 - Explore computational approaches for studying protein structures, genetic sequences, and evolutionary relationships using bioinformatics tools like BLAST, ClustalW, and PHYLIP.
		III	WASTE MANAGEMENT AND SUSTAINABLE DEVELOPMENT (B050903T)	CO1 - Understand the environmental, economic, and social impacts of waste disposal, recycling, and renewable energy benefits, with a focus on E-waste and rural waste management. CO2 - Learn the physical and chemical properties of solid waste, management strategies, disposal technologies, and treatment methods for hazardous and biomedical wastes. CO3 - Grasp the principles of sustainable development, biosafety, and green technologies, while understanding the roles of governments, NGOs, and international organizations in promoting ecological balance. CO4 - Explore sustainable practices such as solar energy, rainwater harvesting, and eco-city development, and analyze environmental laws, policies, and global conventions for biodiversity conservation.
		III	AGROCHEMICALS AND PEST MANAGEMENT (B050904T)	CO1 - Learn about the classification, morphology, and behavior of plant pests, their causes of outbreaks, and their impacts on agriculture, public health, and domestic settings. CO2 - Gain knowledge of agrochemicals, including types of manures, composting technologies, chemical fertilizers, and biofertilizers, and their role in promoting plant health and sustainable agriculture. CO3 - Understand the classification, properties, and application methods of conventional pesticides, their target species, modes of action, and toxicity considerations.

				CO4 - Explore botanical pesticides, biopesticides, insect growth regulators, pheromones, and genetically modified plants as eco-friendly pest management solutions.
		III	ENTOMOLOGY (B050905T)	CO1 - Understand the classification of insects up to order and suborder levels, their evolutionary success, integument structure, and functional morphology including head, thorax, wings, and appendages. CO2 - Gain knowledge of the structure and functions of the digestive, circulatory, respiratory, excretory, and nervous systems, including the neuroendocrine system and physiology of vision. CO3 - Explore sensory systems, sound and light production, reproductive mechanisms, and the physiological basis of these adaptations.
		III	PARASITOLOGY (B050906T)	CO1 - Understand key concepts of parasitism, host-parasite relationships, parasite taxonomy, and biodiversity, including the application of the ICZN for parasite classification. CO2 - Explore parasite population dynamics, host-parasite coevolution, immunological adaptations, and methods for collecting, preserving, and preparing parasites for study. CO3 - Learn the morphology, life cycles, and impacts of major protozoan and trematode parasites affecting humans and domestic animals, such as Entamoeba histolytica, Schistosoma spp., and Fasciolopsis buski.
		III	ICHTHYOLOGY (B050907T)	CO1 - Understand the evolutionary classification of fishes, including ostracoderms, placoderms, elasmobranchs, and bony fishes, along with fish biodiversity in India, particularly in Uttar Pradesh and Bihar. CO2 - Learn fish identification techniques, preparation of identification keys, and fin formula analysis, while understanding biological and local names. Explore fish decomposition processes and rigor mortis. CO3 - Study fish distribution patterns, local fish fauna, preservation techniques, and genetic resources, including chromosomal analysis, karyotyping, and chromosome manipulation methods like gynogenesis and polyploidy.
		III	ENDOCRINOLOGY (B050908T)	CO1 - Understand the history, classification, and evolution of hormones, along with the structure and regulation of neuro-endocrine organs such as the hypothalamo-hypophyseal system and

				<p>pituitary gland.</p> <p>CO2 - Study the structure, secretion, and physiological roles of hormones from the pineal gland, thyroid, parathyroid, and their involvement in calcium homeostasis, biological rhythms, and metabolic regulation.</p> <p>CO3 - Explore the anatomy, secretion, and functions of adrenal gland hormones, the renin-angiotensin system, insulin, glucagon, and their roles in conditions like diabetes mellitus. Learn about gastrointestinal hormones and their physiological roles.</p>
		III	ENVIRONMENTAL BIOLOGY (B050909T)	<p>CO1 - Gain an understanding of ecology's modern scope, climatic factors affecting ecosystems, animal adaptations to extreme climates, water conservation strategies, and India's biogeographical zones.</p> <p>CO2 - Learn the structure and functioning of ecosystems, the role of abiotic and limiting factors, global ecosystem diversity (freshwater, marine, and terrestrial biomes), energy flow, food webs, and nutrient cycling.</p> <p>CO3 - Explore population dynamics, including attributes like density, mortality, life tables, and growth models (exponential and logistic). Understand population regulation mechanisms and strategies like r- and k-selection.</p> <p>CO4 - Understand environmental degradation, pollution control measures, biodiversity conservation, and the role of gender and culture in conservation. Study significant environmental movements like Chipko, Silent Valley, and Bishnois for ecological sustainability.</p>
		III	ANIMAL CYTOGENETICS (B050910T)	<p>CO1 - Understand the fundamental characteristics of living beings, cell theory, and cell cycle, including mitosis and meiosis. Learn about the cell membrane, its structure, chemical composition, and specialized modifications for transport and communication.</p> <p>CO2 - Explore the ultrastructure, function, and significance of cellular organelles such as the nucleus, mitochondria, lysosomes, and cytoskeleton. Gain insights into energy metabolism and the biosynthesis and breakdown of biomolecules like carbohydrates, proteins, and nucleic acids.</p> <p>CO3 - Study chromosome structure, including euchromatin, heterochromatin, and giant chromosomes, along with chromosomal aberrations. Learn about the mechanisms of sex determination and the structure of sex chromosomes, including sex chromatin and Y</p>

				body. CO4 - Examine DNA replication, transcription, translation, and the transformation of matter and energy in metabolism. Understand basic techniques for analyzing cells and tissues using microscopic and sub-microscopic tools.
		III	PRACTICAL (B050911P)	CO1 - Practical studies based on animal cytogenetics & molecular biology, immunology and bioinformatics CO2 - Practical studies based on waste management and sustainable development or agrochemicals and pest management CO3 - Practical studies based on the specialization subject
		IV	ECOLOGY AND TOXICOLOGY (B051001T)	CO1 - Grasp the principles of ecology, including ecosystem structures, functions, and interactions between biotic and abiotic components. CO2 - Analyze ecological issues like pollution and climate change, emphasizing sustainable development and ecosystem restoration. CO3 - Understand toxicological concepts, including dose-response relationships, toxicity testing, and classification of toxic agents. CO4 - Learn the absorption, distribution, biotransformation, and elimination of toxicants, alongside mechanisms of toxicity and antidotal therapies.
		IV	PUBLIC HEALTH AND HYGIENE (B051002T)	CO1 - Understand the principles of hygiene, health hazards, and preventive measures for maintaining personal and community health. CO2 - Recognize nutrient requirements, dietary planning, and strategies to prevent and manage malnutrition-related disorders. CO3 - Analyze causes, symptoms, and prevention strategies for non-communicable diseases and associated health challenges. CO4 - Identify communicable diseases, their causative agents, and implement preventive health education measures.
		IV	HUMAN NUTRITION AND THERAPEUTICS (B051003T)	CO1 - Understand the role of macro- and micronutrients in balanced diets tailored to various life stages and physiological needs. CO2 - Identify, prevent, and manage common deficiency diseases and lifestyle-related health issues. CO3 - Analyze causes, transmission, and prevention of food and water-borne infections, emphasizing food hygiene practices. CO4 - Develop dietary plans for managing medical conditions, considering therapeutic requirements, dietary interactions, and special feeding methods.

		IV	MICROBIOLOGY (B051004T)	<p>CO1 - Understand the diversity of microbes, their pathogenic mechanisms, and techniques for studying microbial growth and identification.</p> <p>CO2 - Analyze the causes, pathogenesis, and management of bacterial, viral, and fungal diseases affecting humans.</p> <p>CO3 - Explore microbial roles in air and aquatic environments, including their interactions, survival, and effects of climate change.</p> <p>CO4 - Learn the processes of biogeochemical cycling and the significance of biofertilizers and vermicomposting in sustainable agriculture.</p>
		IV	BIOTECHNOLOGY (B051005T)	<p>CO1 - Understand transgenic and knockout animal technologies, genome editing tools, and advancements in vaccines, therapeutics, and gene therapy.</p> <p>CO2 - Explore stem cell types, tissue regeneration processes, and the role of pluripotent stem cells in regenerative medicine.</p> <p>CO3 - Gain knowledge of rDNA techniques, cloning vectors, DNA fingerprinting, and applications of recombinant proteins in medicine and industry.</p> <p>CO4 - Learn about transgenic aquatic organisms, marine-derived drugs, FDA regulations, patents, and ethical considerations in biotechnology.</p>
		IV	APPLIED ENTOMOLOGY (B051006T)	<p>CO1 - Understand insect development stages, adaptations, and hormonal regulation, including reproductive strategies like diapause and parthenogenesis.</p> <p>CO2 - Analyze pest damage, pest control methods, pesticide application, and issues like resistance and safe handling of chemicals.</p> <p>CO3 - Learn about the life cycles, damage, and management strategies for major crop pests, storage pests, and insect-borne diseases.</p> <p>CO4 - Explore the economic significance of beneficial insects, plant protection organizations, forensic entomology, and integrated pest management (IPM).</p>
		IV	CLINICAL PARASITOLOGY (B051007T)	<p>CO1 - Understand the causes, symptoms, diagnosis, treatment, and control measures for various protozoan, trematode, cestode, and nematode infections.</p> <p>CO2 - Explore the immune responses to parasitic infections, immunodiagnostic techniques, and the development of vaccines against parasites.</p>

				<p>CO3 - Learn the physiological and biochemical adaptations of parasites, including digestion, excretion, respiration, and metabolism.</p> <p>CO4 - Gain insights into the in vitro cultivation of parasites and physiological processes like egg-shell formation and tegumentary functions.</p>
		IV	<p>APPLIED ICHTHYOLOGY (B051008T)</p>	<p>CO1 - Understand the fisheries of India, including marine, freshwater, estuarine, and cold-water systems, as well as prawn fisheries and pond culture practices.</p> <p>CO2 - Learn seawater and inland fishing methods, handling of cultivable fish species, seed procurement, tagging, and fish marketing.</p> <p>CO3 - Explore techniques like hypophysation, fish breeding practices, and the production of fish-based products such as oil and glue.</p> <p>CO4 - Study fish development stages, reproductive strategies, endocrinal regulation, and parental care in fishes.</p>
		IV	<p>MOLECULAR ENDOCRINOLOGY (B051009T)</p>	<p>CO1 - Understand the chemical nature of hormones and apply modern methodologies like RIA, ELISA, and RT-PCR for hormone analysis and research.</p> <p>CO2 - Explore the synthesis and metabolism of peptide, steroid, and thyroid hormones, including r-DNA technology applications for producing hormones like insulin and GH.</p> <p>CO3 - Analyze hormone-receptor interactions, signal transduction pathways, and mechanisms of action for steroid and thyroid hormones.</p> <p>CO4 - Study the use of hormones as therapeutic agents, hormone disruptors, contraceptive designs, and advancements in hormone research and pharmacology.</p>
		IV	<p>APPLIED ENVIRONMENTAL BIOLOGY (B051010T)</p>	<p>CO1 - Analyze population dynamics, urbanization, industrialization, and their effects on environmental resources, including global warming and climate change.</p> <p>CO2 - Understand the degradation of natural resources, deforestation, soil and water conservation, and the role of NGOs in environmental preservation.</p> <p>CO3 - Study population characteristics, ecological succession, and the impact of environmental pollutants like acid rain, ozone depletion, and carbon emissions.</p> <p>CO4 - Learn about the sources, prevention, and management of air,</p>

				water, noise, and solid waste pollution, as well as the role of environmental laws and organizations in India.
		IV	CLINICAL CYTOGENETICS (B051011T)	CO1 - Gain knowledge of gene structures, genome organization in various organisms, and repetitive DNA elements. CO2 - Learn about linkage, crossing over, chromosomal structure, and human chromosomal complements. CO3 - Analyze hereditary diseases, chromosomal abnormalities, and genetic aspects of blood group incompatibilities. CO4 - Understand population genetics concepts, including gene frequency, Hardy-Weinberg law, and environmental influences on traits.
		IV	PRACTICAL (B051012P)	CO1 - Practical studies based on Ecology and Toxicology CO2 - Practical studies based on public health and hygiene CO3 - Practical studies based on Microbiology/Biotechnology CO4 - Practical studies based on the specialization subject
		IV	RESEARCH PROJECT (B051013R)	CO1 - Demonstrate the ability to think independently and solve complex biological questions. CO2 - Follow ethical guidelines in conducting research, including data reporting, and avoiding plagiarism. CO3 - Understand the societal and environmental implications of zoological research. CO4 - Effectively present research findings through written reports, thesis documentation, and scientific publications.
M. Sc. Chemistry	PO1- M.Sc. Chemistry program provides a strong foundation in analytical, inorganic, organic, and physical chemistry, emphasizing the application of current chemical and scientific theories. PO2- Students develop skills in experimental design, accurate data analysis, problem-solving, critical thinking, and analytical reasoning, enabling them to explore new research areas in chemistry and related fields. PO3- Graduates are prepared for diverse careers in government and private sectors, academia, research, and industry. The program also equips students for national and international	I	INORGANIC CHEMISTRY-I (B020701T)	CO1 - Understand molecular shapes, bonding principles, and hybridization in main group compounds using VSEPR, Walsh diagrams, and other bonding models. CO2 - Analyze factors affecting metal complex stability, explore the chelate effect, and determine formation constants using experimental methods like pH-metry and spectrophotometry. CO3 - Examine reaction mechanisms, including substitution, hydrolysis, and redox reactions, with insights from kinetic and thermodynamic theories. CO4 - Apply crystal field and molecular orbital theories to explain bonding in coordination complexes, including π -bonding effects.

	competitive exams, including UGC-CSIR NET, UPSC Civil Services, and GATE, enhancing their job prospects and expertise in addressing societal challenges.			
		I	ORGANIC CHEMISTRY-I (B020702T)	<p>CO1 - Explore delocalized bonding, aromaticity in various compounds, and bonding in specialized molecules like fullerenes and crown ethers.</p> <p>CO2 - Analyze molecular conformations, symmetry, chirality, and stereochemical principles in complex organic molecules, including asymmetric synthesis and optical activity.</p> <p>CO3 - Comprehend reaction types, energy profiles, intermediate species, and structure-reactivity relationships, supported by quantitative models like the Hammett equation.</p> <p>CO4 - Examine substitution mechanisms, including SN1, SN2, and SE pathways, along with factors influencing reactivity and regioselectivity in aliphatic compounds.</p>
		I	PHYSICAL CHEMISTRY-I (B020703T)	<p>CO1 - Understand and apply the Schrödinger equation to model systems, approximate methods, and angular momentum concepts, exploring electronic structures and molecular orbital theory.</p> <p>CO2 - Analyze thermodynamic laws, phase transitions, fugacity, and non-ideal systems; calculate thermodynamic properties using partition functions and distribution laws.</p> <p>CO3 - Examine entropy production, fluxes, and forces in irreversible processes, with applications to electrokinetic phenomena and biological systems.</p> <p>CO4 - Explore electronic configurations, coupling schemes, and spin-orbit interactions, along with theoretical methods like Huckel and extended Huckel theory for molecular systems.</p>
		I	SPECTROSCOPY (B020704T)	<p>CO1 - Understand rotational and vibrational spectra of molecules, including isotopic effects, anharmonicity, group frequencies, and advanced Raman techniques.</p> <p>CO2 - Analyze atomic and molecular electronic transitions, Franck-Condon principles, and applications to polyatomic molecules and transition metal complexes, including photoelectron and Auger spectroscopy.</p> <p>CO3 - Explore NMR and ESR spectroscopy principles, chemical shifts, coupling constants, and applications in structure determination and diagnostics.</p> <p>CO4 - Learn the principles and applications of nuclear quadrupole</p>

				resonance and photoacoustic spectroscopy in chemical and surface analysis.
		I	PRACTICAL (B020705P)	CO1 - Develop skills in analyzing complex mixtures with at least six ions, including rare elements, through qualitative and quantitative methods. CO2 - Gain proficiency in the preparation, isolation, and identification of organic compounds using systematic approaches. CO3 - Enhance experimental accuracy, data recording, and interpretation through thorough documentation and evaluation. CO4 - Demonstrate understanding of concepts and methodologies during viva-voce and articulate findings effectively.
		II	INORGANIC CHEMISTRY-II (B020801T)	CO1 - Analyze electronic spectra and magnetic properties of transition metal complexes using Orgel and Tanabe-Sugano diagrams, along with spectroscopic and magnetic moment evaluations. CO2 - Understand the bonding, structure, and reactivity of metal carbonyls, nitrosyls, dinitrogen, dioxygen complexes, and the role of tertiary phosphine ligands. CO3 - Explore the structure, bonding, and reactivity of higher boranes, carboranes, metalloboranes, metallocarboranes, and transition metal clusters with metal-metal multiple bonds.
		II	ORGANIC CHEMISTRY-II (B020802T)	CO1 - Understand electrophilic and nucleophilic substitution mechanisms in aromatic systems, including reactivity, orientation, and rearrangement reactions like Von Richter and Sommelet-Hauser. CO2 - Explore free radical substitution, oxidation, coupling, and addition mechanisms involving carbon-carbon and carbon-hetero multiple bonds, with emphasis on regio- and stereoselectivity. CO3 - Analyze elimination reaction pathways (E1, E2, E1cB), double bond orientation, and condensation reactions like Aldol, Claisen, and Mannich, focusing on mechanistic details. CO4 - Study the symmetry and mechanisms of pericyclic reactions, including electrocyclic, cycloaddition, and sigmatropic rearrangements, using FMO and PMO approaches.
		II	PHYSICAL CHEMISTRY-II (B020803T)	CO1 - Gain insights into reaction rate laws, theories of reaction rates, fast reaction techniques, and complex reaction dynamics, including oscillatory and enzyme-catalyzed reactions. CO2 - Understand adsorption phenomena, micelle formation, and

				<p>polymer properties, including molecular mass determination and kinetics of polymerization.</p> <p>CO3 - Explore concepts like electrified interfaces, electrochemical models, electrode charge transfer, semiconductor interfaces, and applications in bioelectrochemistry and electrocatalysis.</p> <p>CO4 - Learn about polarography, corrosion mechanisms, and strategies for corrosion prevention and monitoring.</p>
		II	ENVIRONMENTAL CHEMISTRY (B020804T)	<p>CO1 - Learn the composition of the atmosphere, hydrosphere, and soil, including biogeochemical cycles and the impact of pollutants.</p> <p>CO2 - Explore sources and effects of air, water, and soil pollution, with analytical techniques for measuring pollutants and parameters like BOD, COD, and heavy metals.</p> <p>CO3 - Understand the environmental effects of industrial processes, waste management, and toxicological principles to mitigate pollution.</p> <p>CO4 - Develop knowledge of environmentally friendly industrial practices, biodegradability, and principles for sustainable environmental management.</p>
		II	SYMMETRY AND GROUP THEORY (B020805T)	<p>CO1 - Gain an understanding of symmetry elements, operations, and the fundamental definitions of groups, subgroups, and their relationships.</p> <p>CO2 - Learn point symmetry groups, Schonflies symbols, and group representations with explicit examples for common molecular symmetry groups.</p> <p>CO3 - Understand the construction and interpretation of character tables and their applications.</p> <p>CO4 - Use group theory and character tables to analyze molecular symmetry in spectroscopic contexts.</p>
		II	PRACTICAL (B020806P)	<p>CO1 - Develop proficiency in synthesizing a variety of inorganic compounds with diverse coordination geometries, oxidation states, and ligand types.</p> <p>CO2 - Synthesize organic compounds using common organic reactions like acetylation, oxidation, and Grignard reactions.</p> <p>CO3 - Acquire quantitative skills to determine functional groups such as hydroxyl, amines, and phenols using acetylation or bromate-bromide methods.</p> <p>CO4 - Enhance understanding of experimental principles and methodologies through oral examinations and develop systematic record-keeping habits for laboratory work and assessments.</p>

		II	RESEARCH PROJECT (B020807R)	<p>CO1 - Acquire expertise in designing, conducting, and managing scientific experiments in chemistry.</p> <p>CO2 - Develop proficiency in laboratory techniques and the use of modern analytical instruments</p> <p>CO3 - Formulate hypotheses and solve complex chemical problems by applying theoretical knowledge and experimental approaches.</p> <p>CO4 - Analyze data critically to draw meaningful and accurate conclusions.</p>
		III	BIOINORGANIC, BIOORGANIC, BIOPHYSICAL CHEMISTRY (B020901T)	<p>CO1 - Understand the role of metal ions in biological systems, including energy transfer, photosynthesis, dioxygen transport, and the structure-function relationships of metalloproteins like hemoglobin and myoglobin.</p> <p>CO2 - Analyze enzyme mechanisms, coenzyme chemistry, and the catalytic processes vital for biochemical reactions, emphasizing structure, specificity, and regulation.</p> <p>CO3 - Explore the molecular and energetic principles governing biological cells, biopolymer interactions, and the thermodynamics of processes like ATP synthesis and muscular contraction.</p>
		III	APPLICATION OF SPECTROSCOPY (B020902T)	<p>CO1 - Apply vibrational, electron spin resonance (ESR), and Mössbauer spectroscopy to study molecular symmetry, bonding, and active sites in metalloproteins and metal complexes.</p> <p>CO2 - Utilize UV-Vis and IR spectroscopy to analyze electronic transitions and vibrational frequencies of various organic compounds, considering solvent effects, hydrogen bonding, and structural factors.</p> <p>CO3 - Interpret NMR spectra for protons and carbon-13, exploring chemical shifts, spin-spin coupling, stereochemistry, and advanced techniques like COSY and NOESY for structural elucidation.</p> <p>CO4 - Understand ionization techniques, fragmentation patterns, and their applications in structural determination of organic compounds, including concepts like McLafferty rearrangement and high-resolution analysis.</p>
		III	SOLID STATE CHEMISTRY (B020903T)	<p>CO1 - Understand principles, experimental techniques, and kinetics of reactions in the solid state, including the role of co-precipitation as a precursor.</p> <p>CO2 - Analyze different types of crystal defects (Schottky, Frenkel, color centers) and their thermodynamic implications, as well as the impact of non-stoichiometry on material properties.</p> <p>CO3 - Explore the band theory of solids, classify materials as</p>

				metals, insulators, or semiconductors, and study their optical, electronic, and magnetic behaviors, including superconductivity and p-n junctions. CO4 - Examine electrically conducting organic solids, charge transfer complexes, and their applications, including new organic superconductors.
		III	PHOTOCHEMISTRY (B020904T)	CO1 - Understand the interaction of electromagnetic radiation with matter, excitation types, energy transfer, quantum yield, and actinometry. CO2 - Analyze photochemical reaction mechanisms, including rate constants, lifetimes, and the effects of light intensity on reaction rates. CO3 - Explore photochemical behaviors of alkenes, carbonyl compounds, and aromatic compounds, focusing on isomerization, cyclization, rearrangement, and addition reactions. CO4 - Study advanced photochemical processes like Photo-Fries rearrangement, Barton reaction, photodegradation of polymers, smog formation, and the role of photochemistry in vision.
		III	ORGANOTRANSITION METAL CHEMISTRY (B020905T)	CO1 - Understand the synthesis, stability, decomposition, and applications of organocopper and related compounds in organic synthesis. CO2 - Explore the bonding, reactivity, and synthetic applications of alkylidenes, alkylidynes, low-valent carbenes, and carbynes. CO3 - Study transition metal π -complexes (alkenes, allyl, dienes, arenes, etc.), their bonding, structural features, and their role in nucleophilic and electrophilic organic reactions. CO4 - Analyze the formation, structure, and significance of transition metal-hydrogen compounds. CO5 - Examine catalytic processes like hydrogenation, Ziegler-Natta polymerization, hydrocarbonylation, and C-H bond activation in organic transformations.
		III	ANALYTICAL CHEMISTRY (B020906T)	CO1 - Understand the principles of analytical chemistry, including classical and instrumental methods, laboratory practices, error handling, and reagent management. CO2 - Analyze experimental data for precision, accuracy, and errors using statistical methods to evaluate and report results reliably. CO3 - Learn techniques for analyzing food components, detecting adulterants, and identifying pesticide residues using chromatography and other instrumental methods.

				<p>CO4 - Perform soil and fuel analyses to determine composition and quality.</p> <p>CO5 - Utilize chromatography and spectroscopy for the classification and analysis of drugs and narcotics.</p>
		III	PRACTICAL (B020907P)	<p>CO1 - Synthesis of inorganic compounds (e.g., sodium amide, metal acetylacetonates), preparation and analysis of coordination complexes, and study of metal-ligand interactions, magnetic properties, and stability.</p> <p>CO2 - Spectrophotometric and flame photometric methods for determining metals and anions and Chromatographic techniques for metal and sugar separations.</p> <p>CO3 - Adsorption studies, phase equilibria, and kinetics (including catalysis and micellar effects) and investigations of colligative properties, molecular weights, and electrolyte behavior.</p> <p>CO4 - Conductometry and potentiometry for reaction rates, dissociation constants, and thermodynamics and polarimetric studies for reaction kinetics and enzyme activity.</p>
		IV	ORGANIC SYNTHESIS (B021001T)	<p>CO1 - Study of Li, Mg, Zn, Cu, Pd, Ni, Fe, S, Si, and B compounds: their preparation, properties, mechanisms, and applications in organic synthesis.</p> <p>CO2 - Oxidative processes for hydrocarbons, alcohols, carbonyl compounds, and amines using reagents like RuO₄, iodobenzenediacetate, and Tl(III) nitrate.</p> <p>CO3 - Reductive processes for hydrocarbons, carbonyls, nitro groups, and hydrogenolysis of specific functionalities.</p> <p>CO4 - Mechanistic study and applications of rearrangements such as Pinacol-pinacolone, Beckmann, Curtius, Schmidt, Baeyer-Villiger, and others.</p>
		IV	HETEROCYCLIC CHEMISTRY (B021002T)	<p>CO1 - Master the systematic naming (Hantzsch-Widman system) and classification of monocyclic, fused, and bridged heterocycles, along with their structural features.</p> <p>CO2 - Understand the properties, reactivity, and aromaticity criteria of heterocycles, as well as the structural and stereoelectronic effects influencing non-aromatic systems.</p> <p>CO3 - Gain insights into the principles and methods of synthesizing heterocycles, including cyclization and cycloaddition, and explore reactions of small, six-membered, and larger heterocycles.</p> <p>CO4 - Analyze the synthesis and reactivity of heterocycles with one</p>

				or multiple heteroatoms and expand knowledge to seven- and larger-membered systems.
		IV	CHEMISTRY OF NATURAL PRODUCTS (B021003T)	<p>CO1 - Develop knowledge of the classification, occurrence, nomenclature, and biosynthesis of terpenoids, carotenoids, alkaloids, steroids, plant pigments, porphyrins, prostaglandins, pyrethroids, and rotenones.</p> <p>CO2 - Master the principles and techniques for determining structures, stereochemistry, and synthesis of key natural products using modern analytical methods.</p> <p>CO3 - Understand the roles, biosynthesis, and physiological effects of natural products, emphasizing their biological relevance and applications.</p> <p>CO4 - Utilize spectral data for the structure elucidation of complex natural compounds, integrating theoretical and practical approaches in organic chemistry.</p>
		IV	MEDICINAL CHEMISTRY (B021004T)	<p>CO1 - Understand drug development processes, including lead identification, modification, SAR, and the application of theories like QSAR to optimize bioactivity and receptor interactions.</p> <p>CO2 - Gain knowledge of drug absorption, metabolism, disposition, elimination, and their significance in therapeutic applications and drug development.</p> <p>CO3 - Learn the mechanisms, synthesis, and applications of drugs for cancer, cardiovascular diseases, infections, and psychoactive conditions.</p> <p>CO4 - Study the biosynthesis, mode of action, and synthesis of key antibiotics, emphasizing their role in inhibiting cell wall and protein synthesis.</p>
		IV	POLYMERS (B021005T)	<p>CO1 - Develop an understanding of polymer concepts, including monomers, polymerization mechanisms, classifications, and polymerization processes in various systems.</p> <p>CO2 - Learn methods for measuring molecular weight, analyzing chemical structure, and evaluating physical and thermal properties of polymers using techniques like spectroscopy and microscopy.</p> <p>CO3 - Explore how polymer morphology, crystallinity, and thermal transitions (T_m, T_g) influence physical properties and applications.</p> <p>CO4 - Gain knowledge of processing techniques and the properties of commercial and functional polymers, including their applications in industries like healthcare and electronics.</p>

		IV	NUCLEAR AND RADIO CHEMISTRY (B021006T)	<p>CO1 - Gain insights into nuclear structure, stability, reactions, radioactivity, and the principles of nuclear fission and fusion.</p> <p>CO2 - Learn about the interaction of radiation with matter, detection techniques, and theoretical nuclear models like the shell model and liquid-drop model.</p> <p>CO3 - Understand the components, functioning, and types of nuclear reactors, with a focus on Indian reactors, fuel cycles, and safety aspects of nuclear materials.</p> <p>CO4 - Explore isotope production, applications in medicine, food preservation, radiography, and environmental studies, alongside techniques like radiometric titrations and activation analysis.</p>
		IV	COMPUTATIONAL CHEMISTRY (B021007T)	<p>CO1 - Develop an understanding of numerical techniques for solving equations, interpolation, matrix diagonalization, differentiation, and integration, with applications in chemistry.</p> <p>CO2 - Acquire advanced programming skills in FORTRAN/C for implementing numerical methods and solving computational problems.</p> <p>CO3 - Gain hands-on experience with quantum chemical and molecular simulation packages such as GAUSSIAN, MOPAC, CHARM, and AMBER, applying them to problems in drug design and catalysis.</p> <p>CO4 - Learn to analyze errors, convergence, and conditioning in numerical computations and implement robust algorithms for scientific applications.</p>
		IV	BIOINORGANIC AND SUPRAMOLECULAR CHEMISTRY (B021008T)	<p>CO1 - Understand metal storage, transport, and biomineralization processes, along with calcium's biological significance in cellular transport and regulation.</p> <p>CO2 - Gain insights into the structure, mechanism, and roles of metalloenzymes like carboxypeptidase, catalase, cytochrome P-450, and vitamin B12-dependent enzymes.</p> <p>CO3 - Explore metal-nucleic acid interactions, metal toxicity, deficiencies, and therapeutic uses, including anticancer metal-based drugs.</p> <p>CO4 - Learn about molecular recognition, supramolecular reactivity, transport processes, and device applications, including host-guest chemistry and self-assembly mechanisms.</p>
		IV	INDUSTRIAL CHEMISTRY (B021009T)	<p>CO1 - Understand the composition, properties, and manufacturing processes of cement, glass, and ceramics, along with their industrial applications.</p>

				<p>CO2 - Gain knowledge of composite materials, their types, and the role of their constituents in enhancing strength and performance.</p> <p>CO3 - Learn about the production, composition, and uses of nitrogen, phosphorus, and potassium-based fertilizers.</p> <p>CO4 - Explore the refining and cracking of petroleum, properties of lubricants, and formulation, classification, and manufacturing processes of paints and coatings.</p>
		IV	GREEN CHEMISTRY (B021010T)	<p>CO1 - Comprehend the principles, need, and evolution of green chemistry, and apply these principles to design sustainable chemical processes.</p> <p>CO2 - Learn about non-traditional greener methods using eco-friendly reagents, catalysts, and alternative techniques for sustainable synthesis.</p> <p>CO3 - Explore microwave and ultrasound-assisted synthesis for organic transformations, emphasizing efficiency, energy savings, and reduced environmental impact.</p> <p>CO4 - Understand the use of ionic liquids, aqueous systems, and renewable solvents in green chemistry and explore sustainable methods for synthesizing nanomaterials.</p>
		IV	PRACTICAL (B021011P)	<p>CO1 - Separation, purification, and identification of organic compounds in a three-component mixture (solids and/or liquids) using chemical analysis and thin-layer chromatography (TLC) and use of IR, PMR, and mass spectrometry for compound identification and purity assessment.</p> <p>CO2 - Isolation of natural products like caffeine (tea leaves), casein and lactose (milk), nicotine (tobacco), piperine (black pepper), β-carotene (carrots), and eugenol (cloves).</p> <p>CO3 - Partial molar volume determination of solutes (e.g., KCl) in binary mixtures and solubility dependence on temperature for benzoic acid in water/DMSO-water mixtures and calculation of heat of solution.</p> <p>CO4 - Study of electronic components: resistors, capacitors, inductors, and their solid-state properties.</p>
		IV	RESEARCH PROJECT (B021012R)	<p>CO1 - Develop skills to write detailed research reports, prepare a thesis, and publish findings in peer-reviewed journals.</p> <p>CO2 - Conduct research responsibly, adhering to ethical guidelines, ensuring safe laboratory practices, and minimizing environmental impact.</p> <p>CO3 - Build a strong foundation for pursuing doctoral research</p>

				(Ph.D.) or careers in academia, industry, or government laboratories.
M. Sc. Physics	<p>PO1- M.Sc. Physics program fosters a love for Nature and scientific inquiry, emphasizing observation, intelligent guessing, theory formulation, and pragmatic outlook, encouraging students to cultivate a deep understanding of the subject.</p> <p>PO2- Aligned with international standards and aimed at skilled India goals, the curriculum focuses on theoretical, experimental, and computational aspects of Physics, equipping students with application-oriented training for future employment opportunities.</p> <p>PO3- The program integrates research-oriented projects, industrial training, and specific job requirements, providing a foundation for graduates and postgraduates, and preparing students for national and international competitive examinations such as CSIR-NET and GATE.</p>	I	MATHEMATICAL PHYSICS-I (B010701T)	<p>CO1 - Gain proficiency in analyzing complex functions, Cauchy-Riemann equations, Taylor and Laurent series, and apply residue theorem for contour integration in physics problems.</p> <p>CO2 - Solve second-order linear differential equations and study special functions like Bessel, Legendre, Hermite, and Laguerre polynomials, including their orthonormal properties and applications in physics.</p> <p>CO3 - Understand linear vector spaces, eigenvalues, eigenvectors, Hermitian and unitary operators, and their significance in mathematical formulations in physics.</p> <p>CO4 - Develop skills in probability theory, statistical analysis, hypothesis testing, and tensor operations, with applications to coordinate transformations and physics.</p>
		I	CLASSICAL MECHANICS (B010702T)	<p>CO1 - Develop a foundational understanding of generalized coordinates, constraints, D'Alembert's principle, Lagrange's equations, conservation laws, and their applications in complex mechanical systems.</p> <p>CO2 - Analyze two-body problems, Kepler's laws, and orbit dynamics; apply variational principles to solve problems such as shortest distance, brachistochrone, and geodesics using the Euler-Lagrange equation.</p> <p>CO3 - Master Hamilton's equations, canonical transformations, Poisson brackets, and understand their role in symmetry invariance and Noether's theorem.</p> <p>CO4 - Study rigid body motion, inertia tensor, Euler's equations, torque-free motion, and small oscillations with a focus on normal modes and applications like the symmetrical top.</p>
		I	ELECTROMAGNETIC THEORY (B010703T)	<p>CO1 - Understand Maxwell's equations in vacuum and matter, displacement current, boundary conditions, Poynting's theorem, and energy and momentum conservation in electromagnetic systems.</p> <p>CO2 - Analyze vector and scalar potentials, electromagnetic wave</p>

				<p>equations, gauge transformations, and symmetry properties under rotation, inversion, and time-reversal.</p> <p>CO3 - Study electromagnetic wave propagation in various media, reflection, refraction, polarization, Fresnel formulae, dispersion characteristics, and Kramers-Kronig relations.</p> <p>CO4 - Explore wave propagation in rectangular and cylindrical waveguides, TE and TM modes, cutoff frequencies, cavity resonators, and radiation from electric and magnetic dipoles.</p>
		I	<p>QUANTUM MECHANICS-I (B010704T)</p>	<p>CO1 - Develop an understanding of the abstract formulation of quantum mechanics, including linear vector spaces, Dirac notation, Hermitian operators, and postulates of quantum mechanics.</p> <p>CO2 - Analyze quantum dynamics through Schrödinger and Heisenberg pictures, explore symmetries and conservation laws, and understand density matrices for mixed and pure states.</p> <p>CO3 - Solve problems involving angular momentum operators, spin angular momentum, Pauli matrices, and the addition of angular momenta using Clebsch-Gordan coefficients and the Wigner-Eckart theorem.</p> <p>CO4 - Understand the role of symmetric and anti-symmetric wavefunctions, the Pauli exclusion principle, and the implications of exchange degeneracy in many-particle quantum systems.</p>
		I	<p>GENERAL LAB (B010705P)</p>	<p>CO1 - Develop advanced skills in conducting experiments, operating scientific instruments, and verifying physical theories through practical applications.</p> <p>CO2 - Enhance abilities to analyze experimental data, troubleshoot errors, and interpret results with precision using computational tools.</p> <p>CO3 - Build a strong foundation for independent research, technical innovation, and professional roles in academia or industry.</p>
		II	<p>MATHEMATICAL PHYSICS-II (B010801T)</p>	<p>CO1 - Solve and analyze Laplace, Poisson, diffusion, and wave equations in various coordinate systems and apply them to physical problems.</p> <p>CO2 - Understand Green's function methods, Fourier and Laplace transforms, and their applications in solving inhomogeneous equations and physical systems.</p> <p>CO3 - Explore concepts of group theory, including representations, characters, orthogonality theorems, and continuous groups like $SO(3)$, $SU(2)$, and $SU(3)$ relevant to symmetry in physics.</p>

				CO4 - Apply numerical techniques such as finite differences, Runge-Kutta methods, and fast Fourier transforms for solving equations, integration, and analyzing scientific data.
		II	SOLID STATE PHYSICS (B010802T)	CO1 - Understand crystal structures, symmetry elements, Bravais lattices, and techniques to describe lattice geometries like Miller indices and Wigner-Seitz cells. CO2 - Apply X-ray diffraction, Bragg's law, and reciprocal lattice concepts to analyze crystal structures. CO3 - Analyze electrical and thermal properties of metals using Drude theory, Fermi-Dirac statistics, and related phenomena. CO4 - Explain lattice vibrations, phonon quantization, and theories of specific heat, including Einstein and Debye models.
		II	STATISTICAL MECHANICS (B010803T)	CO1 - Understand microstates, macrostates, Liouville's equation, and the foundational postulates of statistical mechanics. Apply probability theory and equilibrium concepts to physical systems. CO2 - Analyze micro-canonical, canonical, and grand canonical ensembles, and derive thermodynamic quantities and equations of state using the partition function. Address concepts like entropy of mixing, Gibbs paradox, and classical ideal gas behavior. CO3 - Differentiate between Maxwell-Boltzmann, Bose-Einstein, and Fermi-Dirac statistics. Study ideal quantum gases, Bose-Einstein condensation, and Fermi gas properties. CO4 - Explore interacting spin systems using the Ising model, mean-field theory, and Landau theory. Analyze phase transitions, critical exponents, and order parameters in paramagnetic and ferromagnetic phases.
		II	ELECTRONICS (B010804T)	CO1 - Analyze differential amplifiers, their configurations, and performance parameters like CMRR, biasing, and feedback effects. Understand practical Op-Amp characteristics and applications in circuits. CO2 - Design and apply circuits such as adders, subtractors, oscillators, waveform generators, and converters (A/D and D/A). Understand principles of signal conditioning and waveform generation. CO3 - Explain photon interactions in semiconductors and the working principles of devices like LEDs, photodiodes, and solar cells, including efficiency and performance factors. CO4 - Understand the structure, classification, and functioning of

				optical fibers. Analyze light propagation, dispersion, attenuation, and fabrication techniques in fiber optic communication.
		II	GENERAL LAB (B010805P)	CO1 - Develop advanced skills in conducting experiments, operating scientific instruments, and verifying physical theories through practical applications. CO2 - Enhance abilities to analyze experimental data, troubleshoot errors, and interpret results with precision using computational tools. CO3 - Build a strong foundation for independent research, technical innovation, and professional roles in academia or industry.
		II	RESEARCH PROJECT- INDUSTRIAL TRAINING/INTE RNSHIP/SURVE Y WORK ETC (B010806R)	CO1 - Develop the ability to design and conduct experiments or theoretical studies in physics, using modern tools, techniques, and methodologies. CO2 - Analyze research problems critically and develop innovative solutions based on a strong understanding of physical principles. CO3 - Apply fundamental principles to solve complex physical problems and understand natural phenomena. CO4 - Validate theoretical predictions or experimental findings through quantitative and qualitative analyses.
		III	CLASSICAL ELECTRODYNA MICS AND PLASMA PHYSICS (B010901T)	CO1 - Understand Lorentz transformations, spacetime structure, four-vectors, and four-tensors, including their applications in relativistic dynamics and electrodynamics. CO2 - Formulate Maxwell's equations in covariant form, explore gauge invariance, and analyze electromagnetic field transformations, the Proca Lagrangian, and canonical approaches. CO3 - Analyze potentials and fields from moving charges, calculate radiation from accelerated charges, and apply Larmor's formula and Thomson scattering to radiated power. CO4 - Explore fundamental plasma properties, derive moment equations, and study plasma oscillations, Debye shielding, and wave propagation in magnetized plasmas, including Alfven and magnetosonic waves.
		III	QUANTUM MECHANICS-II (B010902T)	CO1 - Apply time-independent perturbation theory (non-degenerate and degenerate), the variational method, and the WKB approximation to solve stationary quantum systems. CO2 - Utilize time-dependent perturbation theory, Fermi's Golden Rule, and semi-classical radiation theory to analyze transitions and

				<p>interactions in quantum systems.</p> <p>CO3 - Analyze non-relativistic scattering using methods like Born approximation, partial wave analysis, and the optical theorem. Solve examples involving Coulomb, Gaussian, square well, and Yukawa potentials.</p> <p>CO4 - Derive and interpret the Klein-Gordon and Dirac equations, explore Dirac matrices, spin, and magnetic moment of the electron, and relate these to non-relativistic limits.</p>
		III	NUCLEAR PHYSICS-I (B010903T)	<p>CO1 - Understand nuclear mass, binding energy, size, spin, magnetic moment, and electric quadrupole moment using experimental techniques like mu-mesic X-rays and molecular beam resonance methods.</p> <p>CO2 - Analyze alpha, beta, and gamma decay processes, including theories, selection rules, transition probabilities, and phenomena like parity violation and the Mössbauer effect.</p> <p>CO3 - Apply conservation laws, the Q-equation, and the compound nucleus model to understand resonance phenomena, optical models, and direct reactions.</p> <p>CO4 - Explore nuclear fission (Bohr-Wheeler theory, chain reactions, and reactors) and nuclear fusion as sources of energy and their practical implications.</p>
		III	ELECTRONICS-I (B010904T)	<p>CO1 - Understand EM wave propagation through transmission lines, ground, space, and sky waves; analyze impedance, reflection, SWR, and basic fiber optics and wireless communication principles.</p> <p>CO2 - Learn antenna principles, array techniques, matching methods, and radar operations and applications for signal detection and analysis.</p> <p>CO3 - Enhance SNR in communication systems and circuits, apply noise reduction techniques, and understand principles of phase locking, lock-in amplifiers, and sample-and-hold circuits.</p> <p>CO4 - Explore 8085 microprocessor architecture, operations, instruction sets, and addressing modes. Develop basic programs for arithmetic operations and interfacing devices.</p>
		III	CONDENSED MATTER PHYSICS-I (B010905T)	<p>CO1 - Analyze transport phenomena using the Boltzmann transport equation, study Fermi surfaces, Landau levels, de Haas-van Alphen effect, and quantum Hall effects, including magnetoresistance.</p> <p>CO2 - Understand dielectric and ferroelectric materials, local and macroscopic electric fields, dielectric constants, and phenomena like ferroelectricity, piezoelectricity, and electrostriction.</p>

				<p>CO3 - Explore optical constants, reflectivity in metals, plasmonic properties, band gap determination, excitons, and luminescence phenomena like photoluminescence and electroluminescence.</p> <p>CO4 - Study magnetic materials, quantum paramagnetism, ferromagnetic and antiferromagnetic behavior, Curie temperature, magnetic anisotropy, exchange interactions, spin-wave excitations, and magnetostriction.</p>
		III	<p>PRACTICAL-SPECIALIZATION BASED (B010906P)</p>	<p>CO1 - Develop advanced skills in conducting experiments, operating scientific instruments, and verifying physical theories through practical applications.</p> <p>CO2 - Enhance abilities to analyze experimental data, troubleshoot errors, and interpret results with precision using computational tools.</p> <p>CO3 - Build a strong foundation for independent research, technical innovation, and professional roles in academia or industry.</p>
		IV	<p>ATOMIC AND MOLECULAR PHYSICS (B011001T)</p>	<p>CO1 - Understand quantum theory applications to atomic systems, spin-orbit interactions, fine structure, term symbols, and optical spectra of alkali and alkaline earth elements. Explore Rydberg-Schruster law and Ritz Combination Principle.</p> <p>CO2 - Analyze coupling schemes for two-electron systems, Hund's and Lande's rules, and phenomena like Zeeman, Paschen-Back, and Stark effects. Study hyperfine structure, isotope effects, and the Lamb-Rutherford shift.</p> <p>CO3 - Explore rotational, vibrational, and Raman spectra of diatomic and polyatomic molecules. Understand structural determination using Raman spectroscopy, isotopic shifts, and spectral selection rules (P, Q, R branches).</p> <p>CO4 - Study electronic spectra of diatomic molecules, Franck-Condon Principle, rotational-vibrational transitions, and dissociation phenomena. Understand principles and applications of ESR, NMR, and lasers in spectroscopy.</p>
		IV	<p>NUCLEAR PHYSICS-II (B011002T)</p>	<p>CO1 - Analyze the nuclear two-body system, including the deuteron, nuclear forces, partial wave analysis, and low-energy nucleon scattering. Understand scattering length, effective range theory, and meson theory of nuclear forces.</p> <p>CO2 - Explore nuclear structure through the liquid drop model, shell model, Nilsson model, and collective model. Predict spin, parity, electromagnetic moments, and study rotational and</p>

				<p>vibrational behaviors of nuclei.</p> <p>CO3 - Classify elementary particles and understand conservation laws, isospin, strangeness, parity, CP violation, and time reversal symmetry in particle physics.</p> <p>CO4 - Learn the quark SU(3) model, Gell-Mann-Nishijima formula, magnetic dipole moments of baryons, hadron masses, and gain foundational knowledge of the Standard Model and mass generation.</p>
		IV	ELECTRONICS-II (B011003T)	<p>CO1 - Understand and implement AM, DSBSC, SSB, and vestigial sideband modulation and demodulation techniques for efficient analog signal transmission.</p> <p>CO2 - Analyze frequency and phase modulation principles, including FM generation (direct and indirect methods) and detection techniques like Foster-Seeley discriminator and ratio detector.</p> <p>CO3 - Apply sampling theorem to low-pass and band-pass signals, and understand pulse modulation techniques (PAM, PWM, PPM), quantization, PCM, delta modulation, and line encoding schemes.</p> <p>CO4 - Explore and implement digital modulation schemes like ASK, PSK (BPSK, DPSK, QPSK), QAM, FSK, and advanced techniques such as MSK for modern communication systems.</p>
		IV	CONDENSED MATTER PHYSICS-II (B011004T)	<p>CO1 - Analyze point defects (Schottky, Frenkel), dislocations, grain and twin boundaries, and stacking faults in crystals. Understand their role in elastic/plastic deformation and methods for observing defects.</p> <p>CO2 - Explore glass formation, amorphous semiconductors, polymer structures, and properties of liquid crystals and quasicrystals. Study transport and optical behavior in disordered materials.</p> <p>CO3 - Understand synthesis and characterization of nanomaterials, including fullerenes, graphene, and carbon nanotubes. Learn about quantum size effects and their applications in advanced materials.</p> <p>CO4 - Study surface topography, thin-film thickness measurement methods, surface crystallography, and characterization techniques (SEM, TEM, STM, AFM). Explore thin-film preparation, electrical conductivity, and surface states in semiconductors.</p>
		IV	PHYSICS OF LIQUID CRYSTALS (B011005T)	<p>CO1 - Understand the classification of liquid crystals, their optical textures, and phases, including thermotropic, calamitic (nematic, smectic, chiral nematic), discotic, bent-core, polymer, and lyotropic liquid crystals.</p>

				<p>CO2 - Analyze phase transitions in liquid crystals using hard particle models, Maier-Saupe, Van der Waals, and Landau theories. Study isotropic-nematic, nematic-smectic, and other transitions.</p> <p>CO3 - Apply elastic continuum theory, study dielectric constants, refractive indices, hydrodynamics, alignment, field-induced reorientation, and threshold voltage. Evaluate elastic constants, birefringence, and order parameters.</p> <p>CO4 - Explore applications in display technologies (e.g., LC displays, switches, 7-segment displays) and non-display uses like temperature sensors, spatial light modulators, optical shutters, tunable photonic crystals, and biomedical tools.</p>
		IV	<p>LASER PHYSICS AND APPLICATIONS (B011006T)</p>	<p>CO1 - Understand the principles of laser operation, including rate equations for three- and four-level systems, mode dynamics, and unique phenomena like mode locking, hole burning, and lamb dips.</p> <p>CO2 - Gain knowledge of laser amplifiers, resonators, and excitation techniques. Study various laser systems, including Ruby, He-Ne, Nd:YAG, CO₂, dye, semiconductor, and excimer lasers.</p> <p>CO3 - Explore diverse laser applications in material processing, communication, holography, medicine, military, infrared devices, cooling, and trapping. Learn about laser hazards and safety measures.</p> <p>CO4 - Analyze optical fiber structure, wave guiding, fabrication, and types. Solve Maxwell's equations for fiber systems and understand signal degradation and attenuation in optical fiber communication.</p>
		IV	<p>PHYSICS OF NANOMATERIALS (B011007T)</p>	<p>CO1 - Understand crystal structures, band theory, density of states, and diffusive transport mechanisms in solids, emphasizing surfaces, interfaces, and layered systems.</p> <p>CO2 - Analyze quantum confinement effects in nanosystems like quantum wells, wires, and dots. Explore dimensionality effects on density of states and band gaps, along with optical and plasmonic properties of nanoscale materials, including carbon nanostructures and their applications in renewable energy.</p> <p>CO3 - Learn top-down and bottom-up synthesis methods, including ball milling, lithography, etching, PVD, CVD, and other innovative chemical and physical synthesis approaches.</p> <p>CO4 - Gain expertise in structural, microscopic, and spectroscopic techniques for analyzing nanomaterials, such as X-ray and electron</p>

				diffraction, SEM, TEM, AFM, STM, and spectroscopic methods like XPS, IR, and Raman.
		IV	ELEMENTS OF ATMOSPHERIC AND SPACE SCIENCE (B011008T)	CO1 - Understand the composition, constituents, and dynamics of the lower atmosphere and analyze diurnal and seasonal variations of temperature, pressure, and humidity. CO2 - Comprehend the structure, formation, and density profiles of the ionosphere and magnetosphere and study phenomena like : CO3 - Explore the Sun's structure, including the photosphere, chromosphere, and corona and examine sunspots, their properties, and the Babcock model of their formation. CO4 - Understand the solar cycle, solar wind, solar flares, and coronal mass ejections (CMEs) and analyze the heliosphere, solar magnetic fields, and their influence on space weather, including its causes and effects on Earth's systems.
		IV	PRACTICAL-SPECIALIZATION BASED (B010906P)	CO1 - Develop advanced skills in conducting experiments, operating scientific instruments, and verifying physical theories through practical applications. CO2 - Enhance abilities to analyze experimental data, troubleshoot errors, and interpret results with precision using computational tools. CO3 - Build a strong foundation for independent research, technical innovation, and professional roles in academia or industry.
		IV	RESEARCH PROJECT (B011010R)	CO1 - Effectively communicate research outcomes through well-structured reports, theses, scientific papers, and oral presentations. CO2 - Conduct research responsibly, adhering to ethical standards, ensuring accuracy, and addressing societal implications of findings. CO3 - Build a strong foundation for pursuing doctoral research (Ph.D.) or careers in research organizations, academia, or the technology industry.
M. Sc. Mathematics	PO1- M.Sc. Mathematics program equips graduates and postgraduates with critical thinking skills, enabling them to solve mathematically modeled problems, interpret numerical data, construct mathematical arguments, and utilize computer technology for problem-solving and understanding. PO2- The curriculum focuses on selected branches of	I	REAL ANALYSIS (B030701T)	CO1. Describe the fundamental properties of the real numbers that underpin the formal development of real analysis. CO2. Demonstrate an understanding of the theory of sequences and series, continuity, differentiation and integration. CO3. Demonstrate skills in constructing rigorous mathematical arguments.

	<p>Mathematics, enhancing mathematical reasoning, sophistication, and application-oriented knowledge, catering to the needs of allied branches in Engineering and Science, and offering opportunities for research in higher mathematics.</p> <p>PO3- Additionally, the course prepares students for national and international competitive exams such as CSIR-NET and GATE, enhancing their prospects for higher studies and career opportunities in mathematical sciences.</p>			<p>CO4. Apply the theory in the course to solve a variety of problems at an appropriate level of difficulty.</p> <p>CO5. Demonstrate skills in communicating mathematics.</p>
		I	<p>TOPOLOGY (B030702T)</p>	<p>CO1. Understand concepts of complete metric space , continuity, Uniform continuity, Isometry, homeomorphism and related some important theorems.</p> <p>CO2. Understand axioms of choice , Zorn’s lemma, Well ordering theorem and Cardinal number and its arithmetic.</p> <p>CO3. Understand the concepts of topological spaces, concepts of Bases and sub bases and the basic definitions of open sets, neighbourhood, interior, exterior, closure and their axioms for defining topological space.</p> <p>CO4. Understand the Characterization of topology in terms of Kuratowski closures perator, continuity, homomorphism, Separation axioms , regular and normal spaces and some important theorems in these spaces.</p> <p>CO5. Apply theoretical concepts in topology to understand real world applications</p>
		I	<p>ADVANCED COMPLEX ANALYSIS (B030703T)</p>	<p>CO1. Apply the concept and consequences of analyticity and the Cauchy-Riemann equations and of results on Harmonic and entire functions including the fundamental theorem of algebra, Analyze sequences and series of analytic functions and types of convergence.</p> <p>CO2. Evaluate complex contour integrals directly and by the fundamental theorem, apply the Cauchy integral.</p> <p>CO3. Theorem in its various versions, and the Cauchy integral formula, and represent functions as Taylor, power and Laurent series, classify singularities and poles, find residues.</p> <p>CO4. Evaluate complex integrals using the residue theorem.</p> <p>CO5. Understand range of analytic functions and concerned results.</p>

		I	DYNAMICS OF RIGID BODIES (B030704T)	<p>CO1. Develop foundational knowledge of moments of inertia, principal axes, and equimomental systems, enabling analysis of rigid body properties.</p> <p>CO2. Apply D'Alembert's principle to derive equations of motion and analyze systems like pendulums and motions about fixed axes.</p> <p>CO3. Utilize generalized coordinates and Lagrangian equations to solve complex problems, emphasizing the principles of energy conservation.</p> <p>CO4. Explore Hamilton's principle, Hamiltonian functions, and their significance in deriving Lagrange's equations and understanding system dynamics.</p> <p>CO5. Use Euler's equations for rotational motion, connecting geometrical, dynamical, and energy-based approaches to rigid body dynamics.</p>
		II	ADVANCED REAL ANALYSIS (B030801T)	<p>CO1. Describe the fundamental properties of the real numbers that underpin the formal development of real analysis.</p> <p>CO2. Demonstrate an understanding of the theory of sequences and series, continuity, differentiation and integration.</p> <p>CO3. Demonstrate skills in constructing rigorous mathematical arguments.</p> <p>CO4. Apply the theory in the course to solve a variety of problems at an appropriate level of difficulty.</p> <p>CO5. Demonstrate skills in communicating mathematics.</p>
		II	ADVANCED TOPOLOGY (B030802T)	<p>CO1. Understand various forms of compactness, including sequential and countable compactness, their properties, and their applications in spaces like the real line.</p> <p>CO2. Analyze connected sets, their characterization, and behavior under continuity, including advanced concepts like locally connected and totally disconnected sets.</p> <p>CO3. Explore nets and filters for understanding convergence, continuity, and topological properties like openness, closure, and compactness.</p> <p>CO4. Master quotient topology, finite and infinite product spaces, and their properties such as connectedness, compactness, and countability.</p> <p>CO5. Apply advanced theorems and concepts, including Tychonoff's theorem, to solve complex problems in topological spaces and their functions.</p>

		II	OPERATIONS RESEARCH (B030803T)	<p>CO1. Formulate and solve the LPP including those that lead to cycling and degeneracy.</p> <p>CO2. Apply integer programming to the LPP's where integer solution is sought.</p> <p>CO3. Solve transportation and assignment problems and their importance.</p> <p>CO4. Apply the above concepts to real life problems.</p> <p>CO5. Simulate different real life probabilistic situations using Monte Carlo simulation technique.</p>
		II	MATHEMATICAL STATISTICS (B030804T)	<p>CO1. Organize, manage and present data. Analyze statistical data using measures of central tendency, dispersion and location.</p> <p>CO2. Use the basic probability rules, including additive and multiplicative laws, using the terms, independent and mutually exclusive events.</p> <p>CO3. Translate real-world problems into probability models.</p> <p>CO4. Derive the probability density function of transformation of random variables and calculate probabilities, and derive the marginal and conditional distributions of variate random variables.</p> <p>CO5. Determine properties of point estimators (efficiency, consistency, sufficiency); find minimum variance unbiased estimators; find method of moments and maximum likelihood estimators.</p>
		II	HISTORY AND DEVELOPMENT OF INDIAN MATHEMATICS (B030805T)	<p>CO1. To understand the contribution of decimal system and place value.</p> <p>CO2. To learn about the contribution of different great Mathematicians.</p> <p>CO3. To learn about the work in number system of different great Mathematicians.</p> <p>CO4. To learn about the Srinivasa Ramanujan.</p>
		II	FUZZY SET THEORY (B030806T)	<p>CO1. Gain foundational knowledge of fuzzy sets, including their definitions, operations, and types, and explore algebraic and Cartesian products.</p> <p>CO2. Apply Zadeh's extension principle to perform fuzzy arithmetic and understand fuzzy numbers and their implications.</p> <p>CO3. Analyze fuzzy relations and graphs, including equivalence and compatibility relations, composition properties, and similarity relations.</p> <p>CO4. Explore concepts like possibility and necessity measures, possibility distributions, and compare fuzzy set theory with</p>

				probability theory. CO5. Develop skills to model and solve problems in uncertain environments using fuzzy measures, relations, and possibility theory.
		II	PROGRAMMING IN C (B030807T)	CO1. Understand the history, importance, and fundamentals of C programming, including constants, variables, data types, operators, and expressions. CO2. Develop proficiency in decision-making constructs such as if, else, switch, and looping constructs like while, for, and do-while. CO3. Gain skills in working with one-dimensional, two-dimensional, and multi-dimensional arrays, along with character arrays and strings. CO4. Learn to design and implement user-defined functions, including function declaration, calls, nesting, and various function categories. CO5. Master pointers for dynamic memory access, function arguments, and arrays, and understand file management techniques in C for real-world applications.
		II	RESEARCH PROJECT (B030808R)	CO1 - Develop the ability to analyze complex mathematical problems and construct rigorous proofs or computational models. CO2 - Gain proficiency in formulating hypotheses, conducting literature reviews, and applying advanced mathematical theories to research. CO3 - Apply mathematical methods to solve real-world problems in fields like physics, computer science, or economics. CO4 - Enhance skills in presenting research findings clearly through reports, publications, and presentations.
		III	ABSTRACT ALGEBRA (B030901T)	CO1 . Learn about Contributions of ancient Indian mathematicians and to perform computations involving the concepts of Vedic maths and Number Theory. CO2. Identify ring-theoretic and group-theoretic properties and identify these properties in familiar rings and groups. CO3. Provide proofs to simple assertions of ring- and group-theoretic principles. CO4. Get a better understanding of later course In algebra and number theory and thus should give students a better platform to study more advanced topics in algebra. CO5. Apply the basic concepts of field theory, including field extensions and finite fields.

		III	FUNCTIONAL ANALYSIS (B030902T)	<p>CO1. Central concepts from functional analysis, including the Hahn-Banach theorem, the open mapping and closed graph theorems.</p> <p>CO2. Banach-Steinhaus theorem, dual spaces, weak convergence, the Banach Analogue theorem, and the spectral theorem for compact self-adjoint operators.</p> <p>CO3. The student is able to apply his or her knowledge of functional analysis to solve mathematical problems.</p> <p>CO4. Appreciate the role of Inner product space. Understand and apply ideas from the theory of Hilbert spaces to other areas.</p> <p>CO5. Understand the fundamentals of spectral theory, and appreciate some of its power.</p>
		III	FLUID DYNAMICS (B030903T)	<p>CO1. Describe the physical properties of a fluid.</p> <p>CO2. Calculate the pressure distribution for incompressible fluids.</p> <p>CO3. Describe the principles of motion for fluids.</p> <p>CO4. Identify derivation of basic equations of fluid mechanics.</p> <p>CO5. Identify how to derive basic equations and know the related assumptions.</p>
		III	SPECIAL FUNCTIONS (B030904T)	<p>CO1. Explain and Usefulness of this function</p> <p>CO2. Classify and explain the functions of different types of differential equations</p> <p>CO3. To determine types of PDE this may be solved by applications of Special functions.</p> <p>CO4. To analyse properties of Special functions by their integral representation and symmetries.</p> <p>CO5. Identified the application of some basic mathematical methods via all these special functions.</p>
		III	ADVANCE ORDINARY DIFFERENTIAL EQUATIONS (B030905T)	<p>CO1. Recognize differential equations that can be solved by each of the three methods – direct integration, separation of variables and integrating factor method – and use the appropriate method to solve them.</p> <p>CO2. Use an initial condition to find a particular solution of a differential equation, given a general solution.</p> <p>CO3. Check a solution of a differential equation in explicit or implicit form, by substituting it into the differential equation.</p> <p>CO4. Understand the various terms used in of population models and radioactivity.</p> <p>CO5. Solve a homogeneous linear system by the Eigen value method.</p>

		III	VEDIC GANITA (B030906T)	CO1. To understand about history of Vedic Ganit. CO2. To learn different vedic ganit sutra for fast multiplication. CO3. To learn the vedic ganit sutra for squaring the numbers. CO4. To apply vedic ganit sutras for fast calculation of division.
		III	BIOMECHANICS (B030907T)	CO1. Understand the definition, scope, and role of biomechanics in biosciences, emphasizing fluid dynamics concepts like Navier-Stokes equations and Poiseuille's law in biological contexts. CO2. Analyze blood flow through arteries, including cases with mild stenosis, two-layered and pulsatile flow, and peristaltic movement in tubes and channels. CO3. Examine gas exchange, airflow in lungs, oxygen transport, and Weibel's model, comparing blood flow with lung airway flow dynamics. CO4. Explore Fick's laws, diffusion equations, and their applications in biological systems like artificial kidneys and hemodialyzers. CO5. Apply mathematical and fluid dynamic models to solve complex biological problems, improving understanding of physiological and medical systems.
		III	COMPUTATIONAL MATHEMATICS WITH PYTHON-I (B030908P)	CO1. Understand the fundamentals of Python, including installation, interpreter usage, program execution, and variable assignments. CO2. Work with literals, constants, numbers, and strings, applying operations like slicing, indexing, concatenation, and advanced mathematical computations. CO3. Gain skills in writing Python programs that handle user input, display output, and perform calculations such as permutations and combinations. CO4. Learn to use relational, logical, and bitwise operators along with conditional statements (if, if-else, if-elif-else) for decision-making. CO5. Master looping constructs (while, for loops) and control statements (break, continue, pass, else, assert) for efficient program control flow.
		IV	ADVANCED ABSTRACT ALGEBRA (B031001T)	CO1. Understand extension fields, algebraic and transcendental extensions, splitting fields, and concepts like separable, inseparable, and perfect fields. CO2. Explore field automorphisms, normal and Galois extensions, the Fundamental Theorem of Galois Theory, and its application to

				<p>algebraically closed, prime, and finite fields.</p> <p>CO3. Analyze the solution of polynomial equations by radicals, constructible numbers, and develop foundational knowledge of modules, submodules, and quotient modules.</p> <p>CO4. Master free, simple, semi-simple, Noetherian, and Artinian modules, and key theorems like Schur's Lemma, Hilbert Basis Theorem, and Wedderburn-Artin theorem.</p> <p>CO5. Apply advanced concepts such as uniform modules, primary decomposition, and the Noether-Lasker theorem in the study of ring and module structures.</p>
		IV	<p>INTEGRAL EQUATION AND BOUNDARY VALUE PROBLEMS (B031002T)</p>	<p>CO1. Understand the types of integral equations, their kernels, and the interrelation between integral and differential equations in initial and boundary value problems.</p> <p>CO2. Solve Fredholm and Volterra integral equations using methods such as successive approximations, resolvent kernels, and Fredholm series.</p> <p>CO3. Apply Laplace and Fourier transforms to solve integral equations, including those with convolution and singular kernels, like Cauchy and Hilbert types.</p> <p>CO4. Master the construction and application of Green's function for solving boundary value problems and initial value problems, including modifications and Dirac Delta function.</p> <p>CO5. Employ advanced methods to analyze and solve real-world problems modeled by integral equations and boundary value problems.</p>
		IV	<p>ADVANCED FLUID MECHANICS (B031003T)</p>	<p>CO1. Analyze three-dimensional irrotational and axisymmetric flows using Stokes stream functions and potential flow theories, including applications like flow around spheres and concentric spheres.</p> <p>CO2. Understand the dynamics of vortex motion, including vortex filaments, doublets, spiral vortices, Rankine combined vortices, and apply Routh's and Kirchhoff's theorems to vortex behavior.</p> <p>CO3. Explore Newtonian and non-Newtonian fluids, stress-strain relations, and solve problems using Navier-Stokes equations, focusing on laminar flow and energy dissipation.</p> <p>CO4. Examine equations of pressure, lines of force, and conditions of equilibrium for homogeneous, heterogeneous, and elastic fluids, including rotating fluid systems.</p> <p>CO5. Calculate fluid pressure on plane and curved surfaces,</p>

				determine the center of pressure, and analyze the resultant pressure effects in practical scenarios.
		IV	WAVELET ANALYSIS (B031004T)	CO1. To learn about Fourier and Wavelet Transforms. CO2. Able to Construct Harr wavelet. CO3. To analyze the different types of wavelets. CO4. To apply the wavelet transform in signals.
		IV	SPECIAL THEORY OF RELATIVITY (B031005T)	CO1. To understand the historical account of the theory of relativity. CO2. To learn about the space time concepts. CO3. To learn about the relativistic correlation of mass and energy. CO4. To understand the principle of equivalence in terms of relativity.
		IV	DIFFERENTIAL GEOMETRY OF MANIFOLDS (B031006T)	CO1. Understand curvatures, curvature tensors, torsion tensors, and skew curvature tensors for curves and surfaces, and analyze surfaces using the first and second fundamental forms. CO2. Explore the concept of tensor spaces, their dimensions, ranks, quotient laws, and apply Christoffel symbols, gradient, divergence, and curl in solving real-world problems. CO3. Gain a solid foundation in differentiable manifolds, including charts, atlases, and tangent spaces, and study examples of 1D, 2D, and higher-dimensional manifolds. CO4. Understand the role of Lie groups, Lie derivatives, and tangent bundles in the study of manifolds and their transformations. CO5. Differentiate between complex and contact manifolds, analyze their structures, and explore examples and applications of these geometric concepts.
		IV	ADVANCED DISCRETE MATHEMATICS (B031007T)	CO1. Have the knowledge of Fibonacci sequence, linear recurrence relations with constant coefficients. CO2. Construct generating function and study its application to counting and in solving recurrence relations. CO3. Simplify logic and Boolean circuits using K-maps. CO4. Find principle disjunctive & conjunctive normal forms and application of inference theory. CO5. Grasp the concepts of relations.
		IV	OPERATOR THEORY (B031008T)	CO1. Develop a foundational understanding of Banach and Hilbert spaces, adjoint operators, and special operator classes like self-adjoint, normal, unitary, and projection operators. CO2. Explore compact operators and the spectral theory of linear

				<p>operators in normed and finite-dimensional normed linear spaces, including bounded operator spectral properties.</p> <p>CO3. Analyze operator spectra, including residual and approximate spectra, and use tools like the spectral theorem, resolvent properties, and spectral mapping for polynomials.</p> <p>CO4. Study Banach algebras, their properties, compactness of spectra, and the role of ideals, maximal ideals, and radicals in commutative Banach algebras.</p>
		IV	<p>CALCULUS OF VARIATIONS (B031009T)</p>	<p>CO1. Understand the historical development, the concept of functionals, and derive Euler's equation for extrema for various types of functionals, including those involving higher-order derivatives.</p> <p>CO2. Analyze Weierstrass function, Legendre condition, and isoperimetric problems to determine sufficient conditions for extrema, incorporating invariance under coordinate transformations.</p> <p>CO3. Solve moving boundary problems using transversality conditions, explore one-sided variations, and understand phenomena like reflection, refraction, and diffraction in extremal paths.</p> <p>CO4. Study field extremals, Jacobi conditions, and second variations, and derive canonical equations for variational problems.</p>
		IV	<p>MATHEMATICAL MODELLING (B031010T)</p>	<p>CO1. To Understand the theory of mathematical modeling.</p> <p>CO2. To make the mathematical model of real life problems.</p> <p>CO3. To solve mathematical model using various techniques.</p> <p>CO4. To apply basic Theory of linear difference equations with constant coefficients.</p> <p>CO5. To apply Mathematical Modeling through partial differential equations.</p>
		IV	<p>COSMOLOGY (B031011T)</p>	<p>CO1. Understand Mach's principle, Einstein's modified field equations with the cosmological term, and derive and analyze static cosmological models like Einstein's and De-Sitter's models in comparison to the observed universe.</p> <p>CO2. Explore dynamical cosmology through Friedmann's equations, understanding critical density, open and closed universes, and the implications for the age and matter-dominated eras of the universe.</p> <p>CO3. Study particle and event horizons, their significance, and their role in understanding the observable universe within different cosmological frameworks.</p>

				CO4. Analyze the perfect cosmological principle and steady-state cosmology, comparing it to dynamic models and understanding its historical and theoretical relevance.
		IV	CRYPTOGRAPHY (B031012T)	CO1. Understand fundamental concepts of cryptography. CO2. Describe the difference among symmetric, asymmetric and public key Cryptography. CO3. Define basic requirements of cryptography. CO4. Apply concepts of Encryption & Decryption. CO5. Describe the process for implementing cryptographic systems
		IV	COMPUTATIONAL MATHEMATICS WITH PYTHON- II (B031013P)	CO1. Gain proficiency in using the SymPy library for symbolic computations, including algebraic simplifications, solving equations, and symbolic integration and differentiation. CO2. Learn to create detailed plots and visualizations using Matplotlib, understanding its various plotting techniques and customization options. CO3. Utilize NumPy for efficient numerical computations involving vectors, matrices, and multidimensional arrays, enhancing data processing and analysis capabilities. CO4. Apply SciPy for advanced numerical analysis, solving mathematical problems in optimization, integration, interpolation, and linear algebra. CO5. Combine SymPy, NumPy, Matplotlib, and SciPy to solve complex mathematical and computational problems, visualizing results effectively.
		IV	RESEARCH PROJECT (B031014R)	CO1 - Develop the ability to analyze complex mathematical problems and construct rigorous proofs or computational models. CO2 - Gain proficiency in formulating hypotheses, conducting literature reviews, and applying advanced mathematical theories to research. CO3 - Apply mathematical methods to solve real-world problems in fields like physics, computer science, or economics. CO4 - Enhance skills in presenting research findings clearly through reports, publications, and presentations.
M. A. English	PO1-MA English program aims to foster an appreciation for the English language, its literary connotations, and didactic purposes, encouraging students to understand historical, social, and cultural contexts of literary works and	I	ENGLISH LITERATURE (14TH-17TH CENTURY) (A040701T)	CO1 - Develop an understanding of the concept, spread and impact of Renaissance and assess how Renaissance ideas revolutionized the entire Europe CO2 - Identify the shift of the worldview towards humanism post Renaissance and Reformation and compare the similarities between

	<p>their societal impact.</p> <p>PO2- The curriculum provides a comprehensive view of cultural and social patterns in English-speaking countries, emphasizing nuances in British, American, and Indian literature, while also exploring concepts like 'New Literatures', world literature, and addressing issues of feminism, racism, and diasporic relocations. PO3- Students are equipped with essential skills for careers in media, journalism, writing, editing, teaching, and content development. The program promotes creative expression through various mediums, such as script-writing, blogging, and engages students in critical analysis of literary adaptations in contemporary films, enhancing their comprehension and analytical abilities.</p>			<p>the Renaissance and contemporary ideas</p> <p>CO3 - Estimate the social and cultural impact of the political events of the Restoration and develop an understanding of the beginnings of the modern political system which started in England after Restoration</p> <p>CO4 - Critically engage with representative mainstream British Literature from the Fourteenth to the Seventeenth century and develop independent critical thinking in their analysis of literary texts</p>
		I	<p>ENGLISH LITERATURE (18TH-20TH CENTURY) (A040702T)</p>	<p>CO1 - Identify the reasons of the emergence of prose and novels and the decline of drama in England</p> <p>CO2 - Develop an understanding of the philosophy of Romanticism and how it was impacted by the revolutions in Europe</p> <p>CO3 - Recognize the impact of Industrial Revolution, Darwinism and Colonization etc. and identify the cause of the emergent societal problems like pollution, population explosion, urbanization etc. which strengthened during the era</p> <p>CO4 - Get introduced to the tradition and significance of non – fictional writing in Great Britain in the 18th, 19th and 20th century.</p>
		I	<p>LINGUISTICS & ELT (A040703T)</p>	<p>CO1 - Extend knowledge of the origin, development and use of language and discover the relationship between language and culture</p> <p>CO2 - Develop the art of deducing the spellings from the pronunciation/ sound of the word, use the correct pronunciations of the words and identify the differences in language, dialects and other varieties of languages</p> <p>CO3 - Acquire in-depth knowledge of the mechanism involved in the production, transmission and reception of speech sounds and develop understanding about the structure of morphological system and morphological process in language</p> <p>CO4 - Get a theoretical grounding in the field of Sociolinguistics</p>

				CO5 - Identify the barriers in teaching English as the second language and illustrate the various methods of teaching English and recognize the advantages and disadvantages of each
		I	INDIAN ENGLISH LITERATURE (A040704T)	CO1 - Understand contributions of various authors in the growth of Indian English Writing and identify the unique features of Indian English Writing CO2 - Acquaint with the work of significant Indian writers of Poetry, Prose, Fiction and Drama and understand how society and culture have played a significant part in the lives and career of the Indian writers. CO3 - Recognize the cultural milieu of the post and the pre-independence era CO4 - Understand Dalit and Native voices in Indian English Literature
		II	LITERARY CRITICISM AND THEORIES (A040801T)	CO1 - Develop an overview of the critical theories from ancient to modern times and apply the critical theories to literary texts CO2 - Acquaint themselves with the dominant trends in literary criticism and understand the theories of principal literary critics and theoreticians CO3 - Acquire a knowledge of the key concepts and terms used in contemporary literary theory and familiarize the learners with the trends and cross-disciplinary nature of literary theories CO4 - Analyse literary writings, based on ever evolving traditions of criticism and cultivate an understanding of major critical approaches and apply them to primary literary works
		II	COLONIAL AND POST-COLONIAL LITERATURE (A040802T)	CO1 - Recognize the difference in colonial and post-colonial sensibilities and examine influence of western culture on non-western societies CO2 - Develop an understanding of the postcolonial literature in their historical and cultural context and identify key questions, authors and literary forms in colonial and postcolonial literature CO3 - Analyse post-colonial elements in literary texts to distinguish between different postcolonial perspectives and understand and evaluate the key debates in postcolonial theory CO4 - Explore the artistic, psychological, and political impact of colonization through a study of range of literary and theoretical texts

		II	RESEARCH METHODOLOG Y (A040803T)	CO1 - Gain knowledge on the fundamental aspects of research and recognize the conventions of research papers and learn textual, editorial and bibliographical skills CO2 - Identify a core research area and specify corresponding research problem and differentiate between various types of research methods CO3 - Develop an insight into different literary approaches in the field of research and equip themselves with various methods, tools and techniques mandatory to the research process CO4 - Identify various styles of referencing and citations and develop a consciousness towards intellectual property rights and plagiarism
		II	TRANSLATION AND FOLK LITERATURE (A040804T)	CO1 - Comprehend the nature and scope of translation and the concept of equivalence in translation CO2 - Develop understanding of different theories of translation and analyse various problems in the process of translation CO3 - Understand the different ways through which literary narratives are drawn from traditions of the oral mythic folk and the form of life-narrative CO4 - Comprehend folklore studies from a linguistic and cultural perspective
		II	LITERATURE & ENVIRONMENT (A040805T)	CO1 - Trace the intertwined relationship between nature and literature since the inception of Literature and learn how nature has served as an inspiration to literary artists since ages CO2 - Gain sensitivity towards the ecological emergencies that the world faces through literary representations and understand the crucial role of literature in addressing and comprehending environmental issues CO3 - Interpret key literary and critical terms associated with the concept of eco-criticism and ecological representations in literature CO4 - Relate the nuances and co-relation between gender and environment through study of literary texts
		II	RESEARCH PROJECT (A040806R)	CO1 - Understand the scope, depth and direction of research and have a grasp over research tools in one's chosen field of research. CO2 - Develop the ability to write a literature review by identifying and critically analyzing the most important and up to date works in the relevant field. CO3 - Explore connections between literature and other disciplines like history, philosophy, and sociology to address complex themes.

		III	AMERICAN LITERATURE (A040901T)	<p>CO1 - Gain a critical understanding of the socio-historical and cultural ethos reflected in different genres of American literature from the beginning of the Seventeenth century to the end of the Twentieth century.</p> <p>CO2 - Understand the American style of writing and ideologies like Transcendentalism, corruption, pride, and obsession along with spiritualism and Christian values.</p> <p>CO3 - Appreciate the literature that embodied the ascendant American Dream and Destiny in the post second world-war period and also the narrative of the rupture of this grand vision and the attendant disillusionment and loss.</p> <p>CO4 - Understand the rise of existential, experimental and postmodern forms of writing that constitute the most significant achievement of contemporary American Literature.</p>
		III	AFRICAN AND CARIBBEAN LITERATURE (A040902T)	<p>CO1 - Critically analyze the language, form and perspectives of different genres of literary texts from African and Caribbean literary traditions</p> <p>CO2 - Demonstrate an understanding of the socio-cultural and political contexts in which the texts have been produced and received</p> <p>CO3 - Critically engage with the literary texts in the light of colonial and postcolonial histories and contemporary theories that are relevant to the issues raised in the texts</p> <p>CO4 - Recognize some key texts from various African and Caribbean nations and the ways in which they engage with questions of language, form, colonial histories, multiculturalism, indigeneity, nativism and contemporary postcolonial developments</p>
		III	SOUTH ASIAN LITERATURE (A040903T)	<p>CO1 - Develop the understanding of the concept of South Asian Literature</p> <p>CO2 - Interpret the inter-national ties between South Asian nations, develop an appreciation of different countries without prejudices and get an understanding of the intrinsic struggles of each nation</p> <p>CO3 - Respond to texts critically, showing an awareness of how writers use and adapt language, form and structure to create meaning in texts</p> <p>CO4 - Perceive the importance of literatures outside the British canon-understand colonialism in its different manifestations and the postcolonial experience</p>

		III	AUSTRALIAN AND CANADIAN LITERATURE (A040904T)	CO1 - Acquire knowledge of the emergence of Canadian Literature and Australian Literature Demonstrate an awareness of the spread and reach of literatures from Australia and Canada CO2 - Gain a critical understanding of the socio-historical and cultural ethos reflected in Australian and Canadian literature. CO3 - Conceptualize the terms like ethnicity, diversity, national culture and multiculturalism
		III	STYLISTICS & DISCOURSE ANALYSIS (A040905T)	CO1 - Infer the basic concepts of Stylistics and Discourse, attend to both literary and linguistic stylistics, and identify specific linguistic features CO2 - Understand the communicative function of stylistic features in the interpretation of the text and explore the relation between style and literary function CO3 - Acquire an understanding of the principles of stylistic analysis and theory and learn different aspects of how to analyse the language of texts
		IV	GENDER STUDIES (A041001T)	CO1 - Understand how a gendered perspective may change one's perception of literature. Study the writings of key theorists with special reference to literature and gender CO2 - Stimulate discussion on issues of cultural constructs of femininity and masculinity Theorize gender in feminism, queer studies or masculinity studies CO3 - Interpret a text and read social change through the lens of gender CO4 - Realize how gender norms intersect with norms of caste, race, religion and community to create forms of privilege and oppression
		IV	CULTURAL STUDIES AND MARGINILITY (A041002T)	CO1 - Formulate individual ideas about cultural forms like photography, films, music, religion, law, painting, architecture etc. CO2 - Develop an acquaintance with major cultural theorists and develop fluency in the terminology of cultural studies CO3 - Develop an interdisciplinary perspective to understand culture CO4 - Critically analyze the rising trends of globalization, capitalism and multi-culturalism
		IV	ADVANCED LITERARY	CO1 - Analyse, and interpret a range of performances, staged and improvisational, scripted and unscripted

			STUDIES IN FILMS, THEATRE AND PERFORMING ARTS (A041003T)	CO2 - Understand performance as event, theory, and method CO3 - Explore the communicative and artistic dimensions of a variety of written texts CO4 - Develop ability to write, enact and produce simple plays CO5 - Gain familiarity with key texts in the field of Performance Studies
		IV	POPULAR CULTURE AND FICTION (A041004T)	CO1 - Comprehend the connections between culture, literature and life. CO2 - Develop a critical sense of the impact and influence of songs, advertising and newspaper articles CO3 - Get an acquaintance with different genres and traits of fiction across ages and nationalities CO4 - Understand some of the representative literary works of fiction CO5 - Account for the popularity of genres like crime fiction, children's fiction, science fiction etc.
		IV	M.A. VIVA VOCE (A041005P)	CO1 - Demonstrate the ability to articulate and defend interpretations of literary works and theoretical concepts effectively. CO2 - Engage in insightful discussions, responding to questions with depth and clarity. CO3 - Exhibit confidence and professionalism in communicating research ideas and critical analyses orally.
		IV	RESEARCH PROJECT (A041006R)	CO1 - Acquire expertise in conducting independent research, including literature reviews, data collection, and application of theoretical frameworks. CO2 - Enhance the ability to present research findings through well-structured academic writing and oral presentations. CO3 - Identify relevant styles of referencing and citations
M. A. Hindi	PO 1 - एम.ए. हिंदी पाठ्यक्रम हिंदी भाषा और साहित्य का आधारभूत ज्ञान प्रदान करता है, जिसमें भारत की समृद्ध शिक्षण परंपरा पर बल दिया जाता है और छात्रों को साहित्य, संस्कृति, संचार और सम्प्रेषण में दक्षता प्रदान की जाती है।		HINDI KAVYA KA ITIHAAS (A010701T)	CO1 - विद्यार्थी हिंदी कविता के ऐतिहासिक विकास को समझने में सक्षम होंगे, जो आदिकाव्य से लेकर आधुनिक काव्य तक विस्तृत है। CO2 - विद्यार्थी हिंदी काव्य के प्रमुख काव्यधाराओं जैसे भक्ति काव्य, रीतिकाव्य, प्रकृतिवाद, आधुनिक काव्य (छायावाद, प्रगतिवाद, प्रौद्योगिकवाद आदि) का गहरा अध्ययन करेंगे।

	<p>PO 2 - छात्र विभिन्न साहित्यिक विधाओं जैसे कथासाहित्य, कविता, फिल्म, नाटक और पत्रकारिता से परिचित होते हैं, जिससे समाज और मानव व्यवहार की उनकी समझ में वृद्धि होती है। साथ ही उनके समग्र और बहुआयामी विकास की दिशा में यह पाठ्यक्रम बहुत उपयोगी सिद्ध होता है।</p> <p>PO 3 - हिंदी भाषा और साहित्य के छात्रों के पास उच्च शिक्षा, पत्रकारिता, मीडिया, शिक्षण और प्रतियोगी परीक्षाओं में रोजगार के विविध विकल्प होते हैं। वे भारत और उन देशों में, जहाँ हिंदी दूसरी भाषा के रूप में उपयोग की जाती है, रोजगार के व्यापक अवसर प्राप्त कर सकते हैं।</p>			<p>CO3 - विद्यार्थी प्रमुख हिंदी कवियों जैसे तुलसीदास, रामकृष्ण परमहंस, सूरदास, मीराबाई, पंत, प्रसाद, निराला, महादेवी वर्मा, आदि के काव्य का गहन अध्ययन करेंगे।</p> <p>CO4 - विद्यार्थी यह समझेंगे कि कविता समाज और संस्कृति के विभिन्न पहलुओं से किस तरह जुड़ी होती है और कैसे काव्य सामाजिक परिवर्तन, धार्मिक विचारधारा, और सांस्कृतिक पहचान को प्रभावित करता है।</p> <p>CO5 - विद्यार्थी काव्य की आलोचना करने की क्षमता विकसित करेंगे। वे काव्य रचनाओं को साहित्यिक दृष्टिकोण से गहराई से विश्लेषित कर सकेंगे, जिसमें शैली, विषय, प्रतीक, और संरचना का समावेश होगा।</p>
		।	SAHITYALOCHAN (A010702T)	<p>CO1 - विद्यार्थी साहित्य के विभिन्न आलोचनात्मक दृष्टिकोणों और सिद्धांतों (जैसे नैतिक आलोचना, सांस्कृतिक आलोचना, साहित्यिक सिद्धांत, सामाजिक आलोचना, संज्ञात्मक आलोचना, स्ट्रक्चरलिज्म, पोस्टस्ट्रक्चरलिज्म, आदि) को समझने में सक्षम होंगे।</p> <p>CO2 - विद्यार्थी आलोचनात्मक सोच विकसित करेंगे और साहित्यिक कृतियों का विश्लेषण करने में सक्षम होंगे।</p> <p>CO3 - विद्यार्थी यह समझ सकेंगे कि साहित्यालोचन के माध्यम से साहित्य को समाज और संस्कृति से जोड़कर देखा जाता है।</p> <p>CO4 - विद्यार्थी आलोचनात्मक लेखन और चर्चा के लिए उपयुक्त भाषा और शब्दावली का प्रयोग करने में सक्षम होंगे।</p> <p>CO5 - विद्यार्थी विभिन्न साहित्यिक सिद्धांतों का तुलनात्मक</p>

				अध्ययन करेंगे जैसे आधुनिकतावाद (Modernism), पोस्टमॉडर्निज़्म (Postmodernism), नारीवादी आलोचना (Feminist Criticism), मार्क्सवादी आलोचना (Marxist Criticism), सांस्कृतिक आलोचना (Cultural Criticism) आदि।
		I	PRAACHEEN EVAM MADHYAKAAL EEN N KAVYA (A010703T)	<p>CO1 - विद्यार्थी प्राचीन और मध्यकालीन काव्य की ऐतिहासिक पृष्ठभूमि को समझने में सक्षम होंगे। वे यह जान सकेंगे कि किस प्रकार काव्य का विकास हुआ, और समय के साथ काव्यशास्त्र में किस प्रकार के परिवर्तन आए।</p> <p>CO2 - विद्यार्थी महाकाव्य, शतकाव्य, और काव्यशास्त्र की प्रमुख प्रवृत्तियों और धाराओं को समझने में सक्षम होंगे।</p> <p>CO3 - विद्यार्थी रस, अलंकार, छंद, ध्वनि और संगति जैसे काव्यशास्त्र के प्रमुख सिद्धांतों को समझेंगे।</p> <p>CO4 - विद्यार्थी भक्ति काव्य (जैसे रामानंद, कबीर, तुलसीदास, मीराबाई, सूरदास) की विशेषताओं और उनके काव्य संदर्शों का अध्ययन करेंगे।</p> <p>CO5 - विद्यार्थी यह समझेंगे कि प्राचीन और मध्यकालीन काव्य में धर्म, समाज और राजनीति के विभिन्न पहलुओं का किस प्रकार चित्रण किया गया है।</p>
		I	KATHA SAHITYA (A010704T)	<p>CO1 - विद्यार्थी हिंदी कथासाहित्य की विभिन्न शैलियों (जैसे कहानी, उपन्यास, नाटक, निबंध, आदि) और धाराओं (जैसे क्लासिक, आधुनिक, सामाजिक, मानवाधिकार, नारीवाद, आधुनिकतावाद, आदि) से परिचित होंगे।</p> <p>CO2 - विद्यार्थी कथासाहित्य के ऐतिहासिक विकास को समझेंगे, जिसमें प्राचीन कथा साहित्य, मध्यकालीन कथा साहित्य, और आधुनिक हिंदी कथा साहित्य के प्रमुख प्रवृत्तियों का विश्लेषण शामिल है।</p>

				<p>CO3 - विद्यार्थी कथासाहित्य के सामाजिक, सांस्कृतिक, और राजनीतिक संदर्भ में लेखन को समझने में सक्षम होंगे।</p> <p>CO4 - विद्यार्थी कथा रचनाओं के साहित्यिक मूल्य का मूल्यांकन करेंगे, जिसमें रचनात्मकता, संवाद शैली, पात्रों की गहराई, और कथा के सामाजिक और सांस्कृतिक प्रभाव का विश्लेषण होगा।</p> <p>CO5 - विद्यार्थी कथा लेखन के सिद्धांतों और शिल्प (कथानक, पात्र, संवाद, रचनात्मक प्रक्रिया, आदि) को समझने में सक्षम होंगे।</p>
		II	HINDI GADYA KA ITIHAAS (A010801T)	<p>CO1 - विद्यार्थी हिंदी गद्य साहित्य के ऐतिहासिक विकास को समझने में सक्षम होंगे। वे यह जान सकेंगे कि किस प्रकार हिंदी गद्य का प्रारंभ हुआ और समय के साथ इसमें किस प्रकार के बदलाव आए।</p> <p>CO2 - विद्यार्थी हिंदी गद्य की प्रमुख शैलियाँ (जैसे निबंध, आलोचना, कहानी, नाटक, संस्मरण, संसारिक गद्य, धार्मिक गद्य, आदि) और प्रवृत्तियों (जैसे रचनावादी, प्रकृतिवादी, संवेदनशीलता, सामाजिक यथार्थवाद, राजनीतिक गद्य, आदि) का अध्ययन करेंगे।</p> <p>CO3 - विद्यार्थी यह समझेंगे कि हिंदी गद्य साहित्य में सामाजिक, सांस्कृतिक, और राजनीतिक संदर्भ किस प्रकार चित्रित होते हैं।</p> <p>CO4 - विद्यार्थी आलोचनात्मक दृष्टिकोण से गद्य साहित्य का विश्लेषण करने में सक्षम होंगे।</p> <p>CO5 - विद्यार्थी गद्य लेखन के प्रति सृजनात्मक दृष्टिकोण अपनाएंगे और अपनी खुद की गद्य रचनाएँ लिखने में सक्षम होंगे।</p>
		II	HINDI NAATAK TATHA EKAANKI (A010802T)	<p>CO1 - विद्यार्थी हिंदी नाटक और एकांकी नाटक के ऐतिहासिक विकास को समझने में सक्षम होंगे।</p> <p>CO2 - विद्यार्थी नाटक के विभिन्न रूपों (जैसे पारंपरिक नाटक, नवीन नाटक, राजनीतिक नाटक, सामाजिक नाटक, व्यंग्यात्मक</p>

				<p>नाटक) और एकांकी नाटक की शैलियों का अध्ययन करेंगे।</p> <p>CO3 - विद्यार्थी नाटक लेखन के प्रमुख तत्वों (जैसे कथानक, पात्र, संवाद, वातावरण, संगति, संरचना) को समझने में सक्षम होंगे।</p> <p>CO4 - विद्यार्थी नाटक की भाषा और संवाद की भूमिका को समझने में सक्षम होंगे। वे यह जान सकेंगे कि नाटक में संवाद के माध्यम से पात्रों की विचारधारा, मनोभावनाएँ, और समाजिक परिस्थितियाँ कैसे व्यक्त होती हैं।</p> <p>CO5 - विद्यार्थी एकांकी नाटक की विशेषताओं और शिल्प का अध्ययन करेंगे, जैसे संरचना, संवाद, पात्रों का सीमित चयन, और कथा का संक्षिप्त रूप।</p>
		II	MEDIA LEKHAN (A010803T)	<p>CO1 - छात्रों को समाचार लेखन, फीचर लेखन, प्रेस विज्ञप्ति, रिपोर्टिंग, टेलीविजन स्क्रिप्टिंग, रेडियो प्रोग्राम लेखन, और डिजिटल मीडिया सामग्री जैसे विभिन्न प्रकार के मीडिया लेखन के बारे में जानकारी मिलती है।</p> <p>CO2 - इस कोर्स के माध्यम से छात्रों को समाचार लेखन के बुनियादी सिद्धांत, समाचार संरचना और निष्पक्ष रिपोर्टिंग पर जोर दिया जाता है।</p> <p>CO3 - छात्र रचनात्मक तरीके से विचारों को प्रस्तुत करना, विश्लेषणात्मक दृष्टिकोण से सामग्री तैयार करना और विभिन्न मुद्दों पर विचार व्यक्त करना सीखते हैं।</p> <p>CO4 - छात्र विज्ञापन लेखन, प्रचार सामग्री, सोशल मीडिया सामग्री, और अन्य व्यावसायिक प्रचार लेखन में दक्षता प्राप्त करते हैं।</p> <p>CO5 - छात्र नए मीडिया उपकरणों और डिजिटल प्लेटफॉर्मों का उपयोग करके विभिन्न प्रकार की सामग्री बनाने और संप्रेषित करने की प्रक्रिया में माहिर होते हैं।</p>

		II	SRIJNATMAK LEKHAN (A010804T)	<p>CO1 - छात्र भाषा और प्रौद्योगिकी के बीच संबंध को समझने में सक्षम होंगे। उन्हें यह समझ में आएगा कि कैसे कंप्यूटर, सॉफ्टवेयर और मशीन लर्निंग का उपयोग भाषा संसाधन और संवाद में किया जा सकता है।</p> <p>CO2 - छात्र विभिन्न भाषाई संसाधन जैसे शब्दकोश, कोर्पस (corpus), और भाषाई डेटा सेट्स के निर्माण और उपयोग में सक्षम होंगे।</p> <p>CO3 - छात्रों को स्वचालित अनुवाद प्रणालियों के कार्य करने के तरीके और चुनौतियों के बारे में जानकारी मिलेगी।</p> <p>CO4 - छात्र स्मार्ट टूल्स और एप्लिकेशनों के विकास में सक्षम होंगे जो भाषाई डेटा का प्रसंस्करण कर सकते हैं, जैसे कि वॉयस असिस्टेंट, चैटबॉट्स, और अन्य प्राकृतिक भाषा आधारित एप्लिकेशंस।</p> <p>CO5 - छात्रों को आर्टिफिशियल इंटेलिजेंस (AI) और मशीन लर्निंग (ML) के माध्यम से भाषा प्रौद्योगिकी में सुधार और विकास के बारे में जानकारी मिलेगी।</p>
		II	BHASHA PRAUDYOGIKI (A010805T)	<p>CO1 - वे प्राकृतिक भाषा प्रसंस्करण (NLP) के विभिन्न एल्गोरिदम जैसे कि स्वचालित भावनात्मक विश्लेषण, टेक्स्ट क्लासिफिकेशन, और सेंसिटिविटी एनालिसिस को समझेंगे।</p> <p>CO2 - इस पाठ्यक्रम के माध्यम से छात्र भाषा प्रौद्योगिकी में व्यावसायिक अवसरों के लिए तैयार होंगे।</p> <p>CO3 - वे भाषा संसाधन निर्माण, तकनीकी लेखन, और भाषाई अनुसंधान क्षेत्रों में कार्य कर सकेंगे। इसके साथ ही, वे शोध के लिए तैयार होंगे और भविष्य में नए शोध क्षेत्रों की पहचान कर सकेंगे।</p>
		II	SHODHAATMAK LEKHAN (A010806T)	<p>CO1 - छात्र शोध के विभिन्न रूपों, प्रक्रियाओं, और उपकरणों जैसे पत्राचार, प्रश्नावली, साक्षात्कार आदि की विस्तृत जानकारी</p>

				<p>प्राप्त करेंगे और वैज्ञानिक प्रणाली का उपयोग कर शोध कार्य को व्यवस्थित रूप से प्रस्तुत करना सीखेंगे।</p> <p>CO2 - छात्र शोध कार्य के विश्लेषण, परिणाम प्रस्तुति, संपादन, और पुस्तकालय सामग्री जैसे संदर्भ ग्रंथ सूची और पांडुलिपियों के मूल्यांकन व प्रस्तुतिकरण में कुशल होंगे।</p> <p>CO3 - छात्र शोध भाषा के स्वरूप, शैली और इसके प्रभावी उपयोग की क्षमता विकसित करेंगे, साथ ही हिंदी शोध कार्य में आने वाली समस्याओं और उनके समाधानों की पहचान कर सकेंगे।</p>
		II	LAGHU SHODH PARIYOJANA (A010807R)	<p>CO1 - छात्रों को हिंदी साहित्य की शोध प्रक्रिया एवं शोध के मुख्य आयामों का ज्ञान होगा।</p> <p>CO2 - विभिन्न शोध विधियाँ, जैसे कि गुणात्मक, ऐतिहासिक, तुलनात्मक आदि का प्रयोग हिंदी साहित्य के शोध में किस प्रकार होता है इसका बोध होगा।</p> <p>CO3 - साहित्य को सांस्कृतिक, सामाजिक आदि विभिन्न दृष्टियों से समझने एवं विश्लेषण करने की क्षमता उत्पन्न होगी।</p> <p>CO4 - शोध परिणामों को स्पष्ट, संक्षिप्त एवं प्रभावी रूप से प्रस्तुत करने की क्षमता उत्पन्न होगी।</p>
		III	ADHUNIK HINDI KAVYA (A010901T)	<p>CO1 - छात्र हिंदी कविता के विभिन्न आधुनिक रूपों को समझने में सक्षम होंगे, जैसे कि नवजागरण, द्विवेदीयुगीन कविता, छायावाद, प्रगतिवाद, प्रयोगवादी कविता, सांस्कृतिक काव्य, लोकतांत्रिक काव्य, और समाजवाद।</p> <p>CO2 - छात्र यह समझेंगे कि कैसे आधुनिक हिंदी कविता समाज, राजनीति, और संस्कृति से जुड़ी होती है। वे कविता के माध्यम से सामाजिक मुद्दों जैसे जातिवाद, असमानता, संघर्ष, और स्वतंत्रता के सवालों पर प्रकाश डालने की प्रवृत्तियों को समझेंगे।</p> <p>CO3 - छात्रों को यह समझने का अवसर मिलेगा कि आधुनिक</p>

				<p>हिंदी कविता में कैसे कवियों ने नए प्रयोग किए, जैसे काव्य की नई भाषा, नए रूप, और नए विषयों को शामिल किया।</p> <p>वे यह जानेंगे कि कवियों ने अपने काव्य में परंपराओं से हटकर नई तकनीकियों का प्रयोग क्यों किया और यह कविता की शक्ति और प्रभाव को कैसे बढ़ाता है।</p> <p>CO4 - छात्र कविता में छिपे भावनात्मक और विचारात्मक आयामों को समझने में सक्षम होंगे। वे यह सीखेंगे कि कैसे कविता सामाजिक, राजनीतिक, और व्यक्तिगत मुद्दों पर गहरी प्रतिक्रिया देती है।</p> <p>CO5 - छात्रों को काव्य की रचनात्मकता और आलोचनात्मकता को समझने और विश्लेषण करने की क्षमता प्राप्त होगी।</p>
		III	KATHETAR GADYA SAHITYA (A010902T)	<p>CO1 - विद्यार्थी कथेतर गद्य साहित्य की प्रमुख विधाओं जैसे निबंध, आत्मकथा, यात्रा-वृत्तांत, संस्मरण, और रेखाचित्र की प्रकृति, विकास और उनकी विशेषताओं को समझने में सक्षम होंगे।</p> <p>CO2 - कथेतर गद्य साहित्य में प्रस्तुत सामाजिक, सांस्कृतिक और ऐतिहासिक संदर्भों को समझकर विद्यार्थी जीवन और समाज के विभिन्न पहलुओं पर गहराई से चिंतन कर पाएंगे।</p> <p>CO3 - पाठ्यक्रम विद्यार्थियों में कथेतर गद्य साहित्य का आलोचनात्मक अध्ययन करने की क्षमता विकसित करेगा, जिससे वे साहित्यिक कृतियों का वस्तुनिष्ठ और सूक्ष्म विश्लेषण कर सकें।</p> <p>CO4 - आत्मकथा और संस्मरण जैसी विधाओं के माध्यम से विद्यार्थियों को व्यक्तिगत अनुभव और राष्ट्रीय दृष्टिकोण के बीच संबंध को समझने का अवसर मिलेगा।</p> <p>CO5 - गद्य साहित्य पढ़ने से विद्यार्थियों की हिंदी भाषा पर पकड़ मजबूत होगी और उनकी लेखन और वाचन कौशल में सुधार होगा।</p>

		III	KABEER DAS (A010903T)	<p>CO1 - विद्यार्थी कबीरदास जी की मुख्य रचनाओं से परिचित होंगे एवं उनकी काव्य शैली, भाषा शैली एवं दार्शनिक विचारों को समझने में सक्षम होंगे।</p> <p>CO2 - विद्यार्थी संत परम्परा के अन्तर्गत कबीरदास जी की निर्गुण भक्ति का महत्व समझेंगे।</p> <p>CO3 - विद्यार्थी आधुनिक काल के सामाजिक, सांस्कृतिक एवं आध्यात्मिक परिप्रेक्ष्य में कबीरदास जी का प्रभाव समझ पाएंगे।</p>
		III	SOOR DAS (A010904T)	<p>CO1 - विद्यार्थी सूरदास जी की मुख्य रचनाओं से परिचित होंगे एवं उनकी काव्य शैली, भाषा शैली एवं दार्शनिक विचारों को समझने में सक्षम होंगे।</p> <p>CO2 - विद्यार्थी भक्ति काल के परिप्रेक्ष्य में सूरदास जी का महत्व एवं योगदान समझेंगे एवं उनकी रचनाओं में व्यक्त भक्तिरस के मुख्य आयामों को समझेंगे।</p> <p>CO3 - सूरदासजी की कृतियों के माध्यम से धार्मिक एवं आध्यात्मिक संदेशों को आधुनिक संदर्भ में समझेंगे।</p>
		III	TULSI DAS (A010905T)	<p>CO1 - इस कोर्स के माध्यम से छात्र रामचरितमानस, कवितावली, गीतावली और दोहावली जैसी रचनाओं का गहन अध्ययन करेंगे, जिससे तुलसीदास जी की धार्मिक, सामाजिक और सांस्कृतिक दृष्टि को समझने की क्षमता का विकास होगा।</p> <p>CO2 - तुलसीदास जी के काव्य में उपयोग की गई भाषा, छंद, और साहित्यिक शैली का विश्लेषण करना और उनकी साहित्यिक परंपरा में योगदान को समझना।</p> <p>CO3 - तुलसीदास जी की कृतियों में प्रस्तुत धार्मिक आदर्शों, नैतिक मूल्यों और सामाजिक संदेशों का मूल्यांकन करना और उनके विचारों का आधुनिक संदर्भ में महत्व जानना।</p>

		III	PREMCHAND (A010906T)	<p>CO1 - विद्यार्थी प्रेमचंद की साहित्यिक यात्रा, उनकी प्रारंभिक रचनाओं से लेकर परिपक्व लेखन तक, के विकास को समझ सकेंगे।</p> <p>CO2 - प्रेमचंद के साहित्य में निहित सामाजिक यथार्थवाद, आर्थिक विषमता, जातिवाद, ग्रामीण जीवन और मानवीय संवेदनाओं का अध्ययन कर विद्यार्थी समाज के प्रति उनकी सोच और दृष्टिकोण को समझ पाएंगे।</p> <p>CO3 - प्रेमचंद के समय के सामाजिक, राजनीतिक और सांस्कृतिक संदर्भों को समझने के साथ-साथ उनके साहित्य में स्वतंत्रता संग्राम, गांधीवादी विचारधारा, और ग्रामीण जीवन का चित्रण कैसे हुआ है, यह स्पष्ट हो सकेगा।</p> <p>CO4 - प्रेमचंद की सरल, सहज और जनमानस के करीब भाषा-शैली को समझने से विद्यार्थियों के भाषा कौशल और लेखन शैली में सुधार होगा।</p> <p>CO5 - प्रेमचंद के साहित्य में निहित नैतिक, मानवीय और सामाजिक मूल्यों को आत्मसात कर विद्यार्थी अपने जीवन में भी उन विचारों को लागू करने की प्रेरणा प्राप्त करेंगे।</p>
		III	JAI SHANKAR PRASAD (A010907T)	<p>CO1 - इस कोर्स से छात्रों को कामायनी, अजातशत्रु, स्कंदगुप्त जैसी महान कृतियों की गहरी समझ और उनकी साहित्यिक महत्ता को पहचानने में मदद मिलेगी।</p> <p>CO2 - जयशंकर प्रसाद के साहित्य में काव्य और नाटकों की संरचना, भावों और विचारों का विश्लेषण करने की क्षमता का विकास होगा।</p> <p>CO3 - छात्रों को प्रसाद के साहित्य और उनके समकालीन लेखकों के बीच तुलनात्मक दृष्टिकोण अपनाने और उनकी कृतियों के</p>

				ऐतिहासिक, सांस्कृतिक और सामाजिक प्रभाव का विश्लेषण करने में दक्षता प्राप्त होगी।
		III	ACHARYA RAM CHANDRA SHUKL (A010908T)	CO1 - इस पाठ्यक्रम से छात्रों को आचार्य रामचंद्र शुक्ल की रचनाओं जैसे चिंतामणि, रस मीमांसा, बुद्ध चरित्र और अन्य प्रमुख कृतियों की गहन समझ विकसित करने में सहायता मिलेगी। CO2 - रामचंद्र शुक्ल की आलोचनात्मक दृष्टि, उनके विचार और उनकी कृतियों के माध्यम से हिन्दी साहित्य के विकास, शैली और विचारों को समझने की क्षमता का विकास होगा। CO3 - हिन्दी साहित्य के इतिहास, कविताओं, और कहानियों के साथ साहित्यिक धरोहर और भाषायी परंपरा के महत्व को पहचानने में दक्षता प्राप्त होगी।
		III	HINDI RANGMANCH (A010909T)	CO1 - भारतीय नाट्यशास्त्र, रंगमंच और नाटक की विभिन्न विधाओं की सैद्धांतिक और व्यावहारिक समझ विकसित करना। CO2 - भारतीय परंपरागत नाटकों और रंगमंच के विकास, विविधता और सांस्कृतिक योगदान को समझना। CO3 - अभिनय, निर्देशन और मंच निर्माण के कौशल का विकास करना, साथ ही प्रसिद्ध थिएटर प्रणालियों जैसे स्टानिस्लावस्की और ब्रेख्त के सिद्धांतों का अध्ययन।
		III	SAHITYA EVAM CINEMA (A010910T)	CO1 - विद्यार्थी यह समझने में सक्षम होंगे कि सिनेमा और साहित्य एक दूसरे से कैसे जुड़ी हुई विधाएँ हैं। वे यह भी समझ पाएंगे कि साहित्यिक कृतियाँ किस प्रकार सिनेमा में रूपांतरित होती हैं, और इसके पीछे की प्रक्रिया क्या होती है। CO2 - विद्यार्थी यह समझ सकेंगे कि भारतीय सिनेमा में समाजिक, सांस्कृतिक, और राजनीतिक मुद्दों का किस तरह चित्रण किया गया है। वे सिनेमा के माध्यम से समाज की वास्तविकताओं और उसकी बदलती धारा को समझने में सक्षम होंगे।

				<p>CO3 - विद्यार्थी सिनेमा की आलोचना करने में सक्षम होंगे, विशेषकर साहित्यिक दृष्टिकोण से। वे यह समझ सकेंगे कि साहित्यिक आलोचना का सिनेमा पर कैसे प्रभाव पड़ता है और सिनेमा को साहित्यिक दृष्टिकोण से कैसे देखा जा सकता है।</p> <p>CO4 - विद्यार्थियों को सिनेमा और साहित्य के समकालीन विचारों और प्रवृत्तियों के बारे में गहरी समझ प्राप्त होगी। वे यह पहचान सकेंगे कि कैसे सिनेमा और साहित्य एक-दूसरे से प्रभावित होते हैं और उनका विकास कैसे एक साथ हुआ है।</p>
		IV	<p>ASMITAMULAK VIMARSH (A011001T)</p>	<p>CO1 - विद्यार्थी अस्मिता (पहचान) की परिभाषा, उसके विविध स्वरूपों (जातीय, लैंगिक, क्षेत्रीय, धार्मिक, और सांस्कृतिक) और साहित्य में इसके प्रभाव को गहराई से समझ सकेंगे।</p> <p>CO2 - अस्मितामूलक विमर्श के माध्यम से विद्यार्थी समाज में व्याप्त असमानता, अन्याय, और हाशिए पर पड़े समुदायों की समस्याओं के प्रति जागरूक होंगे।</p> <p>CO3 - साहित्य में विविध भाषाओं और संस्कृतियों की अस्मिता को पहचानने और उनके महत्व को समझने की क्षमता विकसित होगी।</p> <p>CO4 - अस्मितामूलक साहित्य और विमर्शों से प्रेरित होकर विद्यार्थी अपनी लेखन शैली में सामाजिक और सांस्कृतिक मुद्दों को शामिल करने के लिए प्रेरित होंगे।</p>
		IV	<p>NITI KAVYA (A011002T)</p>	<p>CO1 - विद्यार्थी नीति काव्य की मूल परिभाषा, इसके उद्देश्यों और इसके साहित्यिक और सांस्कृतिक महत्व को समझ सकेंगे।</p> <p>CO2 - नीति काव्य के अध्ययन से विद्यार्थी जीवन के नैतिक मूल्यों, सामाजिक उत्तरदायित्व, और सदाचरण की महत्ता को आत्मसात करेंगे।</p> <p>CO3 - नीति काव्य में भारतीय परंपराओं, धर्म, और संस्कृति के</p>

				<p>आदर्शों की झलक मिलती है, जिससे विद्यार्थी इन पहलुओं को गहराई से समझ सकते हैं।</p> <p>CO4 - नीति काव्य के अध्ययन से विद्यार्थियों की भाषा और अभिव्यक्ति की क्षमता का विकास होगा।</p> <p>CO5 - विद्यार्थी यह समझने में सक्षम होंगे कि प्राचीन नीति काव्य के विचार और मूल्य आज के समय में किस प्रकार प्रासंगिक हैं।</p>
		IV	SHAILI VIGYAN (A011003T)	<p>CO1 - भाषा की संरचना, शैली के विभिन्न प्रकारों और उनके विश्लेषण की प्रक्रिया को समझना।</p> <p>CO2 - साहित्यिक और शास्त्रीय भाषा के तत्वों का अध्ययन करके लेखन और पाठ विश्लेषण की क्षमता विकसित करना।</p> <p>CO3 - भाषा, शैली और साहित्य में सांस्कृतिक और भाषाई विविधता को पहचानना और उसका अध्ययन करना।</p>
		IV	BHARTIYA SAHITYA (A011004T)	<p>CO1 - विद्यार्थी भारतीय साहित्य की बहुभाषी और बहुसांस्कृतिक परंपराओं को समझने में सक्षम होंगे। वे जानेंगे कि कैसे विभिन्न भारतीय भाषाओं का साहित्य एक साझा सांस्कृतिक विरासत को व्यक्त करता है।</p> <p>CO2 - भारतीय साहित्य में विभिन्न धर्मों, जातियों, भाषाओं, और परंपराओं का प्रतिबिंब मिलता है। इस पाठ्यक्रम के माध्यम से विद्यार्थी भारत की सांस्कृतिक विविधता को समझ पाएंगे।</p> <p>CO3 - विद्यार्थी यह समझ सकेंगे कि भारतीय साहित्य कैसे विभिन्न कालखंडों में विकसित हुआ और कैसे यह सामाजिक, राजनीतिक, और सांस्कृतिक परिवर्तनों को दर्शाता है।</p> <p>CO4 - विद्यार्थी यह जान पाएंगे कि भारतीय साहित्य किस प्रकार समाज के विविध पहलुओं जैसे धर्म, राजनीति, और संस्कृति को प्रतिबिंबित करता है और किस प्रकार समाज को दिशा देने में</p>

				<p>सहायक होता है।</p> <p>CO5 - भारतीय साहित्य के अध्ययन से विद्यार्थियों में राष्ट्रीय चेतना और अपनी सांस्कृतिक धरोहर के प्रति गौरव का भाव विकसित होगा।</p>
		IV	HINDITTAR KSHETRA KA HINDI SAHITYA (A011005T)	<p>CO1 - संविधान के तहत वर्णित हिन्दीतर भाषाओं और क्षेत्रों का परिचय प्राप्त करना।</p> <p>CO2 - उत्तर, पूर्वोत्तर, दक्षिण, पश्चिम और पूर्वी भारत के हिन्दीतर क्षेत्रों के साहित्य और उनकी कार्यरत संस्थाओं का विश्लेषण।</p> <p>CO3 - विभिन्न क्षेत्रों में हिन्दी साहित्य के प्रचार-प्रसार और उसके सांस्कृतिक प्रभाव को समझना।</p>
		IV	HINDI VIGYAN LEKHAN (A011006T)	<p>CO1 - हिन्दी में विज्ञान लेखन के विकास, उसकी चुनौतियों, संभावनाओं और विविध रूपों को समझने की क्षमता विकसित करना।</p> <p>CO2 - गुणाकर मुले, देवेंद्र मेवाड़ी जैसे लेखकों के साहित्य का अध्ययन करते हुए भाषा, शैली और वैज्ञानिक दृष्टिकोण को परखना।</p> <p>CO3 - प्रिंट, टेलीविजन और न्यू मीडिया के माध्यम से विज्ञान लेखन के विभिन्न रूपों और उनकी प्रासंगिकता को जानना।</p>
		IV	HINDI KE KSHETRA, LOKSHAILIYA TATHA LOK SAHITYA KE VIVIDH AAYAM (A011007T)	<p>CO1 - विद्यार्थी हिंदी के विभिन्न भाषाई और क्षेत्रीय रूपों को समझने में सक्षम होंगे। हिंदी की उपभाषाओं (जैसे ब्रजभाषा, अवधी, भोजपुरी, बुंदेली, मैथिली) और उनके साहित्यिक और सांस्कृतिक महत्व का ज्ञान होगा।</p> <p>CO2 - भारतीय लोकशैलियों जैसे लोकगीत, लोकनाट्य, लोककथाएँ, लोकगाथाएँ, लोकोक्तियाँ, और लोकनृत्य का गहन अध्ययन होगा।</p> <p>CO3 - विद्यार्थी लोक साहित्य के मौखिक और लिखित रूपों, उनके प्रकार (गद्य, पद्य, कथा, गाथा), और उनकी संरचना को</p>

				<p>समझने में सक्षम होंगे।</p> <p>CO4 - लोक साहित्य और समाज के बीच संबंध का विश्लेषण करेंगे। जाति, वर्ग, लिंग, और धार्मिक विविधताओं के संदर्भ में लोक साहित्य की भूमिका को समझ सकेंगे।</p> <p>CO5 - यह पाठ्यक्रम विद्यार्थियों को भारतीय संस्कृति, परंपराओं, और धरोहरों के संरक्षण और संवर्धन के महत्व को समझने के लिए प्रेरित करेगा।</p>
		IV	LAGHU SHODH PARIYOJANA (A011008R)	<p>CO1 - छात्रों को हिंदी साहित्य की शोध प्रक्रिया एवं शोध के मुख्य आयामों का ज्ञान होगा।</p> <p>CO2 - विभिन्न शोध विधियाँ, जैसे कि गुणात्मक, ऐतिहासिक, तुलनात्मक आदि का प्रयोग हिंदी साहित्य के शोध में किस प्रकार होता है इसका बोध होगा।</p> <p>CO3 - साहित्य को सांस्कृतिक, सामाजिक आदि विभिन्न दृष्टियों से समझने एवं विश्लेषण करने की क्षमता उत्पन्न होगी।</p> <p>CO4 - शोध परिणामों को स्पष्ट, संक्षिप्त एवं प्रभावी रूप से प्रस्तुत करने की क्षमता उत्पन्न होगी।</p>
M. A. History	<p>PO1- MA History program offers comprehensive historical knowledge, focusing on ancient civilizations of India and the world, emphasizing political, cultural, artistic, and religious developments. Students gain a deep understanding of ancient India's pride and heritage, fostering a positive attitude towards history and motivating them for nation-building efforts.</p> <p>PO2- The curriculum enhances students' logical abilities and research attitude, encouraging rational analysis of historical events, and provides an employment-oriented approach. Graduates are well-prepared for competitive exams such as UGC-NET and UPSC Civil Services,</p>	I	HISTORIOGRAPHY, CONCEPTS, METHODS AND TOOLS (A050701T)	<p>CO1 - Understand the meaning, scope, and importance of history and explore the processes of data collection, selection, and interpretation of evidence and causation.</p> <p>CO2 - Analyze the relationship between history and other disciplines, such as geography, economics, sociology, philosophy, political science, natural sciences, archaeology.</p> <p>CO3 - Study traditions of historical writing from Greco-Roman and ancient Indian perspectives.</p> <p>CO4 - Examine various approaches, including theological, orientalist, imperialist, nationalist, Marxist, and postmodernist perspectives.</p> <p>CO5 - Develop research skills to understand historical inquiry, including subject selection and source analysis.</p>

	broadening their opportunities for further studies and career advancements.			
		I	INDIAN CULTURE AND HERITAGE (A050702T)	CO1 - Explore the characteristics and geographical significance of Indian culture and study the societal evolution of India through ages. CO2 - Analyze Indian religion and philosophy, including Pre-Vedic and Vedic religions, Buddhism, Jainism, and schools of Indian philosophy like Vedanta and Mimansa. CO3 - Understand the evolution of Indian scripts and languages, including Harappan, Brahmi, and Devnagri scripts. CO4 - Learn about major Indian art and architectural styles and explore the spread of Indian Culture Abroad
		I	INDIAN NATIONAL MOVEMENT (1857-1947) (A050703T)	CO1 - Analyze various perspectives on the 1857 Revolt and its aftermath. CO2 - Explore the contradictions of colonial rule and the early efforts at political associations. CO3 - Study the founding of the Indian National Congress and Examine Congress' agenda for constitutional, administrative, and economic reforms during its early years. CO4 - Understand the rise of militant nationalism, the Partition of Bengal, and the Swadeshi and Boycott movements. CO5 - Trace the leadership of M.K. Gandhi and the transformative movements he led, including the Rowlatt Satyagraha, Khilafat and Non-Cooperation, and Civil Disobedience.
		I	HISTORY OF EUROPE (1453-1871) (A050704T)	CO1 - Understand the unique conditions in Italy, especially Florence, that fostered the Renaissance and analyze the challenges posed by the Reformation and the responses of the Counter-Reformation. CO2 - Examine the Age of Exploration, with Portugal's pioneering efforts and Spain's conquest of the Americas and understand the 17th-century crisis and its effects on European societies. CO3 - Trace the origins and features of absolutism and analyze the nature of absolutist states and the contrasting developments in England, including the English Revolution. CO4 - Understand the Agrarian and Industrial Revolutions and their transformative effects on European societies.
		II	CONSTITUTIONAL HISTORY	CO1 - Develop a comprehensive understanding of India's constitutional evolution during British rule.

			OF INDIA (1773-1947) (A050801T)	CO2 - Analyze the socio-political challenges and reforms that shaped modern India. CO3 - Appreciate the significance of historical events and legislations in the formation of the Indian Constitution. CO4 - Gain insights into the administrative and legal systems governing pre- and post-independence India. CO5 - Critically evaluate the contributions of key personalities and movements in India's freedom struggle and constitutional development.
		II	TWENTIETH CENTURY WORLD (A050802T)	CO1 - Develop a comprehensive understanding of the key political, social, and economic forces that shaped the 20th century. CO2 - Analyze the causes and effects of global conflicts like the First and Second World Wars. CO3 - Understand the significance of ideological movements, revolutions, and the Cold War in shaping world history. CO4 - Explore the processes of decolonization, disintegration, and globalization and their lasting impact on modern societies. CO5 - Critically assess the role of international organizations like the League of Nations and the United Nations in maintaining global order.
		II	HISTORY OF MEDIEVAL INDIA (POLITICAL AND ADMINISTRATIVE ASPECTS: 1206-1526) (A050803T)	CO1 - Gain insights into the political, administrative, and military strategies of the Delhi Sultanate rulers. CO2 - Analyze the impact of invasions and regional dynamics on the establishment and decline of the Sultanate. CO3 - Understand the administrative, economic, and judicial systems of the Delhi Sultanate and their legacy. CO4 - Critically assess the role of dynastic changes in shaping medieval Indian history. CO5 - Develop a nuanced understanding of the socio-political and cultural transitions during the medieval period in India.
		II	HISTORY OF MODERN INDIA (POLITICAL AND ADMINISTRATIVE ASPECTS: 1740-1857) (A050804T)	CO1 - Develop a critical understanding of the European struggle for supremacy and the establishment of British colonial rule. CO2 - Analyze key events such as the conquest of Bengal, Anglo-Indian wars, and the policies of prominent British administrators. CO3 - Assess the resistance of Indian states and leaders like Mysore's Tipu Sultan, the Marathas, Ranjeet Singh, and others. CO4 - Understand the socio-political and economic impact of British annexationist policies on Indian society.

				CO5 - Evaluate the Revolt of 1857 as a turning point in India's struggle against colonial rule.
		II	SOCIETY, CULTURE AND ECONOMY IN MEDIEVAL INDIA (1206-1526) (A050805T)	CO1 - Gain insights into the social structures and cultural developments during the Delhi Sultanate. CO2 - Understand the role of Bhakti and Sufi movements in shaping religious and cultural life in medieval India. CO3 - Analyze the economic policies of the Delhi Sultans, including revenue reforms, trade, and currency systems. CO4 - Appreciate the contributions of art, music, and architecture in enriching the cultural heritage of medieval India. CO5 - Develop an understanding of the historical sources of the Sultanate period and their significance for reconstructing medieval Indian history.
		II	SOCIETY, CULTURE AND ECONOMY IN MODERN INDIA (1740-1857) (A050806T)	CO1 - Understand the social, religious, and cultural conditions of India before and during British rule. CO2 - Evaluate the progress made in improving the status of women and marginalized communities, as well as the eradication of social evils. CO3 - Examine the economic transformation of India under colonial rule, including the impact of agrarian movements and the Revolt of 1857. CO4 - Appreciate the growth of education, art, and culture, highlighting their role in shaping modern Indian identity.
		II	RESEARCH PROJECT (A050807R)	CO1 - Develop critical skills to analyze historical events, sources, and narratives from multiple perspectives. CO2 - Acquire expertise in identifying research questions, using primary and secondary sources, and applying historical methodologies. CO3 - Explore connections between history and other disciplines such as sociology, politics, and economics to understand broader contexts. CO4 - Enhance the ability to present research findings effectively through academic writing and oral presentations.
		III	CONTEMPORARY HISTORY OF INDIA (1947-2000) (A050901T)	CO1 - Understand India's foreign and domestic policies in shaping its identity as an independent nation. CO2 - Analyze India's role in global diplomacy, particularly its contributions to Non-Alignment and the United Nations. CO3 - Evaluate India's bilateral relations with key nations and its

				<p>strategies to maintain regional and global influence.</p> <p>CO4 - Gain knowledge about the making of the Indian Constitution, its features, and its role in governance and democracy.</p> <p>CO5 - Appreciate India's achievements in science, technology, and education, highlighting their impact on national development.</p>
		III	HISTORY OF MAJOR DYNASTIES OF SOUTH INDIA (A050902T)	<p>CO1 - Gain a comprehensive understanding of the Sangam Age and its significance in South Indian history.</p> <p>CO2 - Analyze the contributions of key dynasties like the Satavahanas, Cholas, Cheras, Pandyas, Pallavas, and Rashtrakutas to South India's political and cultural heritage.</p> <p>CO3 - Evaluate the inter-dynastic struggles and their impact on the political landscape of South India.</p> <p>CO4 - Explore South India's global connections, focusing on trade, diplomacy, and cultural exchanges with the outside world.</p>
		III	HISTORY OF MEDIEVAL INDIA (POLITICAL AND ADMINISTRATIVE ASPECTS: 1525-1658) (A050903T)	<p>CO1 - Gain insights into the political and administrative structures of the Mughal Empire.</p> <p>CO2 - Analyze military campaigns and strategies employed by the Mughals against regional powers.</p> <p>CO3 - Explore the regional challenges faced by the Mughal Empire, including conflicts with the Rajputs, Marathas, and regional insurgencies.</p> <p>CO4 - Evaluate the factors contributing to the decline of the Mughal Empire, including internal rebellions, administrative weaknesses, and external threats.</p>
		III	HISTORY OF MODERN INDIA (POLITICAL AND ADMINISTRATIVE ASPECTS: 1858-1947) (A050904T)	<p>CO1 - Understand the administrative and economic policies introduced by British viceroys and their impact on India.</p> <p>CO2 - Examine the role of early nationalist movements, including the formation of the Indian National Congress and Muslim League.</p> <p>CO3 - Understand the ideological shifts from moderate to extremist nationalism and the rise of Gandhian movements.</p> <p>CO4 - Study the key mass movements like Non-Cooperation, Civil Disobedience, and Quit India, leading to independence.</p>
		III	SOCIO-ECONOMIC AND CULTURAL HISTORY OF MEDIEVAL	<p>CO1 - Gain an understanding of society and religious policies during the Mughal era, including the social hierarchies and role of women.</p> <p>CO2 - Explore the cultural richness of the period, including developments in art, literature, music, and architecture.</p> <p>CO3 - Understand the sources of Mughal history and evaluate the</p>

			INDIA (1526-1740) (A050905T)	narratives provided by contemporary accounts and modern historians.
		III	SOCIO-ECONOMIC AND CULTURAL HISTORY OF MODERN INDIA (1740-1947) (A050906T)	CO1 - Understand the social changes brought by British rule, including reforms, missionary activities, and the spread of modern education and press. CO2 - Analyze the structure and nature of the Indian economy in the pre-colonial and colonial periods. CO3 - Examine the impact of British agrarian policies on Indian peasants, rural indebtedness, and famines. CO4 - Evaluate the effects of colonialism on industries, labor, and trade, and understand nationalist critiques of industrial policies.
		IV	RESEARCH METHODOLOGY (A051001T)	CO1 - Understand the principles and types of research, including formulating and defining research problems. CO2 - Develop proficiency in data collection, processing, and statistical analysis using modern tools. CO3 - Apply soft computing methods to optimize and analyze complex systems. CO4 - Adhere to ethical standards in research and comprehend the fundamentals of IPR and scholarly publishing.
		IV	COLONIALISM AND NATIONALISM IN ASIA (A051002T)	CO1 - Understand the theoretical framework of colonialism through the lens of modern world system theory. CO2 - Analyze the different forms and functions of colonial control in Asia. CO3 - Examine the unique colonial experiences of India, China, Japan, Vietnam, and Indonesia. CO4 - Trace the evolution of nationalism and its role in anti-colonial struggles across Asia. CO5 - Evaluate the processes of decolonization and the persistence of neo-colonial structures in the modern world.
		IV	HISTORICAL APPLICATION IN TOURISM (A051003T)	CO1 - Understand the intrinsic connection between history and tourism, and how cultural heritage contributes to the tourism industry. CO2 - Identify and assess the significance of historical monuments and sites in tourism promotion. CO3 - Appreciate the role of cultural elements such as festivals, folk arts, and religious practices in tourism.

				CO4 - Learn the practical skills necessary to guide and engage tourists effectively.
		IV	GENDER STUDIES (A051004T)	CO1 - Understand the historical evolution and theoretical foundations of gender studies. CO2 - Analyze the role of women in 19th-century social reform movements. CO3 - Examine the contributions of key reformers to women's education in pre-independence India. CO4 - Study the emergence and impact of women-led organizations in advocating for gender equality.
		IV	HISTORY OF IDEAS (A051005T)	CO1 - Analyze the evolution of political, social, and religious ideas across historical periods. CO2 - Examine the role of colonialism in shaping modern political thought, including liberalism and socialism. CO3 - Understand the formation and critique of social hierarchies and caste structures. CO4 - Explore religious reform and revival movements as responses to social and political challenges.
		IV	FREEDOM MOVEMENT IN U.P. WITH SPECIAL REFERENCE TO KANPUR (A051006T)	CO1 - Analyze the unique contributions of Uttar Pradesh to the Indian freedom struggle. CO2 - Evaluate the role of Gandhian and revolutionary movements in mobilizing the people of U.P. against British rule. CO3 - Understand the administrative, economic, and legislative contexts that shaped the resistance. CO4 - Highlight the specific contributions of Kanpur and other cities in the nationalist movement.
		IV	TRIBAL AND PEASANT MOVEMENT IN INDIA (A051007T)	CO1 - Understand the historical context and significance of tribal and peasant movements in India. CO2 - Analyze the colonial policies and their socio-economic impacts that fueled these movements. CO3 - Explore the diverse strategies, leadership, and roles of women in tribal and peasant struggles. CO4 - Conduct detailed case studies to understand the unique dynamics of each movement. CO5 - Appreciate the legacy of these movements in shaping India's socio-political framework.

		IV	RESEARCH PROJECT (A051008R)	<p>CO1 - Develop critical skills to analyze historical events, sources, and narratives from multiple perspectives.</p> <p>CO2 - Acquire expertise in identifying research questions, using primary and secondary sources, and applying historical methodologies.</p> <p>CO3 - Explore connections between history and other disciplines such as sociology, politics, and economics to understand broader contexts.</p> <p>CO4 - Enhance the ability to present research findings effectively through academic writing and oral presentations.</p>
M. A. Political Science	<p>PO1- MA Political Science program provides in-depth knowledge of government processes, political systems, institutional structures, and international relations, emphasizing the challenges of globalization and political economy in Third World countries.</p> <p>PO2- Students develop critical thinking, clear writing, and effective oral communication skills, honing their ability to make sound judgments through analytical reasoning. The curriculum offers practical experiences like Model United Nations, internships, and mock trials, preparing graduates for successful careers.</p> <p>PO3- Graduates are well-equipped for competitive exams, including UGC-NET and UPSC Civil Services, enhancing their opportunities for advanced studies and careers in the field of political science.</p>	I	WESTERN POLITICAL THOUGHT AND IDEOLOGIES (A060701T)	<p>CO1 - Understanding Classical Political Theories: Develop an in-depth understanding of foundational Western political ideas, including theories of knowledge, ideal states, natural law, and justice as presented by thinkers like Plato, Aristotle, and St. Augustine.</p> <p>CO2 - Exploration of Social and Political Evolution: Examine the transition from medieval to modern political thought through concepts like social contract, sovereignty, and constitutionalism, as explored by Hobbes, Locke, and Rousseau.</p> <p>CO3 - Engagement with Modern Political Ideologies: Analyze the contributions of modern political thinkers like Burke, Hegel, and Green in shaping ideas on rights, liberty, democracy, and the state.</p> <p>CO4 - Critical Evaluation of Revolutionary and Economic Thought: Understand revolutionary ideologies, including Marxist communism and its development through thinkers like Marx and Lenin, alongside utilitarian perspectives of Bentham and Mill.</p>
		I	INDIAN GOVERNMENT AND POLITICS (A060702T)	<p>CO1 - Understanding the Foundations of Indian Democracy: Gain insights into the historical evolution of the Indian democratic system, including the colonial legacy, constitutional development, and the philosophical underpinnings of the Indian Constitution.</p> <p>CO2 - Analyzing Constitutional Frameworks: Understand the interplay between Fundamental Rights and Directive Principles and their impact on individual and group rights in Indian society.</p> <p>CO3 - Evaluating the Structures of Governance: Develop a comprehensive understanding of the legislature, executive, and judiciary, including their composition, functions, powers, and mechanisms like judicial review, activism, and reforms.</p>

		I	THEORIES OF INTERNATIONAL RELATIONS (A060703T)	<p>CO1 - Foundational Understanding of International Relations: Develop a clear understanding of the nature, scope, objectives, and evolution of International Relations and the distinction between International Relations and International Politics.</p> <p>CO2 - Application of Theoretical Approaches: Analyze traditional and modern approaches to International Relations, including Realism, Idealism, Neo-Realism, Constructivism, Game Theory, and Marxist and Dependency theories, to comprehend global political dynamics.</p> <p>CO3 - Conflict Resolution and Global Governance: Evaluate mechanisms for peace and conflict resolution, including deterrence, disarmament, and the roles of the NPT, CTBT, and the United Nations in fostering global governance and international law.</p> <p>CO4 - Regional and North-South Relations: Examine the dynamics of North-South dialogue and the role of regional organizations like SAARC, ASEAN, and BIMSTEC in promoting trade, cooperation, and strategic partnerships.</p>
		I	POLITICAL ANALYSIS AND RESEARCH METHODOLOGY (A060704T)	<p>CO1 - Understanding Research Foundations: Develop a comprehensive understanding of research concepts, including epistemologies, ontologies, and scientific methods, while critically analyzing positivist and non-positivist approaches in social science research.</p> <p>CO2 - Research Design and Framework: Learn to identify research problems, formulate objectives and hypotheses, conduct literature reviews, and develop theoretical paradigms to guide research inquiries.</p> <p>CO3 - Mastery of Research Methods: Gain expertise in qualitative, quantitative, and mixed-method approaches (triangulation), as well as techniques for operationalizing concepts, creating measurement scales, and selecting appropriate sampling methods.</p> <p>CO4 - Data Analysis and Reporting: Acquire skills in data processing, interpretation using descriptive and inferential statistics, and practical applications like SPSS for data analysis and PowerPoint for research presentations.</p>
		II	INDIAN POLITICAL THOUGHT (A060801T)	<p>CO1 - Understanding Ancient Indian Political Philosophy: Analyze ancient Indian political ideas and their influence on governance and society.</p> <p>CO2 - Exploring the Indian Renaissance: Examine the modernity and reform movements during the Indian Renaissance, including</p>

				critiques of religion and society, and the reformist versus revivalist debates led by thinkers. CO3 - Engaging with Nationalist Thought: Understand the evolution of modern liberal nationalism and radical nationalism and explore the spiritual and cultural dimensions of Indian nationalism
		II	MAJOR PERSPECTIVES IN PUBLIC ADMINISTRATION (A060802T)	CO1 - Foundational Understanding of Public Administration: Gain insights into the nature, scope, and evolution of Public Administration, including classical and new approaches. CO2 - Organizational and Policy Dynamics: Understand organizational structures, functions, and management principles, as well as leadership styles and decision-making processes. CO3 - Human and Financial Resource Management: Explore human resource practices like recruitment, training, and employer-employee relations, and develop an understanding of financial administration. CO4 - Adapting to Contemporary Governance Needs: Examine the challenges and opportunities presented by the digital economy, emphasizing financial transparency and governance reforms in the Indian context.
		II	CONTEMPORARY ISSUES IN WORLD POLITICS (A060803T)	CO1 - Analyze the multidimensional impact of globalization on the global economy, politics, culture, and military dynamics. CO2 - Examine international frameworks like the UN Charter of Human Rights and the roles of UNHRC, NHRC, and NGOs in addressing human rights violations. CO3 - Explore critical global concerns such as environmental issues, climate change and global terrorism. CO4 - Investigate gender equality, representation, and discrimination, along with the contributions of international organizations and women's commissions.
		II	INDIAN FOREIGN POLICY (A060804T)	CO1 - Analyze the genesis, foundational principles, and evolution of India's foreign policy since independence. CO2 - Assess India's foreign policy strategies during the Cold War and in the post-Cold War era. CO3 - Explore the dynamics of India's engagements with China and understand India's regional strategies, its neighborhood relations, and its role in fostering cooperation through organizations like SAARC. CO4 - Investigate India's positions and strategies on critical global

				concerns, including trade, environmental challenges, security regimes, terrorism, disarmament, and globalization.
		II	POLITICAL SOCIOLOGY (A060805T)	CO1 - Gain knowledge of the main approaches to Political Sociology and examine the relationship between polity and social structures. CO2 - Understand political behavior through the lens of social stratification and study processes of political recruitment, party politics and the role of electoral political culture in shaping Indian politics. CO3 - Engage with debates on equality and inequality, and understand theories of political socialization, participation, and elite dominance in shaping political systems.
		II	INTRODUCTION TO POLITICAL ECONOMY (A060806T)	CO1 - Explore various approaches to political economy, and analyze key contributions of classical thinkers and modern economists to understand the evolution of political economy. CO2 - Investigate the economic and political implications of corruption, rent-seeking, and other forms of economic discontent. CO3 - Use models and game theory to analyze complex macroeconomic and political problems, bridging micro-level behaviors with broader societal outcomes. CO4 - Critically assess key issues in international political economy, including globalization, democratic capitalism in the 21st century, and their impacts on global and local economies.
		II	INTERNATIONAL LAW (A060807T)	CO1 - Gain a foundational understanding of international law and explore the primary sources of international law. CO2 - Study state sovereignty, jurisdiction, recognition, responsibility, and succession, along with issues related to territories, airspace, outer space, and high seas. CO3 - Evaluate the functions of key international organizations and learn about the various diplomatic and legal means for settling international disputes.
		II	RESEARCH PROJECT (A060808R)	CO1 - Develop critical skills to analyze political theories, systems, and policies using advanced methodologies. CO2 - Gain expertise in formulating research questions, collecting data, and applying political science frameworks to study governance and power dynamics. CO3 - Explore the intersections of politics with economics, sociology, and international relations to address complex issues.

				CO4 - Enhance abilities to present research findings through structured academic writing and articulate arguments in discussions or presentations.
		III	INDIAN ADMINISTRATI ON (A060901T)	CO1 - Understand the evolution of Indian administration, including Kautilya's philosophy, Mughal and British influences, and their legacies. CO2 - Analyze the constitutional, federal, and parliamentary systems shaping administrative structures for welfare and governance. CO3 - Explore the functioning of central and state-level administration, including civil services, law enforcement, and control mechanisms like Lokpal. CO4 - Study the roles of key officials and organizations in rural development and public undertakings.
		III	COMPARATIVE GOVERNMENT AND POLITICS (A060902T)	CO1 - Grasp the meaning, scope, and various approaches to studying comparative government and politics. CO2 - Analyze socio-economic bases and characteristics of major constitutions, including comparisons of parliamentary vs. presidential and federal vs. unitary systems. CO3 - Compare the roles and functions of the executive, legislature, and judiciary across different political systems. CO4 - Understand globalization's impact on world politics and analyze the political economy of advanced democracies.
		III	LOCAL SELF GOVERNMENT: RURAL AND URBAN GOVERNANCE IN INDIA (A060903T)	CO1 - Comprehend the significance, evolution, and constitutional framework (73rd and 74th Amendments) of local self-government in India. CO2 - Analyze the composition, roles, and functioning of rural (Zila Parishad, Panchayats) and urban (Municipal Corporations, Councils) local bodies, including their relationship with state governments. CO3 - Evaluate decentralized planning, the role of NGOs, and bureaucracy in grassroots development. CO4 - Explore issues like people's participation, empowerment, electoral politics, and the impact of Panchayati Raj on rural-urban development.
		III	DEVELPOMENT PROCESS & SOCIAL	CO1 - Understand the modern concept of development and its evolution through trade, imperialism, colonialism, and democracy. CO2 - Analyze India's development processes, focusing on social

			MOVEMENTS IN CONTEMPORARY INDIA (A060904T)	change, state planning, and liberalization. CO3 - Examine the impact of industrial and agrarian development strategies on social structures, labor, and farmers. CO4 - Explore the role and influence of tribal, peasant, Dalit, women's movements, and civil rights activism on contemporary development challenges.
		III	PEACE AND CONFLICT RESOLUTION (A060905T)	CO1 - Learn the sources and dynamics of international and domestic conflicts, including trends in peace and conflict resolution. CO2 - Analyze conflict resolution models by scholars like Johan Galtung, Joseph Montville, and Morton Deutsch. CO3 - Understand historical peace movements, principles, and methods for resolving conflicts. CO4 - Evaluate grassroots approaches to war, peace, and conflict resolution in modern contexts.
		III	ELECTORAL POLITICS IN INDIA (A060906T)	CO1 - Understand the evolution of elections and democratic governance in India, along with the role of the Election Commission and electoral systems. CO2 - Reforms and Identity Politics: Analyze electoral reforms, their impact, and the influence of identity politics on elections. CO3 - Learn about electoral planning, campaign strategies, political finance, and the integration of technology and media in electoral processes. CO4 - Examine the relationship between state and national politics, including defection, coalition politics, and their effects on governance.
		III	HUMAN RIGHTS, DEVELOPMENT AND ENVIRONMENTAL ISSUES (A060907T)	CO1 - Comprehend the concept, evolution, and dimensions of human rights globally and in India, with a focus on the Universal Declaration of Human Rights and the Indian Constitution. CO2 - Analyze societal and legal challenges to human rights in India, including issues related to crime, intolerance, abuse, sedition, and marginalized groups. CO3 - Understand the intersection of human rights with climate change, group identity rights, migration, and refugee issues. CO4 - Evaluate the role of human rights movements and the criminal justice system in addressing human rights violations in India.
		IV	COMPARATIVE POLITICS:	CO1 - Understand the meaning, scope, and approaches of comparative politics, including traditional, modern, and post-

			CONCEPTS AND MODELS (A061001T)	<p>modern perspectives.</p> <p>CO2 - Analyze the concepts of political development, modernization, and post-modernization in various political systems.</p> <p>CO3 - Examine theories and practices of constitutionalism, democracy, dictatorship, and different forms of government (parliamentary, presidential, unitary, and federal).</p> <p>CO4 - Explore political culture, participation, electoral behavior, party systems, pressure groups, public opinion, and the role of media.</p>
		IV	CONTEMPORARY POLITICAL THEORY (A061002T)	<p>CO1 - Explore the nature, significance, and evolution of political theory, including the transition from traditional to modern, behavioral, and post-behavioral perspectives.</p> <p>CO2 - Analyze the decline of political theory through the arguments of Easton and Cobban, and engage with debates on the end of ideology and history.</p> <p>CO3 - Examine the resurgence of political theory through contributions by Berlin, Blondel, and Strauss, and the emergence of new political science.</p> <p>CO4 - Study key frameworks such as System Theory, Structural-Functional Theory, and Group Theory to understand political systems and structures.</p>
		IV	PUBLIC POLICY & ADMINISTRATION IN INDIA (A061003T)	<p>CO1 - Understand the nature, scope, evolution, and significance of public policy and its relationship with public administration.</p> <p>CO2 - Analyze theories, approaches, and institutional frameworks involved in the public policy-making process.</p> <p>CO3 - Explore models and techniques of policy implementation, including top-down and bottom-up approaches, challenges, and the roles of key stakeholders.</p> <p>CO4 - Evaluate the impact of globalization and transnational actors on the public policy process.</p>
		IV	STATE AND POLITICS IN INDIA (A061004T)	<p>CO1 - Develop a framework for understanding and analyzing state politics in India.</p> <p>CO2 - Recognize the importance and relevance of studying state-level political dynamics within the Indian federal system.</p> <p>CO3 - Explore the relationship between national and state politics and their mutual influences.</p> <p>CO4 - Analyze the socio-economic, constitutional, and structural factors shaping state politics, including the roles of the executive, legislature, and judiciary.]</p>

		IV	INTERNATIONAL ORGANIZATIONS & ADMINISTRATION (A061005T)	<p>CO1 - Understand the origins, evolution, and characteristics of international organizations, highlighting their role in global politics.</p> <p>CO2 - Analyze the emergence, structure, successes, and failures of the League of Nations as a precursor to modern international organizations.</p> <p>CO3 - Examine the principles, objectives, functions, and challenges of the United Nations, including the need for reforms.</p> <p>CO4 - Explore the dynamics and significance of regional organizations like NATO, EU, ASEAN, and SAARC in addressing regional issues.</p>
		IV	DEMOCRACY & DEVELOPMENT IN SOUTH ASIA (A061006T)	<p>CO1 - Understand the geopolitical realities, historical background, and socio-economic structures of South Asian countries.</p> <p>CO2 - Analyze the dynamics of nation-building in South Asia, focusing on the two-nation theory, partition, and national integration efforts.</p> <p>CO3 - Explore challenges to democracy, including pluralism, multiculturalism, secularism, and issues related to language, caste, and religion.</p> <p>CO4 - Examine the diverse political systems in South Asia, including democratic, military, and monarchical frameworks.</p>
		IV	FOREIGN POLICY OF MAJOR POWERS AND WORLD POLITICS (A061007T)	<p>CO1 - Understand international relations since 1945, focusing on comparative foreign policy approaches, geopolitics, foreign aid, and nuclear proliferation.</p> <p>CO2 - Analyze the evolution of U.S. foreign policy, including its strategies, alliances, and relations with South and West Asia, China, and other global actors.</p> <p>CO3 - Examine the continuity and change in Russian foreign policy, its approach towards India and Central Asia, and its post-Soviet global role.</p> <p>CO4 - Study China's foreign policy foundations, its ideological and indigenous components, and relations with the U.S., Russia, India, and regions like Asia, Africa, and Latin America.</p>
		IV	FEMINISM AND GENDER ISSUES (A061008T)	<p>CO1 - Understand the feminist approach to political theory, including liberal, socialist, modern, and postmodern feminism.</p> <p>CO2 - Analyze core concepts like patriarchy, gender, and sexuality and their influence on societal structures.</p> <p>CO3 - Explore the intersections of gender with class, development, violence, and legal frameworks.</p>

				CO4 - Examine women's empowerment through public policies and their role in political representation.
		IV	RESEARCH PROJECT (A061009R)	CO1 - Develop critical skills to analyze political theories, systems, and policies using advanced methodologies. CO2 - Gain expertise in formulating research questions, collecting data, and applying political science frameworks to study governance and power dynamics. CO3 - Explore the intersections of politics with economics, sociology, and international relations to address complex issues. CO4 - Enhance abilities to present research findings through structured academic writing and articulate arguments in discussions or presentations.
M. A. Sociology	PO1- MA Sociology program offers a curriculum to help students objectively understand the complexities of society, fostering critical thinking and observation skills at both national and global levels, with a focus on social issues such as inequality, gender, environment, polity, religion, economy, kinship, and culture. PO2- The course provides a comprehensive understanding of Indian society, enabling students to link sociological concepts and theories to real-life experiences, emphasizing the examination of institutions and social problems. PO3- Graduates are prepared for competitive exams like UGC-NET and UPSC Civil Services, enhancing their prospects for further studies and careers, while promoting a deep understanding of societal dynamics and fostering analytical skills.	I	CLASSICAL SOCIOLOGICAL TRADITION (A070701T)	CO1- Understand the socio-economic and intellectual foundations of classical sociology. CO2 - Analyze the contributions of key sociological thinkers such as Marx, Durkheim, Weber, and Pareto. CO3 - Explore key sociological concepts, including social action, class conflict, religion, and bureaucracy. CO4 - Develop critical perspectives on classical theories to address contemporary social issues.
		I	PERSPECTIVE OF INDIAN SOCIETY (A070702T)	CO1 - Analyze key theoretical perspectives on Indian society, including ideological, structural-functional, Marxian, civilizational, and subaltern views. CO2 - Understand the contributions of significant thinkers like G.S. Ghurye, M.N. Srinivas, B.R. Ambedkar, and others to Indian sociological thought. CO3 - Develop a sociological understanding of Indian society's

				structure, culture, and transformations. CO4 - Critically evaluate diverse approaches to studying caste, class, and power in India.
		I	SOCIAL STRATIFICATION & MOBILITY (A070703T)	CO1 - Understand the concept of social stratification, including hierarchy, inequality, and mobility. CO2 - Analyze sociological perspectives on stratification, such as functionalist, Marxist, and Weberian approaches. CO3 - Explore forms of stratification in India, focusing on caste, class, religion, gender, and ethnicity. CO4 - Critically assess contemporary debates on marginalization and inequality among SC/STs, Muslim minorities, and women in India.
		I	SOCIOLOGY OF CHANGE & DEVELOPMENT (A070704T)	CO1 - Understand the forms, meanings, and processes of social change, including structural and evolutionary changes. CO2 - Analyze changing conceptions of development, focusing on economic, social, human, and sustainable development. CO3 - Examine theories of social change and development, such as linear, cyclical, and underdevelopment theories. CO4 - Explore the role of planning, including democratic and regional approaches, and the impact of NGOs and institutions like NITI Aayog in development.
		II	CLASSICAL SOCIOLOGICAL THEORY (A070801T)	CO1 - Develop an understanding of the nature and levels of theorization in sociology and its relationship with research. CO2 - Analyze key theoretical perspectives such as structural-functionalism, structuralism, conflict theory, and sociology of knowledge. CO3 - Examine the contributions of theorists like Radcliffe-Brown, Parsons, Levi-Strauss, Dahrendorf, and Karl Mannheim. CO4 - Evaluate the methodological and analytical relevance of classical theories in understanding social structures and changes.
		II	INDIAN SOCIAL THOUGHT (A070802T)	CO1 - Develop an understanding of the philosophical and ideological foundations of Indian society through key thinkers like Manu, Swami Vivekananda, and Gandhi. CO2 - Analyze the interplay between tradition and modernity in Indian social and political thought. CO3 - Gain insights into the contributions of Ambedkar, Aurobindo, and others in shaping modern Indian society and addressing issues of caste, nationalism, and democracy.

				CO4 - Foster critical engagement with the sociological implications of Indian cultural values and modernization efforts.
		II	METHODOLOGY OF SOCIAL RESEARCH-I (A070803T)	CO1 - Understand the foundational concepts, scope, and significance of social research, including hypothesis formulation. CO2 - Explore the scientific steps of theory building and the role of objectivity and subjectivity in research. CO3 - Learn qualitative and quantitative research methods like ethnography, observation, and case studies. CO4 - Develop practical skills in research design, including descriptive, exploratory, experimental, and diagnostic approaches.
		II	RURAL SOCIOLOGY (A070804T)	CO1 - Develop insights into the significance, scope, and cultural aspects of rural sociology, including folk culture and peasant societies. CO2 - Explore the dynamics of traditional Indian villages, focusing on family, kinship, caste, and religion. CO3 - Examine rural transformations through Sanskritization, modernization, and urbanization's effects on rural institutions. CO4 - Analyze contemporary rural leadership patterns and the role of Panchayati Raj in power structures.
		II	URBAN SOCIOLOGY (A070805T)	CO1 - Explore the meaning, growth, and ecological, psychological, and sociological aspects of urbanization and cities. CO2 - Analyze urban social structures, including class, family, governance, and urban culture as a way of life. CO3 - Study migration theories, urbanization trends, and perspectives on urban growth in the Indian context. CO4 - Examine slums, housing challenges, and urban planning strategies for Indian cities.
		II	SOCIAL PSYCHOLOGY (A070806T)	CO1 - Gain understanding of key concepts and their relationship with sociology. CO2 - Learn the stages and theories of socialization in human behavior. CO3 - Explore factors like motivation, perception, attitude, culture, and personality. CO4 - Analyze leadership, crowd psychology, public opinion, and the role of mass media in shaping societal behaviors.
		II	RESEARCH PROJECT (A070807R)	CO1 - Develop the ability to critically analyze social structures, processes, and issues using theoretical frameworks. CO2 - Gain expertise in conducting qualitative and quantitative

				<p>research, including designing studies, collecting data, and analyzing results.</p> <p>CO3 - Explore connections between sociology and fields like anthropology, political science, and economics to address societal challenges.</p> <p>CO4 - Enhance the ability to present sociological insights clearly through academic writing and oral presentations.</p>
		III	<p>ADVANCED SOCIOLOGICAL THEORY (A070901T)</p>	<p>CO1 - Gain insights into the evolution of sociological theories, addressing limitations of modern sociological thought and integrating contemporary perspectives.</p> <p>CO2 - Critically examine neofunctionalism, post-structuralism, critical theory, neo-Marxism, and interactionist perspectives.</p> <p>CO3 - Explore recent advancements in sociological theorizing, including structuration, habitus, and postmodernism.</p> <p>CO4 - Develop the ability to apply theoretical frameworks to analyze cultural, social, and institutional dynamics in modern societies.</p>
		III	<p>METHODOLOGY OF SOCIAL RESEARCH-II (A070902T)</p>	<p>CO1 - Learn various methods of data collection, including surveys, interviews, and questionnaires, to conduct sociological research.</p> <p>CO2 - Gain proficiency in statistical analysis, including measures of central tendency, dispersion, correlation, and regression, for sociological data interpretation.</p> <p>CO3 - Develop skills in using computers for research tasks, such as coding, graphical representation, and creating tables and graphs.</p> <p>CO4 - Acquire knowledge of the steps involved in preparing research papers, including identifying problems, structuring, and proper referencing.</p>
		III	<p>MEDIA CULTURE & SOCIETY (A070903T)</p>	<p>CO1 - Learn about the characteristics, types, and functions of traditional and modern media, including their interaction with culture and society.</p> <p>CO2 - Explore sociological concepts and theories of media, such as cultural industry, public sphere, and critical perspectives on media and society.</p> <p>CO3 - Investigate the relationship between media, pop culture, social relations, and its role as an agent of social change in the context of globalization.</p> <p>CO4 - Critically assess the role and impact of media in cultural globalization, including issues like cultural hegemony, digital divide, and media imperialism.</p>

		III	POLITICAL SOCIOLOGY (A070904T)	<p>CO1 - Learn about the development, scope, and types of political systems, from traditional to modern.</p> <p>CO2 - Examine concepts like bureaucracy, authority, power, elites, political socialization, and participation.</p> <p>CO3 - Explore totalitarian and democratic systems, political elites, and approaches like structural-functional, conflict, and behavioral analysis.</p> <p>CO4 - Assess political modernization, mobilization, voting behavior, and the relationship between civil society and the state.</p>
		III	ENVIRONMENT & SOCIETY (A070905T)	<p>CO1 - Gain insights into the interrelation between environment and society, and explore the key concepts like eco-ecological balance and biodiversity.</p> <p>CO2 - Analyze Environmental Issues: Study the nature, causes, and types of environmental problems, including pollution, deforestation, and desertification.</p> <p>CO3 - Learn about constitutional provisions, laws, and government programs aimed at protecting and enriching the environment.</p> <p>CO4 - Understand the roles of international agencies, NGOs, science, technology, and movements in addressing environmental challenges.</p>
		III	SOCIAL DEMOGRAPHY (A070906T)	<p>CO1 - Explore the scope of social demography and critically analyze classical and modern population theories.</p> <p>CO2 - Examine global and Indian demographic trends, including the population pyramid and measurements.</p> <p>CO3 - Assess strategies in population planning, control, and reproductive health with a focus on India's policies.</p> <p>CO4 - Investigate the relationship between population size, social development, and the role of demographic research and census.</p>
		III	INDUSTRIAL SOCIETY (A070907T)	<p>CO1 - Explore the emergence of industrialism, its societal impact, and modern industrial organization with a focus on India.</p> <p>CO2 - Analyze work processes, technology, work culture, ethics, and human relations at the workplace.</p> <p>CO3 - Study personnel management, wages, collective bargaining, and labour welfare measures.</p> <p>CO4 - Understand the role of labour in industrial management, planning, dispute resolution, and industrial progress.</p>
		IV	CRIMINOLOGY (A071001T)	<p>CO1 - Gain insights into the definitions, scope, and methods of criminology, as well as the legal and sociological concepts of crime.</p>

				<p>CO2 - Study major crime theories, organized crime, crimes against vulnerable groups, and cybercrimes.</p> <p>CO3 - Examine the socio-economic profile of criminals and the impact of corruption in contemporary India.</p> <p>CO4 - Learn about victimology, crime prevention strategies, and the role of prison reforms in correctional measures.</p>
		IV	<p>GLOBALIZATION & SOCIETY (A071002T)</p>	<p>CO1 - Gain knowledge of the historical, social, and conceptual aspects of globalization and its diverse characteristics.</p> <p>CO2 - Examine the structure, perspectives, and socio-economic impacts of globalization, including hyper-globalization and global skepticism.</p> <p>CO3 - Understand the role of multinational corporations, non-governmental organizations, and international agencies in shaping globalization.</p> <p>CO4 - Explore the cultural effects of globalization, such as homogenization and consumerism, along with the resurgence of ethics and resistance movements.</p>
		IV	<p>SOCIAL MOVEMENT IN INDIA (A071003T)</p>	<p>CO1 - Develop a conceptual understanding of the meaning, characteristics, and types of social movements.</p> <p>CO2 - Examine the components, causes, and effects of social movements on societal reform, revival, and transformation.</p> <p>CO3 - Learn key theories, including Marxist, post-Marxist, Weberian, and structural-functional approaches, to analyze social movements.</p> <p>CO4 - Explore various social movements in India, such as Dalit, women's, peasant, ecological, and ethnic movements, and their impact on social change.</p>
		IV	<p>SCIENCE, TECHNOLOGY & SOCIETY (A071004T)</p>	<p>CO1 - Analyze the relationship between science, technology, and society, including the conceptual and theoretical frameworks of the sociology of science.</p> <p>CO2 - Explore the ethos of science, including ethical considerations, professional practices, and the socio-political dimensions of scientific research and technological advancements.</p> <p>CO3 - Examine the history of modern science in India, its colonial and post-independence development, and the contributions of Indian scientists and technologists.</p> <p>CO4 - Assess the role of globalization, liberalization, and education in shaping science and technology in India, focusing on challenges like brain drain and opportunities for growth.</p>

		IV	SOCIOLOGY OF AGING (A071005T)	<p>CO1 - Gain insights into the relevance of sociology of ageing, changes in societal roles, and the impact of ageing in traditional and modern contexts.</p> <p>CO2 - Examine the demographic structure and its implications, with a focus on ageing in India, including migration, gender aspects, and population effects.</p> <p>CO3 - Study biological, social, and psychological theories of ageing to understand its complexities.</p> <p>CO4 - Identify the physiological, psychological, and socio-economic problems faced by the elderly and explore state policies, programs, and the role of NGOs in elderly care.</p>
		IV	RELIGION & SOCIETY (A071006T)	<p>CO1 - Explore the meaning, scope, and development of religion, along with its historical and social context.</p> <p>CO2 - Study key sociological interpretations of religion through the perspectives of Durkheim, Weber, and Marx.</p> <p>CO3 - Investigate the major religions in India—Buddhism, Christianity, Hinduism, Islam, Jainism, and Sikhism—considering their historical and demographic trends.</p> <p>CO4 - Analyze the relationship between social change, religion, and religious movements in India.</p>
		IV	COMPARATIVE SOCIOLOGY (A071007T)	<p>CO1 - Understand the significance of comparative approaches in sociology, focusing on culture, nation, class, and gender.</p> <p>CO2 - Examine the historical and social contexts of Western and Indian sociological traditions and their evolution.</p> <p>CO3 - Explore central themes such as modernity, globalization, diversity, and gender in a comparative framework.</p> <p>CO4 - Analyze the impact of colonialism and debates on decolonization, indigenization, and national concerns within the Indian context.</p>
		IV	GENDER & SOCIETY (A071008T)	<p>CO1 - Analyze the social construction of gender and its intersections with biology, culture, and social roles.</p> <p>CO2 - Examine various feminist theories, including liberal, radical, Marxist, and postmodernist viewpoints on women in society.</p> <p>CO3 - Study the history, strengths, and weaknesses of women's movements globally and in India.</p> <p>CO4 - Understand the demographic, economic, and cultural factors affecting women, including violence, empowerment, and the roles of state and NGOs.</p>

		IV	RESEARCH PROJECT (A071009R)	<p>CO1 - Develop the ability to critically analyze social structures, processes, and issues using theoretical frameworks.</p> <p>CO2 - Gain expertise in conducting qualitative and quantitative research, including designing studies, collecting data, and analyzing results.</p> <p>CO3 - Explore connections between sociology and fields like anthropology, political science, and economics to address societal challenges.</p> <p>CO4 - Enhance the ability to present sociological insights clearly through academic writing and oral presentations.</p>
M. A. Economics	<p>PO1- MA Economics program delves into the allocation of scarce resources by studying the behavior of societies, governments, businesses, households, and individuals, employing conceptual models and rigorous statistical analysis to predict responses to policy changes and market conditions.</p> <p>PO2- Economists play vital roles in advising governments, formulating policies, and analyzing economic conditions for various private sector entities, contributing to public policies related to healthcare, welfare, social reform, and efforts to reduce inequality, pollution, and crime. The study of economics also equips individuals with decision-making tools for everyday life choices, including financial investments, education, careers, and public policy impacts.</p> <p>PO3- Graduates are prepared for competitive exams like UGC-NET and UPSC Civil Services, enhancing their career opportunities and analytical skills, while enabling them to address complex economic challenges and contribute to informed decision-making in diverse fields.</p>	I	MICRO ECONOMIC ANALYSIS- 1 (A080701T)	<p>CO1 - Develop a thorough understanding of demand theories, consumer choice, and the effects of income, substitution, and price changes on demand.</p> <p>CO2 - Gain insights into production and cost theories, including short- and long-term production functions and cost derivations.</p> <p>CO3 - Analyze market structures and price-output determination, covering monopolistic competition, oligopoly models, and related economic concepts.</p> <p>CO4 - Understand neoclassical approaches to income distribution, factor markets, and the determination of wages, rents, interest, and profit.</p>
		I	MACRO ECONOMIC ANALYSIS- 1 (A080702T)	<p>CO1 - Understand national income accounting methods, including sectoral income flows and social, input-output, and balance of payment accounting.</p> <p>CO2 - Analyze short-run and long-run consumption behaviors, linking income to consumption through various hypotheses and empirical evidence.</p>

				<p>CO3 - Evaluate investment functions, including efficiency, accelerators, multipliers, and the impact of inflation and policy measures on investment.</p> <p>CO4 - Integrate Neo-classical and Keynesian models to understand the IS-LM framework, fiscal-monetary policy effectiveness, and flexible labor and price systems.</p>
		I	PUBLIC FINANCE (A080703T)	<p>CO1 - Understand the role of government in addressing market failures, externalities, and providing public and merit goods.</p> <p>CO2 - Analyze public expenditure theories, including Wagner's Law and cost-benefit analysis, and their implications for budget planning.</p> <p>CO3 - Explore taxation and public debt theories, focusing on incidence, optimal taxation, and strategies for debt management.</p> <p>CO4 - Evaluate fiscal policy objectives like full employment, inflation control, economic growth, and equitable income distribution.</p>
		I	DEMOGRAPHY (A080704T)	<p>CO1 - Understand the scope, theories, and international aspects of population growth, including demographic transitions and life table applications.</p> <p>CO2 - Analyze fertility, mortality, nuptiality, and migration patterns, along with their socio-economic and cultural determinants.</p> <p>CO3 - Explore the interconnections between population, economy, environment, and human development, focusing on India's demographic trends and policies.</p> <p>CO4 - Learn methods for collecting and analyzing demographic data for informed economic planning and development.</p>
		II	MICRO ECONOMIC ANALYSIS- 2 (A080801T)	<p>CO1 - Understand advanced theories of the firm, including behavioral, managerial, and pricing models for growth and profit maximization.</p> <p>CO2 - Apply game theory concepts like Nash equilibrium, strategic decision-making, and limitations in real-world oligopoly scenarios.</p> <p>CO3 - Analyze welfare economics with concepts like Pareto optimality, market failures, and social welfare functions.</p> <p>CO4 - Examine the principles of general equilibrium and its graphical and theoretical models, addressing its existence and uniqueness.</p>
		II	MACRO ECONOMIC	<p>CO1 - Understand different theories of inflation, including Classical, Keynesian, and monetarist perspectives, and analyze their</p>

			ANALYSIS- 2 (A080802T)	<p>policy implications.</p> <p>CO2 - Explore the theories and models of trade cycles to understand fluctuations in economic activity and business cycle control mechanisms.</p> <p>CO3 - Analyze open economy macroeconomics, including the Mundell-Fleming model and the monetary approach to the balance of payments.</p> <p>CO4 - Evaluate macroeconomic policy issues such as inflation targeting, policy rules versus discretion, and approaches to addressing policy inconsistencies.</p>
		II	AGRICULTURAL ECONOMICS (A080803T)	<p>CO1 - the role of agriculture in economic development and its interdependence with industry, along with poverty and environmental impacts.</p> <p>CO2 - Analyze agricultural production efficiency, farm size, and technological changes affecting labor and productivity.</p> <p>CO3 - Evaluate land distribution trends, land reforms, and challenges faced by small and marginal farmers, including policies like MNREGA.</p> <p>CO4 - Study sustainable agricultural practices, cropping patterns, and the role of biotechnology and organic farming in India's agricultural growth.</p>
		II	ELEMENTARY STATISTICS (A080804T)	<p>CO1 - Understand the fundamentals of statistics, including data collection, classification, tabulation, and graphical representation.</p> <p>CO2 - Apply measures of central tendency (mean, median, mode) and dispersion (quartiles, standard deviation) for data analysis.</p> <p>CO3 - Analyze relationships using skewness, correlation, and simple linear regression methods.</p> <p>CO4 - Construct and interpret index numbers and learn about national statistical systems and population statistics.</p>
		II	RESEARCH METHODOLOGY (A080805T)	<p>CO1 - Understand the fundamental concepts, objectives, and significance of research in social sciences.</p> <p>CO2 - Design effective research frameworks, including hypothesis formulation and experimental controls.</p> <p>CO3 - Apply appropriate sampling techniques and data collection methods for quantitative and qualitative research.</p> <p>CO4 - Utilize statistical tools and techniques, such as regression analysis, hypothesis testing, and ANOVA, for data analysis.</p>

		II	INDIAN PUBLIC FINANCE (A080806T)	CO1 - Understand the evolution of fiscal federalism and the financial relations between central and state governments in India. CO2 - Analyze public expenditure trends, including key expenditure components of central and state governments. CO3 - Evaluate sources of revenue, taxation systems like GST, and other significant tax policies in India. CO4 - Assess India's budgetary policies, deficit financing, and public debt management strategies.
		II	RESEARCH PROJECT/ INDUSTRIAL TRAINING/ INTERNSHIP/ SURVEY WORK & VIVA -VOCE (A080807R)	CO1 - Develop the ability to critically evaluate economic theories and research methodologies. CO2 - Gain hands-on experience in applying qualitative and quantitative research techniques. CO3 - Enhance skills in collecting, analyzing, and interpreting economic data for policy implications. CO4 - Improve academic writing skills by preparing a well-structured research paper with proper citations.
		III	INTERNATIONAL ECONOMICS (A080901T)	CO1 - Develop an understanding of classical and modern theories of international trade and their implications. CO2 - Analyze trade policies, including tariffs, subsidies, and trade barriers, and their effects on welfare and global markets. CO3 - Evaluate balance of payments issues, international capital flows, and exchange rate adjustments. CO4 - Understand the role of regional trade blocks, multilateral institutions, and globalization in shaping global trade dynamics.
		III	ECONOMICS OF GROWTH (A080902T)	CO1 - Gain an understanding of fundamental growth concepts, equilibrium conditions, and various classical, neoclassical, structural, and Marxist growth theories. CO2 - Analyze advanced growth models like Harrod-Domar, Solow, Kaldor, and endogenous growth models, focusing on capital, innovation, and balanced/unbalanced growth. CO3 - Explore dynamic models, including overlapping-generation and infinite-horizon frameworks, for long-term economic analysis. CO4 - Evaluate planning techniques, investment criteria, and the role of education and research in fostering sustainable economic growth.
		III	INDIAN ECONOMIC	CO1 - Understand India's monetary and fiscal policies post-1991, including their objectives, execution, and role in addressing

			POLICY (A080903T)	inflation and development. CO2 - Analyze India's commercial policies, foreign trade, balance of payments, and regulatory frameworks like FERA and FEMA. CO3 - Examine population dynamics, poverty alleviation, employment schemes, and welfare initiatives for inclusive development. CO4 - Assess India's policies in promoting economic growth, welfare, and addressing social and economic inequalities.
		III	ENVIRONMENTAL ECONOMICS (A080904T)	CO1 - Understand the interaction between economic development and environmental sustainability, focusing on resource conservation and biodiversity. CO2 - Analyze environmental challenges like pollution, climate change, and natural hazards, along with policy instruments for mitigation. CO3 - Explore sustainable practices, including green marketing, eco-tourism, and waste management economics. CO4 - Evaluate the role of environmental ethics, property rights, and laws in fostering sustainable development and protecting natural resources.
		III	QUANTITATIVE ANALYSIS (A080905T)	CO1 - Develop mathematical skills to analyze economic functions, derivatives, and their applications in models like trade cycles and growth. CO2 - Solve optimization problems using linear programming techniques, including duality concepts and game theory applications. CO3 - Gain proficiency in statistical methods, such as correlation, regression, and probability, for analyzing economic data. CO4 - Understand sampling techniques and hypothesis testing to evaluate economic hypotheses and estimations effectively.
		III	INDUSTRIAL ECONOMICS (A080906T)	CO1 - Understand the role of industries in economic development and analyze the challenges faced by key sectors like iron, steel, coal, and engineering goods. CO2 - Examine industrial growth patterns, policies, and the impact of globalization, including privatization, liberalization, and environmental concerns. CO3 - Analyze market structures, industrial finance, and theories of industrial location to assess profitability and institutional financial roles. CO4 - Address labor-related challenges, including industrial

				disputes, labor unions, and social security measures for industrial workers.
		IV	MONETARY ECONOMICS (A081001T)	<p>CO1 - Comprehend the theories of money supply, its determinants, and the monetary aggregates, including high-powered money and the money multiplier.</p> <p>CO2 - Analyze Keynesian and post-Keynesian theories of money demand, including monetarist perspectives such as Friedman's theory of demand.</p> <p>CO3 - Understand advancements in monetary theory, focusing on liquidity and credit approaches like Baumol-Tobin models and Gurley-Shaw thesis.</p> <p>CO4 - Evaluate inflation and monetary policies, including the Phillips Curve, adaptive expectations, and theories related to unemployment and stagflation.</p>
		IV	ECONOMICS OF DEVELOPMENT (A081002T)	<p>CO1 - Understand traditional and modern theories of economic development, including underdevelopment and measures like HDI and Sen's capabilities.</p> <p>CO2 - Analyze the role of resources like population, education, health, and gender in addressing poverty, inequality, and unemployment.</p> <p>CO3 - Explore the significance of internal and external finance, including microfinance, fiscal policies, FDI, and external aid, in promoting development.</p> <p>CO4 - Evaluate the role of institutions, social networks, and political economy in economic development.</p>
		IV	RURAL ECONOMICS (A081003T)	<p>CO1 - Understand the importance, historical context, and challenges of rural development in India.</p> <p>CO2 - Analyze rural population dynamics, poverty alleviation programs, and flagship government schemes like MGNREGA and PMGSY.</p> <p>CO3 - Evaluate the role and effectiveness of Panchayati Raj systems, rural health initiatives, and sanitation programs in development.</p> <p>CO4 - Explore the contribution of cooperatives, rural industries, and government policies in promoting rural employment and economic growth.</p>
		IV	SOCIAL SECTOR &	CO1 - Understand the role and challenges of social infrastructure, education, and healthcare in India's socio-economic development.

			DEVELOPMENT ISSUES (A081004T)	<p>CO2 - Analyze the linkages between human resource development and economic growth, including government policies and public participation.</p> <p>CO3 - Evaluate education policies and programs, emphasizing universal access and the role of science and technology in educational achievements.</p> <p>CO4 - Assess health and social development policies, addressing nutrition, healthcare access, and contributions of NGOs and voluntary organizations.</p>
		IV	ECONOMIC THOUGHT (A081005T)	<p>CO1 - Gain a historical understanding of classical, neo-classical, and modern economic theories, including key contributions by thinkers like Adam Smith, Ricardo, and Marshall.</p> <p>CO2 - Explore Keynesian, monetarist, and Schumpeterian views on economic growth, trade cycles, and policy-making.</p> <p>CO3 - Understand the unique perspectives of Indian economists like Gandhi, Gadgil, and Deendayal Upadhyay on socio-economic development.</p> <p>CO4 - Analyze the evolution of economic ideas and their relevance in modern contexts, including theories of demand, labor, and income distribution.</p>
		IV	LABOUR ECONOMICS (A081006T)	<p>CO1 - Understand the structure and dynamics of the labor market, including demand, supply, and labor mobility.</p> <p>CO2 - Analyze poverty and unemployment issues in India, focusing on their causes and impacts across various sectors.</p> <p>CO3 - Examine wage determination theories and practices, including minimum wage policies and productivity relationships.</p> <p>CO4 - Evaluate social security measures, policies addressing labor issues (e.g., child labor, discrimination), and the effects of globalization on labor markets.</p>
		IV	RESEARCH PROJECT/ INDUSTRIAL TRAINING/ INTERNSHIP/ SURVEY WORK & VIVA -VOCE (A081007R)	<p>CO1 - Develop the ability to critically evaluate economic theories and research methodologies.</p> <p>CO2 - Gain hands-on experience in applying qualitative and quantitative research techniques.</p> <p>CO3 - Enhance skills in collecting, analyzing, and interpreting economic data for policy implications.</p> <p>CO4 - Improve academic writing skills by preparing a well-structured research paper with proper citations.</p>